National
Early Years Access Initiative
(2011-2014)

RESEARCH PROTOCOL

MAIN REPORT

Kieran McKeown
Trutz Haase
Jay Belsky

Kieran McKeown Limited
Social & Economic Research Consultants,
16 Hollybank Road, Drumcondra, Dublin 9.
Phone 01-8309506. E-mail: kmckeown@iol.ie

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www.neyai-evaluation.ie

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1. Introduction

This Research Protocol sets out how the Research Team[1] will evaluate the National Early Years Access Initiative (NEYAI), with the approval of the Evaluation and Learning Expert Advisory Group[2]. The protocol draws upon internationally-recognised evaluation practices to meet the unique requirements of the initiative. It has been prepared in consultation with the 11 projects that make up the NEYAI in order to ensure an alignment between project implementation and project evaluation.

The vision for NEYAI is to build a national evidence-base for policy and practice in order to improve the quality, coordination and outcomes of services for 0-6 year olds. In this way, the initiative aspires to 'leave in place a sustainable legacy for the future'[3]. That is why, within this vision, projects are referred to as a 'demonstration sites' and 'demonstration projects', denoting that their core function is to contribute to demonstrating more effective and efficient ways to promote better outcomes for 0-6 year olds and their parents. In other words, the vision implies that NEYAI projects, through the demonstration effect of their work, have the capacity to improve services for all 0-6 year old children in Ireland, which currently amount to approximately 360,000 children.

The broad context of this vision is set by the intrinsic and extrinsic value of all children, especially children who, by virtue of adverse circumstances, are not adequately nurtured to realise their true potential. That is why the initiative is focused exclusively on areas of socio-economic disadvantage since children in these areas are, on average[4], more likely to experience what Urie Bronfrenbrenner[5] calls 'developmentally disruptive influences' often leading to 'developmental dysfunction' rather than 'developmental competence'.[6]

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1 The Research Team comprises Kieran McKeown, Trutz Haase and Jay Belsky.

2 The Research Protocol was approved by the Evaluation and Learning Expert Advisory Group on 27th November 2011 subject to minor changes which are incorporated in this draft. The members of the Evaluation and Learning Expert Advisory Group are:

➢ Dr Tony Crooks, Evaluation and Learning Expert Advisory Group

➢ Ms Bernie McDonnell, Programme Manager, Equality Programmes, Pobal

➢ Prof Marjorie Smith, Thomas Coram Institute, University of London.

➢ Prof Áine Hyland, University College Cork.

➢ Dr Heather Weiss, Harvard Family Research Project, Harvard University

➢ Prof Áine Hyland, University College Cork.

3 Request for Tender For Evaluation of National Early Years Access Initiative, 2011.

4 Whether a person who is disadvantaged also lives in a disadvantaged area depends on how the area is defined since not everyone who lives in a disadvantaged area is disadvantaged. Smaller areas which are predominantly disadvantaged, such as the ones used to define catchment areas for this initiative, are also likely to contain major concentrations of people who are also disadvantaged. In this context therefore, it is reasonable to assume that all, or almost all, of those participating in this initiative are disadvantaged.

5 The work of Uri Bronfrenbrenner (1917-2005) has been highly influential in the study of child development and, as a result, child development is now understood as inherently multi-dimensional and multi-disciplinary. Of passing note is the fact that a member of the research team, Jay Belsky, was awarded in 2007 the Urie

The context for this initiative is also set by the substantial State investment in the early childhood care and education which is estimated to be in the region of €300m annually[7]. The cost of NEYAI, at €5.25m, is less than 2% of this. This implies that if the NEYAI generates a set of interventions that have the capacity to improve outcomes by, say 0.5%, then the initiative could pay for itself in less than 4 years through improved productivity, if these interventions are delivered nationally and without additional costs. This perspective suggests one possible benchmark for judging, other things being equal, the cost effectiveness of NEYAI as an investment in the early childhood care and education sector.

Against this background, we now describe the NEYAI in more detail (Section 2), including the logic model on which it is based (Section 3). We then outline the overall research design for the evaluation (Section 4) and associated sampling strategy (Section 5), measurement instruments (Section 6) and timeframe for data collection (Section 7). Ethical considerations arising from the

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Bronfenbrenner Award for Lifetime Contribution to Developmental Psychology in the Service of Science and Society by the American Psychological Association (Division 7).

6 Bronfrenbrenner defines 'dysfunction' in terms of a child having difficulty maintaining control and integration of behaviour across situations while 'competence' is defined as the acquisition of knowledge and skills. His 'proto-hypothesis' is that 'proximal processes' (notably the interaction between a child and its parents) in disadvantaged environments have more impact on dysfunction whereas, in advantaged environments, they have more influence on competence. The rationale for this is explained as follows: 'Most parents have the capacity and the motivation to respond to manifestations of physical or psychological distress on the part of their children. In deprived or disorganized environments, such manifestations of dysfunction have been shown to be both more frequent and more severe … thus drawing on more of parents' available time and energy. Accordingly, to the extent that, in disadvantaged settings, parents are able to engage in proximal processes, these are likely to have greater impact in reducing dysfunction rather than in enhancing their children's knowledge about and skill in dealing with the external environment. … . The situation in advantaged and stable environments is rather different. Manifestations of dysfunction are likely to occur less often and to be less intense. Under these circumstances, parents are more apt to be attracted by and respond to the more frequent and more gratifying signs of their children's growing competence, with the result that proximal processes may be focused mainly in this latter sphere. In addition, parents living in a middle-class world are themselves more apt to possess and exhibit the knowledge and skills they wish their children to acquire. They also have greater access to resources and opportunities outside the family that can provide needed experiences for their children.' (Bronfenbrenner and Morris, 2006:803).

7 This is an estimate of current costs, excluding capital, and is based on the following cost categories:

Cost Category	€m	Source
Early Childhood Care & Education (ECCE) Programme	166.0	Dept Children & Youth Affairs, email
Community Childcare Subvention (80% for 0-6)	36.8	Dept Children & Youth Affairs, email
Childcare Education & Training Support (50% for 0-6)	11.5	Dept Children & Youth Affairs, email
City/County Childcare Committees	11.8	Dept Children & Youth Affairs, email
Voluntary Childcare Organisations	2.7	Dept Children & Youth Affairs, email
Early Start	5.6	Dept Education & Skills, email
Training & Community Employment	67.0	Dept Education & Skills, 2009:31-3
Total	301.4	

Note that, according to the Pobal database in October 2011, there are 4,352 childcare centres in the country of which 70% are private and 30% public or 'community-based'.

evaluation are clarified (Section 8). Finally, we describe the types of data analysis which will be undertaken (Section 9) and the outputs which will be delivered through this (Section 10).

2. National Early Years Access Initiative

The National Early Years Access Initiative (NEYAI) was officially launched by the Minister for Children and Youth Affairs in June 2011. It is a collaboration between Atlantic Philanthropies, Mount Street Club Trustees, Office of the Minister for Children & Youth Affairs, Department of Education & Skills (Early Years Education Policy Unit), and Pobal who manages the initiative.

NEYAI has a dual focus reflecting a national and local orientation: 'At national or programmatic level, the Initiative is concerned with establishing a strong evidence-base to contribute to improvements in practice and coordinated service delivery and to influence policy change (wherever relevant and appropriate) with regard to improved learning/educational, wellbeing outcomes for children and their families. At local level, it is concerned with building the delivery capacity of local projects specifically with regard to data collection, monitoring, reflective practice and creating an operating ethos/culture conducive to learning and continuous review. This approach will in turn help to strengthen the quality and impact of the local project while simultaneously contributing to the quality of the learning of the Initiative as a whole. The mechanism for uniting and inter-linking these two dimensions will be the creation of a Learning Community whereby a creative space/opportunity can be made available (and appropriately resourced) as an aid to: stimulate thinking/learning; the cross fertilization of ideas; the sharing of resources; and the exploration of good practice etc. on an ongoing basis'[8].

The general aims of NEYAI are:
- ✓ Improvement in the quality and coordination of local services to young children and families in a small number of demonstration sites; and
- ✓ Provision of an evidence-base to inform mainstream practice and policy with regard to the design and delivery of integrated services for young children and families and to leave in place a sustainable legacy for the future.

The more specific aims of NEYAI are:
- ✓ Demonstrate innovative inter-agency responses to the provision of early years care, education and development;
- ✓ Improve access to, and increase participation in early childhood care and education services;

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8 Terms of Reference for Evaluation of National Early Years Access Initiative, 2011.

✓ Influence early years mainstream practice and provision;

✓ Contribute to the ongoing development of early years policy;

✓ Inform a community-based model to underpin the local delivery of joined up services to children and families;

✓ Engage in a process of learning and review and share the learning arising from practice and experience; and

✓ Involve children and families as active participants in the programme.

The five areas of project activity which are funded by the NEYAI are:

1. Promotion and dissemination of quality improvements through use of the National Framework for Early Childhood Education (Síolta[9]) and the Early Childhood Curriculum Framework (Aistear[10]);

2. Up-skilling the early childhood care and education workforce;

3. Fostering improved health / learning and school readiness outcomes among young children;

4. Developing parents' skills and improved parenting support;

5. Demonstrating a continuum of services for the 'whole child' linking and integrating the child, family, local services and the community.

Table 1 lists the 11 demonstration projects that are funded by NEYAI over a four-year period (2011-2014). Each project is made up of a consortium comprising a lead organisation and at least two other organisations. Seven of the projects are in the Dublin area (identified by its ID: BC, CC, CN, DD, FL, RO, TT) with the remaining four in Cork (CK), Limerick (LK), Longford (LD) and Donegal (DL), the latter two being the only rural-based projects. Table 1 also lists the *core activity* of each project – defined as its most *substantial and sustained intervention*[11] - which is the focus of this evaluation.

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9 Department of Education and Skills, 2010a.

10 National Council for Curriculum and Assessment, 2009.

11 The focus of the evaluation on interventions which are 'substantial and sustained' is informed by Bronfenbrenner's proposition that: 'Especially in its early phases, but also throughout the life course, human development takes place through … interaction … . To be effective, the interaction must occur on a fairly regular basis over extended periods of time' (Bronfenbrenner and Morris, 2006:797). This proposition is also consistent with the scientific understanding of how the brain functions: 'All functional capacities in the brain are dependent to some degree upon the presence of appropriately timed, appropriately patterned signals that will specifically stimulate the neutral systems mediating that function. … . Patterned, repetitive activity changes the brain. … . A child exposed to consistent, predictable, nurturing, and enriched experiences will develop neurobiological capabilities that will increase the child's chance for health, happiness, productivity and creativity. … . If a child is neglected – if he or she hears fewer words, has fewer relational opportunities, receives less physical comfort, and has less love – the rapidly organizing networks in the brain that mediate language, social affiliation, and attachment will not receive sufficient patterned, repetitive activation to develop normally. … . The therapeutic implications of this … cannot be overstated. Repetition, repetition, repetition: Neural systems – and children – change with repetition' (Perry, 2006:36-37).

Table 1 List of Projects in the National Early Years Access Initiative

ID	Location	Name	Lead Agency	Intervention for Evaluation
BC	Ballyfermot / Chapelizod	Early Years Language & Learning Initiative	Partnership	Train and mentor childcare staff in Hanen Programme to: (i) Improve the child's language development (ii) Support parents to encourage the child's language development
CC	Canal Communities	Bringing It All Back Home	Daughters of Charity	Train and mentor childcare staff in Marte Meo Programme and Incredible Years Programme to: (i) Improve the child and parent outcomes (ii) do intensive outreach with children and their parents
CK	Cork	Happy Talk Project	Partnership	Train childcare staff in Hanen Programme to: (i) Improve the child's language development (ii) Support parents to encourage the child's language development
CN	Clondalkin	Addressing Gaps in Training & Practice	Partnership	Mentor childcare staff to improve outcomes for children and their parents
DD	Dublin Docklands	Early Years Numeracy Project	National College of Ireland	Train and mentor childcare staff in numeracy skills to deliver: (i) Improve the child's numeracy skills (ii) Support parents to encourage the child's numeracy development
FL	Fingal	Fingal Parents Initiative	County Childcare Committee	Train childcare staff to deliver: (i) Parents Together (6-Week Parenting Course) (ii) Parents Plus Early Years (12-Week Parenting Course)
DL	Donegal	Professional Pedagogy Project	County Childcare Committee	Train and mentor childcare staff to improve outcomes for children
LK	Limerick	Start Right	Partnership	Train and support childcare staff to: (i) meet Siolta standards (ii) do intensive outreach with children and their parents
LD	Longford	Tus Nua	County Childcare Committee	Train and mentor childcare staff to improve outcomes for children
RO	Rialto	Dublin SW Inner City Demonstration Model	Barnardos	Train and mentor childcare staff in Hanen Programme to: (i) Improve the child's language development (ii) Support parents to encourage the child's language development
TT	Tallaght	Quality Through Professionalisation	Shanty	Deliver training based on the Fledglings Early Years Manual which integrates the two national early years frameworks – Siolta (Quality) and Aistear (Learning) - through the pedagogical approach and curriculum of HighScope.

3. Logic Model of Programme

In order to design the evaluation framework, it is necessary to develop a logic model for the NEYAI. A logic model is normally defined as a graphic representation of a programme depicting the logical sequence between inputs, outputs and outcomes[12]. In other words, a logic model describes the way an initiative is believed to make an impact and therefore takes account of the intervention and the population it is expected to benefit (input), the pathways or 'active ingredients' by which the intervention is believed to work (outputs or pathways), and the results that are expected (outcomes). It is called a 'logic' model because it is based on 'if-then logic' which describes the underlying theory of change in the programme by showing how (or 'if') inputs are transformed into outputs and why (or 'then') these pathways lead to outcomes.

The logic model is important from the perspective of any evaluation because it simultaneously describes the theory behind the programme and facilitates identification of the different categories of data that need to be collected in order to test if the programme is achieving its expected outcomes and, if so, how. At the same time, logic models can provide a somewhat static and linear representation of a programme and for that reason, they are not necessarily an accurate representation how the programme is implemented in practice or the outcomes that may be unexpected or unintended. That is why logic models are simply a guide to the theory of change in the programme and, for that reason, are best regarded as a set of hypotheses about the programme that will be tested by the evaluation[13].

Figure 1 summarises a general logic model for the NEYAI. It is based on three sets of considerations: (i) stated aims and objectives of NEYAI; (ii) actual work plans of NEYAI projects; and (iii) evidence from other programme evaluations about how interventions like this usually work.
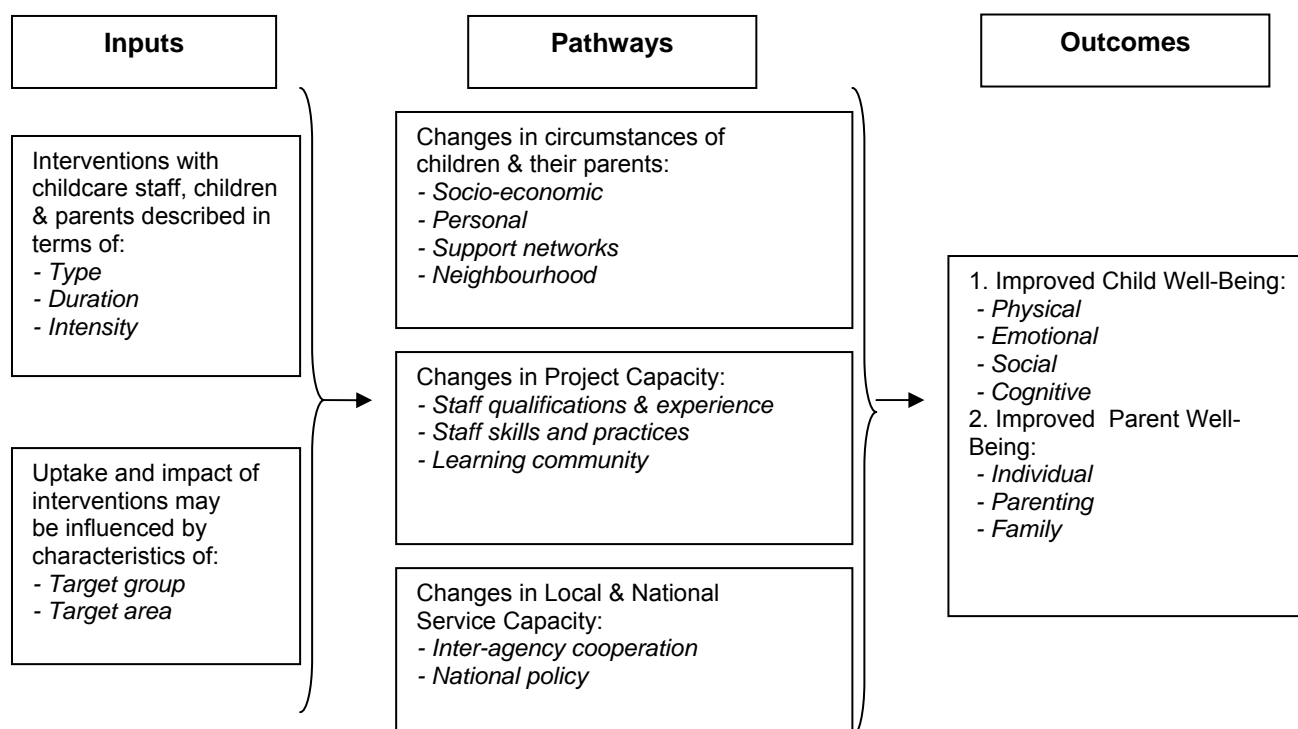
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12 The following is a standard explanation of how logic models work in practice: 'Many who use logic models talk about them as a series of "if-then" sequences. … . If you have certain resources, then you will be able to provide activities, produce services or products for targeted individuals or groups. If you reach those individuals or groups, then they will benefit in certain specific ways in the short term. If the short-term benefits are achieved to the extent expected, then the medium-term benefits can be accomplished. If the medium-term benefits for participants/organizations/decision-makers are achieved to the extent expected, then you would expect the longer-term improvements and final impact in terms of social, economic, environmental, or civic changes to occur. This is the foundation of logic models and the theory of causal association. Such "if-then" relationships may seem too simple and linear for the complex programs and environments in which we work. However, in working out these sequences, we uncover gaps in logic, clarify assumptions, and more clearly understand how investments are likely to lead to results' (Taylor-Powell & Henert, 2008).

13 For that reason, the proper use of a logic model requires awareness of its limitations since 'the logic model is a model – not reality. It depicts assumed causal connections not true cause-effect relationships' (Taylor-Powell & Henert, 2008). Limitations of logic modelling include the following: (i) a logic model represents intention, it is not reality; (ii) it focuses on expected outcomes so people may overlook unintended outcomes (positive and negative); (iii) it focuses on positive change – change isn't always positive; (iv) it may simplify the complex nature of causal attribution where many factors influence process and outcomes; (v) it doesn't address whether we are doing the right thing – we may get caught up in creating a logic model and lose track of whether the program is the right thing to do; and (vi) may stifle creativity and spontaneity. (Ibid).

The left-hand side of the logic model depicts the inputs of NEYAI and are constituted by the 11 project interventions. These include both the actual services delivered to children and their parents as well as the training and mentoring of staff to deliver those services. These inputs will vary be type, duration and intensity but will also vary in the manner of their implementation. The context of each project, particularly the focus on children living in disadvantaged areas, can also be regarded as an 'input' in the sense that the uptake and effectiveness of each intervention is likely to be affected by characteristics of the target group and the target area. In this sense, context provides important information about how NEYAI is targeted, who participates, and how it influences outcomes directly and indirectly for parents and children (see Section 6.5 below).

The right-hand side of the logic model depicts the outcomes which are conceptualised as improved well-being for children and their parents. For children, this takes the form of improved physical, emotional, social and cognitive development. For parents, it includes improved individual well-being, both physical and mental, as well as improved parenting and family relationships but may also include an improved sense of social support.

Figure 1 Logic Model of National Early Years Access Initiative

Inputs	Pathways	Outcomes

Interventions with childcare staff, children & parents described in terms of:
- *Type*
- *Duration*
- *Intensity*

Uptake and impact of interventions may be influenced by characteristics of:
- *Target group*
- *Target area*

Changes in circumstances of children & their parents:
- *Socio-economic*
- *Personal*
- *Support networks*
- *Neighbourhood*

Changes in Project Capacity:
- *Staff qualifications & experience*
- *Staff skills and practices*
- *Learning community*

Changes in Local & National Service Capacity:
- *Inter-agency cooperation*
- *National policy*

1. Improved Child Well-Being:
   - *Physical*
   - *Emotional*
   - *Social*
   - *Cognitive*
2. Improved Parent Well-Being:
   - *Individual*
   - *Parenting*
   - *Family*

At the centre of the logic model are the hypothesised pathways by which inputs are transformed into outcomes. The first of these is rooted in the circumstances of children and their parents and may include personal well-being (such as physical and mental health), relationships (with child and their partner), support networks, and neighbourhood quality (such as trust and safety). The second is

changes in project capacity denoted mainly by changes in how staff experience their job and their work; it may also include changes induced by the learning community. The third potential pathway is changes in service capacity such as improved local inter-agency cooperation or the implementation of national policy on early years such as the National Framework for Early Childhood Education (Síolta[14]) and Early Childhood Curriculum Framework (Aistear[15]).

Given the importance of pathways as active ingredients in how programmes work, it is worth documenting briefly some research evidence in support of the pathways which have been identified in the logic model. Beginning with the behaviour and attitude of parents and children, one study of Early Head Start in the US identified the parent-child relationship as a key pathway to improved outcomes for children[16]. Similarly, an evaluation of the Child-Parent-Centres in Chicago identified family and school supports for the child's education as key mediators of improved cognitive outcomes for the child, as well as reductions in child neglect and abuse[17]. The first phase of the evaluation of Sure Start in the UK found that, while there were relatively few impacts among children – fewer behaviour problems and greater social competence among the three year-old children of

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14 Department of Education and Skills, 2010a.

15 National Council for Curriculum and Assessment, 2009.

16 A study of 114 mothers and their children (aged 16 to 26 months) in Early Head Start who were deemed to be 'high-risk' (defined as adolescent motherhood, multiple births, homelessness, multiple children under age five, or depression symptoms in the clinical range) were interviewed at baseline and six months later to determine influences on the child's social-emotional functioning (defined as social competence, problem behaviours and aggressive behaviours). Using structural equation modelling, the analysis identified maternal sensitivity to the child (defined as acceptance, responsiveness and warmth) as the main influence on the child's social-emotional functioning, leading the authors to conclude that: 'even among families living highly stressful lives, due to poverty and their parenting experiences, parents' practices with their very young children (i.e., maternal sensitivity) are more directly related to children's outcomes and, if strengthened, can facilitate more positive child social-emotional functioning. … Thus, they affirm the import of early childhood policy that moves beyond a singular focus on child-specific strategies to promote the development of young children, to an incorporation of service systems and funding streams that allow for interventions to enhance parent and family functioning' (Whittaker, Jones, See, Meisch and Westbrook, 2011:83-84).

17 This study involved tracking a group of children who attended the Chicago Child-Parent Centres (CPCs) and a comparison group till age 22 (combined sample of 1334) and found that the cognitive advantage of those who attended CPCs was reinforced by a supportive environment at home and school: 'The findings indicated that cognitive advantage alone would not last into adulthood if the environment did not provide positive reinforcement over time. For example, the gain in kindergarten was associated with educational attainment through a lower rate of grade retention, greater parental involvement, greater later achievement, or a higher rate of attendance in better quality schools. Without changing the environment simultaneously, the benefits of promoting a child's skills are limited and unlikely to last over time and contexts. Therefore, the effect of preschool participation should be examined as a chain of reaction with environmental factors rather than a direct effect on developmental outcomes' (Ou, 2005:605; see also Reynolds, 2002; 2004; 2005).

non-teen mothers but no impact on verbal and non-verbal ability[18] – these were mediated by parents through reductions in negative parenting[19].

In research carried out in Ireland, based on a sample of over 1,600 parents and their children, members of the research team have estimated that every unit change in the well-being of parents is associated with half a unit change in the well-being of children, a quantitative measure of the strong interdependency between the well-being of children and their parents[20] (See Figure 2). This is consistent with other studies which have highlighted the centrality of parental influences on child outcomes[21] and likelihood of interventions with children being more effective when they target these direct (or proximal) influences rather than indirect (or distal) ones[22].

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18 'In sum, results suggested that within the sample of children from (mostly) deprived families living in deprived communities, those from relatively less (but still) disadvantaged households (that is, non-teen mothers) residing in SSLP areas benefited somewhat from living in these areas. In contrast, within these same deprived communities, children from relatively more disadvantaged families (that is, teen mothers, lone parents, workless households) appeared to have been adversely affected by living in an SSLP community' (Belsky and Melhuish, 2007:49) .

19 However the third phase of the Sure Start evaluation found few direct impacts on child outcomes and no indirect impacts. This was based on 7,000 five-year olds and their families in 150 SSLP areas who were initially studied when the children were nine months old and again when they were three years old; comparative data was drawn from the Millennium cohort Study. According to the report: 'After taking into consideration pre-existing family and area background characteristics six positive and two negative effects of SSLPs emerged from 21 measured outcomes at age 5. On the positive front, mothers in SSLP areas reported (1) greater life satisfaction, while (2) engaging in less harsh discipline and (3) providing a less chaotic and (4) more cognitively stimulating home learning environment than their counterparts who did not live in SSLP areas. Additionally, children growing up in SSLP areas had (5) lower BMIs, due to the fact that they were less likely to be overweight and thus healthier in terms of BMI, even if not less likely to be obese per se; and (6) better physical health than those residing in comparison communities. Mothers in SSLP areas, however, (7) experienced more depressive symptoms and (8) were less likely to attend school meetings than those in comparison areas' (National Evaluation of Sure Start Team, 2010:39). It is significant that improvements in parental well-being had no indirect effect on child outcomes possibly because, the report suggests, 'while the effect sizes for parenting are the strongest effects detected, they are relatively small, and any consequent effect upon child development may simply be too small to detect' (Ibid:41).

20 This is derived from study which combined data from a number of studies by members of the research team, all based on the same set of measurement instruments, to constitute a sample of 1,634 households (McKeown, Haase, Pratschke, Lanigan, Burke, Murphy, and Allen, 2008:23-28; McKeown and Haase, 2007; Haase, McKeown, and Pratschke, 2008; Haase, 2009). It is acknowledged that this is not representative of the national population. However it is a useful way of assessing properties of the instruments used from the perspective of measuring parent and child well-being and their determinants (Pratschke, McKeown and Haase, 2011).

21 According to one review: 'the great driving force for deciding the future of children is their parents. No policy designed to break through the glass ceiling that is firmly in place over the heads of all too many children can succeed without parents. The very best governments, communities and families can do is to support parents to enable them to be even more effective agents of change for their children. But communities and governments do have other roles they must play if we are radically to improve the life chances of poorer children' (Field, 2010:18). Another review also confirms the importance of parenting and the corresponding lack of interventions to support it: 'Despite the wealth of evidence on the importance of good parent-child relationships to child well being, and on the negative impact of inter-parent conflict and adult relationship problems (both more likely to occur in circumstances where there are other difficulties), there are few preventive interventions that have aimed to strengthen family relationships, or to address these aspects of risk' (Statham and Smith, 2010:28). A third review identified parents as key to the learning outcomes of children: 'Engaging parents in supporting learning in the home is the most successful way of raising student achievement and is where schools should focus their efforts in supporting parents' (Stratham, Harris and Glenn, 2010:1). A final review summarised the state of knowledge as follows: 'we know that the early home

In the area of staff capacity, studies have identified a range of staff competencies that influence child outcomes in the early years sector, including interaction style[23], teaching skills[24], personality[25], training[26], and general approach[27]. In Ireland, a recent study on how staff interaction with children in the early years sector found that they 'prioritised children's social development over their cognitive

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learning environment is the single biggest influence on a child's development – more important than material circumstances or parental income, occupation or education. Indeed, the quality of a child's relationships and learning experiences in the family has more influence on achievement than innate ability, material circumstances or the quality of pre-school and school provision' (Allen, 2011:57).

22 This was underlined in a recent review as follows: 'effecting change in a distal variable [indirect influence] will not necessarily lead to change in child outcomes, unless it is followed by change in proximal variables [direct influence]. Interventions that are based on addressing distal variables – such as welfare benefits to reduce child poverty – need to ensure that change is also happening at the proximal level if they are to be effective in improving outcomes for children. This also means that identification of risk status on the basis of distal variables (such as living below the poverty line) will result in less accurate ascertainment of 'true' risk, and poorer predictive validity. Distal variables are more easily measured, but do not represent the real complexity of risk for children as their main impact on children is via their influence on other, more proximal, variables' (Statham and Smith, 2010). Building on this distinction, another review drew out the following implications for public policy on child poverty in the UK: 'there is much more beyond just improving short-term family incomes in determining the life chances of poor children. A healthy pregnancy, positive but authoritative parenting, high quality childcare, a positive approach to learning at home and an improvement in parents' qualifications together, can transform children's life chances, and trump class background and parental income. A child growing up in a family with these attributes, even if the family is poor, has every chance of succeeding in life. Other research has shown that the simple fact of a mother or father being interested in their children's education alone increases a child's chances of moving out of poverty as an adult by 25 percentage points' (Field, 2010:8).

23 For example, the NICHD Study of Early Child Care and Youth Development led by Jay Belsky found that, in US childcare settings, 'one of the strongest and most consistent predictors of children's development is positive caregiving - that is, sensitive, encouraging, and frequent interactions between the caregiver and the child' (NICHD Study of Early Child Care and Youth Development, 2006b:10). By contrast, the evaluation of childcare settings in Sure Start found no association between caregiver interaction (as measured by the CIS – Caregiver Interaction Scale) and child outcomes: 'The CIS did not show significant correlations with child outcomes and was dropped from subsequent analyses' (Melhuish, Belsky, MacPherson and Cullis, 2010:30).

24 An overview of preschool education in the US concluded that: 'Increased public investment in effective preschool education programs for all children can produce substantial educational, social, and economic benefits, but only if the investments are in programs in which teaching is highly effective. … Effective teaching in early childhood education requires skilful combinations of explicit instruction, sensitive and warm interactions, responsive feedback, and verbal engagement or stimulation intentionally directed to ensure children's learning while embedding these interactions in a classroom environment that is not overly structured or regimented.' (Pianta, Barnett, Burchinal and Thornburg, 2009:50-51)

25 A small-sample study of 41 mothers and home visitors in Early Head Start found that home visitors were likely to spend less time with each mother on home visits if the home visitor was stress-prone. Commenting on this, the authors suggest: 'The stress-proneness of home visitors may be related to their skills in establishing relationships. It may be especially important for social service providers whose work takes them into high-stress situations to have a positive, less stress-prone personality. Individuals with a negative, more stress-prone personality may find the difficult circumstances of parents like those in our sample overwhelming.' (Cited in Mathematica Policy Research, 2002:110).

26 Melhuish, 2004; NICHD Early Child Care Research Network, 1999.

27 For example, attrition rates from the Nurse Family Partnership are influenced by the 'different styles of behaviour of the nurses … those who had low retention had a more directive approach, emphasising the programme's 'perks' and positive outcomes with completion. In contrast, nurses who had higher retention talked more about the importance of tailoring and adapting the programme to the needs and interests of the clients' (Barnes, 2010:11).

or language development'[28]. The Effective Pre-School and Primary Education Project (EPPE) identified pedagogical skills[29], management skills[30], and working with parents[31] as distinguishing features of 'excellent' early years settings. The NICHD Study of Early Child Care and Youth Development defined childcare quality in terms of both 'structural' and 'process' dimensions and found that higher quality was related to better cognitive, language, and pre-academic outcomes, although behaviour problems tended to increase for children who spent more time in childcare[32]. In

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28 This was based on detailed case studies of three early years settings in which three staff were video-taped during six 'scheduled small group learning experiences' (French, 2011). The author found that interactions between staff and children tended to lack 'extended purposive conversations', a synonym for 'sustained shared thinking'. Specifically, it found that: 'The three educators presented as calm, sensitive and responsive to all of the children in their care. They focused on building strong, caring and reciprocal interpersonal relationships with them. Such positive relationships seemed to provide the children with a secure foundation enabling them to focus on their learning experiences without apparent anxiety or fear of reprimand. The educators demonstrated warmth, physical affection and empathy. All three affirmed and encouraged children regularly. … . Looking across the data in relation to the three educators, one common thread appeared to be little emphasis on engagement in purposive conversations designed to develop children's thinking and language. This is evidenced by the few open-ended questions. While acknowledging the brief time of data gathering, few of the interactions analysed were in relation to scaffolding and modelling in the SGLEs [scheduled small group learning experiences]. … . This raises serious questions about whether there is sufficient emphasis on strategies to extend conversations in educators' initial training. EPCs [extended purposive conversations] between educators and children are critical for the development of language and thinking for all children but particularly those in the focus settings.' (French 2011:155-6).

29 This was based on detailed case studies of 12 of the 141 early years settings in the EPPE project. It found that: 'The 'excellent' settings were thus found to encourage 'sustained share thinking', a concept that came to be defined as any episode in which two or more individuals 'worked together' in an intellectual way to solve a problem, clarify a concept, evaluate activities, extend a narrative, etc. … . The research found that this did not happen very frequently. … . Our investigations of adult-child interaction suggest that periods of 'sustained share thinking' are a necessary prerequisite for excellence in the early years practice, and it is especially powerful when it is also encouraged in the home by parents. … . The evidence also suggested that adult 'modelling' often combined with sustained periods of shared thinking, and open-ended questioning, was associated with better cognitive achievement. However, open-ended questions were found to make up only 5.1 per cent of the questioning used in the case study settings. … . Adults need, therefore, to create opportunities to extend child-initiated play as well as teacher-initiated group work, as both of these have been found to be important vehicles for promoting learning.' (Siraj-Blatchford, 2010a:157-158).

30 'All managers took a strong lead, especially in curriculum and planning. In most of the settings the strong leadership was characterised by a strong philosophy for the setting that was shared by everyone working in the setting. The managers of the excellent centres also had a strong educational focus, valued the importance of adult-child interaction, and supported their staff to develop better ways of engaging children.' (Siraj-Blatchford, 2010a:160)

31 'Where a special relationship in terms of shared educational aims has been developed with parents, and pedagogic efforts were being made by parents at home to support children, sound learning took place even in the absence of consistently good pedagogic practice in the pre-school setting. … . The evidence suggested that the 'excellent' settings in disadvantaged areas recognised the importance of, and made significant efforts to encourage strong parental involvement in the educational process.' (Siraj-Blatchford, 2010a:160-161)

32 The NICHD (National Institute of Child Health and Human Development) Study of Early Child Care and Youth Development (SECCYD), was based on 1,261 children recruited at birth and assessed at 15, 24, 36, and 54 months. The study measured childcare quality in two ways: structural or regulable features of childcare (such as adult-child ratio, group size, caregiver's education level) and process features (such as showing a positive attitude, having positive physical contact, responding to vocalisations, asking questions, praising, encouraging, teaching, telling, singing and eliminating negative interactions). It found that both structural and process features of childcare were 'modestly to moderately predictive' of child outcomes (NICHD Early Child Care Research Network, 2006a:99) but also found that 'only a small percentage of children received a lot of positive caregiving' (NICHD Early Child Care Research Network, 2006b:11). The policy implications of these findings directly support the NEYAI logic model: 'Our results provide support for programs designed to improve child-care quality. These include policies that invest funds in child-care teacher training and professional development, offer incentives to programs to provide quality care, support regulations and

other fields, such as counselling and psychotherapy, there is evidence that front-line staff characteristics, and the therapeutic relationship formed with clients, has an impact on outcomes[33]. Across these different studies, an overarching finding is the strong association between the quality of adult-child interactions and the quality of child outcomes[34], and this knowledge is reflected in the importance given to 'interactions' in both the National Framework for Early Childhood Education (Síolta[35]) and the Early Childhood Curriculum Framework (Aistear[36]).

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inspections, offer vouchers so that parents can afford higher quality care programs, and fund programs such as Head Start and prekindergarten that allow access to high-quality care for children from low income families. Because high-quality care for infants and toddlers is often unavailable, it is especially important to focus efforts on improving the quality for children younger than three years of age .. … . In addition, our results provide support for policies that reduce the amount of time children spend in child care. … . the findings from the NICHD SECCYD also support policy initiatives that promote growth-facilitating parenting, including home-visiting programs already demonstrated to be effective in this regard' (Ibid:114).
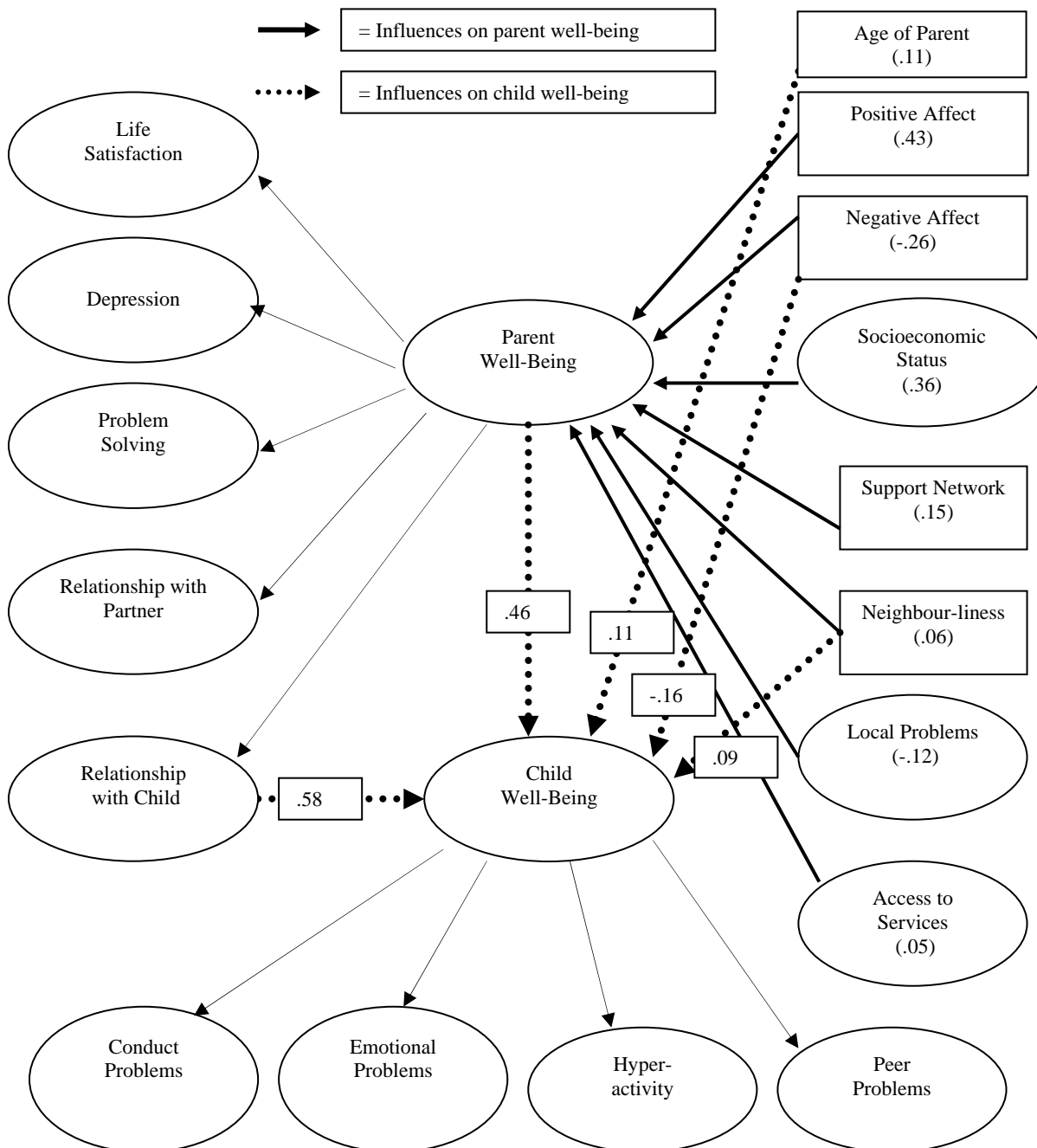
33 The therapeutic relationship is seen by many commentators as 'the sine qua non of successful therapy' (Sprenkle, Blow and Dickey, 1999:334). It has been suggested that many of the qualities of effective therapist-client relationships – emotionally warm, available, attentive, responsive, sensitive, attuned, consistent and interested - are in fact generic to many relationships both in work and family (Howe, 1999:99). The writings of Carl Rogers laid particular stress on the helping relationship by emphasising the need to show clients – and be experienced by clients as showing – unconditional positive regard, accurate empathic understanding, and openness to creative solutions (Rogers, 1957). One review of the literature, based on the findings of over 1,000 studies, recommended three ways to improve the therapeutic relationship: (1) accommodate the client's motivational level and state of readiness for change; (2) accommodate the client's goals for therapy; and (3) accommodate the client's view of the therapeutic relationship (Hubble, Duncan and Miller, 1997:Ch.4; Duncan 2010). These considerations, while specific to the therapeutic context, have more general applicability to all caring relationships.

34 For a review, see French, 2011.

35 Standard 5 (of 16) states: 'Fostering constructive interactions (child/child, child/adult and adult/adult) requires explicit policies, procedures and practice that emphasise the value of process and are based on mutual respect, equal partnership and sensitivity.' (Department of Education and Skills, 2010a:39).

36 One of the four guidelines for good practice is 'learning and developing through interactions'. It states: 'Relationships are at the very heart of early learning and development. Through their early interactions babies learn to feel secure, to communicate, and to enjoy being with people. As they grow and develop, toddlers and young children love to play, to chat, to watch, and to be with others. Children build relationships, communicate, express love and affection, play together, learn, and have their needs met through contact with others. These guidelines identify a range of interaction strategies and methods which the adult can use to enhance children's learning and development.' (National Council for Curriculum and Assessment, 2009:27).

Figure 2 Influences on the Well-Being of Parents and Children

Note: The relationship between each independent variable and the two dependent variables (parent well-being, child well-being) is expressed as a standardised coefficient and reflects the relative weight of influence of each independent variable on the dependent variables. Thus, for example, the two largest influences on parent well-being are positive affect (.43) and socio-economic status (.36) while the two largest influences on child well-being are the parent's relationship to the child (.58) and the parent's well-being (.46). Source: Pratschke, McKeown and Haase, 2011.

In the area of project capacity more generally, the evaluation of Sure Start found that child and parent outcomes were better in projects which were more proficient at implementing the 18 guiding principles of the programme[37]. Although the 'detected relationships are not strong[38], the evaluation drew attention to 'empowerment' as an aspect of implementation that merited attention; this aspect of capacity was defined as 'the extent to which procedures are in place that actually increase parent and staff participation and collaboration in decision-making and programme activities. The programme characteristics that go with empowerment include community groups and parents being involved in the planning and delivery of services; parent representation; staff training opportunities; clear exit strategies for users; services to include self-help groups; evidence that staff and users constitute a learning community; and evidence of mutual respect for all parties.'[39]

Finally, inter-agency cooperation is seen as an important aspect of capacity in the NEYAI but quite challenging to assess from an evaluation perspective. Possibly because of this, there are few well-designed studies which show that interagency working has substantial measurable impacts on services users[40]; although there are studies which show positive outcomes for professionals and

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37 This was based on a random sample of 150 of the first 260 Sure Start Programmes in England and a random sample of 12,575 nine-month olds and 3,927 three year olds. The 18 guiding principles of Sure Start Local Programmes (SSLPs) are: (1) SSLP has a well-articulated vision that is relevant to the community; (2) SSLP Partnership Board includes a balanced representation of local organizations, local education authority, social services, local NHS, voluntary and community organizations, and local parents; (3) The Partnership is functional; (4) SSLP has an intention to empower users and service providers; (5) Communication systems reflect and respect the characteristics and languages of the host communities; (6) SSLP has effective leadership/management; (7) Multi-agency teamwork is established in the SSLP; (8) There are clear pathways for users to follow in accessing specialist services; (9) Staff turnover is low; (10) SSLP takes account of and acts upon evaluation findings; (11) SSLP has strategies for identification of users; (12) SSLP is showing a realistic and improving reach of children in the area; (13) SSLP is aware of reach and has strategies to improve/sustain use of services over time; (14) Service delivery reflects the guidance requirements for the provision of core services in support, health, and play & childcare; (15) SSLP service delivery reflects intention to target children, parents & families and the community; (16) SSLP shows innovative features; (17) Services accommodate the needs and preferences of a wide range of users; (18) Overall, the SSLP has a welcoming and inclusive ethos (National Evaluation of Sure Start Team, 2005b, Appendix 5).

38 Melhuish, Belsky, Anning, Ball, Barnes, Romaniuk, Leyland and the NESS Research Team, 2007:548; see also National Evaluation of Sure Start Team, 2005b. This was based on a random sample of 150 of the first 260 Sure Start Programmes in England and a random sample of 12,575 nine-month olds and 3,927 three year olds.

39 'The finding that empowerment is related to two of the eight measures of programme impact upon child and parenting outcomes, in particular two of the five parenting measures (9-month-old maternal acceptance, 36-month-old home learning environment), suggests that strengthening programme activities relevant to empowerment should improve their effectiveness in influencing parenting. Note that empowerment in this study is not a self report measure.' (Melhuish, Belsky, Anning, Ball, Barnes, Romaniuk, Leyland and the NESS Research Team, 2007:59).

40 'For despite much rhetoric about, and investment in, partnership working as the panacea for complex problems, we still know relatively little about the workings of these strategic partnerships and how they actually engage with, and improve, front-line practice and outcomes for service users. … Indeed, we are in only the early stages of identifying evidence that such partnerships improve outcomes' (Morrison, 2010:313). A meta-analysis of the effectiveness of early years programmes found that 'comprehensive services are neither necessary nor sufficient for large sustained gains' (Barnett, 2011:977). In Ireland, a qualitative study of a five-year inter-agency process found that 'a good inter-agency process alone may not guarantee better outcomes' (McKeown, 2011; 2012).

agencies[41], and also studies which show how the absence of inter-agency working contributes to system failures in protecting children from neglect, abuse or even death[42]. While this does not challenge the value of inter-agency working, or the link between service capacity and outcomes, it draws attention to the need for this evaluation to find out if inter-agency structures translate into changes in how front-line services are delivered and experienced by children and their parents.

Returning to the logic model, the precise way in which the different elements of the model operate in practice, and connect with each other as covariates or causes, cannot be represented in advance of the evaluation. However as a simple framework, it serves to clarify the type of research design which is needed to meet the objectives of the evaluation. It does this by describing the theory behind the programme and identifying the different categories of data that need to be collected in order to test if the programme is achieving its expected outcomes and, if so, how. In other words, the logic model sets out a set of hypotheses which will be tested through a statistical model of how NEYAI actually works, based on the evidence available.

4. Research Design

The overall objective of NEYAI can be stated in relatively simple terms: to improve the capacity of childcare services in order to improve outcomes for children and their parents. Equally, the questions at the heart of this evaluation can also be stated in relatively simple terms:

(i) Does NEYAI have an impact on children and their parents by comparison with a 'matched' sample of those who have not participated in NEYAI?

(ii) If NEYAI has an impact, how does this come about, for whom, in which projects, using what type of intervention(s), etc?

Designing a research project in order to answer these questions with robust scientific evidence is not a simple undertaking however. That is why it may be useful to begin by setting out some of the challenges encountered in preparing this research design.

4.1 Challenges in the Research Design

NEYAI could be described as multi-faceted in that it is *multi-programme* (11 different interventions), *multi-theme* (covering different aspects of child and parent well-being using a range of new and existing programmes), *multi-site* (each project works with different childcare centres), *multi-agency* (each project comprises a lead organisation and at least two other organisations), and *multi-level*

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41 These outcomes include improved understanding each other's role, greater willingness to share information, reduction in duplication, better connection to local communities, etc. See Stratham, 2011; Barlow and Scott, 2010; CfBT Education Trust, 2010; Duggan and Corrigan, 2009; Oliver, Mooney and Stratham, 2010; Robinson, Atkinson and Downing, 2008.

42 See, for example, Inquiry Team in Roscommon Child Care Case, 2010; Lord Laming, 2003.

(initiative-level, thematic-level, project-level, learning community-level). Unlike a standard 'programme' evaluation – where programme is understood as a defined set of inputs and processes, often manualised, and delivered to either a population or specific target group – each of the 11 NEYAI projects has its own unique programme. In that sense, this could be described an evaluation of 11 programmes rather than one programme.

These complexities derive, at least in part, from the fact that, in its overall design, the objective of the initiative (which is to build a national evidence-base for policy and practice in the early years sector), is not fully aligned to the corresponding research requirements for producing a national scientific evidence-base. For example, projects were selected before an evaluation framework was put in place. A practical if understandable consequence of this design is that some projects have questioned why they are being funded to carry out a range of activities for all children in the 0-6 age range even though the evaluation, for reasons explained later in this section, can only evaluate a subset of those activities, albeit the subset which constitutes their most 'substantial and sustained' interventions. A further and potentially more serious consequence is that, while some projects are delivering programmes that are well-developed and already evidence-based, others appear to be at a much earlier stage in the cycle of programme design and development; when this is seen in the context of the relatively small effect sizes that well-developed manualised programmes can produce (see Appendix One), then the 'evaluation-readiness' of some projects might be questioned.

These challenges have been encountered in the course of preparing the research protocol, and to some extent have been resolved as much as they can be. There is also some reassurance, of a kind, that these difficulties are not unique to the evaluation of NEYAI since similar challenges were encountered in the evaluation of Springboard[43] in Ireland and Sure Start[44] in Britain. Nevertheless it is important that these challenges are recognised, not just as constraints on the evaluation but as part of the initial learning from the NEYAI about the need to ensure that, during the design stage,

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43 'It is important to note that the diversity of interventions which constitute the Springboard programme pose a challenge for the evaluation since it is not possible to link outcomes to specific therapeutic inputs, given that the inputs vary widely in their approach and content. In other words, the design of the Springboard programme – which is similar to the design of many other family support programmes – limits the capacity of the evaluation to elucidate the mechanisms by which programme inputs are linked to programme outcomes' (McKeown, Haase and Pratschke, 2006; see also 2001).

44 'The great diversity among SSLPs [Sure Start Local Projects] posed a particular set of challenges for the National Evaluation in that there were not several hundred programmes delivering one well-defined intervention, but several hundred unique and multifacted interventions operating in different places' (Melhuish and Hall, 2007:16). Similarly, Rutter has observed that 'there is no such thing as Sure Start in the sense of a defined programme with a definable intervention strategy (despite government implying the contrary). Instead, it constitutes a large 'family' of programmes that involve as much diversity as commonality.' (Rutter, 2006:138).

programmes which aim to produce an 'a strong evidence-base'[45] must take into account the corresponding research requirements for producing a strong evidence-base.

4.2 Confirmatory Programme Evaluation

This research design is based on an approach that is sometimes referred to as confirmatory programme evaluation[46]. This approach simultaneously assesses the impact of the programme and the pathways by which that impact may have come about. In order to do this, it is necessary to have a clear understanding of the theory which informs the programme – such as outlined in the logic model above - and to test the theory against the evidence. The principle steps in confirmatory programme evaluation are:

1. Specify programme theory and processes that are expected to affect outcomes.
2. Identify and measure outcomes and their timing over the short, intermediate, and long term.
3. Collect or obtain data on hypothesised mediators of the programme theory and key background variables necessary to identify programme impact.
4. Estimate main effects of programme participation for the total group and relevant subgroups, quantifying the temporality, size, gradient, specificity, consistency, and coherence of programme effects.
5. Where main effects are detected, test hypothesised causal mechanisms of the programme theory to account for estimated effects.
6. Interpret the pattern of findings to facilitate generalisation and knowledge transfer.
7. Identify formative uses of findings for programme improvement, including modifications to programme theory, programme implementation, and analysis of programme effects.

We now outline, based on this approach, how we answer the two core questions at the heart of this evaluation.

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45 The Request for Tender For Evaluation of National Early Years Access Initiative emphasises the importance of 'establishing a strong evidence-base to contribute to improvements in practice and … policy' (p.8).

46 According to Reynolds who first used the term, 'Confirmatory evaluation is a theory-driven methodology for investigating the effects of social and educational programs. In a theory-driven impact evaluation, the explicit theory of the program is highlighted to establish an a priori model of how the program is expected to exert its influence. Causal uncertainty is reduced through an examination of the empirical pattern of findings against the expectations inherent in the program. … Confirmatory evaluation attempts to strengthen causal inference through systematic investigation of the nature of the relationship between program participation and outcome. Special emphasis is given to testing causal mechanisms that are associated with program effectiveness. A major tenet of confirmatory program evaluation is that the plausibility of an estimated effect can be strengthened through systematic testing of causal mechanisms and other aspects of the program-outcome link, such as consistency and specificity of estimated effects. In the confirmatory evaluation approach, the theory of the program is used to document and interpret the pattern of findings to strengthen confidence in program-outcome links. … Three key questions addressed are: Is program participation independently and consistently associated with key outcomes? Do the estimated effects vary by background characteristics, such as child and family attributes, or by program components? What are the processes or pathways through which participation leads to effectiveness in the short term and over time?' (Reynolds, 2005:2401-2; see also 2004; 2002).

4.3 Does NEYAI have an impact?

We propose a quasi-experimental design[47] since, in the circumstances, this is the most appropriate way of answering the first evaluation question: does NEYAI have an impact on children and their parents by comparison with a matched sample of those who have not participated in NEYAI? This design involves comparing the treatment group (those who receive the 'NEYAI treatment') with a comparison group (those who receive the 'usual treatment'), both groups matched in terms of demographic and socio-economic characteristics. More specifically, this design involves three related elements:

(i) assessing the treatment group at baseline (before the NEYAI intervention) and at follow-up (immediately after the NEYAI intervention) in order to measure any changes in the intervening period;

(ii) assessing a matched comparison group at baseline (without any intervention other than 'treatment as usual') and at follow-up (using the same intervention period as the treatment group) in order to measure any changes in the intervening period;

(iii) comparing changes in the treatment group and the comparison group in order to establish the difference in outcomes between NEYAI intervention and 'treatment as usual', thereby measuring the *net* impact of the intervention.

The measurement of difference in outcomes between the treatment and comparison groups - 'between-group differences' - is an acceptable and accepted way of measuring impact provided that all of the measured differences between the two groups are taken into account. However it also needs to be recognised that it is not a perfect comparison since, due to the absence of randomisation[48], there may be unmeasured differences between the two groups which could account for any difference in the observed net impact. The perfect comparison involves an experimental design, usually called a randomised control trial (RCT), but this is not an option since the NEYAI was not designed with that in mind and, moreover, could be difficult to design in practice. Nevertheless, the quasi-experimental method provides an important degree of confidence that,

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47 A quasi-experimental method involves setting up two groups (an treatment and comparison group) except that the process of random allocation is not used to establish each group, either because of ethical or practical considerations, or both. In the case of NEYAI, the reasons are entirely practical due to the design of the programme which effectively rules out the possibility of random allocation. The absence of random allocation means that it is not possible to be sure that the treatment and comparison groups are perfectly matched. Nevertheless, when both groups are matched on a range of measured variables – bearing in mind that, due to the absence of random allocation, there is no control over unmeasured variables - it may be reasonable to infer that differences between the treatment and comparison groups are attributable to the programme. In this way, the quasi-experimental method is sometimes regarded as an appropriate test of a programme, even if second best to a randomised control trial. Where a comparison group is not possible, the use of advanced statistical techniques to control for the separate influence of each variable in the dataset is a useful alternative except that it cannot control for the influence of participating in a programme versus not participating.

48 The effect of randomisation is to ensure that both groups are matched on measured as well as unmeasured characteristics.

where net impacts are detected, they are more likely to have occurred as a result of NEYAI rather than by chance.

4.4 How does NEYAI have an impact?

Turning to the second question in the evaluation - if NEYAI has an impact, how does this come about, for whom, in which projects, using what type of intervention(s), etc? – the research design involves using structural equation modelling (SEM)[49] to identify all the possible sources of statistically-significant variation in outcomes between the treatment and comparison groups. This approach is based on confirmatory programme evaluation and involves testing each hypothesis in the 'logic model' against the evidence. The detailed steps involved in this analysis are detailed below (Section 9). It is noteworthy that many of the pathways postulated in the logic model above (Figure 1) have themselves been identified through previous confirmatory studies of early years interventions, while SEM was also used to identify the pathways in Figure 2 above.

SEM falls into the broad realm of multiple-regression analysis but, unlike ordinary regression analysis, it allows different levels of influence to be investigated[50]. By comparison with ordinary regression analysis, it also deals in a more satisfactory manner with the distinction between the 'measurement model' which estimates each latent variable and associated degree of error (such as the left-hand side of Figure 2) and the 'structural model' which describes associations between those latent variables (such as the right-hand side of Figure 2).

Statistical analysis, however sophisticated, cannot interpret results much less infer that a statistically-significant association between variables implies that they are causally related. That is why the interpretation of results is a key part of the research design. Establishing a causal link between inputs, pathways and outcomes is fundamentally a matter of interpretation and requires that verifiable criteria are met, to some degree at least, in order to have confidence in the validity of

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49 All modelling will use EQS 6.1 Structural Equation Modelling Software (Bentler, 1995).

50 Traditionally, it has been common for researchers, using regression analysis, to treat all variability in an outcome as attributable to individual-level variation (level 1), and to assume that each individual-level observation is independent and not influenced by the setting which individuals may share such as the same neighbourhood, school, hospital, programme, etc (level 2). The effect of this is to over-estimate individual-level influences, where they occur, and to overlook group-level influences which are properly attributable to setting. When these two sources of variability are not separated in statistical analysis, and only sources of variation at level 1 are considered, there is a danger that the influence of predictor variables may be over-estimated since sources of variation at level 2, where they occur, are assumed to occur at level 1 only; correspondingly, there is an under-estimation of the variability that is random or unexplained, usually referred to as 'the error variance'. Multi-level modelling was invented to overcome these problems which are not just 'statistical' problems but have practical consequences. The practical consequence of this is that, when drawing out practice or policy implications of analysis, one may place too much importance on individual-level predictors or, conversely too little on how these individual-level predictors may vary in their influence from one setting to another.

the interpretation. Within confirmatory programme evaluation[51], and in other fields of inquiry where causal inference is required such as epidemiology[52], these criteria typically include the following:

1. Temporality

This is generally regarded as the most basic criterion of causal inference since a cause must precede its effect in time. That is why the research design for this evaluation is based upon a 'before-and after' comparison of those who participate in NEYAI with those who do not.

2. Size & Strength

This criterion suggests that, other things being equal, the larger the association between programme participation and outcome, the more likely the association represents a true effect. The requirement of 'other things being equal' draws attention to the possibility that the association may be due to the confounding effects of selection bias; for example, those who participate in the programme may be different from those who do not. Within the limitations of quasi-experimental design, these confounding effects are taken into account by controlling for all of the measured characteristics of programme participants.

3. Gradient (dosage-response)

This criterion implies that a causal inference is more justified if, other things being equal, there is a direct relationship between programme participation (such as the number of days or sessions attended, number of contact hours, number of years of participation) and the outcome. This criterion will be difficult to apply in this evaluation, particularly at initiative-level, because each project has a unique programme intervention with the result that dosages are not in equivalent units across projects. Moreover, within some projects, the concept of dosage is not be clearly defined. Although gradient effects have been established in a number of early childhood evaluations[53], the dosage-response relationship may be direct inverse[54].

4. Specificity

This criterion refers to an association between a programme and an outcome which is quite specific to the theory underpinning the programme. For example, if NEYAI projects which focus on language or numeracy development have greater impact on cognitive outcomes than on social skills this would suggest, other things being equal, a causal link between those interventions and outcomes. Similarly, NEYAI projects which focus on enhancing the capacity of parents and which have a

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51 See, for example, Reynolds, 2005.

52 See, for example, Bradford Hill, 1965.

53 Examples include studies of the Abecedarian Project (Campbell and Ramey, 1995), the Chicago Child-Parent Centers (Reynolds, 1994; Reynolds and Temple, 1998), and the Infant Health and Development Program (Ramey, et al., 1992).

54 As indicated above, the NICHD Study of Early Child Care and Youth Development found that higher quality childcare was related to better cognitive, language, and pre-academic outcomes but behaviour problems tended to increase for children who spent more time in childcare (NICHD Early Child Care Research Network, 2006a; 2006b). Similarly, the evaluation of Sure Start suggested that, 'within … deprived communities, children from relatively more disadvantaged families (that is, teen mothers, lone parents, workless households) appeared to have been adversely affected by living in an SSLP community' (Belsky and Melhuish, 2007:49) .

greater impact in that area compared to other projects would strengthen the causal inference about the efficacy of their intervention.

5. Consistency

Consistency refers to an association between a programme and a set of outcomes which has been found consistently across sample populations, at different times and places, under different types of analyses and model specifications, and for similar programme theories. The more consistent the results, the more robust are the causal inferences. Consistency can be 'within-study' which is where the same result is produced using different analytic techniques, or 'between-study' where the result is consistent with findings from previous studies using different samples, social contexts, and programme variations.

6. Coherence

Coherence is essentially about whether the interpretation offered provides a convincing story about the effects of the programme. This criterion focuses on plausibility of the causal mechanisms (or 'active ingredients') which are proposed to explain the association and builds on existing knowledge as well as the theory underpinning the programme. In this evaluation, the coherence criterion will be addressed by building a statistical model of pathways leading to outcomes and then supplementing this by case studies of how those pathways may operate in practice. This aspect of evaluation is often overlooked since, as Reynolds has observed, 'relatively little attention in the evaluation field has been devoted to the pathways or causal mechanisms of change, or more broadly, the environmental conditions that help maintain or enhance effectiveness.'[55]

These criteria are designed to improve the validity of causal inferences while also recognising that knowledge, in the scientific context, always contains elements of conjecture and the possibility of refutation – hence the characterisation of science in a once famous work as 'conjectures and refutations'[56]. In this evaluation, the focus of interpretation will be on projects where a net impact has already been established and where the collection of additional qualitative data may help explain how that net impact came about, particularly where this is not apparent from the statistically-significant associations between inputs, pathways and outcomes. This analysis, in turn, is designed to provide a reasonable platform for drawing conclusions and making recommendations about the type of actions that may be required at the level of practice and policy to improve the quality of care and education for children in their early years.

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55 See, for example, Reynolds, 2005:2406.
56 Popper, 1963.

4.5 Assessing the Design and its Implications

One way of assessing this research design is to ask whether, and how well, it avoids the twin dangers of producing a 'false negative'[57] (such as claiming that the initiative has no impact when it has) or a 'false positive'[58] (such as claiming the initiative has an impact when it has not). That question has also guided the research design.

It could be argued that, in an exploratory initiative such as this, the risk of a false negative could have more serious consequences than a false positive. This is because a false negative may close off the possibility of finding more effective interventions for children and their parents[59], similar to the scenario in scientific research where a false negative may close off valuable lines of further inquiry[60]. At the same time, the danger of false positives should not be underestimated, and may indeed by the more usual scenario, since some programmes claiming to having a positive impact could turn out to be 'false positives' if a scientific evaluation were ever carried out[61].

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57 A false negative is the term used to refer to a finding that is thought to be not-statistically-significant when it is, also referred to as Type I error.

58 A false positive is the term used to refer to a finding that is wrongly thought to be statistically significant, also referred to as Type II error.

59 This risk was also highlighted by the authors of the first impact report on Sure Start Programme: 'readers of this report need to appreciate the critical distinction between evaluations reporting (1) no evidence of effectiveness and (2) the lack of effectiveness. That is, a conclusion that "no evidence of effectiveness could be detected", is distinctly different from concluding that the programme is ineffective in realizing its goals of enhancing child development and family functioning. In other words, absence of evidence (of effectiveness) is not evidence of absence of effectiveness. The critical distinction is between detecting evidence of effectiveness and lack of effectiveness. This distinction is particularly important for this report as it focuses on an intervention that is not necessarily well established in many places for children and families who have not been studied repeatedly over time.' (National Evaluation of Sure Start Team, 2005a:3).

60 The eminent child psychologist and founder of the bioecological model of human development, Urie Bronfrenbrenner (1917-2005), also observed that, from the scientific perspective of discovery rather than verification, 'Type I errors can entail an even greater risk than errors of Type II' because 'dismissing as invalid a finding that points the way to a fuller and more precise explanation for the phenomenon under investigation may result in a greater loss than that produced by accepting a finding that is highly significant because of as yet undifferentiated and thereby confounded factors producing the phenomenon in question (e.g., the failure to distinguish Process from Context). The greater risk in the discovery process of dismissing findings as Type 1 errors is further compounded by the phenomenon of magnification of early environmental differences over time' (Bronfrenbrenner and Morris, 2006:802).

61 For example, the Controller and Auditor General examined programmes in the area of educational disadvantage and, based on a desk-top review of the available evidence, noted the apparent lack of positive impact. This was based on a review of the Educational Disadvantage Initiatives in the Primary Sector between 1984 and 2004 which involved an expenditure of €62 million in the school year 2003/4. The review revealed that reading standards in designated disadvantaged schools - the only indicator for which there is consistent data over the period – deteriorated in the period between 1984 and 2004: 'In both 1998 and 2004, pupils in designated disadvantaged schools had significantly lower average scores than pupils in non-designated schools with a slightly bigger gap in 2004 than in 1998. The data suggest a slight drop in reading standards of pupils in designated disadvantaged schools between 1998 and 2004.' (Controller and Auditor General, 2006, p.51). Reviews of other programmes undertaken by the Controller and Auditor General, such as regeneration of Ballymun at a cost of €942 million, suggest that the impact may never be known due to 'the lack of baseline statistics and inadequate and variable information feedback on programmes. … . In future regeneration programmes, the Department should ensure that the baseline position is established and that there is regular monitoring of key outcomes' (Controller and Auditor General, 2007, p.11)

The need to minimise the risk of false negatives and false positives has shaped the entire research design, but has been particularly influential in shaping three aspects of the evaluation. First, the focus of the evaluation is exclusively on interventions which are *substantial and sustained*. The definition of what constitutes a *substantial and sustained* intervention is left to each individual project based on their judgement that the intervention is capable of producing a measurable impact on children and/or their parents, or indirectly on staff. This requirement may have been taken into account already during the selection of projects but is mentioned here as a core evaluation requirement since interventions which are not *substantial and sustained* are unlikely to produce a measurable impact. This follows logically from the fact that the best programmes for children and their parents tend to produce relatively small effects. These are typically expressed in terms of 'effect sizes' which is a simple way of standardising and comparing the difference between the treatment group and the comparison group (see Appendix One)[62]. For example, childcare programmes like High Scope[63], Early Head Start[64], Effective Pre-School and Primary Education Project[65], all have small effects. The same applies to family support programmes like Sure Start[66] and Springboard[67]. None of this implies that small effects are not worthwhile[68]; only that

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62 The formula involves subtracting the mean at baseline from the mean at follow-up and dividing by their pooled standard deviation. The convention, referred to as 'Cohen's d', is that a coefficient between 0.2 and 0.5 indicates a small effect, between 0.5 and 0.8 indicates a moderate effect, and above 0.8 indicates a large effect (Cohen, 1992; Van Belle, 2002:31). As an example, an effect size of 0.8 means that the score of the average person at follow-up is 0.8 standard deviations above the average person at baseline, and hence exceeds 79% of the baseline scores. Unlike statistical significance, the effect size statistic is independent of the group size and therefore considered more informative and meaningful. The Centre for the Study and Prevention of Violence at University of Colorado in Boulder, USA which selects 'Blueprints Model Programs' on the basis of 'the most rigorous tests of effectiveness in the field', requires that all Blueprint programmes have 'at least moderate effect sizes' (http://www.colorado.edu/cspv/blueprints). The Promising Practices Network run by the Rand Corporation defines a programme as 'proven' where, inter alia, 'at least one outcome is changed by 20%, 0.25 standard deviations or more' which implies impacts at lower threshold of effects (http://www.promisingpractices.net) (see also Shonkoff and Phillips, 2000:342-343).

63 The overall effect size of the High Scope Perry Pre-School Programme in the US when participants reached the age of 23 was 0.36 (Schweinhart and Weikhart, 1997; Schweinhart, 2004; Schweinhart, Montie, Xiang, Barnett, Belfield, Nores, 2005). At age 14, reading and math scores improved by 0.33 standard deviations, a very significant achievement given that the US achievement gap in reading and math gaps between low-income and middle-income children at kindergarten entry is about 0.50 standard deviations (Barnett, 2011: 975).

64 The evaluation of Early Head Start found that 'overall impacts were modest, with effect sizes in the 10 to 20 percent range, although impacts were considerably larger for some subgroups, with some effect sizes in the 20 to 50 percent range. The overall pattern of favorable impacts is promising, particularly since some of the outcomes that the programs improved are important predictors of later school achievement and family functioning' (Mathematica Policy Research, 2002:xxv).

65 The effect size of high quality pre-school for children at the age of 11, according to the Effective Pre-School and Primary Education Project, was: 0.23 for pro-social behaviour, 0.25 for self-regulation, 0.29 for English, 0.34 for Mathematics, (Sammons, 2010:128-130).

66 The effect size of Sure Start when children were five years old, was 0.12 for Body Mass Index and 0.10 for physical health; for parents, it was 0.24 for harsh discipline, 0.29 for chaos in the home and 0.27 for home learning environment (National Evaluation of Sure Start Team, 2010:29).

67 The effect size of Springboard on children's strengths and difficulties was 0.30; for parents, its was 0.23 for communication between parent and child (McKeown, Haase and McKeown, 2006).

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interventions which are 'light' in their design, intensity and duration are less likely to show a measurable effect.

Second, the overall envelope of resources for the evaluation enables the two core questions to be answered through a sample of 35 children and their parents in each project, in both the treatment and comparison groups, assessed at baseline and follow-up. This yields a total sample of 385 each in the treatment and comparison groups, and a combined sample of 770. As explained below, this sample size is adequate for the evaluation but is also close to the minimum required. For this reason, and in order to minimise the amount of extraneous variation within the sample, it was decided to confine the sample to one age-cohort of children (3.5 years and over) in order to maximise the possibility of finding an impact where there is one (a true positive) and being confident that if no impact is found it is also genuine (a true negative). Conversely, we avoided the risk of splitting the sample into two age-cohorts of children (such as 0.5 to 3.5 / 3.5 and over) since this would run the risk of producing inconclusive results because the resulting sample would lack the power to draw any statistically-significant conclusions about either age-cohort. The fact that there is near-universal uptake of childcare services for children in this age-cohort (3.5 years and over)[69] has the added benefit that there is relatively little self-selection in this population and therefore fewer of the methodological problems normally associated with programme evaluations, like this, which are based on a quasi-experimental method.

Third, at the analysis stage, the risk of a false negative or a false positive could arise from a failure to disaggregate the national net impact of NEYAI into its component project-level impacts, some of which may be positive, some negative, and some with no impact. That is why the analysis will involve assessing the net impact across each project for each set of child outcomes, parent outcomes and staff outcomes. As a result of this analysis, we can be confident that no net impacts, where they occur, will be missed even in the circumstance where a finding of no national net impact may mask positive impacts at project level for particular sets of outcomes.

Overall, the importance of this research design derives from the fact that it will identify impacts, where they occur, and the 'active ingredients' associated with them. This is the type of knowledge that the initiative was set up to produce in order to establish 'a strong evidence-base to contribute to

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68 The lifetime rate of return to the High Scope Perry Pre-School Programme in the US – based on data to age 40 – is estimated to be between 7% and 10%, above the post-World War II stock market rate of return on equity which is about 5.8% (Heckman, Moon, Pinto, Savelyev and Yavitz, 2009).

69 This is the cohort of children in the Early Childhood Care and Education (ECCE) Programme. The eligible cohort has a 17 month age range between 3 years 3 months and 4 years 6 months on 1st September of each year. In the 2010/11, the first full year of the programme, there was a 94% participation rate (Department of Children and Youth Affairs, email, October 2011).

improvements in practice and … policy'.[70] Naturally, it is not possible to know in advance the results of this analysis but the logic model of the programme and the different elements of the research design (including sampling, measurement instruments and data analysis which are detailed below) are sufficiently comprehensive to create a reasonable expectation that this design will yield useful and usable results.

5. Sampling Strategy

As already indicated, a sample of 35 children and their parents will be drawn in each of the 11 NEYAI projects, yielding a total sample of 385 cases. A similar number will be sampled in the comparison group. The decision on sample size was influenced by five main statistical considerations, in addition to the overall budget for the evaluation.

The first consideration is the minimum sample size required to ensure that statistical tests are able to detect a difference between the treatment group and the comparison group. This is called the power of a statistical test and the convention is that a sample which allows differences to be detected in 80% of cases (referred to as a power of 0.8) is acceptable. Conversely, this convention accepts the likelihood that differences between the treatment and comparison group may not be detected in 20% of cases.

The second consideration is the level of significance attached to any result produced by a statistical test. The convention here is that results should be true in 95% of cases (referred to as $p=0.05$). Conversely, this convention accepts that differences detected between the treatment and comparison groups may not be true in 5% of cases.

The third consideration is the effect size which is expected as a result of the programme. As explained in the previous section, the impact of a programme is typically expressed in terms of effect sizes and most effective programmes for children and families tend to achieve effect sizes in the range 0.2 to 0.5 across a wide range of outcome domains and this seems to be an appropriate target for the NEYAI (see Appendix One). Based on these considerations, a sample of 35 participants is appropriate for each group, bearing in mind that most of the statistical analysis will be based on the combined samples of treatment group (385 cases) plus comparison group (385 cases), equal to 770 cases. This is a safe sample size by comparison with more celebrated evaluations of early years programmes[71].

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70 Request for Tender For Evaluation of National Early Years Access Initiative, 2011:8.

71 One of the more celebrated evaluations of a pre-school programme - High Scope which was first introduced into Perry Elementary School in the Michigan city of Ypsilanti in 1960 and has tracked children from then till age 40 – is based on a combined sample of 123 (58 in the treatment group and 65 in the control group) (Schweinhart, Montie, Xiang, Barnett, Belfield and Nores, 2005). Similarly, the Carolina Abecedarian

The fourth consideration is that in order to undertake multi-level modelling, as we propose, there is a 'rule of thumb' which requires a minimum of 30-35 cases in each individual 'cluster' or project. Multi-level modelling is required in order to accurately estimate the sources of variability in NEYAI outcomes that are attributable to individual-level variables (i.e., differences between individual children and parents – level 1) and group-level variables (i.e., differences between the clusters of childcare centres in each project – level 2). The sample of 35 therefore has built in provision for a drop-out of 5 cases per project, equivalent to an attrition rate of 14%.

The fifth consideration is that the sample of children and parents must be related to each other as a family – hence the term 'children and *their* parents' – since the evaluation needs to assess how NEYAI impacts not only on children and parents as separate individuals but also on both as a family unit, including the separate dynamics within the family as possible mediators of outcomes. The rationale for this has already been spelt out in logic model. This implies that once a child is selected, then the child's parent is automatically selected, and *vice versa.*

5.1 Treatment Group Sample

The treatment group sample is drawn from a list, prepared by each project, of all children aged 3.5 years and over, and their parents, who are the target of a *substantial and sustained* intervention. This list will be prepared by each project from which the evaluation team will then draw a random sample of 35. This will yield a total sample of 385 children and their parents.

The list of children and their parents prepared by each project will also indicate the childcare centres which are delivering the interventions and the member of staff in each centre who works most closely with the child and, if applicable, with the parent. The evaluation will link these two elements in order to test if staff capacity in childcare centres – at individual-level, centre-level and project-level - has an impact on child and parent outcomes and, if so, how.

A detailed set of instructions has been prepared for the Coordinators in each project to make sure that the process for recruiting the treatment group sample is consistent across the 11 projects. The full set of instructions are in Appendix Two.

Early Intervention Project was based on just 111 infants born between 1972 and 1977 of which 57 were in the treatment group and 54 in the control group. An overwhelming majority (98 percent) of the children who participated in the experiment were African-American. Another well-known programme, The Incredible Years Programme, is based on a series of evaluations with samples in the 25-35 range (see Webster-Stratton, 1981; Webster-Stratton, 1984; Webster-Stratton, 1994; Webster-Stratton and Hammond, 1997; Webster-Stratton, Reid and Hammond, 2004; Spaccarelli, Cotler and Penman, 1992).

5.2 Comparison Group Sample

The comparison group sample is created in three stages. First, the catchment areas of the treatment group are identified in terms of demographic and socio-economic characteristics. For each NEYAI project, its catchment area is defined as the sum of the catchment areas of each childcare centre participating in the evaluation.

The data used to define these catchment areas is derived from the 2006 Census of Population, based on 'Small Areas' which are have a minimum of 65 households and an average of 100 households; as such the data is almost 'street-level' and allows catchment areas to be defined precisely. This data will be expressed in terms of its deprivation score using the Pobal-Haase Index[72]. This data has the advantage that it is immediately available and, more to the point, the only data that allows areas to be defined in this way. The disadvantage is that while it is possible to match treatment and comparison areas in terms of deprivation scores, it is not possible to match them on other family characteristics which may be more relevant to this evaluation such as child and parent well-being, family functioning, neighbourhood and community factors. Nevertheless, the use of deprivation scores is the best available option and there are precedents for drawing comparison groups in this way, a notable example being the Sure Start evaluation[73].

Second, having established the level of deprivation in these catchment areas, a set of comparison areas will be identified which are matched as closely as possible to the treatment areas. In each of these comparison areas, childcare centres will be drawn from the Pobal database to match the

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72 The Pobal-Haase Index was created by Trutz Haase and Jonathan Pratschke with funding from Pobal (Haase & Pratschke, 2005, 2008). The index is based on an understanding of affluence and deprivation, verified by confirmatory factor analysis, as having three dimensions which they refer to as: demographic profile, social class composition, labour market situation. The index combines these dimensions into a single score which is calculated at Electoral District level (3,409 units) and Small Area level (14,937 units). It has a mean score of zero and a standard deviation of ten; consequently nearly all scores are situated within three standard deviations of the mean, ranging between -30 and +30. Based on this index, areas are classified as 'disadvantaged' (score of -10 to -20), 'very disadvantaged' (score of -20 to -30), or 'extremely disadvantaged' (score of < -30). Further details at www.pobal.ie and www.trutzhaase.eu.

73 The first phase of the National Evaluation of Sure Start Impact Study compared children/families in 150 of the first 260 SSLP [Sure Start Local Programmes] with their counterparts living in 50 communities that did not have up-and-running SSLPs at the time they were studied but which were to have programmes shortly after data collection (that is, Sure Start-to-be communities). 'Overall data were collected on 12,575 nine-month-olds and 3,927 36-month-olds and their families in 150 SSLP communities, and on 1,509 nine-month-olds and 1,101 36-month-olds and their families in the comparison communities' (Belsky and Melhuish, 2007:136-137). In a subsequent follow-up, a sub-sample of the children in SSLP areas were compared to a sample of children from the Millennium Cohort Study (MCS) not living in SSLP areas. Propensity scoring was used to estimate if there was a significant different between the two sets of areas in terms of '85 indices of deprivation and other areas characteristics obtained from administrative sources' (National Evaluation of Sure Start Team, 2010:11). The results of this analysis revealed that 'SSLP populations were, in general, more disadvantaged than the comparison population drawn from the MSC sample', and this in turn, 'posed problems in making comparisons between roughly equivalent NESS and MSC groups in order to evaluate the putative SSLP effects' (Ibid). The creation of a comparison group for the NEYAI evaluation is unlikely to generate such challenges because we expect to be able to find comparison areas that are a close match of treatment areas on the Pobal-Haase Index.

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childcare centres in the treatment group[74]. The comparison group therefore is taken to represent the 'usual', 'average' or 'conventional' treatment provided by childcare centres to children and their parents. In other words, the basis of comparison in this evaluation is 'NEYAI treatment' versus 'treatment as usual' rather than 'NEYAI treatment' versus 'no treatment'. This also means that we explicitly exclude areas from the comparison group where it is known that other intensive childcare initiatives are operating such as Ballymun, Coolock and West Tallaght where there is already a significantly-above-average investment in early years programmes. This approach is reasonable and, in the circumstances, the best option available but it also needs to be acknowledged that 'treatment as usual' is an umbrella term which conceals more than it reveals since we do not know what 'usual treatment' actually means or how much it varies within as well as between childcare centres.

Third, the evaluators in collaboration with Pobal, will approach the City/County Childcare Committees and/or Partnership Companies in the identified areas and invite them to participate in the study. If agreeable, they will be asked to nominate someone who will act as a Study Coordinator in order to liaise with the selected childcare centres in their area. These Study Coordinators, whose role in the evaluation will be the same as the Project Coordinators in the treatment group, will be briefed by the evaluation team based on the same set of guidelines (see Appendix Two). Identical procedures will be used to select the sample of children.

The benefits to the City/County Childcare Committees and/or Partnership Companies of participating in this study are similar for those who are already participating in the NEYAI – excluding the benefit of implementing an NEYAI project - since each will receive study results for their area and will participate in a broader national study of childcare. Our expectation is that this benefit, in conjunction with the support of Pobal, will be sufficient to ensure their willingness to participate in the study and to adhere to its requirements.

6. Measurement Instruments

The dataset for the evaluation is generated through the following linked set of measurements:
- ✓ Child Questionnaire
- ✓ Parent Questionnaire
- ✓ Staff Questionnaire
- ✓ Template for describing each project intervention in the evaluation
- ✓ Data extraction on project area characteristics
- ✓ Data extraction from the Growing Up in Ireland database

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74 We know from the Pobal database that there are 1,278 'community-based' childcare centres in the country, most of which are in disadvantaged areas.

✓ Template for observing the learning community

6.1 Child Questionnaire

The purpose of the Child Questionnaire is to assess the well-being of each child across a wide range of domains that are recognised as central to child development including: physical health; social competence; emotional maturity and regulation; language and cognitive skills; communication skills. The assessment of the child will be carried out in the childcare centre, jointly by the Childcare Leader and Childcare Worker who have a thorough knowledge of the child, and must know the child for at least a month. The questionnaire requires that answers are based on careful and reliable observation of all aspects of the child's development. Results of the Child Questionnaire are entered on-line by childcare staff. The Child Questionnaire was piloted in two childcare settings – none of which are part of this evaluation - and it can be completed in about half an hour.

The conceptual framework underpinning the Child Questionnaire is graphically illustrated in Figure 3. There is a detailed guide to every question in Appendix Three and the actual questionnaire is in a separate document. The left-hand-side of Figure 3 illustrates our theoretical understanding of the constituent elements of child well-being while the right-hand-side illustrates its likely determinants. This understanding, though not new or different from existing paradigms of child well-being, is a working hypothesis that will be tested against the data (see Section 9 below).

The main instrument within the Child Questionnaire is the Early Development Instrument (EDI). The EDI was developed at the Offord Centre for Child Studies at McMaster University in Hamilton, Canada. It has been validated as a measure of children's readiness to learn at school, based on data from over 16,000 Canadian children, collected in the spring of 1999[75]. The EDI has been tested in both pre-school and school settings and there is a 'high inter-rater reliability' between the scores of early childhood educators and teachers[76]. In Ireland, the EDI is being used to evaluate the Preparing for Life Programme by UCD Geary Institute[77] and has been used in a city-wide study of

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75 Janus, Brinkman, Duku, Hertzman, Santos, Sayers, and Schroeder, 2007; Janus and Offord, 2007.

76 'In order for the EDI to provide reliable and meaningful information, its respondents need to be very familiar with the range of appropriate child behaviour and skills within an early learning setting and be familiar with the specific abilities of each child. Kindergarten teachers and early childhood educators have proven to be the best respondents for these indicators. In fact, there is a high inter-rater reliability between these two types of professionals (Janus & Offord, 2007). Arguably, parents would seem to be the most knowledgeable experts on their children; however, although parent ratings on the EDI correlate well with teacher ratings, they are not as close as those of other teachers (See Table 10.2). This could be due to documented differences in the patterns of child behaviour between the home and school setting (Janus & Offord, 2007). As well, teachers are more aware of children's specific academic skills than many parents and their training in child development provides them with a fairly uniform background from which to assess their students in comparison with a standard of what levels of ability constitute 'school readiness to learn'.' (Janus, Brinkman, Duku, Hertzman, Santos, Sayers, and Schroeder, 2007:11; see also Janus and Offord, 2007).

77 Doyle and McNamara, 2011.

children in all infant classes in Cork by UCC [78]. The EDI has been adopted as the national measure of children's health and development in Australia[79]. Use of EDI is regulated by a license fee, and the raw data is post-coded by the Offord Centre.

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78 Margaret Curtin, Department of Epidemiology and Public Health, UCC. Personal Communication.

79 In Australia, the EDI is referred to as the AEDI (Australian Early Development Index). In 2009, the AEDI was used in a census of the 5-year old population, with an estimated coverage of 97.5% (261,147 children), and the Australian Government has made a commitment to repeat this census every three years. In 2004, the AEDI was embedded in the Longitudinal Study of Australian Children thereby facilitating an assessment of its ability to predict outcomes later in life.

Figure 3 Conceptual Framework Informing Child Questionnaire

Aspects of Child Well-Being	Influences on Child Well-Being

Physical Health & Well-Being

Social Competence

Emotional Maturity

Child Well-Being

Language & Cognitive Skills

Communication Skills & General Knowledge

Emotion Regulation

Child characteristics including: gender, age, disability, temperament

Parent characteristics including: affect, optimism, self-esteem, emotional intelligence, health, financial well-being, lifestyle, support network

Family characteristics including: home, socio-economic status, neighbourhood

Staff and centre capacity

Project characteristics and intervention

The instrument can also be completed by parents but their assessments tend to be give higher ratings for the child's abilities. We are not in a position to evaluate the extent to which assessments by childcare staff might correspond with assessments by teachers. Despite this limitation, the assessments are being carried out by the same childcare staff at baseline and follow-up and this provides a consistent basis for comparing change in the intervening period.

In addition to the EDI, the Child Questionnaire includes a measure of the child's emotional regulation using the Emotion Regulation Checklist (ERC)[80]. This is based on a growing body of evidence which suggests that a child's capacity for emotional self-regulation is a strong predictor of well-being generally[81] as well as school-readiness and school outcomes[82], and has been used in the assessment of pre-school children[83].

The Child Questionnaire also contains a measure of inter-agency working based on the rationale that, where this occurs, it will manifest at the front-line of service delivery for children and their parents. Three questions are used to measure inter-agency working: (i) has there been any contact with any other agency or service about the needs of this child during the previous four weeks; (ii) how many times there has been contact during the previous four weeks; and (iii) whether the response has been helpful. The questions, as worded, are suitable for the baseline (since some children may only be known to the childcare centre for 4 weeks) but will be adjusted to give a longer timeframe in the follow-up (since all children will be in the childcare centre for the previous school year). A similar set of questions are also asked in the Staff Questionnaire (Section D). Aspects of inter-agency working are also covered in the Parent Questionnaire (H2.6: 'Staff help me to contact other services when I need to') with a matched item in Staff Questionnaire (D3.6: 'I help parents to contact other services when they need to').

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80 Shields and Cicchetti, 1997.

81 The results of a recently published longitudinal study - based on the Dunedin Multidisciplinary Health and Development Study which tracked 1,037 children from birth (in 1972/3) to 32 years with 96% retention rate - found that 'childhood self-control predicts physical health, substance dependence, personal finances, and criminal offending outcomes, following a gradient of self-control. Effects of children's self-control could be disentangled from their intelligence and social class as well as from mistakes they made as adolescents' (Moffitt, et al, 2011:2693). The same study included analysis of a cohort of 500 sibling-pairs – based on the Environmental Risk Longitudinal Twin Study (E-Risk) in England and Wales which tracks the development of a representative birth cohort of 2,232 twin children born in 1994/5 – found that 'the sibling with lower self-control had poorer outcomes, despite shared family background. Interventions addressing self-control might reduce a panoply of societal costs, save taxpayers money, and promote prosperity' (Ibid).

82 This is a major finding of The Effective Provision of Pre-School Education (EPPE) research project which is a 12-year, mixed-method research design following the progress of over 3000 children, aged 3–11 years in 141 pre-schools and 800 primary schools across England since its inception in 1996. 'The EPPE has found that that the strongest predictor of children's resilience to disadvantage is in their level of 'Self-regulation' (or 'Independence and Concentration') at the start of school (Sylva et al., 2008). Additionally, the early years HLE [Home Learning Environment] also has a strong and long-lasting effect on children's later self-regulation (Sammons et al., 2007). Self-regulation in this study was measured by questions about the child's willingness to 'work things out for themselves', 'seeing task through to the end' and 'persevering in face of difficulty.' (Siraj-Blatchford, 2010b:471-2). Building on the concept of self-regulation, the EPPE study distinguished between 'mastery-oriented' and 'helpless-oriented' children noting that: ''Helpless' children have been found to be less persistent; they give up easily as they worry about their lack of ability. But when 'mastery oriented' children experience a setback; they tend to focus on effort and strategies instead of worrying that they are incompetent. These dispositions to learn seem to be very powerful and are associated with the development of positive early personal and social identities. Positive dispositions have been found to provide resilience (Werner & Smith, 1982; Claxton, 1999) and to lead to positive lifelong 'learning trajectories' (Gorard et al., 1999).' (Ibid). See also Shields, Dickstein, Seifer, Giusti, Dodge-Magee and Spritz, 2001; Fantuzo, Bulotsky-Shearer, Fusco and McWayne, 2005.

83 Fantuzo, Bulotsky-Shearer, Fusco and McWayne, 2005.

6.2 Parent Questionnaire

The purpose of the Parent Questionnaire is to assess the well-being of each mother across a wide range of domains that are recognised as central to personal well-being and the well-being of children. The Parent Questionnaire will be completed using a face-to-face interview with the mother of the 'focus child', the latter defined as the child attending the childcare centre who has been randomly selected to participate in the evaluation. Each parent will be interviewed in the home, or elsewhere if that is her preference, and at a time that is agreed with the interviewer[84]. The Parent Questionnaire is similar to a questionnaire that has been used in numerous studies by members of the research team[85] – with the addition of some new instruments, some of them from the GUI – and for that reason, it is considered unnecessary to pilot it.
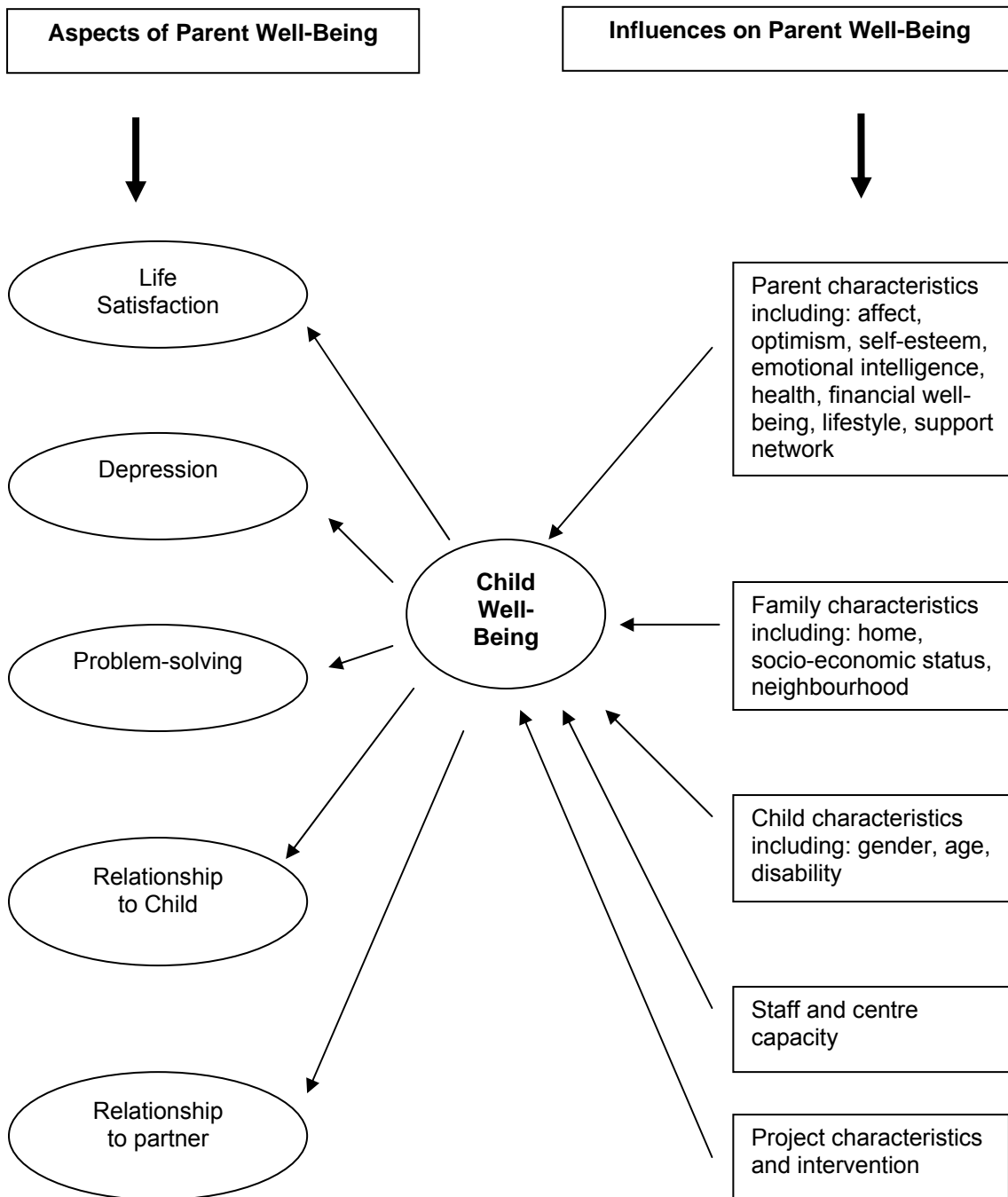
The conceptual framework underpinning the Parent Questionnaire is graphically illustrated in Figure 4. There is a detailed guide to every question in Appendix Four and the actual questionnaire is in a separate document. The conceptual framework informing the Parent Questionnaire has already tested in previous work (see Figure 2 above) and this is being further re-analysed using the GUI[86] dataset. This framework envisages parental well-being as a latent construct which manifests through the parent's personal and relationship experiences and is itself influenced by the parent's personality traits, socio-economic and neighbourhood characteristics, etc.

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84 The decision to interview mothers only is based entirely on practical considerations since interviewing fathers as well as mothers is beyond the resources of the evaluation. However the Parent Questionnaire contains two questions on the father's involvement with the child, based on similar questions used in the GUI, the Sure Start evaluation and the Millennium Cohort Study: 'How often can you count on him if you need him to take care of the child?' and 'Overall how close would you say he is to your child?'.

85 McKeown, Haase, Pratschke, Lanigan, Burke, Murphy, and Allen, 2008:23-28; McKeown and Haase, 2007; Haase, McKeown, and Pratschke, 2008; Haase, 2009.

86 Pratschke, Haase and McKeown, 2011. GUI refers to Growing Up in Ireland: National Longitudinal Study of Children; available at: www.growingup.ie. GUI is based on two cohorts of children: 8,570 nine-year old children on whom data was collected 'between September 2007 and June 2008' (Williams, Greene, Doyle, Harris, Layte, McCoy, McCrory, Murray, Nixon, O'Dowd, O'Moore, Quail, Smyth, Swords and Thornton, 2009:16); and 11,100 nine-month old children on whom data was collected 'between September 2008 and April 2009' (Williams, Greene, McNally, Murray and Quail, 2010:21).

Figure 4 Conceptual Framework Informing Parent Questionnaire

Aspects of Parent Well-Being	Influences on Parent Well-Being

Life Satisfaction

Depression

Problem-solving

Child Well-Being

Relationship to Child

Relationship to partner

Parent characteristics including: affect, optimism, self-esteem, emotional intelligence, health, financial well-being, lifestyle, support network

Family characteristics including: home, socio-economic status, neighbourhood

Child characteristics including: gender, age, disability

Staff and centre capacity

Project characteristics and intervention

In addition to this theoretical understanding, the selection of instruments is also informed by whether they have been used previously in similar evaluations and studies. Specifically, we have adopted instruments that have been used in the GUI since this will facilitate comparison of the initiative with nationally representative benchmarks. Of note is the fact that some of the longer multi-item questions from the GUI have been shortened, notably F1-2 (Pianta Child-Parent Relationship Scale), F8 (Parental Stress Scale), and G1-G7 (Dyadic Adjustment Scale); this was done following

latent variable analysis[87] and resulted in deleting those items which added little to the overall measurement of the concept or its components.

6.3 Staff Questionnaire

The purpose of the Staff Questionnaire is to assess the capacity of staff. It is widely recognised that staff capacity is a key ingredient in childcare services, as outlined above, and this is also a core assumption underpinning the NEYAI. At the same time, the measurement of staff capacity is far from straightforward and, within the constraints of self-report instruments, it is difficult to find instruments that are specifically tailored to the requirements of staff in the early years sector. Within these constraints therefore we have devised a bespoke instrument, albeit with measures widely used in other contexts. The Staff Questionnaire will be completed on-line by all childcare staff in each centre participating in the evaluation, excluding administrative and support staff. The questionnaire has been piloted in two childcare centres – which are not part of this evaluation - and can be completed in about 30 minutes.

The conceptual framework underpinning the Staff Questionnaire is graphically illustrated in Figure 5. There is a detailed guide to every question in Appendix Five and the actual questionnaire is in a separate document.

The conceptual framework informing the questionnaire is based on an understanding of work, and therefore staff capacity, as having an 'outer' and an 'inner' aspect. The outer aspect is conventionally referred to as the 'job' which we measure, using standardised instruments, through qualifications and the job experience of staff in terms satisfaction, commitment, pressure, autonomy, consultation, staff-management relations, support and engagement. By contrast, the inner aspect is the relationship which staff perceive themselves to have with the 'object' or 'essence' of their work which, in this case, is the children and their parents. This inner aspect is foundational to all work but is particularly important in work that is generative of human development such as the teacher-pupil relationship, the master-apprentice relationship or, more generally, the adult-child relationship[88].

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87 Latent variable analysis involves using factor analysis to identify the underlying or 'latent' variable which is shared, conceptually and statistically, by a set of measured items. In other words, measured items which are highly inter-correlated are assumed to form a common unmeasured latent variable which manifests through those items.

88 The psychologist Carl Jung has written about this relationship: 'An understanding ear is everything in a teacher, and cannot be esteemed highly enough. One looks back with appreciation to the brilliant teachers, but with gratitude to those who touched our human feelings. The curriculum is so much necessary raw material, but warmth is the vital element for the growing plant and for the soul of the child (Jung, 1953). The memoirs of Irish writer and Principal of a primary school in Kerry, Bryan McMahon, capture a similar understanding of teaching: 'each child had a gift, and that the 'leading out' of that gift was the proper goal of teaching. To me a great teacher was simply a great person teaching. … he should never cease to promote in children the determination to say "yes" to life, to the dark as well as to the bright of it, to its beauty and glory, to its lapses from grace into degradation and its eventual restoration to serenity' (McMahon, 1992:8 and 83). The psychoanalyst Eric Fromm has also written about this relationship but from the perspective of the adult:

Central to this relationship is the capacity of the teacher / master / adult to see and nurture the unique potential of the person in their care, and to cultivate what Jung calls 'the soul of the child'[89]. In the context of childhood education, it has been described as the capacity to 'open the windows of wonder' for the child by the noted teacher and writer, Bryan McMahon[90]. Specialists in early childhood education increasingly refer to this as the capacity for 'sustained shared thinking'[91] or 'extended purposive conversations'[92]. These insights are reflected in the importance given to 'interactions' in both the National Framework for Early Childhood Education (Síolta[93]) and the Early Childhood Curriculum Framework (Aistear[94]). This capacity, often acknowledged in (auto)biographical accounts of how talent is nurtured through the encouragement and engagement of an interested adult, is central to our understanding of capacity in the childcare setting.

'The teacher is taught by his students, the actor is stimulated by his audience, the psychoanalyst is cured by his patient – provided they do not treat each other as objects, but are related to each other genuinely and productively' (1956:24).

89 Jung, 1953.

90 He wrote of teaching as 'opening the windows of wonder' (McMahon, 1955) and observed that his school was 'fortunate that the infant teachers encouraged the emergence of a personality among the infants. … We were far-sighted enough to appreciate that encouragement at the chrysalis stage would serve him all his life' (McMahon, 1992:80).
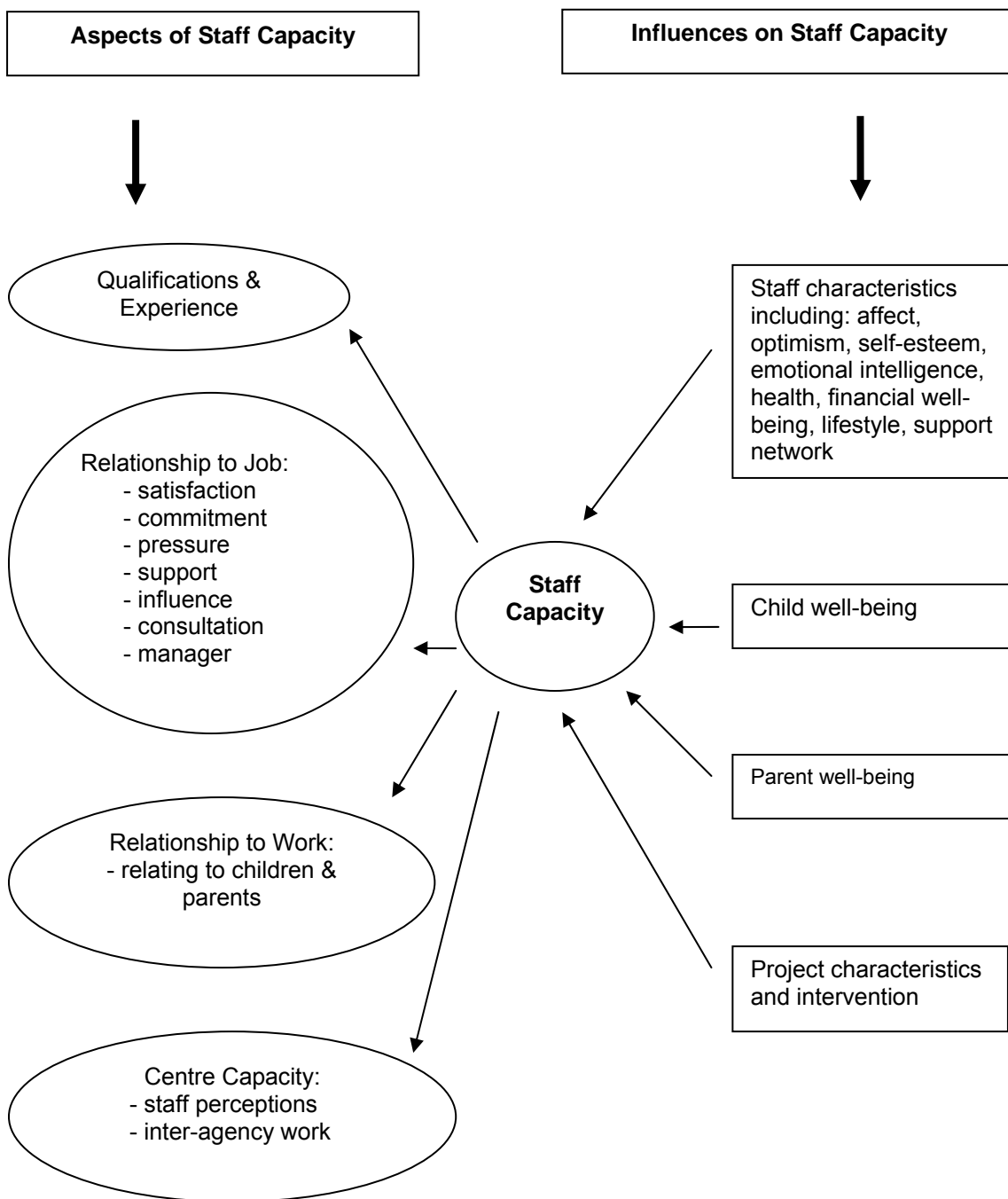
91 Sustained shared thinking is defined as 'any episode in which two or more individuals 'worked together' in an intellectual way to solve a problem, clarify a concept, evaluate activities, extend a narrative, etc. To count as sustained shared thinking, both parties had to be contributing to the thinking and it had to be shown to develop and extend thinking' (Siraj-Blatchford, 2010a:157).

92 Extended purposive conversations are conceptually the same as sustained shared thinking but French has suggested that 'extended purposive conversations' may be a more appropriate term because 'it puts the focus on extending the conversation 'by listening to and engaging children with conscious purpose and intent, encouraging them to articulate their discoveries and their learning. … . The emphasis on 'conversation' is perhaps more concrete, grounded in practice, and easier than 'thinking' for educators to conceptualise as a goal for working with young children' (French, 2011:74).

93 Standard 5 (of 16) states: 'Fostering constructive interactions (child/child, child/adult and adult/adult) requires explicit policies, procedures and practice that emphasise the value of process and are based on mutual respect, equal partnership and sensitivity.' (Department of Education and Skills, 2010a:39).

94 One of the four guidelines for good practice is 'learning and developing through interactions'. It states: 'Relationships are at the very heart of early learning and development. Through their early interactions babies learn to feel secure, to communicate, and to enjoy being with people. As they grow and develop, toddlers and young children love to play, to chat, to watch, and to be with others. Children build relationships, communicate, express love and affection, play together, learn, and have their needs met through contact with others. These guidelines identify a range of interaction strategies and methods which the adult can use to enhance children's learning and development.' (National Council for Curriculum and Assessment, 2009:27).

Figure 5 Conceptual Framework Informing Staff Questionnaire

| Aspects of Staff Capacity | Influences on Staff Capacity |

Qualifications & Experience

Relationship to Job:
- satisfaction
- commitment
- pressure
- support
- influence
- consultation
- manager

Staff characteristics including: affect, optimism, self-esteem, emotional intelligence, health, financial well-being, lifestyle, support network

Staff Capacity

Child well-being

Parent well-being

Relationship to Work:
- relating to children & parents

Project characteristics and intervention

Centre Capacity:
- staff perceptions
- inter-agency work

We measure this inner aspect of capacity using three bespoke self-report measures of how staff relate to children and their parents. The first of these focuses on staff sensitivity to the child, staff capacity to stimulate the child, and respect for the child's autonomy; these dimensions are derived from the Adult Engagement Observation Schedule[95]. The second measure focuses on how staff interact with children in order to promote each child's thinking and language, drawing on Síolta, Aistear and the work of French[96]. The third measure focuses on how staff interact with parents in

95 Bertram, 1996:Ch 4; Pascal and Bertram, 1999.
96 French, 2011.

order in order to promote each child's learning and development, again drawing on Síolta and Aistear.

On the right-band-side of Figure 5 we list the possible determinants of staff capacity. These are mainly the same as the measures of well-being used in the Parent Questionnaire, based on the assumption that, since child development is influenced by these aspects of parental well-being it is likely to be similarly influenced by the same aspects of staff well-being[97].

We expect the Staff Questionnaire to provide useful insights into the capacity of childcare staff. However an important limitation is that we have no independent observation or assessment of staff interactions with children. This is a significant limitation since staff self-reports may not correlate with staff behaviour. We are not in a position to overcome this limitation since direct observation of staff is outside the resources available for the evaluation. At the same time, this limitation also applies to the Parent Questionnaire and it is well-known that parental self-reports are highly predictive of outcomes for their children.

6.4 Template for Describing Each Project Intervention

Each NEYAI project is delivering a unique intervention. It is important therefore to have a clear description of that intervention for the evaluation since, where an intervention is shown to be effective, this will be valuable in helping to explain why this may have happened; additionally, it may also help to guide those who wish to replicate the intervention elsewhere. The interventions in the evaluation, as listed in Table 1 above, were selected to represent each project's most *substantial and sustained* intervention and, in that sense, could be regarded as the 'flag-ship' of each project, the impact of which will determine the success of their entire project.

A template will be prepared by the evaluation team to enable each project to prepare a detailed description of its intervention using the following headings:

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97 This is an important assumption though seldom acknowledged due to the tendency to treat the 'personal' and the 'professional' as separate and unrelated domains of staff capacity. It is significant therefore that a recent review of the early childhood education drew attention to how child development is influenced by the capacities of all adults who interact with the child on a regular basis, both parents as well as childcare staff: '... although the call for more effective strategies to build parenting capacities is broadly accepted, the unmet, skill-building needs of service providers in these domains are acknowledged less frequently. Although many preschools are staffed by highly trained professionals, a large proportion of staff in early care and education programs have limited education, constrained work experience, and high rates of depression. Thus, large numbers of vulnerable children and highly stressed staff are engaged in dysregulated interactions on a daily basis that compromise early learning and undermine the ability to manage routine challenges and normative life stresses. Other indicators of unmet staff training needs include complaints about high rates of problematic child behaviors, increasing antipsychotic drug prescriptions for children as young as age 3, and large numbers of children being expelled from preschool programs. These signs of impending staff burnout underscore the need for expanded professional development activities to strengthen emotional health and executive function skills and self-regulation capacities of early childhood service providers.' (Shonkoff, 2011:983)

- ✓ Name of project and intervention
- ✓ Logic model of intervention and how it is expected to work in order to produce outcomes, including the mediating role of staff capacity
- ✓ History of intervention including evidence of its effectiveness in Ireland and elsewhere
- ✓ Target group of intervention (children, parents, staff) including measures used to recruit, retain and minimise drop-out
- ✓ Description of the intervention including method used to deliver the intervention such as individual-work or group-work, home-based or centre-based, etc.
- ✓ Duration of intervention broken down by number and length of each session including whether homework is part of the programme
- ✓ Resources needed to deliver the intervention such as manual, videos, handouts, etc.
- ✓ Staff recruitment, training and skills required to implement the intervention
- ✓ Organisational structures to support intervention at childcare centre-level, project-level, inter-agency level
- ✓ Breakdown of the cost of undertaking the intervention, focusing on the additional cost over and above the existing 'overhead' cost of the centre and its staff
- ✓ Challenges encountered during implementation and how these were addressed.

The information provided by each project will form the basis for preparing case studies of effective interventions where the evaluation has already shown evidence of a significant impact on parent, child or staff outcomes. This information will also act as a 'manual' for other projects wishing to implement the intervention.

6.5 Extraction of Data on Area Characteristics

Data will be extracted on the area characteristics of each childcare centre participating in the evaluation, aggregated to project-level, using the summary Pobal-Haase Index. This data is based on the Census of Population and is disaggregated at the level of Small Areas which have a minimum of 65 households and average of 100 households.

This data will serve three purposes. First, it will describe the areas being served by the childcare centres in the NEYAI and situate those 'treatment areas' in terms of their level of deprivation relative to the surrounding county and Ireland. Second, as already explained (Section 5.2), it will facilitate the selection of 'comparison areas' that match the treatment areas as closely as possible. Third, it will enable an assessment of the 'fit' between the children and parents using the childcare centres and those living in the wider catchment area; this will be done by combining data from the Parent Questionnaire and the CSO data.

6.6 Extraction of Data from the Growing Up in Ireland Database

Growing Up in Ireland (GUI), as already explained, is the National Longitudinal Study of Children, based on a large nationally representative sample of children and their parents. An important by-product of the GUI is the creation of a national set of benchmarks on the well-being of children and their parents, based on standardised instruments that produce consistently valid and reliable results in different settings and at different times. That is why, in designing the questionnaires for this evaluation, instruments are drawn from the GUI wherever possible. In light of that, data will be extracted from the GUI to provide 'benchmarks' for the treatment and comparison groups.

The use of GUI as benchmark data has some similarities with the way the UK's Millennium Cohort Study (MCS)[98], itself similar to GUI, was used in the national evaluation of Sure Start (NESS)[99]. However there are also important differences. In the national evaluation of Sure Start, a population-based approach (or 'intention to treat design') was adopted to assess its impact in each area and involved comparing samples of children in NESS areas and matched MCS areas[100]. This is different to the evaluation of NEYAI where we use a target-group approach (or 'per protocol design') to assess impact by comparing the treatment group with the comparison group. Nevertheless, the experience of using MCS in NESS draws attention to the need to ensure that, for each benchmark used, all comparisons are based on variables which are measured in an identical manner. The NESS experience also indicates that due consideration needs to be given to the different times when data is collected[101] (2007/9 for GUI data, 2011/13 for NEYAI data), particularly time-sensitive events (such as the timing of immunisation for three year-olds which affected the comparability of

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98 The Millennium Cohort Study (MCS) is based on around 19,000 children born in the UK in 2000/1. Four cohorts of children are being tracked at ages (i) nine months (ii) three years (iii) five years and (iv) seven years. The study is being carried out by the Centre for Longitudinal Studies (CLS), based at the Institute of Education, University of London.

99 National Evaluation of Sure Start Team, 2010.

100 'The comparison group of Millennium Cohort Study (MCS) children and their families, against which the NESS sample was compared, was selected from the entire MCS cohort. Their selection was based upon identifying and selecting children living in areas with similar economic and demographic characteristics to those in which the NESS [National Evaluation of Sure Start] sample resided, but which were not SSLP-designated areas and thus did not offer SSLP services. This enabled the NESS research team to make comparisons with children and families from areas as similar as possible to the NESS Impact Study areas to detect the potential effects of SSLPs on children and families' (National Evaluation of Sure Start Team, 2010:iv).

101 In evaluating the impact of Sure Start when children reached 5 years, the NESS team were unable to test for the possible effect that 'time of measurement' might have on the comparison of MCS data (collected between January 2006 and March 2007) and NESS data (collected between June 2007 and June 2009). As a result, the report highlights that 'time of measurement cannot be ruled out as an alternative explanation for almost any NESS/MCS differences – and thus SSLP effects – discerned. … any and all discerned effects of SSLPs – whether positive or negative in character – potentially could be attributed to time-related changes in communities and/or the larger society that had nothing to do with SSLPs' (National Evaluation of Sure Start Team, 2010:7 and 39).

MCS and NESS areas), or different approaches to measuring each benchmark (such as self-report, interview, direct observation) [102].

6.7 Monitoring Impact of Learning Community

The learning community is an innovative feature of NEYAI in the sense that it makes a specific commitment to 'learning' as an outcome to be achieved collectively by the projects. This is additional to the learning that will emerge through this evaluation although, in practice, the two processes are likely to be inter-connected. The learning community held its first meeting on 13th-14th September and has agreed to meet three times a year over the course of the initiative.

From the perspective of the evaluation, two broad outcomes of the learning community will be monitored and evaluated. The first and main outcome is learning that directly impinges on the interventions that are being evaluated. This type of learning is particularly important because it may increase the likelihood of positive impacts - for some or all projects - in the outcome areas affecting children, parents and staff. The second outcome is learning associated with other work being undertaken by the projects, though not part of the intervention that is being evaluated.

Evaluation of the learning community and its achievements will entail attendance at, and direct observation of, all meetings. At the end of each meeting, every project will be asked to complete a brief online questionnaire designed to capture the two broad outcomes of the learning community described in the previous paragraph (see Appendix Six). The data generated by this process will be used to provide an overall assessment of the learning community as well as assist in the interpretation of positive impacts that may be traceable, directly or indirectly, to the learning community. More details on how this data will be analysed is presented below (Section 9).

7. Timeframe for Data Collection

The core principle underpinning data collection for the treatment group is that baseline data must be collected before <u>any</u> significant intervention takes place while follow-up data must be collected as soon as possible after the end of the intervention. Applying this principle in practice requires some flexibility since the 11 projects vary in the timing of their interventions. Taking this into account, a

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102 'Any effects discerned in the evaluation have to be considered "putative" because the data for the NESS and MCS samples of 5-year olds and their families were collected two years apart and by two different research teams. This makes attributing any discerned SSLP effects to SSLP exposure per se difficult, as they could potentially reflect changes taking place in communities or society more generally across the two-year period in question or be the result of differences in approaches to measurement by the two research teams, although close cooperation did occur with respect to staff training. Indeed, possible time of measurement effects were identified in the NESS Impact Study when children were 3 years old with respect to child immunisations. That is, apparently positive effects of SSLPs on immunisations were found to be possibly a function of the time difference between when NESS and MCS 3-year old data were collected rather than an effect of SSLPs on immunisations' (National Evaluation of Sure Start Team, 2010:iv).

timeframe for data collection will be agreed with each project within the parameters that all baseline data will be collected by the end of October 2012 and all follow-up data will be collected by the end of June 2013.

There are fewer constraints on data collection for the comparison group but the timeframe will broadly mirror that of the treatment group. As indicated above, further work is required, in collaboration with Pobal, to support data-collection for the comparison group, possibly through the County Childcare Committees or Partnerships or both.

8. Ethical Considerations

The main ethical and legal requirement in the study is to ensure that the right of children, parents and staff to privacy and confidentiality is respected at all times. This right is enshrined in the Data Protection Acts 1988 and 2003.

Bearing this in mind, the consent of each parent is required to allow childcare staff assess each child using the Child Questionnaire. Similarly, the consent of each parent is required before any contact details can be passed over to the evaluation team in order to carry out the interview using the Parent Questionnaire.

In order to meet these requirements, a standard Parent Consent Form has been prepared (Appendix Seven). This form explains the nature of the study and the guarantee that the parent's and child's privacy and confidentiality will be protected at all times. Parents who are randomly selected to take part in the study will be invited by staff in each childcare centre to sign the consent form.

The central mechanism in the evaluation to ensure privacy and confidentiality is the use of numerical data identifiers on all questionnaires; no names or other personal identifiers are written on any of the questionnaires. All data collection, data entry and data storage are based on these numerical data identifiers such that personal information is never collected and stored with the research data, making them anonymous. All data derived from the questionnaires is stored on password-protected computers, encrypted, and user-restricted.

9. Data Analysis

There are two parts to the data analysis. The first follows completion of baseline data collection in October 2012 and will result in an Interim Report in early 2013. The second follows completion of follow-up data collection in June 2013 and will result in a Final Report in early 2014. These two parts

of the data analysis constitute a seamless stream of work and, in that sense, the baseline data analysis might be seen as preparatory to the combined analysis of baseline and follow-up data.

Both parts of the analysis will be linked thematically around the three core themes of child well-being, parent well-being and staff capacity. Specifically the thematic analysis will focus on how these concepts are defined, determined and connected to each other. These themes also cover the three core questions in the terms of reference[103]:

✓ how to improve outcomes for children, particularly 'improved health / learning and school readiness'

✓ how to improve the well-being of parents and their capacity to nurture the child's development through 'parent's skills and improved parenting support'.

✓ how to improve the capacity or 'up-skilling' of childcare staff.

The over-riding consideration in the data analysis, as in the overall evaluation, is to establish if NEYAI has an impact and, if so, how. Naturally, it cannot be known in advance if the evaluation will show a measurable impact. However, even if no measurable impact is detected – or only the slightest impact – the proposed data analysis is still capable of generating useful results because, in addition to assessing impact, the evaluation will also address questions, arguably more generic ones, about the measurement of child well-being, parent well-being and staff capacity, and the relationships of influence that may link these together. Irrespective of the impact of the initiative therefore, the evaluation is likely to produce valuable insights that could have useful policy and practice implications for the early years sector.

9.1 Baseline Data Analysis

The baseline data analysis will involve the following components.

9.1.1 Compare the characteristics of respondents in the treatment and comparison groups. This will include a description of respondents by age, gender, household composition, marital status, residential status, level of education, current work situation, financial status and ethnicity. The purpose of this analysis is to provide an indication of the 'match' in socio-economic characteristics between the treatment and comparison groups. In addition, the analysis will position both groups relative to the population as a whole, using comparative data from the Growing up in Ireland (GUI) study. As the GUI study is deemed to be nationally representative, and the NEYAI is targeted towards relatively disadvantaged communities, the analysis will also assess the extent of targeting. It is recognised that the interpretation of this data will need to be done with some care and take account of the different times when the data was collected (2007/9 for GUI data, 2011/13 for NEYAI

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103 Request for Tender For Evaluation of National Early Years Access Initiative, 2011.

data) and the limitations this may place in drawing comparisons[104]. The data will be presented in simple tables and bar charts based on group means and standard deviations. It is recognised that whether or not the treatment and comparison groups are well-matched or poorly-matched will not affect our ability to identify the impact of NEYAI – since all *measured* sources of variability can be statistically controlled – but it may be useful to know if there are systematic variations in target group characteristics either between the two groups or within the treatment group.

9.1.2 Construction of multivariate outcome measures. The outcomes of the initiative, as shown in the logic model in Figure 1, are improved child and parent outcomes. The logic model also shows intermediate outcomes, notably improved staff capacity, which may act as a pathway to final outcomes. These outcomes are latent variables in the sense that each of them is based on an underlying construct which is manifested through various 'proxies' or 'indicators'. This is illustrated in Figure 2 above and shows how child and parent well-being are latent variables which manifest through, and are measured by, a range of indicators; that is why the arrows point from the latent variable to the indicators which measure it. Detailed analysis will be undertaken to construct robust latent variables for all outcome measures and establish their validity (both discriminant and convergent). There are many precedents for measuring child and parent outcomes in this way but the measurement of staff capacity, particularly in the childcare sector, is more novel and will require a more exploratory approach. This part of the analysis, which establishes the 'measurement models' for the evaluation, is a crucial building block for the subsequent analysis, and is effectively a test of the conceptual framework underpinning each of the questionnaires as illustrated in Figures 3, 4 and 5 above.

9.1.3 Construct a model of child and parent well-being. This will build on the 'measurement model' just described and analyse how the latent variables relate to each other. The resulting 'structural model' will combine the measurements of child and parent well-being with all possible influences within the dataset to produce an overall model, somewhat similar to the model described in Figure 2 above. The analysis will distinguish between an 'optimal' model, which utilises the NEYAI dataset only, and a 'comparison' model based on those concepts shared between NEYAI and GUI. The rationale for this is that GUI has less data on parental well-being compared to NEYAI and this may influence the resulting models of child and parent well-being. The results of this analysis will allow us to compare key outcome measures between the two datasets and thus allow us to position the NEYAI sample relative to the national GUI sample.

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104 For example, the impact of the recession, which began to manifest in 2008 and has deepened since then, will need to be considered and we will draw upon our cross-sectional analysis of the baseline data to form a view as to the importance of economic factors relative to other influences on the key benchmark indicators.

9.1.4 Construct a model of staff capacity. This involves using the same analytical approach described in the previous paragraph – excluding GUI data which does not cover this topic – and will test the underlying concept of staff capacity, and its determinants, as hypothesised in Figure 5 above.

9.1.5 Generate descriptive data on the treatment and comparison groups, based on variables identified in the multi-level models as having a significant role in either defining or determining outcomes. This approach to descriptive data has the merit of ensuring that data is generated on the basis of what has already been shown to be significant in the overall analysis of outcomes rather than simply producing descriptive statistics 'for the sake of it'. As a consequence, this approach avoids the danger of over-producing descriptive data which, on subsequent analysis, turns out to be irrelevant. Table 2 is a possible format for presenting these descriptive statistics.

Table 2 Format for Presenting Descriptive Statistics in the Interim Report

Var-iable	Mean & Standard Deviation Scores for Treatment Group (TG)												Mean & Standard Deviation Scores Comparison Group (CG)										GUI Score
	BC	CC	CK	CN	DD	DL	FL	LD	LK	RO	TT	All	1	2	3	4	5	6	7	9	10	All	
*																							
**																							

*Denotes a statistically significant difference between treatment group and comparison group for that variable.
**Denotes a statistically significant difference between treatment group or comparison group and the GUI for that variable.

9.1.6 The results of the foregoing analysis will be presented and interpreted in the Interim Report. This will also include a Technical Appendix giving the detailed statistical results.

9.2 Follow-up Data Analysis

The follow-up data analysis will involve the following components.

9.2.1 Repeat the analysis described in paragraphs 9.1.2, 9.1.3 and 9.1.4 above. This is necessary in order to make sure that, when baseline and follow-up data are merged, the latent variables underpinning the measurement and structural models are based on identical structure matrices and measurement scales. That is the only way of making valid comparisons between baseline and follow-up when using multi-dimensional outcome measures. This step will involve a recalibration of all latent concepts using the combined dataset since, only when these conditions are satisfied, will we be able to present robust 'before-and-after' comparisons of outcomes. The adjusted models of child, parent and staff outcomes will be presented graphically along with an interpretation of their meaning and implications.

9.2.2 Having established consistent and robust measurements for all multi-dimensional outcomes relating to children, parents and staff, we will present results on impact by comparing the difference between baseline and follow-up scores. Improvements in outcomes will be expressed in terms of a comparison of means, standard deviations and effect sizes. As explained earlier, the use of effect sizes is a simple way of standardising and comparing two sets of scores and allows the impact of NEYAI to be measured in a way that is comparable to other early years programmes. Table 3 is a draft of the format that will be used to present this data.

Table 3 Format for Presenting Effect Size Scores in the Final Report

Vari-able	Effect Size Score for Treatment Group (TG)												Effect Size Score for Comparison Group (CG)									
	BC	CC	CK	CN	DD	DL	FL	LD	LK	RO	TT	All	1	2	3	4	5	6	7	9	10	All
*																						
**																						

*Denotes a statistically significant difference between treatment group and comparison group for that variable.
**Denotes a statistically significant difference between treatment group or comparison group and the GUI for that variable.

9.2.3 Examine possible pathways associated with each net impact. Using Structural Equation Modelling, analysis of the combined dataset of treatment and comparison group will estimate if there is a difference in outcomes between the two groups and whether, in turn, this is related to the interventions in any or all of the projects. Only when this has been established, will the analysis examine the association between these interventions and other independent variables, since that is how the pathways suggested in the logic model are tested against the evidence. This will involve taking one outcome measure each for children, parents and staff, and then developing a statistical model to explain the pathways by which that improved outcome came about. We will also build a statistical model which combines all three outcome measures in order to show how the well-being of children, parents and staff are inter-connected. Within these models, relationships between variables are measured by standardised regression coefficients and each coefficient measures the unique influence of each variable on the outcome, controlling for all other variables which affect that outcome. This method of analysis is capable of yielding statistically robust insights into the pathways by which change occurs in outcome variables and is increasingly regarded by researchers and statisticians as the appropriate form of analysis for this type of evaluation.

9.2.4 Describe in more detail the interventions and pathways associated with positive impacts, as identified in the models. This is important because it is unlikely that the statistical models, on their own, will contain an exhaustive account of all factors associated with statistically-significant improvements in outcomes. That is why data on the intervention delivered by each project is important (see Section 6.4 above) as well as data from evaluation of the learning community (see Section 6.7 above). Additional case-study data, collected from projects identified as having a positive impact, may also cast light on questions which cannot be addressed easily or

comprehensively within the multivariate regression analysis - such as the role of formal and informal linkages between services; or the contribution of institutional structures such as County Childcare Committees, Partnerships and Children's Services Committees. This more detailed analysis will help improve the interpretation of results but will also assist in the process of transferring knowledge about what works in a particular project to a more general context. This is in line with the request in the evaluation's terms of reference: 'to assess the replicability and sustainability of different individual service models within the Initiative'[105].

9.2.5 Prepare a 'stand-alone' assessment of the learning community. It is true that no part of this evaluation is 'stand-alone' and, as described in the previous paragraph, the main interest of the learning community, from the perspective of this evaluation, is whether it is associated with any measurable impacts of the initiative. At the same time, given its innovative nature, there is merit it describing it as a separate process, possibly in a separate chapter in the final report.

9.2.6 Draw conclusions and implications from the evaluation. This is the final and, in some senses, the most important part of the evaluation since it cannot be assumed that 'results speak for themselves'; results can be over-interpreted, under-interpreted or simply misinterpreted and this can undermine the entire evaluation. We have already underlined the centrality of interpretation in the overall research design above (Section 4.4) and the careful work that is required to translate research findings – specifically statistically-significant associations between variables – into a plausible understanding of how those variables may relate to each other as cause and consequence. Equally, it is important to acknowledge that while variables may co-vary, a causal sequence cannot always be established either because the temporal 'before-and-after' sequence is unknown, or the mechanism and 'agency' connecting them is not understood. Within these limitations, the evaluation will use our analysis and interpretation of the evidence to draw out the implications for action since that is the raison d'etre of the entire initiative. These implications may well confirm what is already known about the factors associated with positive outcomes for children and their parents but this finding, in itself, may provide the motivation that is sometimes missing in order to link knowledge to action. Equally, the implications may draw attention to variables that have no measurable impact, directly or indirectly, on outcomes and this may also be useful, particularly where existing policies and practices are based on assumptions that give undue importance to these variables.

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105 Request for Tender For Evaluation of National Early Years Access Initiative, 2011:9.

10. Outputs from the Evaluation

The outputs of the evaluation, including a timetable for their delivery, are summarised in Table 4.

Table 4 Delivery Dates for Core Outputs of Evaluation

Core Outputs of Evaluation	2011	2012	2013	2014
	Final Delivery Dates			
Research Protocol	Oct			
Baseline surveys of child, parent and staff		Oct		
Data Extraction on area-characteristics of projects		Jan		
Data Extraction from Growing Up in Ireland database		Dec		
Interim Report			Mar	
Follow-up surveys of child, parent and staff			Jun	
Description of project interventions			May	
Case studies of individual service models			Dec	
Monitoring and evaluation of learning community	ongoing			
Progress Reports and Updates	ongoing			
Final Report				Mar

11. Limitations of Research Protocol

It is appropriate, by way of conclusion, to indicate the main limitations of the evaluation as set out in this research protocol. Limitations denote strength as much as weakness and are an important convention in scientific research because they set out the parameters within which research findings may be held as valid. Three limitations stand out as particularly significant.

A first limitation is that the evaluation, by virtue of focusing on how NEYAI will impact on children in the ≥3.5 age group, does not consider the impact on younger children aged <3.5. The reasons for this limitation have been explained above (Section 4); they inhere essentially in the overall budget for the evaluation since, to carry out a robust evaluation of both these age-cohorts would effectively require two separate studies with separate instruments and methods of data collection. It is true that the effectiveness of early years programmes do not appear to vary according to whether they are started before or after the age of three, although programme characteristics inevitably vary with age[106]. At the same time, there is substantial consensus among experts in the field of early childhood that some of the most significant developments in the life of a child, and adult, take place

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106 'Despite oft-heard claims that earlier is better, starting education interventions before age 3 does not appear to be a major contributor to effectiveness, although health and early nutrition components may be more effective when begun earlier. The effects of many other program features, including intensity and duration, are uncertain'. (Barnett, 2011:977)

in the period from 0-3 years, such that all subsequent developments build on experiences that take place during those years[107]. That is why, as observed in a recent edition of Science, 'age 4 cannot be characterized as "early" with respect to brain development'[108]. Our purpose in highlighting this limitation is to draw attention to the fact that the evaluation, while contributing to the evidence-base of policy and practice for ≥3.5 year olds, will not make any corresponding contribution for children in the <3.5 age group, particularly those children whose circumstances may be more conducive to 'developmental dysfunction' than 'developmental competence'[109]. It is recognised that other studies in Ireland, most notably the infant-cohort of 11,000 children in the GUI, have potential to contribute to this evidence-base and the evaluation of NEYAI cannot realistically answer all of the challenging questions about the most effective forms of early childhood care and education for all age groups. In other words, while the evaluation will contribute to our understanding of what works for children aged ≥3.5 years, it needs to be recognised that this is only part of a much larger picture which needs to inform developments in the early years sector.

A second limitation is that most of the data used in the evaluation is based on self-report by parents and staff. This is an appropriate and tried-and-tested method of data collection, particularly where it involves the use of instruments whose validity and reliability has been well-established, as here. Nevertheless these instruments are limited and cannot provide the type of insight that could come from direct observation, such as observing interactions (eg, parent-child interactions, staff-child interactions, staff-parent interactions) or the settings in which those interactions occur (such as the way the home or childcare centre is organised, equipped, decorated, etc). Numerous studies of the early years sector testify to the power of direct observation as a robust method for yielding scientific insights into the processes of care and education that could not be obtained through self-report instruments alone[110]. It is true that the evaluation of NEYAI as outlined in this research protocol will contain a substantial amount of case-study material and other narrative accounts, but these are not the same as systematic observation by observers who are trained to a high-level of inter-rater

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107 For example, a recent report on early intervention in the early years observed that: 'babies are born with 25 per cent of their brains developed, and there is then a rapid period of development so that by the age of 3 their brains are 80 per cent developed' (Allen, 2011:xviii; see also Perry, 2006).

108 Shonkoff, 2011:983. The author adds: 'If early childhood policy and practice focused more explicit attention on buffering young children from the neurodevelopmental consequences of toxic stress, then scientists, practitioners, and policy-makers could work together to design and test creative new interventions that combine both cognitive-linguistic stimulation with protective interactions that mitigate the harmful effects of significant adversity, beginning as early as possible and continuing throughout preschool. For this two-pronged approach to succeed, new strategies will be needed to strengthen the capacities of parents and providers of early care and education (beyond the provision of additional information and supports) to help young children cope with stress.' (Ibid:983-983)

109 Bronfenbrenner and Morris, 2006:803.

110 Noteworthy examples include the Effective Pre-School and Primary Education Project (EPPE) (Siraj-Blatchford, 2010a) and the NICHD Study of Early Child Care and Youth Development (NICHD Early Child Care Research Network, 2006a, 2006b).

reliability[111]. These types of observation are expensive and time-consuming, reflected in the fact that a just-completed, and outstanding, doctorate in early childhood education in Ireland was based on the direct observation of just three staff engaged in six 'small group learning experiences[112]. That is why, in effect, this methodology is not appropriate to the scale of NEYAI and its budget for evaluation. This limitation implies that certain aspects of care and education provided though NEYAI projects will not evaluated – or at least not in the detail that would be possible through direct observation - such as the pedagogical skills of staff[113] or the interaction styles parents[114].

A third limitation is that the evaluation cannot assess if NEYAI impacts, where identified, are sustainable. As with the other limitations, there are budgetary reasons for this. The research protocol is based on a simple 'before-and-after' design with a comparison group and there is no provision to follow-up children, parents or staff to see what benefits of NEYAI might be evident, other things being equal, in 1, 2, 3, 5 or even 10 years after the intervention. Many of the studies which have left a lasting legacy on the early years sector have involved waves of data collection and analysis over many years[115]. In general, these studies suggest that all effects tend to diminish over time; however larger effects (such as effect sizes in the region of 0.3 for programmes like High Scope) tend to last for many years while smaller effects (such as effect sizes below 0.2 for programmes like Head Start and Early Head Start) tend to disappear within a year or two[116]. This

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111 Inter-rater reliability has been defined as 'The degree of agreement among people collecting data or making observations on what they decide when collecting the same data from the same data sources for the same cases using the same directions. It is measured as the percentage of agreement when either:

• Several people collect data from the same sources for the same cases, or

• One person collects data from the same sources for the same cases at different times.' (Dixon and Pearce, 2010:18).

112 French, 2011.

113 It is well-established that the pedagogical skills of childcare staff have a significant influence on a wide range of child outcomes (Pianta, Barnett, Burchinal and Thornburg, 2009). In broad terms, these skills vary along a continuum from 'adult-directed' to 'child-directed'. Studies confirm that cognitive gains are associated with both 'adult-directed' learning (Barnett, 2011:977) and 'child-directed' learning (Siraj-Blatchford, 2010a:157) while gains in socio-emotional development and executive function are likely to require a balance of both.

114 Parent-child interactions are recognised as foundational to human development: 'Especially in its early phases, but also throughout the life course, human development takes place through … interaction … . To be effective, the interaction must occur on a fairly regular basis over extended periods of time' (Bronfenbrenner and Morris, 2006:797). These interactions are heavily influenced by the sensitivity of the adult, particularly the mother, and involve acceptance, responsiveness and warmth towards the child (Whittaker, Jones, See, Meisch and Westbrook, 2011:83-84).

115 The outstanding example of this is High Scope which was first introduced into Perry Elementary School in the Michigan city of Ypsilanti in 1960 and has tracked children from age 3 to 40 (Schweinhart, Montie, Xiang, Barnett, Belfield and Nores, 2005; Heckman, Moon, Pinto, Savelyev and Yavitz, 2009).

116 Barnett, 2011:976; see also Camilli, Vargas, Ryan and Barnett, 2010; Nores and Barnett, 2009. Some measures recommended to improve the effect size of Early Head Start (EHS) and Head Start (HS) also draw attention to the active ingredients in early years programmes: 'EHS and HS might improve their results by providing richer educational experiences. EHS could increase and improve both parenting education and direct classroom experiences. HS may need to focus more resources on the classroom to recruit and retain better teachers. Improving teaching practices may also require increased spending on supervision and

suggests that the size of the initial effect may provide an early indication as to its sustainability. Nevertheless, this limitation needs to be kept in mind since the sustainability of NEYAI impacts, where identified, can only be assumed rather than proven.

As indicated, the acknowledgement of limitations is an important convention in scientific research whose purpose is to protect against over-interpretation or under-interpretation of results and their implications. That is why the limitations just discussed do not detract from the fact that the evaluation, as proposed, will answer robustly the two core questions that it was designed to address:

(i) Does NEYAI have an impact on children and their parents by comparison with a 'matched' sample of those who have not participated in NEYAI?

(ii) If NEYAI has an impact, how does this come about, for whom, in which projects, using what type of intervention(s), etc?

The research design is informed by internationally-recognised evaluation practices and will deliver a study which meets the highest peer-reviewed standards for an evaluation of this type.

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coaching of teaching staff. Without budget increases, these changes would require a reduction in program resources devoted to other activities (for example, social services and adult education).' (Ibid:977)

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Appendix One Effect Sizes

Table A1 Effect sizes for family support programmes and pre-school prevention programmes

Outcome Domain	Average Effect Size: Short-term (end of treatment)	Average Effect Size Longer-term (follow-up)
1. Meta-Analysis of 665 experimental and quasi-experimental studies of family support programmes		
Child cognitive development	0.293	0.345
Child social-emotional development	0.223	0.150
Child physical health and development	0.123	0.112
Child injury, abuse, neglect	0.213	0.152
Parenting attitudes and knowledge	0.230	0.273
Parenting behaviour	0.257	0.204
Family functioning / family resources	0.169	0.002
Parent mental health / health risks	0.137	0.226
Family economic self-sufficiency	0.099	0.464
2. Meta-Analysis of 34 experimental and quasi-experimental studies of pre-school prevention programmes for children		
Cognitive impacts on children	0.52	0.30
Socio-emotional impacts on children	0.27	0.27
Parent / family wellness impacts	0.33	0.30
3. Meta-Analysis of 2,513 experimental and quasi-experimental studies of psychotherapy		
Psychotherapy	0.82	
4. Evaluation of 14 Projects in Springboard Programme		
Strengths & Difficulties Questionnaire (Parent)	0.30	
Strengths & Difficulties Questionnaire (Teacher)	0.16	
Strengths & Difficulties Questionnaire (Child)	0.27	
Parent-Child Relationship Inventory (Support)	0.30	
Parent-Child Relationship Inventory (Satisfaction)	0.07	
Parent-Child Relationship Inventory (Involvement)	0.21	
Parent-Child Relationship Inventory (Communication)	0.23	

Sources: 1. Layzer, Goodson, Bernstein and Price, 2001.
2. Nelson, Westhues and MacLeod, 2003
3. Asay and Lambert, 1999
4. McKeown, Haase and Pratschke, 2006

Table A2 Average Sure Start Local Projects (SSLP) effect sizes across all 3 analyses when children are 5 years old

Outcome Measures	Sure Start Main Effects(i)			
	Mean difference	95% CI	p probability of result occurring by chance	Effect size(ii) (sd units)
Child Behaviour and Social Development				
Emotional dysregulation	0.02	-0.02 to 0.05	0.32	0.05
Positive social behaviour	0.02	0.00 to 0.05	0.05	0.07
Internalising	-0.01	-0.04 to 0.03	0.66	0.03
Self regulation	-0.03	-0.06 to 0.00	0.04	0.08
Child Physical Health				
BMI	*-0.14*	*-0.22 to -0.07*	*0.00*	*0.12*
Physical health	*0.08*	*0.02 to 0.14*	*0.01*	*0.10*
	Odds ratio	**95% CI**	**p**	
Children who had accidents	-1.35	-0.91 to -2.00	0.14	
Child Educational Development				
Personal, social and emotional	-0.01	-0.09 to 0.08	0.84	0.01
Communication and language	0.03	-0.08 to 0.14	0.61	0.03
Problem-solving, reasoning, numeracy	0.04	-0.07 to 0.15	0.49	0.04
Knowledge/ understanding of the world	-0.02	-0.13 to 0.09	0.70	0.02
Physical development	-0.05	-0.16 to 0.05	0.33	0.05
Creative development	0.00	-0.12 to 0.11	0.99	0.00
Foundation profile score total	0.01	-0.09 to 0.11	0.83	0.01
Maternal Wellbeing				
Mother's satisfaction with life	*0.21*	*0.08 to 0.33*	*0.00*	*0.10*
Mother's rating of safety in area	0.03	-0.03 to 0.10	0.27	0.03
Mother's self rated depression	*0.40*	*0.14 to 0.65*	*0.00*	*0.09*
Parent and Family Functioning				
Harsh discipline in home	*-0.13*	*-0.18 to -0.08*	*0.00*	*0.24*
Chaos in home	*-0.24*	*-0.36 to -0.13*	*0.00*	*0.29*
Home learning environment	*0.17*	*0.09 to 0.24*	*0.00*	*0.27*
	Odds ratio	**95% CI**	**p**	
Parents attended school meetings	*- 0.43*	*-0.34 to- 0.56*	*0.00*	

(i) Effects are adjusted for child, family and area characteristics and strata.
(ii) The mean effect size across all three sets of analyses for those outcomes which were significantly related to SSLP status across all three sets of analyses.
CI=Confidence interval
Results in bold italics are replicated as statistically significant across all 3 data sets.

Source: National Evaluation of Sure Start Team, 2010:29.

N E Y A I
EVALUATION
Evaluation of
National Early Years
Access Initiative

Guidelines for Project Coordinators to Support the Evaluation

1. Coordinators are the link between the childcare centres and the Evaluation Team. As such, they have a key role to play in ensuring that the evaluation is carried out as planned and agreed. The core of the evaluation is based on data collected using three questionnaires: Staff Questionnaire, Child Questionnaire, and Parent Questionnaire. These questionnaires are completed at baseline (at a time to be agreed with each project but always **before** any intervention begins but not later than October 2012) and at follow-up (again, at a time to be agreed with each project but not later than June 2013). Coordinators have a particularly central role in data-collection using the Staff Questionnaire and the Child Questionnaire as well as keeping an accurate record of the intervention which is being implemented in their project. The Parent Questionnaire will be administered by an independent team of interviewers.

2. The timing of baseline data-collection is determined by the start-date of the intervention and the requirement that **no** intervention begins until the relevant baseline data has been collected. Coordinators will inform the Evaluation Team before baseline data-collection begins for the Staff Questionnaire, the Child Questionnaire and the Parent Questionnaire.

3. Coordinators will identify the childcare centres that are participating in the evaluation. Each childcare centre will be given a unique ID number from 1 upwards, preceded by the two letters identifying each project.

4. Coordinators will ask each childcare centre to compile a list of all childcare staff (excluding administrative and support staff). Each member of the childcare staff will be given a unique NEYAI Login Code by the Evaluation Team so that the can assess the evaluation website: www.neyai-evaluation.ie. In order to ensure that childcare staff have full confidence in the confidentiality of the evaluation, the Coordinator will give the NEYAI Login Code to each individual childcare staff and assure them that no other member of staff knows this ID. This NEYAI Login Code must be used by staff to complete the Staff Questionnaire and the Child Questionnaire online. Coordinators may need to facilitate access to an internet-linked computer, in a private and confidential setting, where this is not available in the childcare centre so that the results of the Child Questionnaire can be entered on-line.

5. Coordinators will liaise with each childcare centre to generate a list of **all** children and their parents who are eligible to participate in the evaluation. To be eligible, the child must be aged three and a half years or over. This list will be compiled on an Excel spreadsheet based on a template provided by the Evaluation Team.

6. The Evaluation Team will supply each Coordinator with the randomly selected names of 35 children and their parents who will be invited to participate in the evaluation. An additional list of 10 randomly selected names will also be provided as replacements for those parents who do not consent to participate in the evaluation. This additional list is called the 'replacement list'.

7. Childcare staff will approach the randomly selected parents in each centre, explain that this study is being carried out in their childcare centre, and that they have been randomly selected to participate in the study. The Parent Consent Form (attached) contains a short and clear explanation of what the study is about. It will be explained to each parent that participation in the study means:
- ✓ they will be interviewed by an independent interviewer in 2-4 weeks time and again in about 12 months time;
- ✓ the interview will be completely confidential and no names or other details about the parent will ever be revealed;
- ✓ a questionnaire will be completed on their child based on the observations of staff and, again, no names or other details about the child will ever be revealed;
- ✓ parent's who participate in the evaluation will, after each interview, have their name entered into a prize-draw for three prizes of €200, €100 and €50.
- ✓ in order to arrange the interviews, it will be necessary to pass on the name and contact details of the parent to the independent interviewer so that s/he can arrange a suitable time for interview. These contact details will be used only to arrange the interviews and nothing else.

8. Parents who consent to participate in the evaluation will be asked to sign the Parent Consent Form. In the case of parents on the 'replacement list', it will be explained to them that they will only be interviewed if some other parent drops out. It may be worth repeating here that the selection process is entirely random, and independent of the childcare centre, and does not reflect in any way on any parent.

9. Once the consent of parents has been obtained, the Coordinator will send the contact details to the Evaluation Team, on an Excel spreadsheet provided by the Evaluation Team, with the following information:
- ✓ Project ID
- ✓ Centre ID
- ✓ Parent ID
- ✓ Child ID
- ✓ Name of 'Focus Child', defined as the child on whom the Child Questionnaire will be completed
- ✓ Age of 'Focus Child', who must be three-years-six-months or more
- ✓ Gender of 'Focus Child'
- ✓ Name of Parent
- ✓ Address of Parent
- ✓ Mobile Phone of Parent
- ✓ Other Phone of Parent
- ✓ Name of Childcare Leader working with 'Focus Child'
- ✓ Name of Childcare Worker working with 'Focus Child'

10. Once the consent of parents has been obtained, staff can begin to fill out the Child Questionnaire. This needs to be done jointly by the Childcare Leader and Childcare Worker. The assessment should only be carried out when the Childcare Leader and Childcare Worker know the child for at least a month.   The assessment may be completed directly on-line, or alternatively, it may be completed using a pen-and-paper format and then inputted on-line. Coordinators may need to facilitate access to an internet-linked computer, in a private and confidential setting, where this is not available in the childcare centre so that the results of the Child Questionnaire can be entered on-line.

13. Each project is undertaking a unique intervention. It is essential that Coordinators compile a description of this intervention and the detailed steps by which it is implemented. This will be based on a template provided by the Evaluation Team.

14. Any queries about the evaluation should be directed to:
Kieran McKeown, 01-8309506 or kmckeown@iol.ie
Trutz Haase, 01-4908800 or mail@trutzhaase.eu

Appendix Three Guide to Child Questionnaire

Question Number	Concept	Instrument	Comparative Data	
			Growing up in Ireland[117]	Well-Being Study[118]
SECTIONS A-D: Your Observations about this Child				
A-D	Child development and school readiness	Early Development Instrument (EDI) covering the child's development in five areas: (1) physical health and well-being (2) social competence (3) emotional maturity (4) language and cognitive development (5) communication skills and general knowledge. It is suitable for children who are aged three-years-six-months and upwards.		
SECTION E: Other Observations about this Child				
E1-24	Emotion Regulation	Emotion Regulation Checklist (ERC)[119]. The ERC comprises 24 items and two sub-scales: emotion regulation (E1,3,7,15,16,18,21,23) and lability / negativity (E2,4,5,6,8,9,10,11,13,14,17,19, 20, 22, 24). Items 4,5,9,11,16,18 are reverse scored. Item 12 is not included on either sub-scale.		
SECTION F: Your Relationship to this Child				
F1.1-2.14	Staff relationship to child	Pianta Student-Teacher Relationship Scale[120] as used in Sure Start Evaluation[121]	✔	
F3.1-F3.2	Staff relationship to child	GUI-Infant Cohort	✔	
F3.1-F3.2	Staff concerns about child	Staff concerns about: (i) behaviour, emotions, relationships (ii) language development (iii) numeracy development. Adapted from Centre-based Carer Questionnaire in Growing Up in Australia: The Longitudinal Study of Australian Children.		
SECTION G: Child's Attendance at this Centre				
G1	Know the child	Bespoke question: How long have you worked with this child?		
G2-4	Child's attendance	GUI-Infant Cohort: How long is the child attending centre?	✔	
G5-6	Child's absences	Growing Up in Australia: Teacher Questionnaire		
G7	Parental involvement in child's learning	Growing Up in Australia: Teacher Questionnaire		

117 Murray, McCrory, Thornton, Williams, Quail, Swords, Doyle and Harris, 2011.

118 Pratschke, McKeown and Haase, 2011.

119 Shields and Cicchetti, 1997.

120 Pianta, 2001.

121 National Evaluation of Sure Start Team, 2005a:42-3.

	and education			
G8	Informal discussion with parent	Growing Up in Australia: Teacher Questionnaire		
				78

	SECTION H: Special Services for this Child			
H1	Needs requiring special services	Growing Up in Ireland: Teacher Questionnaire	✔	
H2.1-2.5	Extra services for child	Growing Up in Ireland: Teacher Questionnaire	✔	
H3.1-3.3	Contact with any other agency about child	Bespoke question		
	SECTION I: Height and Weight of this Child			
I1	Child's height	Use Leicester portable height measure or equivalent, as used in GUI	✔	
I2	Child's weight	Use SECA 761 flat mechanical weighing scales, as used in GUI	✔	

Appendix Four Guide to Parent Questionnaire

Question Number	Concept	Instrument	Comparative Data	
			Growing up in Ireland[122]	Well-Being Study[123]
SECTION A: Background Information				
A1-4	Household size; children (0-18 & 0-6)	CSO Census of Population question	✔	
A5	One or two parent household	CSO Census of Population question	✔	
A6	Marital status	CSO Census of Population question	✔	
A7-8	Own or rent house or flat	CSO Census of Population question	✔	
A9	Age	CSO Census of Population question	✔	
A10-11	Education	CSO Census of Population question	✔	
A12	Occupation	CSO Census of Population question	✔	
A13	Employment	CSO Census of Population question	✔	
A14	State income supports	Bespoke question	✔	
A15	Degree of financial difficulty	CSO Survey of Income and Living Conditions[124], also used in GUI	✔	
A16	English is first language	CSO Census of Population question	✔	
A17	Born in Ireland	GUI question	✔	
A18	Nationality	GUI question	✔	

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122 Murray, McCrory, Thornton, Williams, Quail, Swords, Doyle and Harris, 2011.

123 Pratschke, McKeown and Haase, 2011.

124 Central Statistics Office, 2010.

		SECTION B: Your Neighbourhood		
B1.1-1.4 B2.1-2.3	Local Problems	GUI scale	✔	
B3.1-3.3	Neighbourliness	Measures of Trust and Reciprocity, adapted from the UK Social Capital Module of the General Household Survey 2000[125], and used in Ireland by the Institute of Public Health in Ireland[126].		✔
B3.4-3.5	Trust	Question used in the European Values Study 1981, 1990, 1999-2000[127] ; also used in the US in the National Opinion Research Center's General Social Survey[128].		✔
B4.1-4.11	Support Networks	Adapted from other scales, and used in a number of studies in Ireland[129].		✔
B4.12	Overall Support	Overall support from family or friends outside the household. GUI Infant Questionnaire.		✔
B5.1-5.10	Local Services	Local Services Score, adapted from the UK Social Capital Module of the General Household Survey 2000[130], and used in Ireland by the Institute of Public Health in Ireland[131].		✔
		SECTION C: Personal Characteristics		
C1.1-1.20	Personality traits	Positive and Negative Affect Scales (PANAS)[132], comprising 20 items and two sub-scales: (i) positive affect (ii) negative affect.		✔
C2.1-2.5	Satisfaction with Life	Satisfaction with Life Scale[133], comprising five items.		✔

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125 Coulthard, Walker and Morgan, 2002.

126 Balanda and Wilde, 2003.

127 For analysis see Fahey, Hayes and Sinnott, 2005:179; .

128 For analysis see Kim, Baum, Ganz, Subramanian and Kawachi, 2011; Glaeser, Laibson, Scheinkman and Soutter, 2000.

129 McKeown, Pratschke and Haase, 2003.

130 Coulthard, Walker and Morgan, 2002.

131 Balanda and Wilde, 2003.

132 Adapted from Watson, Clark, and Tellegen, 1988.

133 Diener, Lucas and Oishi, 2002:70.

C3.1-3.8	Depression	The Center for Epidemiologic Studies Depression Scale (CES-D) Scale[134], comprising 20 items divided into four sub-scales: (i) depressed affect (ii) positive affect (iii) somatic symptoms (iv) interpersonal problems.	✔	✔
C4.1-4.9	Drug use	GUI scale	✔	
C5.1-5.8	Problem-solving capacity	The Hope Scale[135], comprising 8 items divided equally into two sub-scales: (i) pathways (ii) agency.		✔
C6.1-6.6	Optimism	Life Orientation Test – Revised (LOT-R), a measure of Generalised Optimism Versus Pessimism[136]. Items D6.2, D6.4 and D6.5 to be reverse coded.		
C7.1-7.10	Self-Esteem	Rosenberg Self-Esteem Scale[137]. Items D7.3, D7.6, D7.8, D7.9, D7.10 to be reverse coded.		
C8.1 to 8.6	Gratitude	Gratitude Questionnaire (GQ-6)[138]. Reverse code items C8.3 and C8.6.		
C9.1 to 9.10	Emotional Intelligence	Five facets taken from Trait Emotional Intelligence Questionnaire (TEIque-SF)[139]: Emotion expression (D9.1, D9.6) Emotion management of others (D9.5, D9.10), Emotion perception of self and others (D9.4, D9.9), Emotion regulation (D9.3, D9.8), Trait empathy (D9.2, D9.7). Reverse code items C8.2, C8.3, C8.4, C8.6, C8.10.		
SECTION D: Your Health and Lifestyle				
D1.1	General health	GUI scale	✔	
D2.1-2.6	Incidence of disability	GUI scale	✔	
D3.1-3.2	Smoking	GUI scale	✔	
D3.3-3.4	Drinking alcohol	GUI scale	✔	
D3.3-3.4	Drinking alcohol	GUI scale	✔	

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134 Reproduced in McDowell, 2006:350-358.

135 Snyder, Rand and Sigmon, 2002:268-270

136 In Carver and Scheier, 2004.

137 In Heatherton and Wyland, 2004.

138 Emmons, McCullough and Tsang, 2003.

139 Available at: www.psychometriclab.com. Cooper and Petrides, 2010.

		Section E Focusing on One Child		
E1.1-1.4	Age, gender and birth-weight	Standard question	✔	✔
E2.1	Child's physical health	GUI scale	✔	
E2.2	Child's chronic physical or mental health problem, illness or disability	GUI scale	✔	
E2.3	Child hampered in his/her daily activities by this problem	GUI scale[140]	✔	
E3.1-3.25	Behaviour and Emotional Difficulties	Strengths and Difficulties Questionnaire (SDQ)[141] (version for 3-4 year olds to be completed by parent) comprising 25 items on its core scale which has five sub-scales: (i) conduct problems (ii) emotional symptoms (iii) hyperactivity (iv) peer problems (v) prosocial behaviour. Note that items 18 ('often argumentative with adults'), 21 ('can stop and think things over before acting') and 22 ('can be spiteful to others') are slightly different to the 4-16 year old version of SDQ.	✔	✔
E4.1-4.20	Temperament	Emotionality, Activity and Sociability Questionnaire (EAS)[142] (version to be completed by parent) comprising 20 items on its core scale which has three sub-scales: (i) emotionality (ii) activity (iii) sociability.	✔	
E5.1	Concerns about how the child talks	GUI scale[143]	✔	
E5.2	Child has a specific learning difficulty	GUI scale[144]	✔	
E6.1-6.21	Child's diet	GUI scale	✔	

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140 A recent analysis defined the prevalence of Special Education Needs (SEN) by reference to E2.2, E2.3, E5.1, E5.2 (See Banks and McCoy, 2011:85-104).

141 For more information, see www.sdqinfo.com; see also Goodman, 1997; Goodman, Meltzer and Bailey, 1998; Goodman and Scott, 1999; Goodman, 1999; Smedje, Broman, Hetta and von Knorring, 1999.

142 Buss and Plomin, 1984.

143 A recent analysis defined the prevalence of Special Education Needs (SEN) by reference to E2.2, E2.3, E5.1, E5.2 (See Banks and McCoy, 2011:85-104).

144 A recent analysis defined the prevalence of Special Education Needs (SEN) by reference to E2.2, E2.3, E5.1, E5.2 (See Banks and McCoy, 2011:85-104).

SECTION F: Relationship with Your Child				
F1.1	Having fun with child	Pianta Child-Parent Relationship Scale[145]	✔	
F2.1-F2.30	Child-Parent Relationship	Pianta Student-Teacher Relationship Scale[146] as used in Sure Start Evaluation[147]	✔	
F3.1-F3.2	Breastfeeding	GUI scale	✔	
F4.1-4.5	Family time together	GUI scale	✔	
F5.1-5.4	TV, etc in child's bedroom	GUI scale	✔	
F6.1-6.5	Home Learning Environment	Home Learning Environment (HLE) Scale[148]		
F7.1-7.4	Home Chaos	Confusion, Hubbub and Order Scale[149], used in Sure Start evaluation[150]		
F8.1-8.18	Parental Stress	Parental Stress Scale[151] comprising 18 items representing positive aspects of parenthood (emotional benefits, self-enrichment, personal development) and negative aspects (demands on resources, opportunity costs and restrictions).	✔ GUI Nine-month cohort only	
F9	Disciplining child	GUI scale, adapted from Millennium Cohort Study; similar to the Parent-Child Conflict Tactics Scale[152] used in Sure Start.	✔	
F10.1-10.15	Events in life of child	GUI scale	✔	
SECTION G: Relationship with Your Partner				
G1-G7	Couple relationship	Dyadic Adjustment Scale[153]	✔	
G8.1-8.4	Couple relationship	Ineffective Arguing Inventory[154], comprising 4 items and no sub-scales.		✔
G9.1-9.6	Father involvement	Scale used in Sure Start evaluation, derived from Millennium Cohort Study[155].		✔

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145 Pianta, 1992.

146 Pianta, 2001.

147 National Evaluation of Sure Start Team, 2005a:42-3.

148 Melhuish, 2010; Melhuish, et al, 2008.

149 Matheny, Wachs, Ludwig and Phillips, 1995.

150 National Evaluation of Sure Start Team, 2005a:44.

151 Berry and Jones, 1995.

152 Straus, Hamby, Finkelhor, Moore and Runyan, 1995.

153 Sharpley and Rogers, 1984, derived from Spanier 1976.

154 Kurdek, 1994.

155 National Evaluation of Sure Start Team, 2005a:44-45.

SECTION H: Your Assessment of the Childcare Centre

H1.1-1.8	Quality of Care for Children	Bespoke scale informed by the National Framework for Early Childhood Education: Standard 5 - Interactions (Síolta[156]); Early Childhood Curriculum Framework: Guidelines for Good Practice – Learning and developing through interactions (Aistear[157]). Selection of items also informed by the Helpgiving Practices Scale[158] and the Family-Centred Practices Scale[159].			85
H2.1-2.11	Quality of Care for Parents	Bespoke scale informed by the National Framework for Early Childhood Education: Standard 3 – Parents and Families (Síolta[160]); Early Childhood Curriculum Framework: Guidelines for Good Practice – Building partnerships between parents and practitioners (Aistear[161]). Selection of items also informed by the Helpgiving Practices Scale[162] and the Family-Centred Practices Scale[163].			
H3.1-3.2	Satisfaction with childcare centre	GUI scale – Infant Cohort. Matching set of items used in the Staff Questionnaire (D3.1-3.11). Matching set of items used in the Staff Questionnaire (G1.1-1.2).	✔		
H3.3-3.5	Helpfulness of childcare centre	Bespoke item to assess helpfulness to self, child and family			

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156 Department of Education and Skills, 2010a:75-86.

157 National Council for Curriculum and Assessment, 2009.

158 Dunst, Trivette and Hamby, 2006:38.

159 Dunst, Trivette and Hamby, 2006:44.

160 Department of Education and Skills, 2010a:75-86.

161 National Council for Curriculum and Assessment, 2009.

162 Dunst, Trivette and Hamby, 2006:38.

163 Dunst, Trivette and Hamby, 2006:44.

Appendix Five Guide to Staff Questionnaire

Question Number	Concept	Instrument	Comparative Data	
			Growing up in Ireland[164]	Well-Being Study[165]
SECTION A: Background Information				
A1-2	Gender and age	Standard question	✔	
A3-6	Parenting and marital status	CSO Census of Population question	✔	
A7.9	Language and ethnic background	CSO question	✔	
SECTION B: Your Qualifications and Experience				
B1-2	Education	Similar to CSO question	✔	
B3-5	Qualifications in childcare	GUI-Infant Cohort	✔	
B6-8	Time working in childcare and in centre	GUI-Infant Cohort – Survey of Centre-Based Care	✔	
B9	Role in childcare centre	Bespoke question	✔	
B10-12	Employment status including hours worked	Bespoke question	✔	
B13-15	On-the-job training received	Questions adapted from ESRI scale[166]		
B16-17	Feeling prepared for your work	Bespoke questions		

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164 Murray, McCrory, Thornton, Williams, Quail, Swords, Doyle and Harris, 2011.

165 Pratschke, McKeown and Haase, 2011.

166 Used in the 2003 and 2009 Changing Workplace Survey (O'Connell, Russell, Williams and Blackwell, 2004; O'Connell, Russell, Watson and Byrne, 2010).

SECTION C: Your Job				
C1.1-1.4	Job Satisfaction	ESRI scale[167]		
C2.1-2.6	Job Commitment	ESRI scale[168]		
C3.1-3.4	Job Pressure	ESRI scale[169]		
C4.1-4.5	Job Autonomy	ESRI scale[170]		
C5.1-5.4	Job influence on family life	ESRI scale[171]		
C6.1-6.4	Workplace consultation	ESRI scale[172]		
C7.1-7.5	Perceptions of manager	ESRI scale[173]		
C8.1-8.2	Staff-management relations	ESRI scale[174]		
C10.1	Bullying at work	ESRI scale[175]		
C9.1-9.5	Staff supports	Bespoke scale informed by the National Framework for Early Childhood Education (Síolta[176]) - Standard 10: Organisation; Standard 11: Professional Practice		
C11.1-11.9	Work engagement	Utrecht Work Engagement Scale – Shorted Version (UWES-9)[177]. This scale comprises three subscales: vigour (10.1, 10.2, 10.5); dedication (10.3, 10.4, 10.7); absorption (10.6, 10.8, 10.9).		

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167 Used in the 2003 and 2009 Changing Workplace Survey (O'Connell, Russell, Williams and Blackwell, 2004; O'Connell, Russell, Watson and Byrne, 2010).

168 Used in the 2003 and 2009 Changing Workplace Survey (O'Connell, Russell, Williams and Blackwell, 2004; O'Connell, Russell, Watson and Byrne, 2010).

169 Used in the 2003 and 2009 Changing Workplace Survey (O'Connell, Russell, Williams and Blackwell, 2004; O'Connell, Russell, Watson and Byrne, 2010).

170 Used in the 2003 and 2009 Changing Workplace Survey (O'Connell, Russell, Williams and Blackwell, 2004; O'Connell, Russell, Watson and Byrne, 2010.).

171 Used in the 2003 and 2009 Changing Workplace Survey (O'Connell, Russell, Williams and Blackwell, 2004; O'Connell, Russell, Watson and Byrne, 2010).

172 Used in the 2003 and 2009 Changing Workplace Survey (O'Connell, Russell, Williams and Blackwell, 2004; O'Connell, Russell, Watson and Byrne, 2010).

173 Used in the 2003 Changing Workplace Survey only (O'Connell, Russell, Williams and Blackwell, 2004).

174 Used in the 2003 and 2009 Changing Workplace Survey (O'Connell, Russell, Williams and Blackwell, 2004; O'Connell, Russell, Watson and Byrne, 2010).

175 Used in the 2003 and 2009 Changing Workplace Survey (O'Connell, Russell, Williams and Blackwell, 2004; O'Connell, Russell, Watson and Byrne, 2010).

176 Department of Education and Skills, 2010a:75-86.

177 Schaufeli, Bakker, Salanova, 2006.

		SECTION D: Your Work		
D1.1-1.12	Adult-Child engagement	This is a bespoke scale based on the Adult Engagement Observation Schedule[178] which distinguishes three dimensions of engagement: (i) sensitivity (items 12.1-12.4), stimulation (items 12.5-12.8), and autonomy (12.9 to 12.12).		
D2.1-2.10	Working with children	Bespoke scale informed by the National Framework for Early Childhood Education: Standard 5 - Interactions (Síolta[179]); Early Childhood Curriculum Framework: Guidelines for Good Practice – Learning and developing through interactions (Aistear[180]). Selection of items also informed by French, 2011[181].		
D3.1-3.12	Working with parents	Bespoke scale informed by the National Framework for Early Childhood Education: Standard 3 – Parents and Families (Síolta[182]); Early Childhood Curriculum Framework: Guidelines for Good Practice – Building partnerships between parents and practitioners (Aistear[183]).		
D4.1-4.5	Contact with Other Services	Bespoke scale to assess the extent of contact with other services		

178 Bertram, 1996:Ch 4; Pascal and Bertram, 1999.

179 Department of Education and Skills, 2010a:75-86.

180 National Council for Curriculum and Assessment, 2009.

181 French, 2011.

182 Department of Education and Skills, 2010a:75-86.

183 National Council for Curriculum and Assessment, 2009.

SECTION E: Your Personal Characteristics				
E1.1-1.20	Personality traits	Positive and Negative Affect Scales (PANAS)[184], comprising 20 items and two sub-scales: (i) positive affect (ii) negative affect.		✔
E2.1-2.5	Satisfaction with Life	Satisfaction with Life Scale[185], comprising five items.		✔
E3.1-3.8	Depression	The Center for Epidemiologic Studies Depression Scale (CES-D) Scale[186], comprising 20 items divided into four sub-scales: (i) depressed affect (ii) positive affect (iii) somatic symptoms (iv) interpersonal problems.	✔	✔
E4.1-4.8	Problem-solving capacity	The Hope Scale[187], comprising 8 items divided equally into two sub-scales: (i) pathways (ii) agency.		✔
E5.1-5.6	Optimism	Life Orientation Test – Revised (LOT-R), a measure of Generalised Optimism Versus Pessimism[188]. Items D6.2, D6.4 and D6.5 to be reverse coded.		
E6.1-6.10	Self-Esteem	Rosenberg Self-Esteem Scale[189]. Items D7.3, D7.6, D7.8, D7.9, D7.10 to be reverse coded.		

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184 Adapted from Watson, Clark, and Tellegen, 1988.

185 Diener, Lucas and Oishi, 2002:70.

186 Reproduced in McDowell, 2006:350-358.

187 Snyder, Rand and Sigmon, 2002:268-270

188 In Carver and Scheier, 2004.

189 In Heatherton and Wyland, 2004.

E7.1 to 7.8	Emotional Intelligence	Five facets taken from Trait Emotional Intelligence Questionnaire (TEIque-SF)[190]: Emotion expression (D9.1, D9.6) Emotion management of others (D9.5, D9.10), Emotion perception of self and others (D9.4, D9.9), Emotion regulation (D9.3, D9.8), Trait empathy (D9.2, D9.7). Reverse code items D8.2, D8.3, D8.4, D8.6, D8.10.		✔
E8.1-8.11	Support Networks	Adapted from other scales, and used in a number of studies in Ireland[191].		✔
E8.12	Overall Support	Overall support from family or friends outside the household. GUI Infant Questionnaire.	✔	✔
E9.1	Degree of financial difficulty	CSO Survey of Income and Living Conditions[192]	✔	
SECTION F: Your Assessment of this Childcare Centre				
F1.1	Estimated child satisfaction	Bespoke question. Similar question used in the Parent Questionnaire (H3.1).	✔	
F1.2	Estimated parent satisfaction	Adapted from the GUI scale – Infant Cohort. Similar question used in the Parent Questionnaire (H3.2).	✔	

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190 Available at: www.psychometriclab.com. Cooper and Petrides, 2010.

191 McKeown, Pratschke and Haase, 2003.

192 Central Statistics Office, 2010.

Appendix Six NEYAI Learning Community: Monitoring Instrument

NEYAI EVALUATION

Evaluation of
National Early Years
Access Initiative

This monitoring instrument is designed to document how the NEYAI Learning Community is influencing the thinking and actions of each project. It should be completed within a week of each meeting of the Learning Community by those who attend from each project.

Please enter your NEYAI Login Code:	Your Name:	Date of Meeting:

Thinking about your NEYAI project and the early years sector in general, how much has this meeting of the Learning Community influenced your thinking or actions in any of the following areas? Please focus primarily on the work of your project which is part of the NEYAI evaluation.

How much has this meeting influenced you about …	Type of influence
ways of improving outcomes for children? ❏₁ Not at all ❏₂ A little ❏₃ A lot	If you have been influenced a little or a lot by this meeting, please specify:
ways of improving outcomes for parents? ❏₁ Not at all ❏₂ A little ❏₃ A lot	If you have been influenced a little or a lot by this meeting, please specify:
ways of improving outcomes for staff? ❏₁ Not at all ❏₂ A little ❏₃ A lot	If you have been influenced a little or a lot by this meeting, please specify:

ways of improving the early years sector? ❏₁ Not at all ❏₂ A little ❏₃ A lot	If you have been influenced a little or a lot by this meeting, please specify:
any other aspect of your work? ❏₁ Not at all ❏₂ A little ❏₃ A lot	If you have been influenced a little or a lot by this meeting, please specify:

At this meeting, who has influenced you thinking or likely future actions?   Tick all that apply.

❏₁ Other NEYAI Projects   ❏₂ Invited speakers   ❏₃ Pobal   ❏₄ Facilitator   ❏₅ NEYAI Evaluation Team   ❏₆ None of these

In the period between this meeting and the last meeting of the Learning Community, have you been in contact with other NEYAI projects about any aspect of your work? Include all contacts by phone, email, letter, face-to-face meeting, etc.

Name of Project	Have you been in contact with this project in the period between this and the last meeting of the Learning Community?		If yes, about how many times have you been in contact?
BC Early Years Language & Learning Initiative, Ballyfermot / Chapelizod	❏₁ Yes ❏₂ No	❏₃ Not Applicable if this is your project	
CC Bringing It All Back Home, Canal Communities	❏₁ Yes ❏₂ No	❏₃ Not Applicable if this is your project	
CK Happy Talk Project, Cork	❏₁ Yes ❏₂ No	❏₃ Not Applicable if this is your project	
CN Addressing Gaps in Training & Practice, Clondalkin	❏₁ Yes ❏₂ No	❏₃ Not Applicable if this is your project	
DD Early Years Numeracy Project, Dublin Docklands	❏₁ Yes ❏₂ No	❏₃ Not Applicable if this is your project	
FL Fingal Parents Initiative, Fingal	❏₁ Yes ❏₂ No	❏₃ Not Applicable if this is your project	
DL Professional Pedagogy Project, Donegal	❏₁ Yes ❏₂ No	❏₃ Not Applicable if this is your project	
LK Start Right, Limerick	❏₁ Yes ❏₂ No	❏₃ Not Applicable if this is your project	
LD Tus Nua, Longford	❏₁ Yes ❏₂ No	❏₃ Not Applicable if this is your project	
RO Dublin SW Inner City Demonstration Model, Rialto	❏₁ Yes ❏₂ No	❏₃ Not Applicable if this is your project	
TT Quality Through Professionalisation, Tallaght	❏₁ Yes ❏₂ No	❏₃ Not Applicable if this is your project	

In the period between this meeting and the last meeting of the Learning Community, have you attended any events such as conferences, seminars or training workshops about any aspect of your work or about the early years sector in general?

Have you attended any events since last meeting?	If yes, how many events, approximately, since last meeting?	If yes, did any of these events influence your thinking or actions about any aspect of your work or the early years sector in general?	If you have been influenced a little or a lot by these events, please specify the event and how it has influenced your thinking or actions:
❑₁ Yes ❑₂ No		❑₁ Not at all ❑₂ A little ❑₃ A lot	

Thank you for taking the time to complete this.

Appendix Seven Parent Consent Form

NEYAI EVALUATION — Evaluation of National Early Years Access Initiative

Confidential

Parent Consent Form

Dear Parent,

We are inviting you to be part of a national study about childcare in Ireland. The study is trying to find out how childcare services are meeting the needs of children, and their parents, so that we can learn how to improve these services for all children in the country.

The study is funded by the Government and some charitable organisations and is part of the National Early Years Access Initiative. The childcare centre which your child attends is part of this initiative. The study is being carried out by Dr. Kieran McKeown, Mr. Trutz Haase and Professor Jay Belsky, who have extensive research experience in this area. If you have any queries about the study, please do not hesitate to ask.

Your name has been chosen at random to take part in the study. That is why we are asking if you are willing to be part of the study, and allow your child to be part of the study as well.

If you are willing to be part of the study, you will be interviewed twice: the first interview will take place within the next few weeks and the second interview in about a year's time. The idea behind the two interviews is to see if there are any changes for you or your child over the course of the year.

The interviews will be held in your own home, if that is where you prefer, and will be entirely private and confidential. The identity of you and your child will never be revealed to anyone. No one in the childcare centre will ever know what you say during these interviews.

After each interview, your name will be entered in a prize draw for three prizes of €200, €100, and €50.

If you consent to take part in the study, we will pass on your contact details to the interviewer who will make contact with you to arrange the interview. The interview will be at a time and place that suits you.

If you are willing to take part in the study, and allow your child to be part of the study, we would simply ask you to sign this consent form.

SIGNED_____   DATE:_____