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RAISING QUALITY IN THE EARLY YEARS

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Wolverhampton Early Years and KS1 Quality Improvement Project

Early Years Evaluation
Technical Report

December 2015

Executive Summary

Between May 2014 and July 2015, 21 schools took part in the Wolverhampton Early Years and Key Stage 1 Quality Improvement Project, designed to improve children's outcomes by raising the quality of teaching. This report presents evaluation findings from the Early Years element of the project.

Teachers were offered a number of different professional development opportunities to support quality improvement within the Early Years Foundation Stage (EYFS). These included:

- a baseline quality audit using the research-validated ECERS-R and ECERS-E rating scales;
- a course on self-evaluation and improvement, using ECERS as a framework;
- in-class support provided by project mentors.

With a few exceptions, a teacher from one reception and one nursery class per school took part, each accessing different elements. A final ECERS audit was also completed at the end of the project to provide a measure of change. This report presents the improvement in practice over the course of the project - as measured by ECERS-R and E - for the 17 schools (33 classes) in which audits were completed at both time-points. Both ECERS tools use a 7-point scale, where 1 represents inadequate, 3 minimal, 5 good and 7 excellent quality.

The findings of the evaluation reflect the hard work of participating teachers throughout the project. Over the course of the (on average) 10 months between the baseline and follow-up audits, overall ratings improved from a baseline of minimal quality (3.27) to an average of 4.33 on the ECERS-R. This represents a relative gain of 33% (15% in absolute terms).

The aspects of practice reflected within the ECERS-R were the primary focus of the training, particularly the adult role in supporting learning and development. Although overall quality is not yet rated as good, all three of the ECERS sub-domains relating to the adult role were rated as being of good quality (i.e. 5 or above) by the end of the project:

- the quality of interactions;
- the quality of support for language and reasoning;
- the way in which the structure/organisation of the day supports developmentally appropriate practice.

Quality in all three of these areas improved by at least one ECERS scale-point during the project. In addition, the other four areas which formed a focus within the training – although not yet of good quality – improved by one ECERS scale-point or more. These were the physical environment (4.6), resourcing and activities (4.6), support for understanding of science/the environment (3.8), and opportunities for active play (4.3). Although difficult to quantify precisely what an improvement of 1 ECERS point might mean for child outcomes, we have good evidence that children who attend settings scoring more highly on ECERS-R and E have better language, pre-reading, maths, reasoning and social-behavioural outcomes than children attending lower quality settings (OPRE, 2010) and that they do better in national tests at ages 7 and 11 (Taggart et al.., 2015).

Baseline scores on the more specific areas of learning and development evaluated by ECERS-E were generally lower than the ECERS-R scores, reflecting national and worldwide trends. However, with the exception of a science module designed to promote exploration and critical thinking skills, these aspects did not form a main focus of the project. It was felt that schools needed to build the foundations of developmentally appropriate practice before moving on to work on areas such as literacy and maths. In fact, some change was seen in both the quality of support for literacy (+0.8) and maths (+0.8) skills, suggesting perhaps that general improvements in the quality of adult-child interactions were having a positive knock-on effect in other areas.

Overall, the teachers taking part in the project have made considerable progress in a short time-frame and built firm foundations for effective learning. Interactions and relationships are the cornerstones of effective practice (Hamre et al., 2012) and early language skills – and particularly vocabulary skills – are strong predictors of children's later development (Scarborough, 2001). Comparison of self-evaluations with the external ECERS ratings at the start and end of the project also suggest that teachers became more skilled at evaluating the quality of their practice, which provides a further indicator of capacity for improvement.

Individually, there were some variations in the improvement made. Some teachers still have work to do in strengthening the foundations of effective practice. Others made very large improvements, achieving good-to-excellent quality by the end of the project, and are ready to deepen and sustain existing improvements and begin work in other areas.

1. Introduction

Between May 2014 and July 2015, 21 schools took part in the Wolverhampton Early Years and Key Stage 1 Quality Improvement Project, designed to improve children's outcomes by raising the quality of teaching. The main project report (Education Central, 2015) describes the project, its aims, elements and participants in more detail. This supplementary technical report presents evaluation findings from the early years element of the project.

1.1 The early years professional development programme

Teachers were offered a number of different professional development opportunities to support quality improvement within the Early Years Foundation Stage (EYFS):

1. ***A baseline quality audit using the research-validated ECERS-R and ECERS-E rating scales*** (see 1.3). The audits were conducted by A+ Education, and provided schools with an external snapshot of their provision, including strengths and potential areas for development. Although the audits were carried out at the start of the project (either in June or September 2014), feedback was not provided until the first day of training had taken place, so that practitioners understood and felt ownership of the rating scales, and knew how to interpret the feedback. *(June-September 2015)*
2. ***A course on self-evaluation and improvement, using ECERS as a framework***. The training was provided by A+ Education and took place over 5 days, spread across 5 months. The content was informed by the baseline audits and focused on common areas of need. Each day targeted a different aspect of practice, looking both at how children learn and develop, and at how to support that development through evidence-based practice. Teacher had opportunities to watch and analyse clips of early years environments and interactions, using the ERS as a framework to identify features of effective practice. They were also taught the principles of using ECERS as an action research tool to critically evaluate and improve their practice. Between each day they were asked to use items of the ECERS to evaluate their practice, and to make and evaluate changes, before returning to discuss their experiences on the next training day. *(September 2015 to March 2015)*
3. ***In-class support provided by project mentors.*** Support was provided by locally-trained practitioner mentors known as Teaching and Learning Consultants (TLCs) from Education Central and local Teaching Schools. Mentors provided at least one day of direct classroom support for each teacher, specific input for all teachers based on their greatest common needs and telephone and email support. They also facilitated ***cluster group meetings***, to provide teachers and schools with opportunities for peer support based on areas of common need and interest. Schools were assigned to cluster groups on the basis of their baseline audits. *(Throughout project period)*

A total of thirty eight classes from 20 of the schools had a baseline ECERS audit and participated in the early years programme. With a few exceptions, a teacher from one reception class and one nursery class per school took part. A final ECERS audit was also completed at the end of the project, to provide an external and objective measure of change within participating classes. The final observations were completed in June and July[1] 2015 with – on average – 10 months between the baseline and final observations. This report presents details of the improvement in practice over the course of the project - as measured by ECERS-R and E - for the 17 schools (33

[1] One observation was completed early because the participating teacher was leaving at Easter

classes) in which audits were completed at both time-points[2]. Three schools (5 classes) did not have a follow-up audit and have therefore not been included in this report.

1.2 Project participation

Many of the schools experienced turbulence of some sort during the project. This included staff turnover, difficulties in recruitment, changes in the senior team, amalgamation, extensive building work, preparation for academy status and high levels of pupil mobility. Despite this, all of the schools that started the project completed the work to the best of their abilities.

The teachers from the 33 classes included within this report all participated in at least one aspect of the professional development programme, although the degree of engagement varied. The majority of teachers engaged in all elements of the programme, with small numbers not accessing the training or the in-class support. On average, teachers attended 4 days of training, received 4 in-class support visits and attended 4.5 cluster group meetings during the course of the project.

Twenty six of the teachers taking part in the project were involved from beginning to end: they were teaching in their class at the time of the baseline and the final ECERS audits and took part in one or more elements of the professional development. Five teachers participated in the professional development and were teaching at the time of the final ECERS audit, but had not been teaching in the 'project' class at the time of the baseline audit. Two classes experienced high staff turnover, with one teacher in place at the baseline, a second taking part in the professional development and a third in place by the time of the final audit.

1.3 The Environment Rating Scales (ECERS)

The ECERS scales are valid and reliable research tools, known to predict children's development in the early years and beyond (OPRE, 2010; Taggart et al., 2015).

The ***Early Childhood Environment Rating Scale Revised (ECERS-R)*** assesses provision for children aged from 30 months to five years. The first six subscales of the ECERS-R were used within the project.

1. Space and furnishings (e.g. room arrangement, space for gross motor play)
1. Personal care routines (e.g. meal times, arrivals, health and hygiene, safety)
2. Language and reasoning (e.g. informal use of language, use of books)
3. Activities (e.g. range and variety of resources to support learning)
4. Interactions (e.g. support for personal, social and emotional development)
5. Program structure (e.g. structure and organisation of the day, opportunities for play)

The extension to the ECERS-R (***ECERS-E***) focuses on the specific areas of learning and development, and the extent to which diversity and individual needs are provided for. The four ECERS-R subscales evaluate provision to support:

1. Literacy development
2. Mathematical development
3. Understanding of science and the environment
4. Diversity and individual learning needs

[2] The design of this evaluation did not include a control group. As a result, it is not possible to be sure that the changes seen during the project happened as a result of the professional development received. Without a comparison group, we cannot tell what would have happened in the absence of schools receiving professional development and support. Throughout this report, we therefore describe change and improvement in project schools, rather than claiming impact as a result of the project.

The ECERS audits were completed during an observation of a full day within each class at each time-point. Within each subscale, observers complete number of individual items, rated on a seven-point scale with explicit indicators for scores of 1 (inadequate), 3 (minimal), 5 (good) and 7 (excellent). For example, within 'staff-child interaction' item, indicators at each level include:

- 1.1 Staff members are not responsive to, or not involved with, the children
- 3.1 Staff usually respond to children in a warm, supportive manner
- 5.2 Staff show respect for children (e.g. listen attentively, make eye contact….)
- 7.2 Staff encourage the development of mutual respect between children and adults (e.g. wait until children finish asking questions before answering, encourage children in a polite way to listen while others speak).

There are clear rules for giving even numbered scores between the 'anchored' criteria for the odd numbers.

1.4 The teacher questionnaire

Teachers taking part in the project were also asked to complete a questionnaire at the baseline and follow-up time-points. This was based on the aspects of quality assessed by the ECERS scales, and asked teachers to rate:

- the extent to which they believed each dimension of quality was important to support children's development; and
- the current quality of provision within their class for each dimension (e.g. support for peer interactions).

The analysis compares teacher's responses to the questionnaire with the findings from the external quality audit.

1.5 Structure of this report

The remainder of the report is structured as follows:

- section 2 presents a descriptive summary of the findings
- section 3 to 6 presents the ECERS findings for the 33 classes:
    - 3: the overall quality findings (i.e. the ECERS total and subscale scores)
    - 4: the detail (i.e. the individual ECERS items)
    - 5: the fine detail (i.e. the individual ECERS indicators showing what actually changed in practice)
    - 6: the variation in scores across participating schools
- section 7 presents the results from the teacher questionnaire
- section 8 presents conclusions.

2. Summary of findings

2.1 Baseline picture and how this informed the support offered

The overall quality of provision at baseline was just above minimal, at 3.27 on ECERS-R and 3.15 on ECERS-E[3], with none of the broad areas of practice evaluated by the ECERS subscales rated as being of good quality (see Section 3). The lowest rated areas included the quality of resourcing ('activities'), support for understanding science and the environment, provision to support diversity and individual learning needs, and the quality of personal care routines.

The baseline profile was used to plan the support offered during the project and, in particular, the content of the training course. The approach taken was not necessarily to focus on the lowest scoring areas, but to consider the aspects of practice evaluated by ECERS which are known to be the most important for supporting children's development.

We know, for example, that interactions and relationships form the foundations of effective practice, and that the adult role in supporting children's learning is crucial. We also know that early language skills – and particularly vocabulary skills – are strong predictors of children's later development. The training was therefore based on *intelligent* use of the ECERS results, and focused particularly on:

- the role of the adult in supporting interactions, relationships and play;
- the role of the adult in supporting language development;
- structure and organisation of the day;
- the physical environment and resourcing;
- support for understanding of science and the environment, on the grounds that science provides rich opportunities for developing children's critical thinking skills; and
- opportunities and support for active play.

With the exception of the science module, the main focus was on the prime areas of the Early Years Foundation Stage (EYFS) and the characteristics of effective learning, using ECERS-R as a framework to support self-evaluation and improvement. The timeframe of the project was relatively short, and it was felt that participating schools needed to build the foundations of developmentally appropriate practice before moving on to work on the specific areas of learning and development such as literacy and maths.

Within the evaluation, the greatest changes were therefore expected in the aspects of practice evaluated by ECERS-R, which takes a broad and holistic child-centred approach. Less change was anticipated in the more curricular areas assessed by the ECERS-E. However, given that the ECERS-E is known to be predictive of children's development (Sylva et al., 2010) it was important to include it as a measure, in order to provide schools with information about potential areas for development after the project had ended.

In addition to the areas covered within the training course, the Teaching and Learning Consultants provided individual support for teachers based on the areas they most needed to work on, with a particular focus on adult interactions with children to improve language, adult deployment and planning for learning. The cluster groups also included input on leadership and management skills.

[3] Measured on a scale from 1 to 7, where 1 is inadequate, 3 is minimal, 5 is good and 7 is excellent

2.2 Overall improvement

Over the course of the (on average) 10 months between the baseline and follow-up audits, participating classes improved from a baseline of minimal quality (3.27) to an average rating of 4.33 on the ECERS-R (see Section 3). This represents a relative gain of 33% (15% in absolute terms[4]).

As noted above, the aspects of practice included within the ECERS-R were the primary focus of the training, particularly the adult role in supporting learning and development. Although overall quality is not yet rated as good, all three of the ECERS subdomains relating to the adult role were rated as being of good quality by the end of the project:

- the quality of interactions;
- the quality of support for language and reasoning; and
- the way in which the structure and organisation of the day supports developmentally appropriate practice (i.e. the 'program structure').

Quality in all three of these areas improved by at least one ECERS scale-point during the project. In addition, the other four areas which formed a focus within the training – although not yet of good quality – improved by one ECERS scale-point or more. These were the physical environment (4.6), resourcing and activities (4.6), support for understanding of science/the environment (3.8), and opportunities and support for active play (4.3) (see Section 3). Although it is hard to pin down precisely what an improvement of 1 ECERS point means for child outcomes, we have good evidence that children who attend settings scoring more highly on ECERS-R and E have better language, pre-reading, maths, reasoning and social-behavioural outcomes than children attending lower quality settings (OPRE, 2010) and that they do better in national tests (Sylva et al., 2010).

As expected, fewer changes were seen on the ECERS-E, with the exception of improvements in the quality of support for science and exploration (+1.1). However, some change *was* seen in both the quality of support for literacy (+0.8) and maths (+0.8) skills, suggesting perhaps that general improvements in the quality of adult-child interactions were having a positive knock-on effect. Overall, quality as measured by the ECERS-E improved from a baseline of 3.15 to a final score of 3.91 (see Section 3).

Section 2.3 describes in more detail the changes in practice within each of the above areas, as well as change in areas not focused on within the training but evaluated by the ECERS scales. It is supported by Sections 3 to 5 which provide the detailed ECERS findings and scores:

- section 3: the overall and subscale scores
- section 4: the item scores
- section 5: the individual ECERS indicators, showing the detail of what actually changed in practice.

[4] On the basis that 3.27 is 47% of 7, 4.33 is 62% of 7 (62%-47%=15%)

2.3 What actually changed in practice within the 33 classes?

2.3.1 Change in areas which formed a focus of the training

The role of the adult in supporting interactions, relationships and play (see also 5.1.1, p.17)

Over the course of the project, teachers were successful in lifting the overall quality of *interactions* to a good level (i.e. a rating of 5) from a baseline of 3.8. The items of the *interaction* subscale of ECERS-R assesses the quality of interactions between staff and children and support for peer interactions. Staff-child interactions were already of good quality at the baseline (5.4) and improved to good-to-excellent quality (6.3) by the end of the project. The greatest improvements were seen in the quality of supervision (+1.5), behaviour management (+1.2) and in support for peer interactions (+1.7).

Analysis of the individual ECERS descriptors within these items identifies the specific practices which were taking place more frequently by the end of the project. Support for positive behaviour and peer interaction was a key theme, for example:

- ten more classes organised their provision to avoid conflict and promote age-appropriate interaction (14 -> 24)
- ten more classes helped children to develop appropriate social behaviour with peers (12 -> 22)
- eleven more classes actively involved children in solving conflicts and problems (5 -> 16).

Supervision had also improved by the end of the project, both in terms of protecting children's safety and in terms of active support for children's play:

- Fourteen more classes provided enough supervision to protect children's safety (11 -> 25)
- Ten more classes provided careful supervision adjusted for age and stage (2 -> 12)
- Ten more classes used supervision as a means of facilitating play (20 ->30) and eleven more used supervision of play to promote learning (10 ->21).

The role of the adult in supporting language development (see also 5.1.2, p.18)

The quality of support for children's *language and reasoning* skills also improved to a good level (i.e. a rating of 5) from a baseline of 3.9. The ECERS-R *language and reasoning* subscale evaluates the quality of support for communication and thinking skills. Analysis of the item scores shows that the greatest improvements were seen encouragement for children to communicate (+1.3) and in informal use of language (+1.4). By the end of the project:

- fifteen more classes offered accessible materials to encourage communication in a variety of interest centres more than doubled (9 -> 24)
- many staff-child conversations were observed in thirteen more classes (14 -> 27)
- individual conversations with most children were observed in fourteen more classes (11 -> 25)
- practitioners in eleven more classes added information to and expanded on ideas presented by the children (16 -> 27)
- practitioners in twice as many classes provided scaffolding for conversations (9 -> 20)
- practitioners in twice as many classes regularly used open-ended questions to extend language through talk (13 -> 27).

These improvements in the quality of interactions and support for language development are very encouraging, since relationships and interactions are the cornerstone of successful learning (Hamre et al., 2012), and oral language is the strongest predictor of children's later success (Scarborough, 2001).

Structure and organisation of the day (see also 5.1.3, p.19)

The third ECERS subscale rated as being of good quality (5.1) by the end of the project was the ECERS-R *program structure* subscale, which improved by 1.1 of a scale point from a baseline of 4. The items in this subscale evaluate the overall routine and organisation of the day, including opportunities for child-initiated play, group activities and support for children with identified special educational needs and disabilities (SEND). Improvements were relatively consistent across the subscale, with the largest gains seen in opportunities for free play (+1.2) and in provision for children with disabilities (+1.9)[5].

Analysis of the ECERS descriptors shows that the main improvements were in opportunities for play. For example, by the end of the project:

- thirteen more classes offered ample and varied resources for free play (8 -> 21)
- staff in eleven more classes used supervision as an educational interaction (10 -> 21)
- nine more classes provided a balance of teacher-directed and child-initiated play opportunities (21 ->30)
- children had opportunities to be part of self-selected small groups in thirteen more classes (15 ->28).

The physical environment and resourcing (see also 5.1.4, p.20)

Although the average score for the ECERS-R *activities* subscale was graded as less than good (4.3) at the end of the project, large improvements were seen from the relatively low baseline of 3 (minimal quality). Items in this subscale evaluate the quality of resourcing to support different aspects of learning and development. Analysis of item scores shows that the greatest improvements were seen in provision to support fine motor skills (+2), art/creativity (+1.5), music and movement (+1.5), block play (+1.7), learning about nature and science (+2) and mathematical learning (+1.5). Analysis of individual indicators shows that there were also improvements in resourcing to support reading and emergent writing, communication and gross motor development.

Improvements were primarily seen in the range and variety of resourcing, in the accessibility of resources to enable children to make choices about their own play and learning, and in the amount of time children had available to access resources. This can be illustrated by looking at the detailed indicators in the 'nature and science' item. By the end of the project, for example:

- nineteen more classes offered a range of developmentally appropriate games, materials and activities to support science learning (5 -> 24)
- fourteen more classes made sure that materials were accessible for a substantial portion of the day (6 -> 20)
- sixteen more classes made sure that science resources were well organised and in good condition (10 -> 26).

Improvements were also seen in the ways the physical environment was arranged to support learning. The quality of *'space and furnishings'* in participating classes was graded as just less than 'good' at the end of the project (4.6), following an improvement of over 1 point from a baseline of 3.5. The largest improvements were seen in room arrangement (+1.7) and furnishings for relaxation and comfort (+1.7).

Looking in detail at the room arrangement item, we can see that classes were offering children a greater range and variety of accessible 'interest centres'. An interest centre is a defined area to

[5] This item is only scored when children are attending with identified SEND, and was completed for only 7 classes at baseline and 4 classes at follow-up. The results should therefore be interpreted with caution.

support a particular kind of play, for example block play, role play or creative activities. Materials are organised by type and stored so that they are accessible to the children. Furniture (e.g. a sand tray, open shelving) is provided if needed, as well as open space to play. Although it is important not to suggest that certain resources can 'only' be used in specific areas, research evidence shows that grouping resources can support meaningful engagement and more complex play and learning (Neuman & Roskos, 1993). By the end of the project:

- eighteen more classes provided at least three interest centres (13->31)
- thirteen more classes provided at least five interest centres (4->17)
- nineteen more classes organised resources so they were accessible to children (6->25).

ECERS items in which little change was seen, and which remained of minimal quality, include:

- *indoor space (item 1)*, primarily because there was little possibility of increasing the amount of physical space available within some of the classroom;
- *ICT resourcing (item 27)*: scores on the information technology item were constrained by the fact that only six classes limited the amount of time that children were allowed to engage with computers and other audio-visual equipment. Recent evidence suggests that screen-time for young children should be limited;
- *resources which promote equality and awareness of diversity (item 28)*: for example at the final audit, only three classes had many books, images and materials accessible showing people of different races, cultures, ages and abilities and gender in non-stereotyped roles; only four had role play resources representing different cultures.

Support for understanding of science and environment (see also 5.1.5, p.22)

Analysis of the ECERS-E science and environment subscale shows improvement of more than one ECERS point in this area (+1.1). This is a positive finding because science activities are an important means of promoting children's critical thinking and exploration skills. By the end of the project, for example:

- nineteen more classes offered a range of appropriate science resources (5 -> 24)
- ten more classes used everyday events as the basis for learning about science (21 -> 31)
- eleven more classes were regularly offering science activities needing more input from staff (11 ->22)
- seventeen more classes used natural materials beyond decoration to illustrate specific science concepts such as growth (11 -> 28).

Opportunities and support for active play (see also 5.1.6, p.22)

Although the quality of support for active play is not reflected in a specific subscale within the ECERS, there are a number of items and indicators which evaluate this area (ECERS-R items 7, 8 and 29). Changes to space for gross motor play were limited, due to the physical constraints of the space available. The quality of gross motor equipment improved by more than 1 ECERS point, with particular changes in the variety of skills stimulated.

Some changes were also evident in relation to adult support for movement and physical development. An improvement of more than 1 ECERS point on the gross motor supervision item was driven largely by changes in safety practices (fourteen more classes acting to prevent dangerous situations before they occur) and adults being more likely to talk with children about ideas related to their play (observed in eleven more classes).

However, fewer changes were seen in other aspects of support for physical development, such as support for children to develop the skills needed to use gross motor equipment (observed in only three more classes) and regular movement/ dance activities (offered by only three more classes).

2.3.2 Change in areas which were evaluated, but did not form a primary focus of the training

The adult role in supporting the specific areas of learning and development (see also 5.2.1, p.23)

In general, the support for the specific areas of learning and development evaluated by the ECERS-E received lower ratings than the areas evaluated by the more developmental ECERS-R. This follows national trends, and is also mirrored in other research showing that instructional quality is often lower than the quality of emotional support and classroom organisation (e.g. Sylva et al., 2004).

With the exception of science learning, the specific areas of the EYFS (e.g. literacy, maths) were not the main focus of the training and support received, but the intention was that the improvements made during the project would provide the foundation upon which future gains could be built. In fact, there were some changes even within the life of the project, suggesting that the general improvements made in the quality of teaching were already filtering through. It also suggests that teachers may have been extending their use of the ECERS scales to help them work on areas not specifically included within the training but included within ECERS.

Of the areas evaluated by the ECERS-E, the quality of ***literacy*** provision received the highest rating at baseline (3.8), with ***mathematics*** receiving a slightly lower rating of just above minimal (3.3). Both improved by just less than one ECERS point to 4.5 and 4.1 respectively. Analysis of the individual items and indicators shows that two areas (adults reading with children, and support for talking/listening) were graded as being of good quality by the end of the project. The greatest improvements were seen in the quality of book and literacy areas (+1.1), support for emergent writing and mark-making (+1.3) and support for reading and writing simple numbers (+1.1). Although largely driven by improvements in resourcing (see section 5.1.4) there were also some changes relating to the adult role. For example, informal reading was observed in twelve more classes (9 -> 21) and staff were seen scribing children's words in nine more classes (5 ->14), eight more classes offered regular maths activities requiring more input from staff (16 -> 24) and seven more classes planned specific counting activities (13 -> 20). Least change was seen the attention paid to printed words and letters, both within the environment and within books, and in the frequency with which adults draw attention to sounds in words.

We turn now to the EYFS area of '***knowledge and understanding of the world'***, which encapsulates understanding of the world (including science and exploration), people and communities, and technology. Science learning was addressed during the training and is covered in section 2.3.1. Looking at the items and indicators within ECERS which reflect 'people and communities', we see that explicit adult support to promote learning in this area changed little over the course of the project. Even at the end of the project, for example, only four classes were including diversity as part of daily routines and play activities. Interestingly, although this aspect of practice was not a main focus of the training, a short session was included on diversity. It appears that, for whatever reason, this aspect of practice was not one which teachers chose to focus on during the course of the project.

The third aspect of KUW relates to technology. The ECERS definition of technology is rather narrower than that of the EYFS, and relates only to IT resources such as computers, television and video. Analysis of the relevant item shows little change in active adult support for children using ICT (observed in only one more school). As noted previously, scores on this item were also constrained by the fact that only six classes limited the amount of time that children were allowed to engage with computers and other audio-visual equipment.

Finally, a number of the ECERS items consider support for ***creativity and expression***. Analysis of the indicators reflecting the adult role in supporting this area show that teachers were more likely to encourage creativity in both art (9 ->24) and music (10 -> 21) by the end of the project.

Welfare requirements, routines and self-care

Only small improvements were seen for the *personal care routines* subscale (+0.3) from a baseline of 1.8 to a final score of 2.2. The care routines items cover health, safety and the quality of routines such as toileting and mealtimes (including support for children to develop self-help skills in these areas). Although there are improvements which can be made, the low scores generally reflect the fact that the ECERS-R is very rigorous in relation to health, hygiene and safety. National studies using the ECERS-R have shown similar trends (Sylva et al., 2004; Mathers & Sylva, 2007; Mathers, Sylva & Joshi, 2007). An improvement of more than 1 point for the item assessing safety practices (+1.1) was driven largely by improvements in the effectiveness of supervision. However, the overall rating remained low, at 3.3 (minimal) even by the end of the project.

2.4 Variation in classes

Behind the overall story lies considerable variation in individual journeys of improvement. By the end of the project, some classes were rated as good-to-excellent quality, while others remained of minimal – or even below minimal – quality. Similarly when we consider improvement during the course of the project, we see considerable variation. Some classes made gains of more than 2 points on the 7-point ECERS scale, while others made minimal gains or were even – in the case of the ECERS-E – rated as lower quality at the end of the project than at the start. It is not the role of this report to explain the changes, but much could be gained from exploring the reasons for the variation, for example by considering supports and barriers to improvement, teacher engagement with the project, and teacher's past experience and training. More detail is provided in Section 6.

2.5 Teacher self-evaluation skills

Teacher ratings were consistently higher than quality as assessed by the external auditors. This reflects the challenges of translating beliefs about how children learn into practice, and in accurately evaluating ones' own practice.

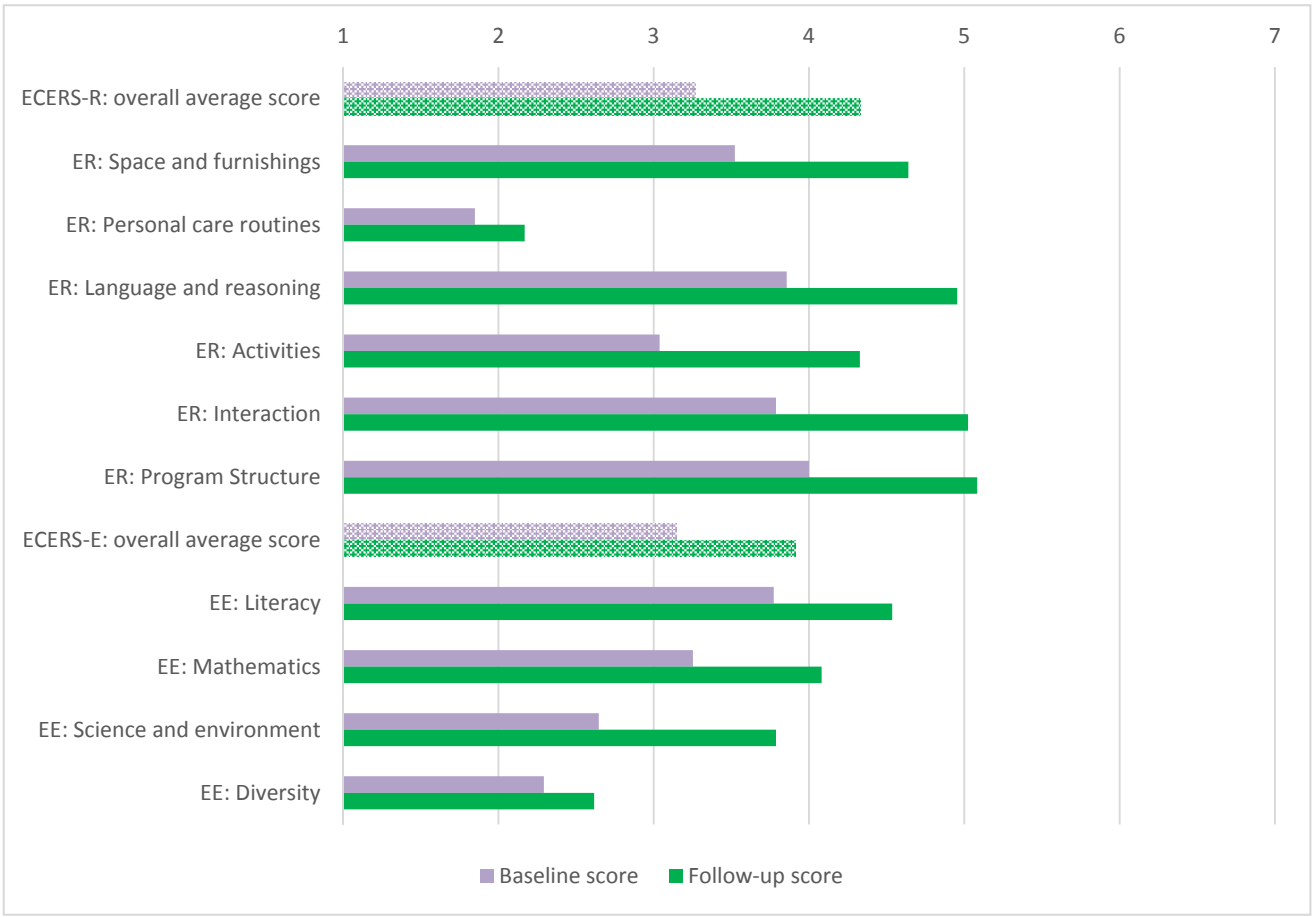
By comparing ratings at the beginning and end of the project, we can see whether teacher ratings were closer to the external observer's ratings at the end of the project than at the beginning. Did they become more accurate in their self-assessments and were their quality values more clearly reflected in their provision? The data suggest that this was the case. The difference between teacher ratings of importance and the external ECERS scores for their classrooms fell from 3.3 to 2.1, and the difference between teacher's self-assessments of their classrooms and those of the external assessors fell from 1.7 to 1.0. We do need to take care with interpretation, since closer alignment might simply reflect teacher's greater familiarity with ECERS at the end of the project. However, the results do suggest that by the end of the project teachers were more able to translate their values into practice and to accurately evaluate the quality of provision within their classrooms, providing a good indicator of capacity for future improvement. More detail is provided in Section 7.

3. Overall quality: ECERS total and subscale scores for the 33 classes

Table 1. Overall improvement as measured by ECERS-R and E (1= inadequate, 3=minimal, 5=good, 7 = excellent)

	Baseline score	Follow-up score	Change in score[6]
ECERS-R			
Overall average score	***3.27***	***4.33***	***+1.1***
Overall average score not including personal care routines items	***3.50***	***4.70***	***+1.2***
Space and furnishings	3.5	4.6	+1.1
Personal care routines	1.8	2.2	+0.3
Language and reasoning	3.9	5.0	+1.1
Activities	3.0	4.3	+1.3
Interaction	3.8	5.0	+1.2
Program Structure	4.0	5.1	+1.1
ECERS-E			
Overall average score	***3.15***	***3.91***	***+0.8***
Literacy	3.8	4.5	+0.8
Mathematics	3.3	4.1	+0.8
Science and environment	2.6	3.8	+1.1
Diversity (incl. planning for individual learning needs)	2.3	2.6	+0.3

Figure 1. Overall improvement as measured by ECERS-R and E (1= inadequate, 3=minimal, 5=good, 7 = excellent)



[6] Where the change in score does not appear to exactly reflect the difference between the baseline and follow-up scores, this is due to rounding.

4. The detail: individual ECERS item scores for the 33 classes

Table 2. ECERS-R item scores: baseline, final and change in score (1= inadequate, 3=minimal, 5=good, 7 = excellent)

	Baseline score	Follow-up score	Change
Space and furnishings			
1. Indoor space	3.0	3.2	0.2
2. Furniture for routine care, play, learning	4.5	5.8	1.2
3. Furnishings for relaxation and comfort (Fig.14)	3.0	4.8	1.7
4. Room arrangement for play(Fig.13)	3.1	4.8	1.7
5. Space for privacy	2.9	3.8	0.9
6. Child-related display	4.2	5.3	1.2
7. Space for gross motor play	3.8	4.7	0.8
8. Gross motor equipment(Fig.12,18)	3.6	4.7	1.1
Personal care routines			
9. Greeting and departing	2.7	2.7	0.0
10. Meals and snacks	1.0	1.3	0.3
12. Toileting and diapering	1.2	1.3	0.1
13. Health practices	2.2	2.3	0.1
14. Safety practices	2.2	3.3	1.1
Language and reasoning			
15. Books and pictures(Fig.12,19)	3.2	4.2	0.9
16. Encouraging children to communicate(Fig.7)	3.7	5.0	1.3
17. Using language to develop reasoning skills	4.2	4.9	0.7
18. Informal use of language(Fig.8)	4.3	5.7	1.4
Activities			
19. Fine motor(Fig.12)	3.0	5.1	2.0
20. Art(Fig.12,22)	3.3	4.8	1.5
21. Music and movement(Fig.12,22)	2.7	4.2	1.5
22. Blocks(Fig.12)	1.8	3.5	1.7
23. Sand/water(Fig.12)	4.6	5.8	1.2
24. Dramatic play	3.4	4.3	0.9
25. Nature and science(Fig.11,17)	3.2	5.2	2.0
26. Maths and number(Fig.12,20)	3.5	4.9	1.5
27. Use of TV, video, and/or computers(Fig.16,21)	2.2	2.4	0.2
28. Promoting acceptance of diversity(Fig.15,21)	2.5	2.9	0.3
Interaction			
29. Supervision of gross motor activities(Fig.18)	2.6	3.6	1.0
30. General supervision of children(Fig.5)	2.5	4.0	1.5
31. Discipline(Fig.3)	4.2	5.3	1.2
32. Staff-child interactions	5.4	6.3	0.8
33. Interactions among children(Fig.4)	4.2	5.9	1.7
Program structure			
34. Schedule	3.5	4.6	1.1
35. Free play(Fig.6)	3.8	5.0	1.2
36. Group time	4.5	5.6	1.0
37. Provisions for children with disabilities[7]	4.9	6.8	1.9

References are provided to items which are illustrated in more detail in the figures within Section 5.

[7] Item 37 was only scored in 7 classes at baseline and 4 classes at follow-up (i.e. those for which it was relevant on the day of the observation). The data shown here reflects the average score for these audits and should not therefore be considered representative of all classes, particularly since the item was scored in different classes at each time-point.

Table 3. ECERS-E item scores: baseline, final and change in score (1= inadequate, 3=minimal, 5=good, 7 = excellent)

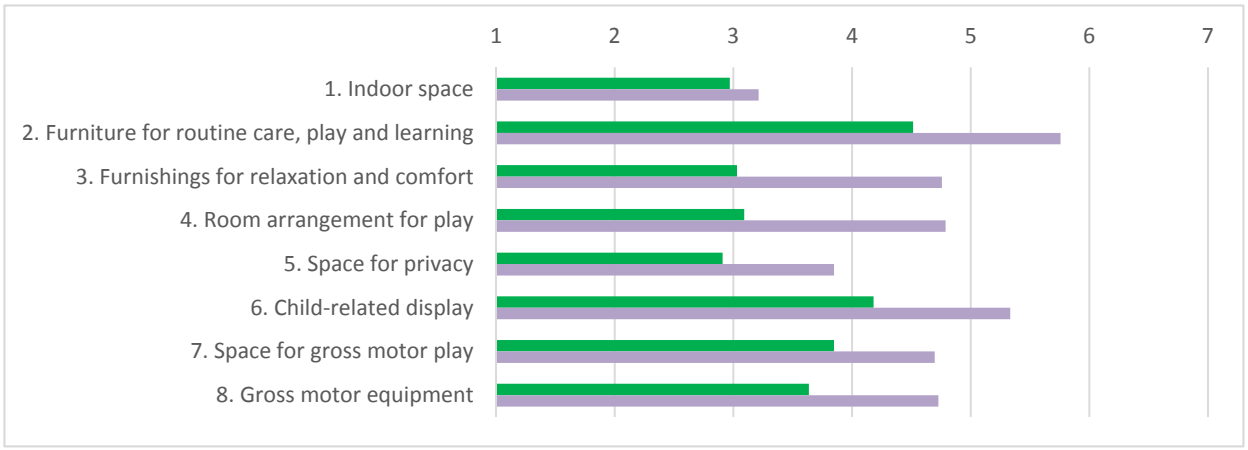
	Baseline score	Follow-up score	Change
Literacy			
1. Environmental print: letters and words	3.8	4.1	0.2
2. Book and literacy areas	2.9	4.0	1.1
3. Adult reading with the children	4.4	5.1	0.7
4. Sounds in words	3.8	4.2	0.4
5. Emergent writing and mark making	3.3	4.6	1.3
6. Talking and listening*	4.4	5.2	0.9
Mathematics			
7. Counting and the application of counting	3.2	4.0	0.8
8. Reading and writing simple numbers	3.0	4.1	1.1
9. Maths activities (shape and space; sorting matching and comparing)[8]	3.5	4.1	0.6
Science and environment			
10. Natural materials	2.7	4.1	1.4
11. Areas featuring science/science resources	2.0	3.2	1.2
12. Science processes (non-living, living processes, food preparation) [5]	3.3	4.2	0.9
Diversity			
13. Planning for individual learning needs	3.3	3.5	0.2
14. Gender equality and awareness	1.3	1.8	0.5
15. Race equality and awareness	2.3	2.6	0.3

* denotes an item which is illustrated in more detail in Section 5.

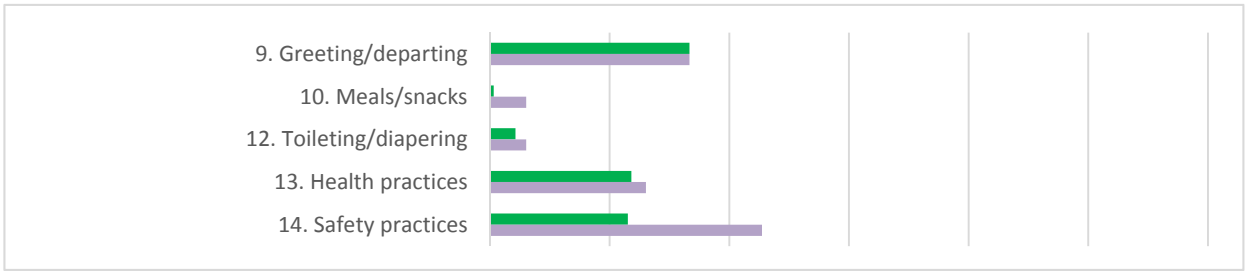
[8] ECERS-E Items 9 and 12 contain optional elements. Within each observation, *one* item of 9a or b is completed, and *one* item of 12a, b or c is completed. Combined scored are presented here.

Figure 2. ECERS-R/E item scores: baseline, final and change (1= inadequate, 3=minimal, 5=good, 7 = excellent)

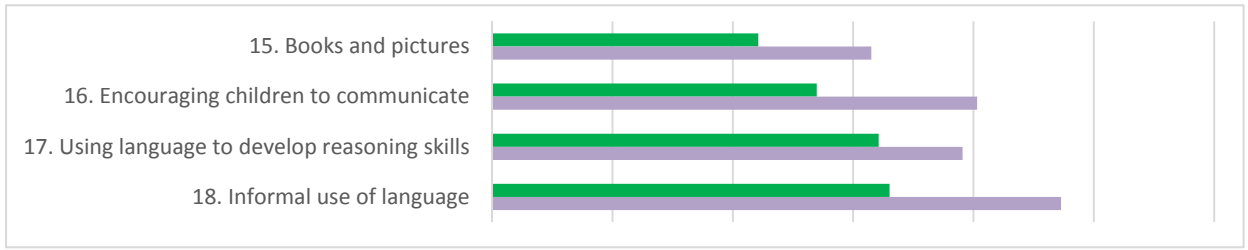
ECERS-R Space and furnishings



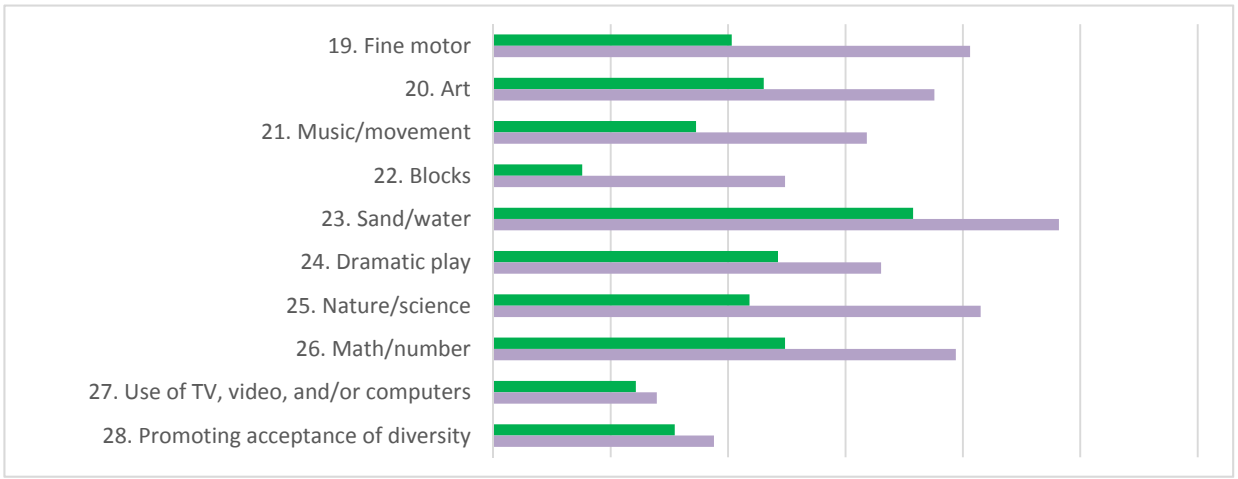
ECERS-R Personal care routines



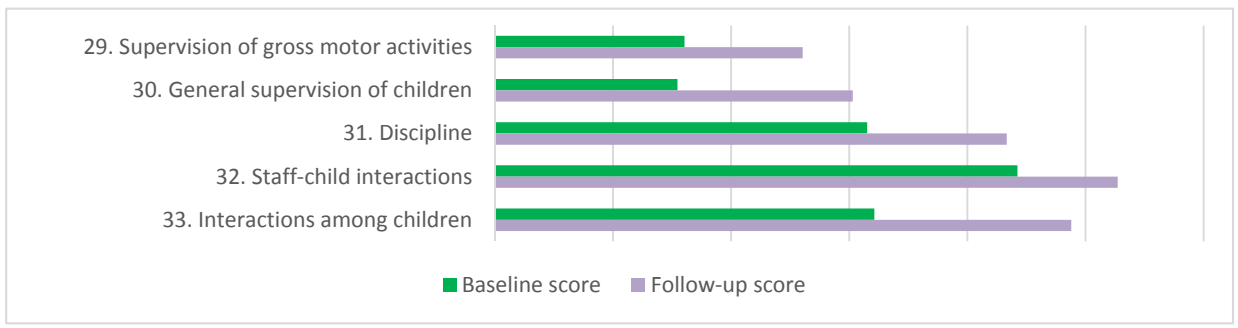
ECERS-R Language and reasoning



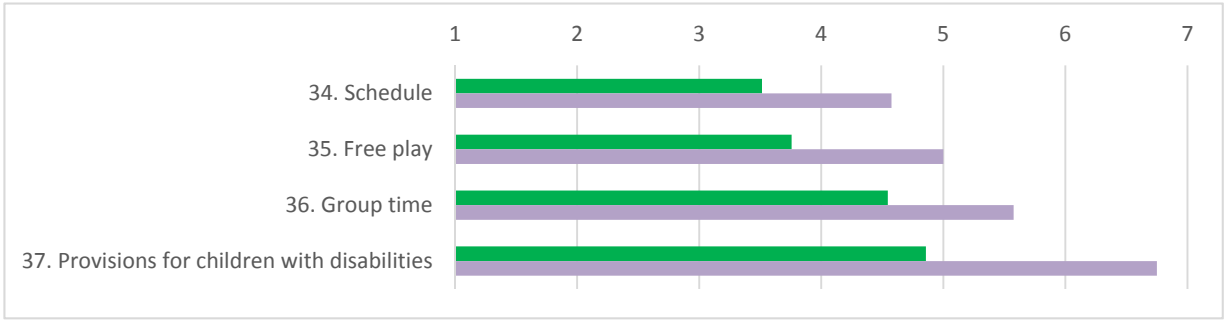
ECERS-R Activities



ECERS-R Interaction

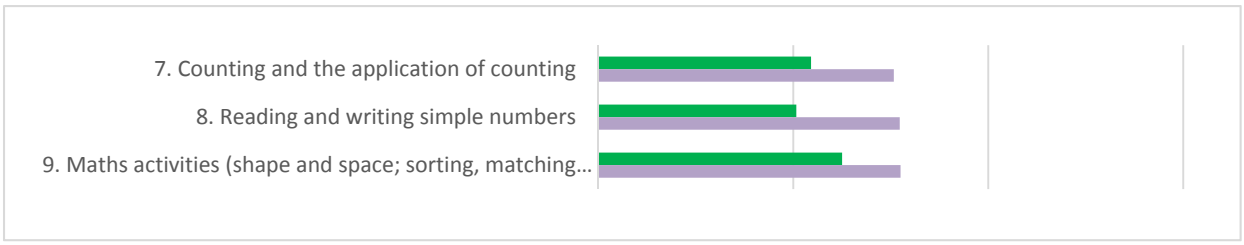


ECERS-R Programme structure

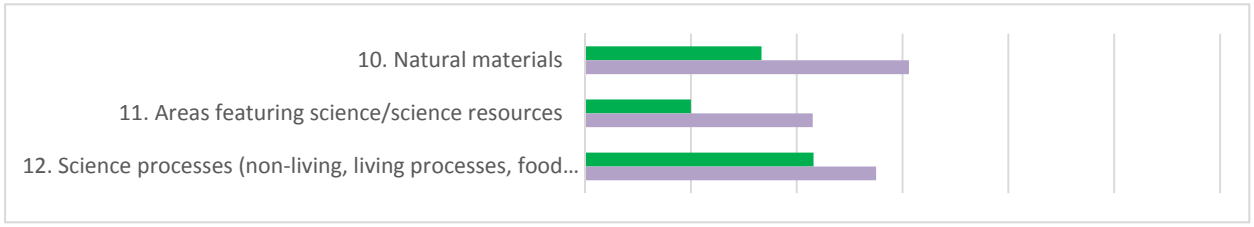


ECERS-E Literacy

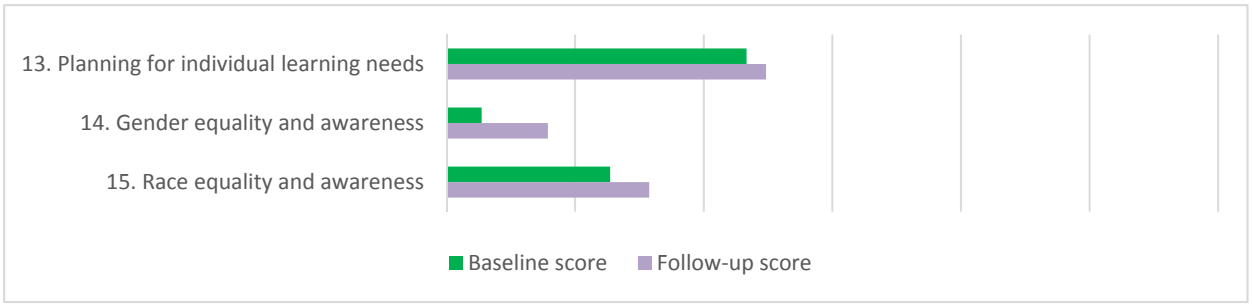
ECERS-E Mathematics



ECERS-E Science and environment



ECERS-E Diversity



5. The fine detail: individual ECERS indicators (i.e. what actually changed in practice within the 33 classes)

In this section we illustrate some of the specific improvements which took place over the course of the project. Within each area of practice described in Section 2, the charts below present some of the changes at indicator level (i.e. the individual descriptors which make up the ECERS items), focusing particularly on the descriptors at the 5 (good) and 7 (excellent) levels. Indicators for which improvement was observed in 10 or more classes are marked with a ★. Areas where little change was observed are also noted[9].

5.1 Change in areas which formed the focus for training

5.1.1 The role of the adult in supporting interactions, relationships and play (see also 2.3.1)

Key improvements:

- support for positive behaviour and peer interaction
- careful supervision adjusted to age and stage
- adult support for play

Figure 3. ECERS-R Item 31 on supporting positive behaviour ('discipline'), number of classes achieving each indicator

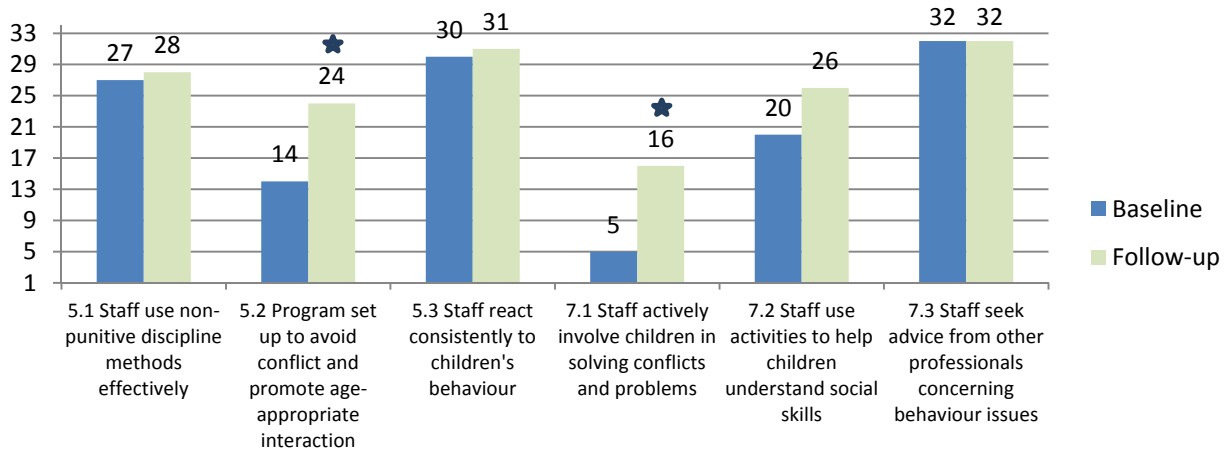
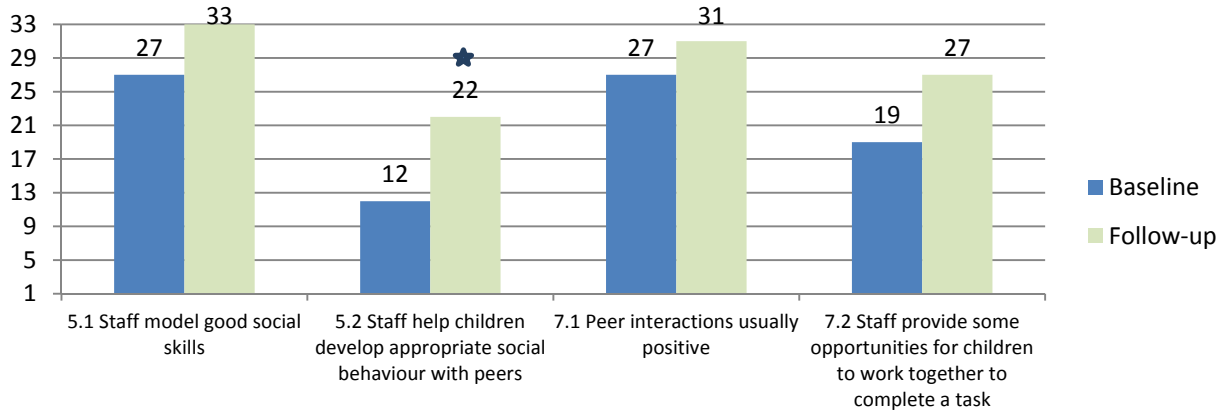


Figure 4. ECERS-R Item 33 Interactions among children (number of classes achieving each indicator)



[9] Defined as items where an improvement of less than half a point was observed over the course of the project.

Figure 5. ECERS-R Item 30 General supervision (number of classes achieving each indicator)

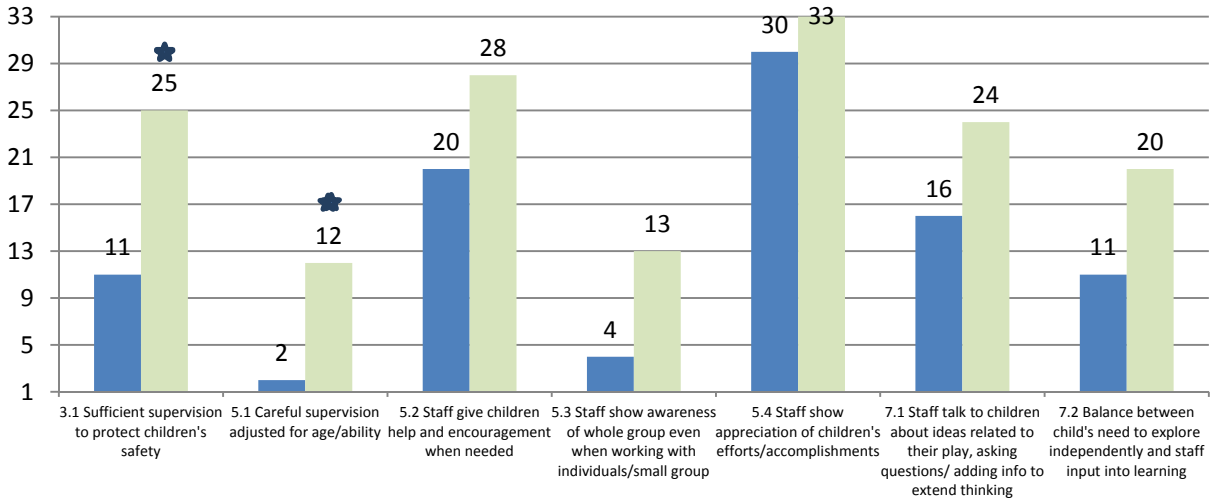
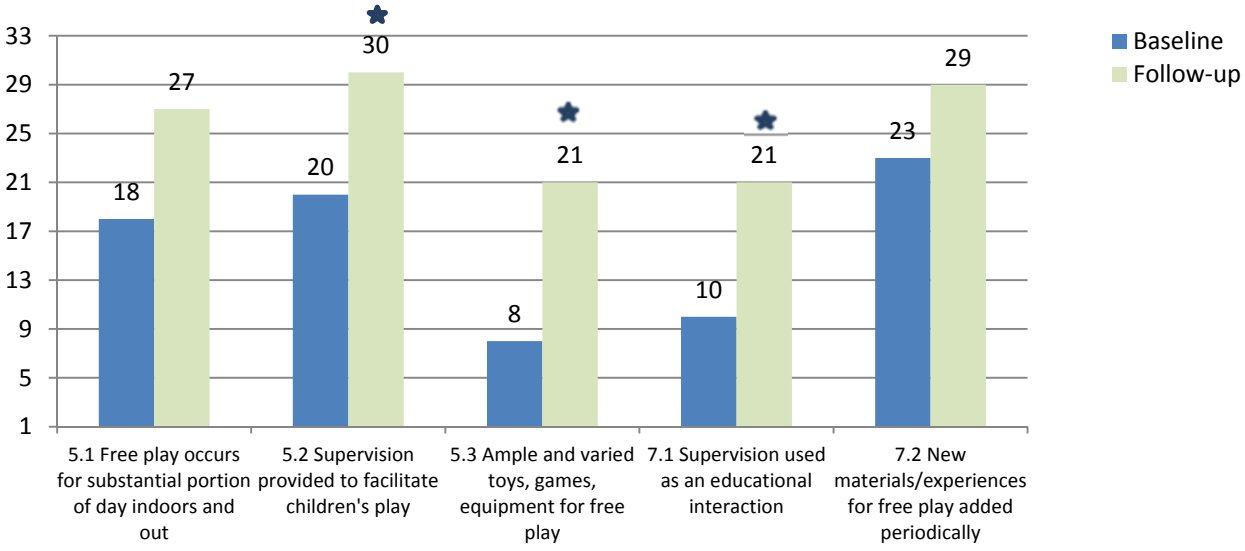


Figure 6. ECERS-R Item 35 Free play (number of classes achieving each indicator)



5.1.2 The role of the adult in supporting language development (see also 2.3.1)

Key improvements:

- accessibility of a range of materials to encourage communication
- the ways in which staff extend and scaffold children's language
- the frequency of individual conversations with children

Figure 7. ECERS-R Item 16 Encouraging children to communicate (number of classes achieving each indicator)

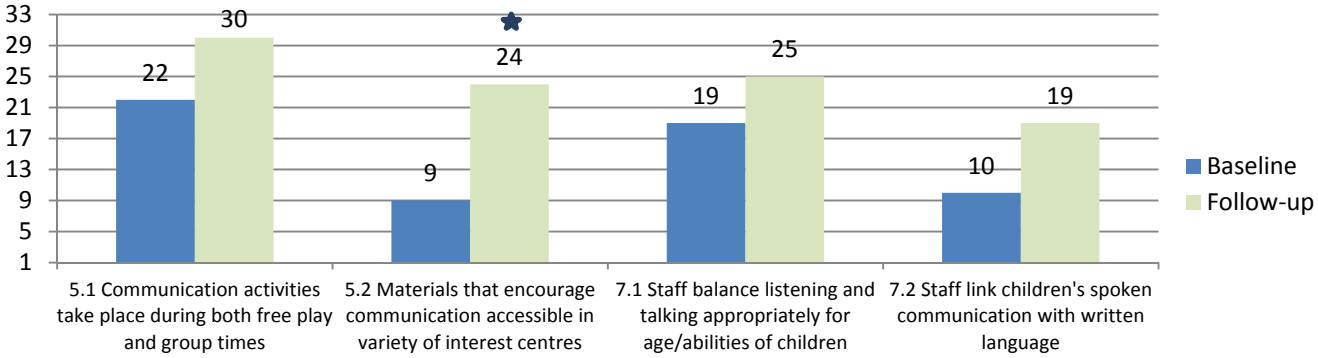


Figure 8. ECERS-R Item 18 Informal use of language (number of classes achieving each indicator)

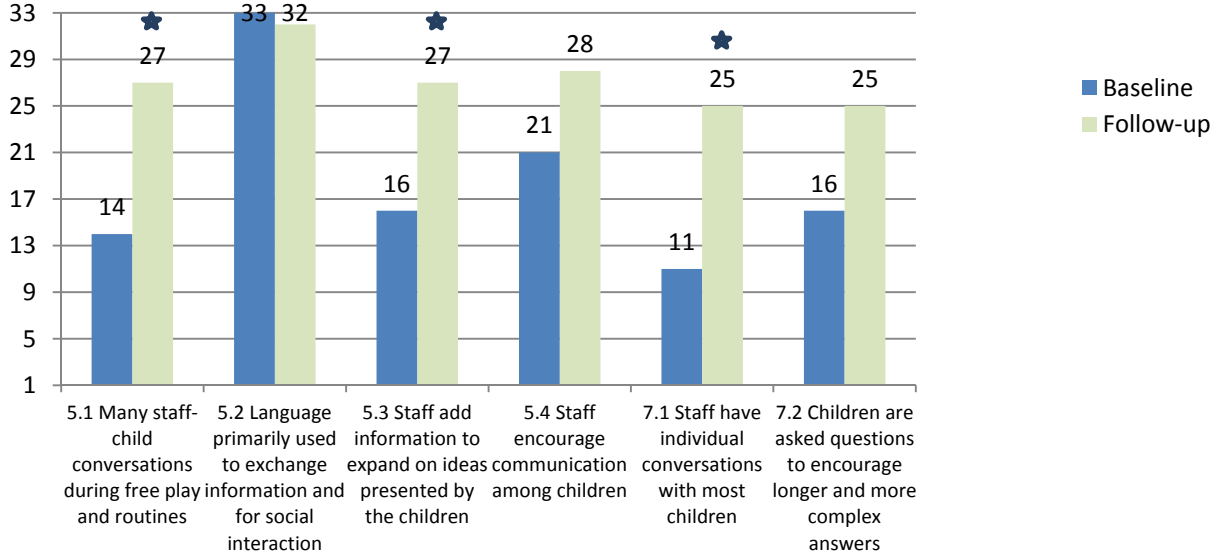
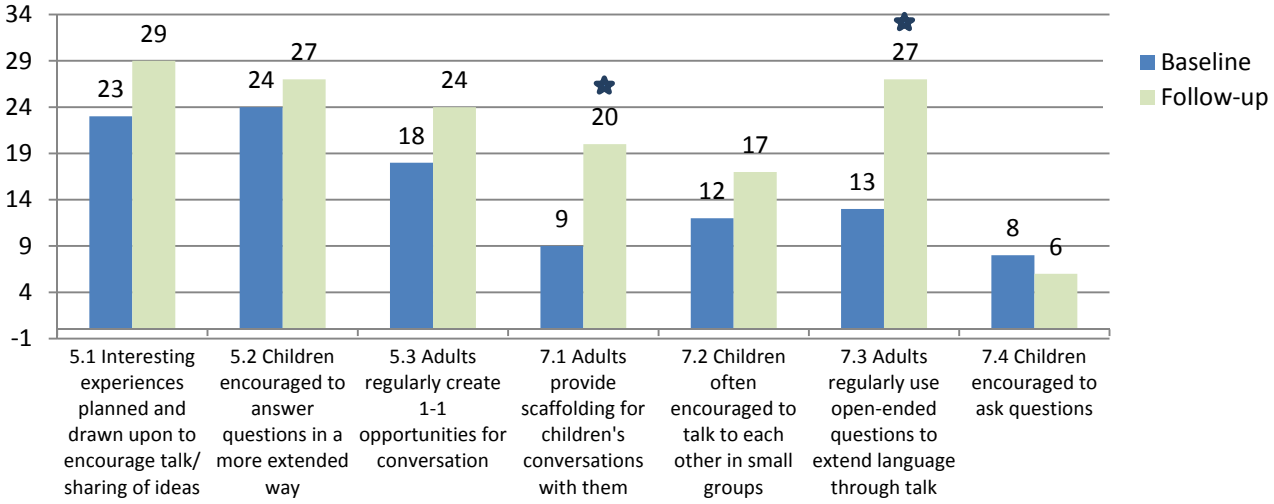


Figure 9. ECERS-E Item 6 Talking and listening (number of classes achieving each indicator)

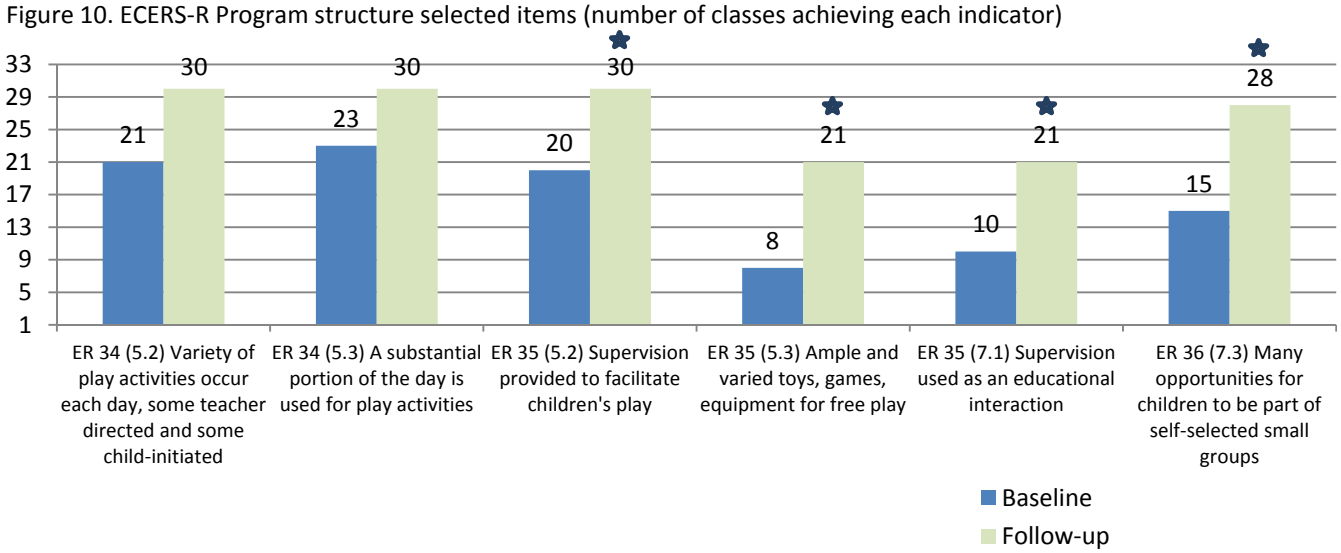


5.1.3 Structure and organisation of the day (see also 2.3.1)

Key improvements:

- opportunities and support for play

Figure 10. ECERS-R Program structure selected items (number of classes achieving each indicator)



5.1.4 The physical environment and resourcing (see also 2.3.1)

Key improvements:

- range and variety of resources to support different aspects of learning
- the grouping of resources into interest centres to support meaningful engagement and more complex play and learning
- accessibility of resources to allow children to make independent choices about their own play and learning
- organisation of the schedule to allow children time to engage with materials in a meaningful way (i.e. materials are accessible for a substantial part of the day)
- provision of cosy spaces for children to relax and spend quiet time

Figure 11. ECERS-R Item 25 Nature/science (number of classes achieving each indicator)

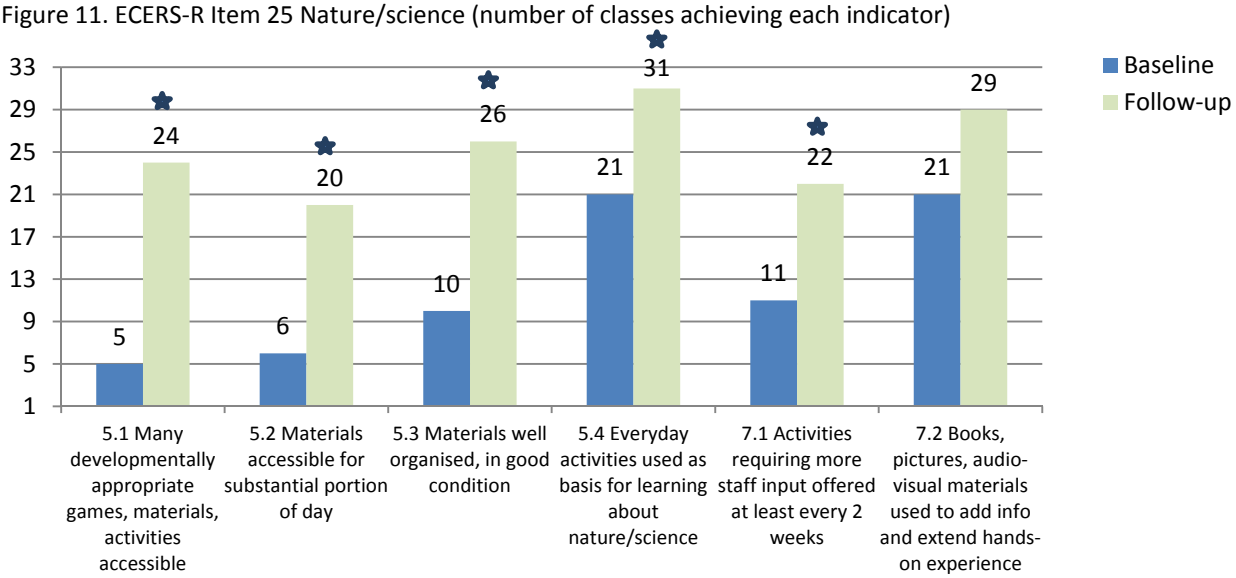


Figure 12. ECERS-R and E selected resourcing indicators (number of classes achieving each indicator)

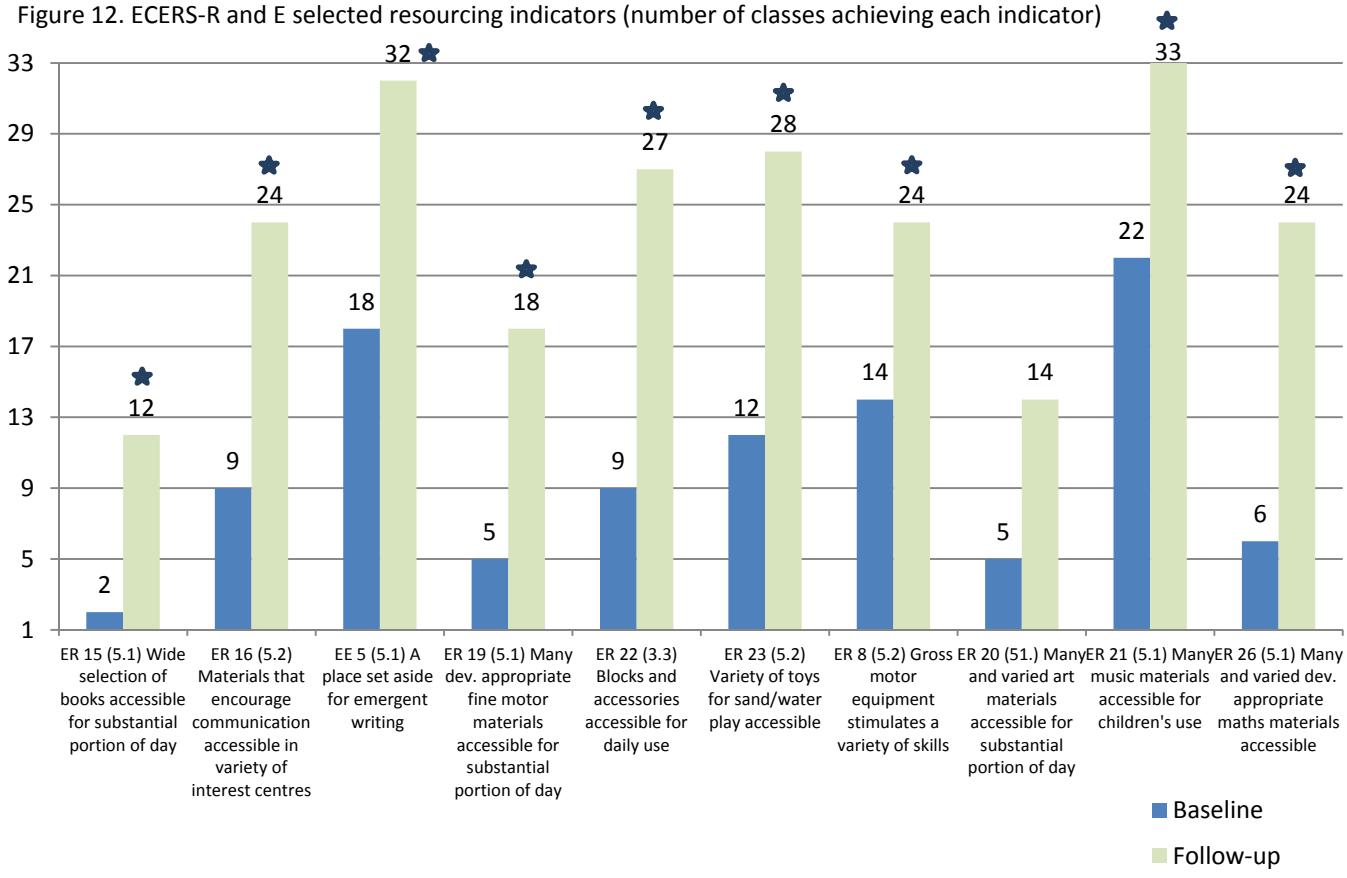


Figure 13. ECERS-R Item 4 Room arrangement (number of classes achieving each indicator)

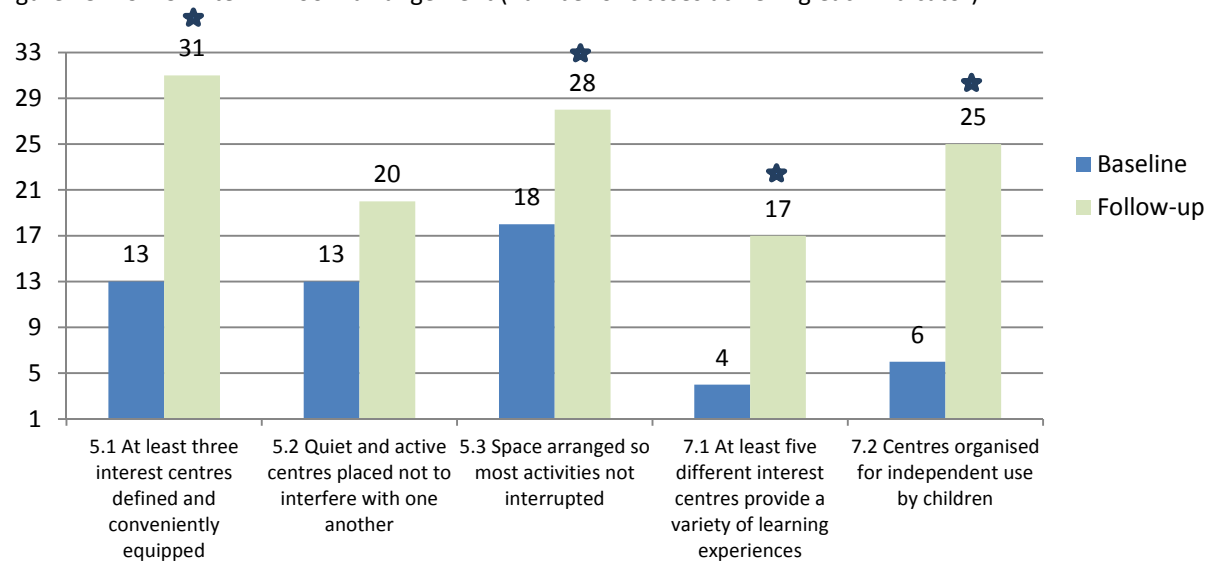
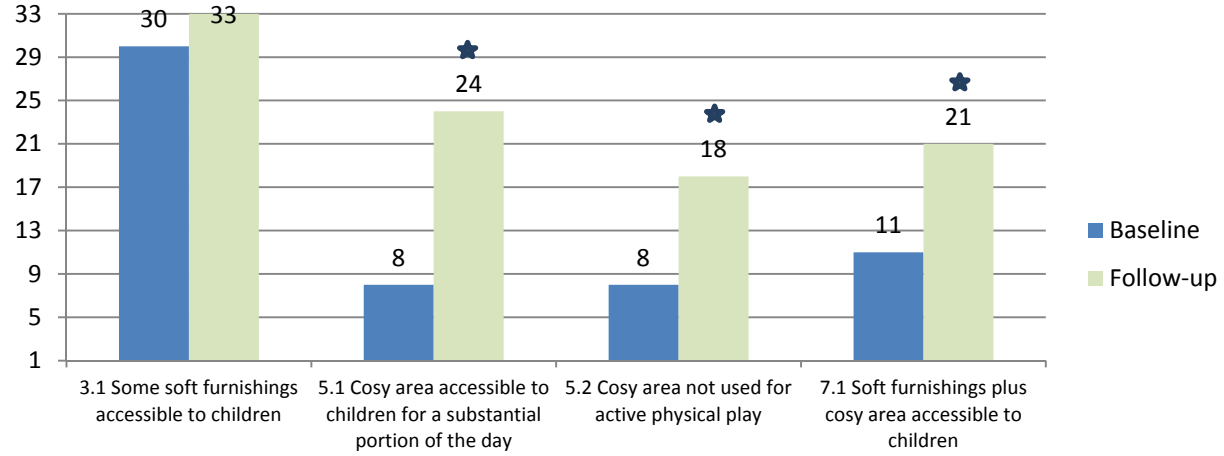


Figure 14. ECERS-R Item 3 Furnishings for relaxation and comfort (number of classes achieving each indicator)



Little change seen in:

- resources which promote equality and awareness and acceptance of diversity
- ICT resourcing
- indoor space, particularly the amount of space available for play and learning.

Figure 15. Indicators from ECERS-R Item 28 and ECERS-E Item 15 reflecting resourcing to raise awareness and acceptance of diversity (number of classes achieving each indicator)

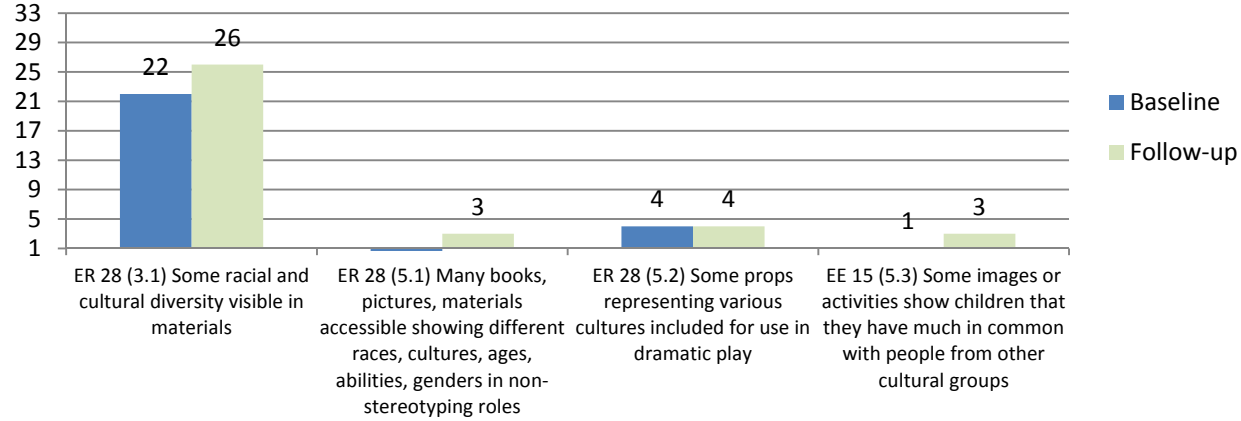
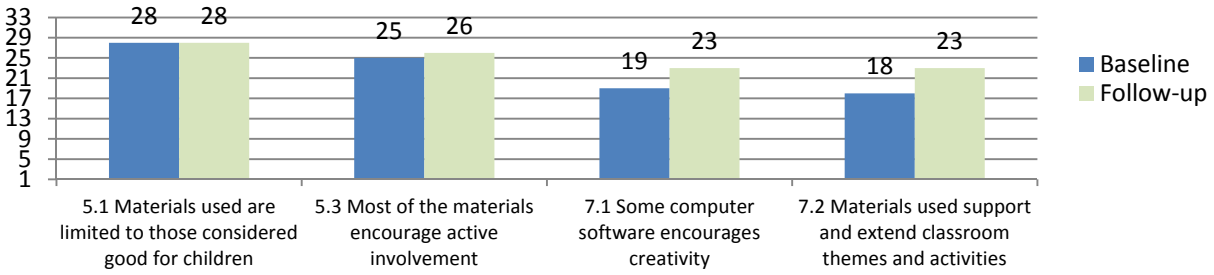


Figure 16. ECERS-R Item 27 ICT resources (number of classes achieving each indicator)

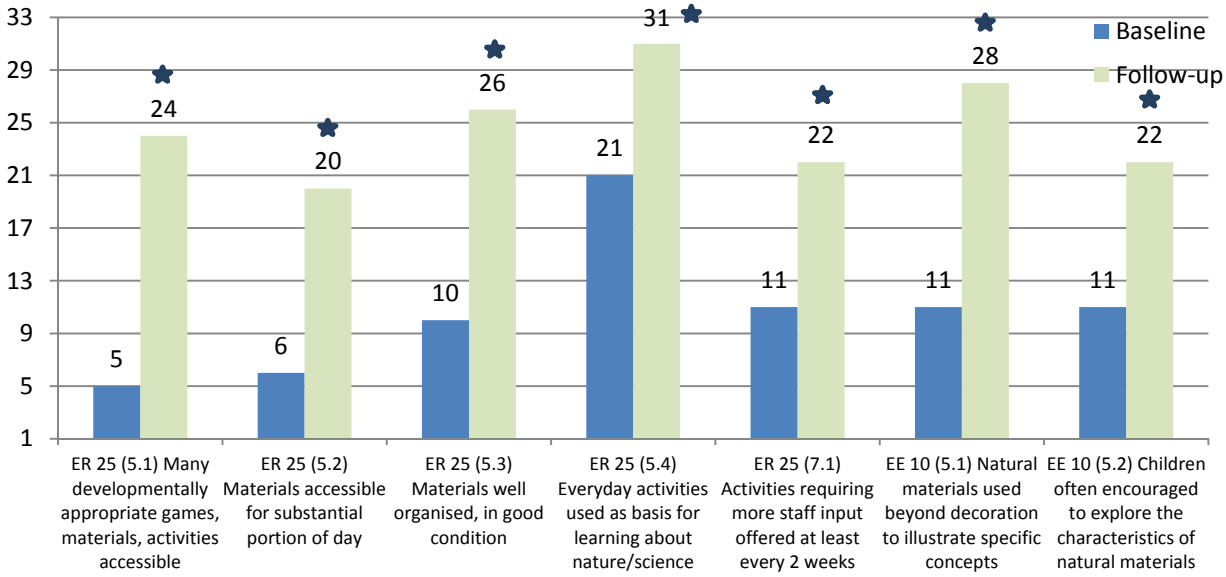


5.1.5 Science and environment (see also 2.3.1)

Key improvements:

- resourcing to support scientific learning
- adult support for exploration and learning about science and the natural world

Figure 17. Selected science indicators (number of classes achieving each indicator)

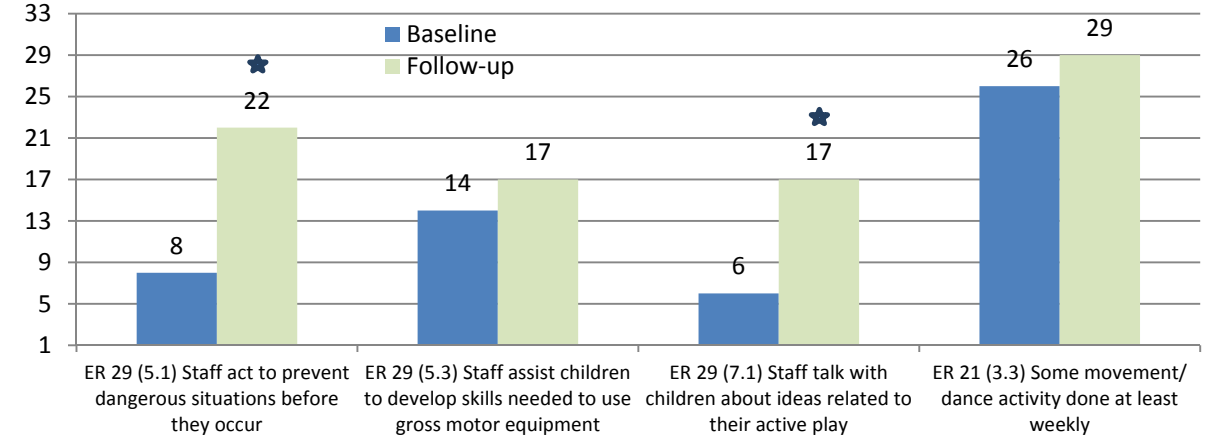


5.1.6 Opportunities and support for active play (see also 2.3)

Key improvements:

- supervision of active play, including staff talking with children about their play

Figure 18. Supporting active play, selected indicators (number of classes achieving each indicator)



5.2 Change in areas which were evaluated, but did not form a primary focus of the training

5.2.1 The adult role in supporting the specific areas of learning/development (see also 2.3.2)

Key improvements:

- frequency of informal reading
- encouragement of individual expression and creativity (e.g. in art, music)

Little change seen in:

- discussion of printed words and letters within the environment and in books
- the extent to which adults draw attention to sounds in words
- efforts to raise awareness and promote acceptance of diversity and difference
- support for children using information technology resources (e.g. computers)

Figure 19. Selected literacy indicators (number of classes achieving each indicator)

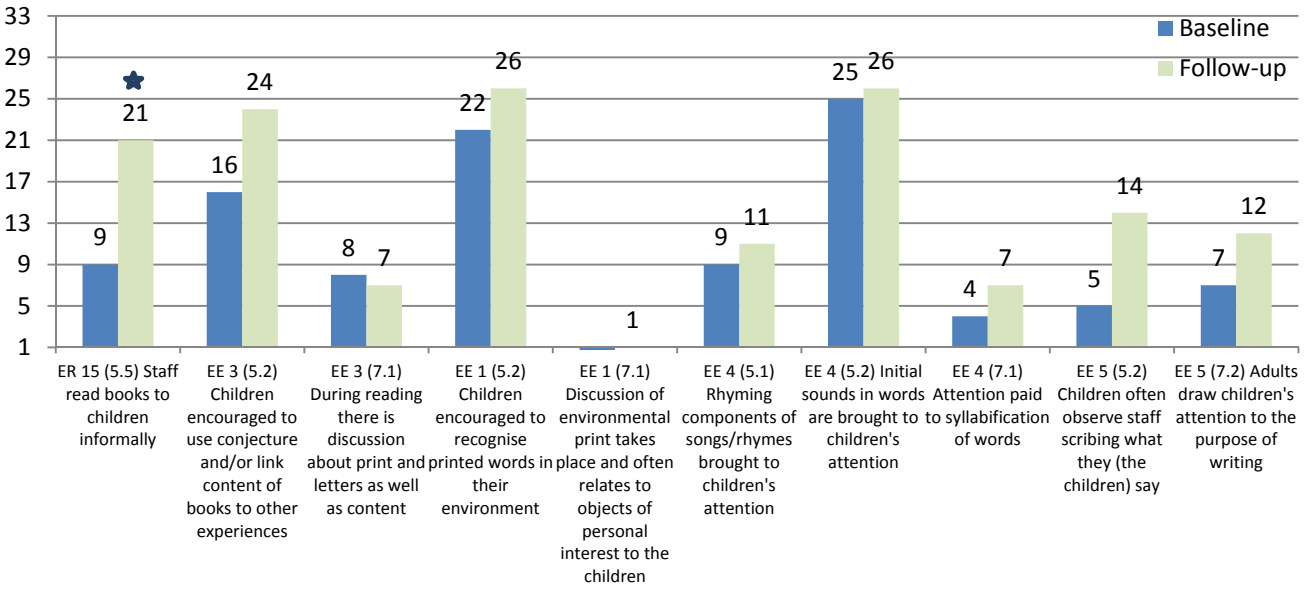
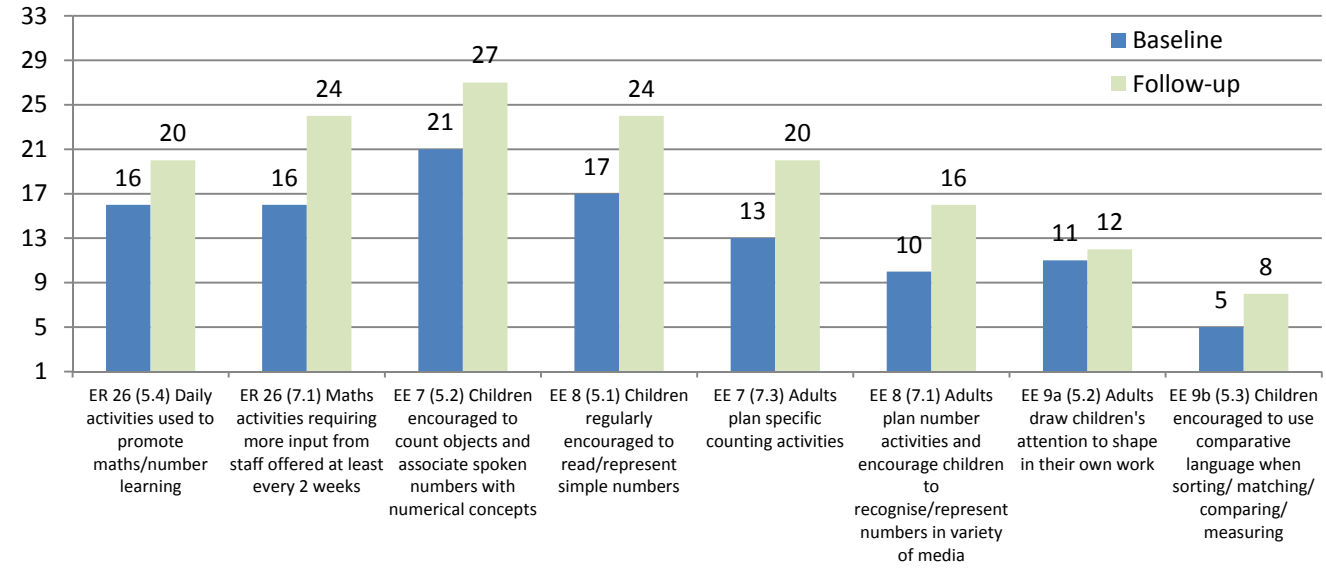


Figure 20. Selected mathematics indicators (number of classes achieving each indicator)



NB: Item 9a and 9b completed in smaller numbers of classrooms (19 and 14 respectively at the final audit)

Figure 21. Selected knowledge and understanding of the world indicators (excluding science), number of classes achieving each indicator

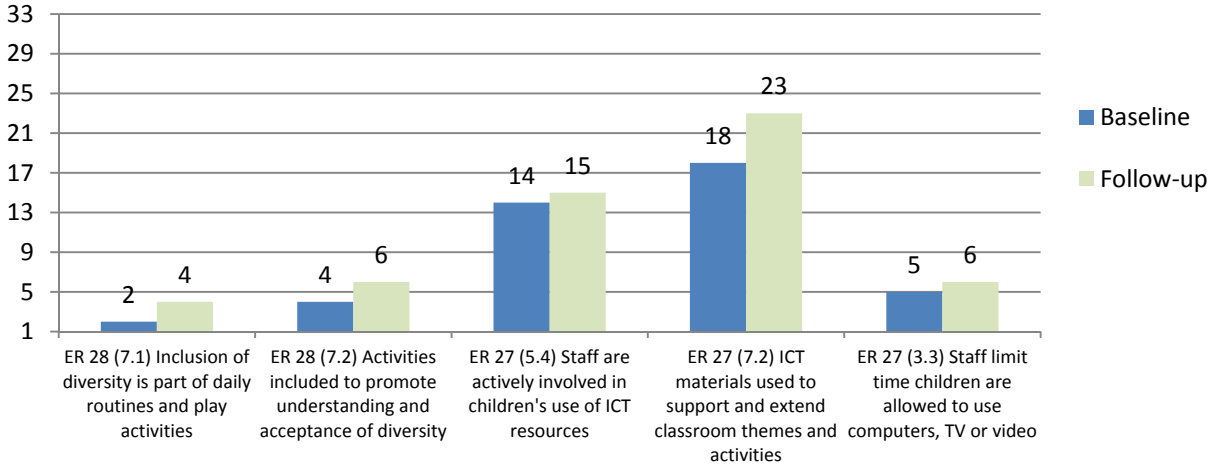
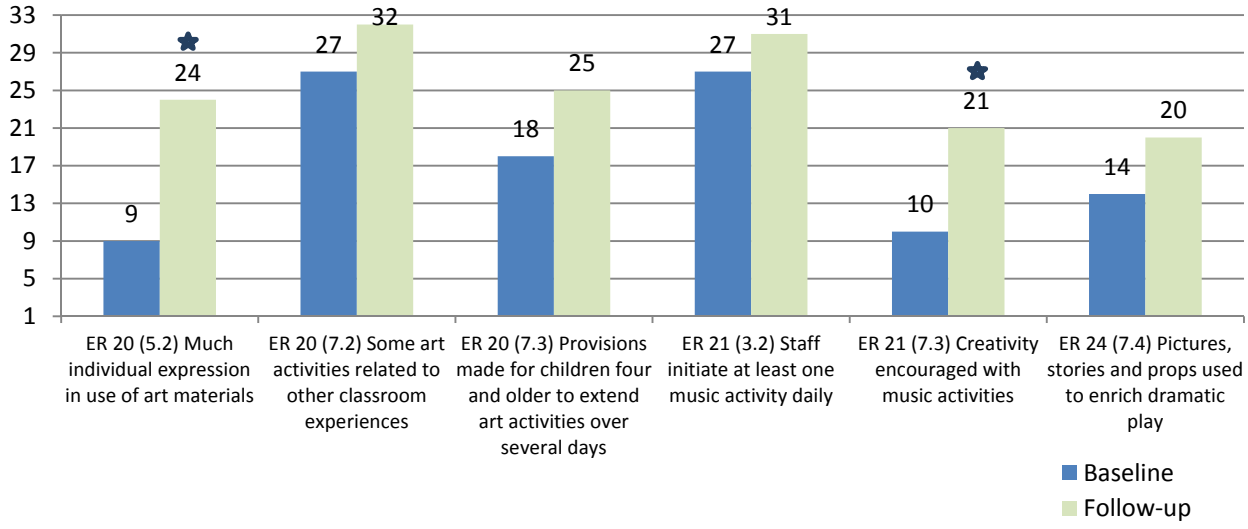


Figure 22. Selected creativity and expression indicators (number of classes achieving each indicator)



6. Variation among classes

Behind the overall story lies considerable variation in individual journeys of improvement. In this section we look at the range of scores, and change in scores, over the 33 classes taking part in the ECERS element of the project. It is not the role of this report to explain the changes, but much could be gained from exploring the reasons for this variation; for example by considering supports and barriers to improvement, teachers' engagement with the project and their past experience and training.

Figures 23 and 24 show that, by the end of the project, some classes were rated as good-to-excellent quality, while others remained of minimal – or even below minimal – quality.

Figure 23. Variation in ECERS-R scores at follow-up in the 33 classes (1= inadequate, 3=minimal, 5=good, 7 = excellent)

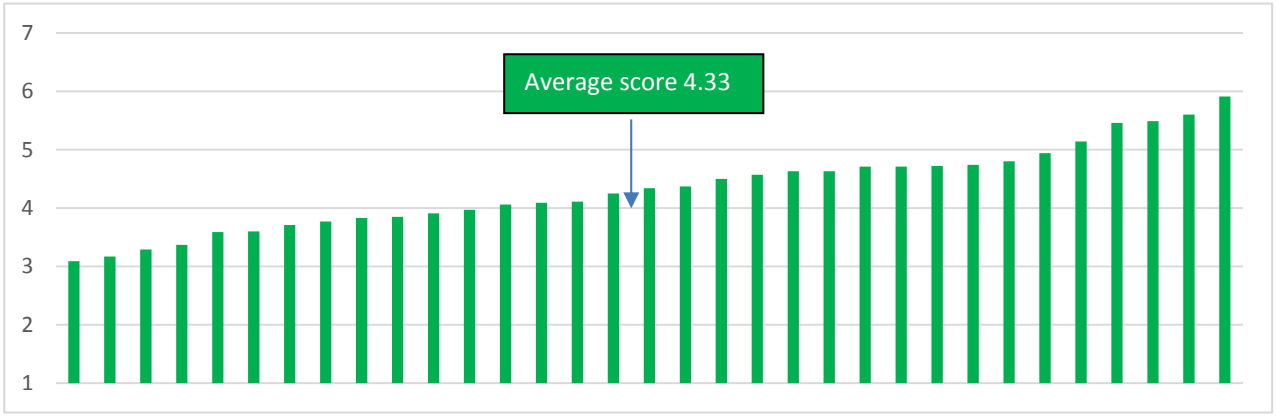
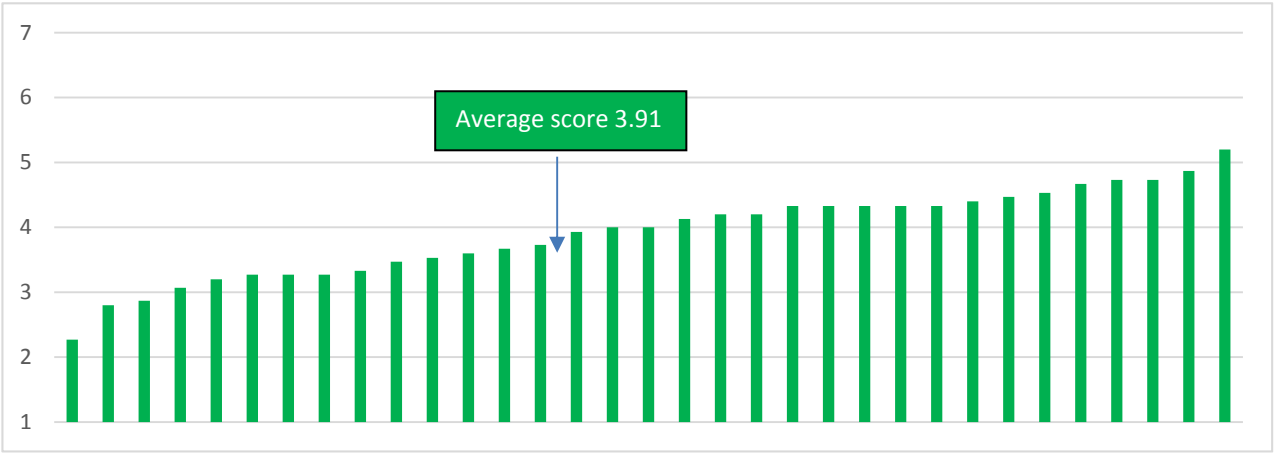


Figure 24. Variation in ECERS-E scores at follow-up in the 33 classes (1= inadequate, 3=minimal, 5=good, 7 = excellent)



Similarly when we consider improvement over the course of the project, we see considerable variation (Figures 25 and 26). Some classes made gains of more than 2 points on the 7-point ECERS scale, while others made minimal gains or were even – in the case of the ECERS-E – rated as lower quality at the end of the project than at the start.

On the ECERS-R, approximately half (16) of the classes improved by one scale-point or more. Classes were fairly evenly distributed across the range, with a slight lift at the top end:

- eight classes improved by less than 0.5 of a point
- nine classes improved by between 0.5 and 0.99 of a point
- eight classes improved by between 1 and 1.49 of a point
- eight classes improved by more than 1.5 of a point, with 4 improving by over 2 points.

As discussed in Section 2, fewer changes were seen in the aspects of practice assessed by the ECERS-E, which were not an explicit focus of the training:

- four classes either did not improve or decreased their score
- six classes improved by less than 0.5 of a point
- nine classes improved by between 0.5 and 0.99 of a point
- twelve classes improved by between 1 and 1.49 of a point
- two classes improved by more than 1.5 of a point, with one improving by over 2 points.

Although we are not able to explore the reasons for variation in change in great depth, one relevant aspect worth noting is the continuity of teachers across the project. In 26 of the classes, one teacher remained constant throughout the project: s/he was teaching at the time of both the baseline and final ECERS audits and participated in one or more elements of the professional development. However in seven classes, the 'project' teacher was not yet in place at the time of the baseline audit. In two of these classes the project teacher did not stay for the full year, and was therefore also not present at the time of the final ECERS audit. These seven classes are marked with a pattern on the charts, showing that they largely (although not exclusively) achieved change scores lower than the average. This reflects the challenges of maintaining good quality practice in the context of change.

Figure 25. Variation in ECERS-R change-scores in the 33 classes

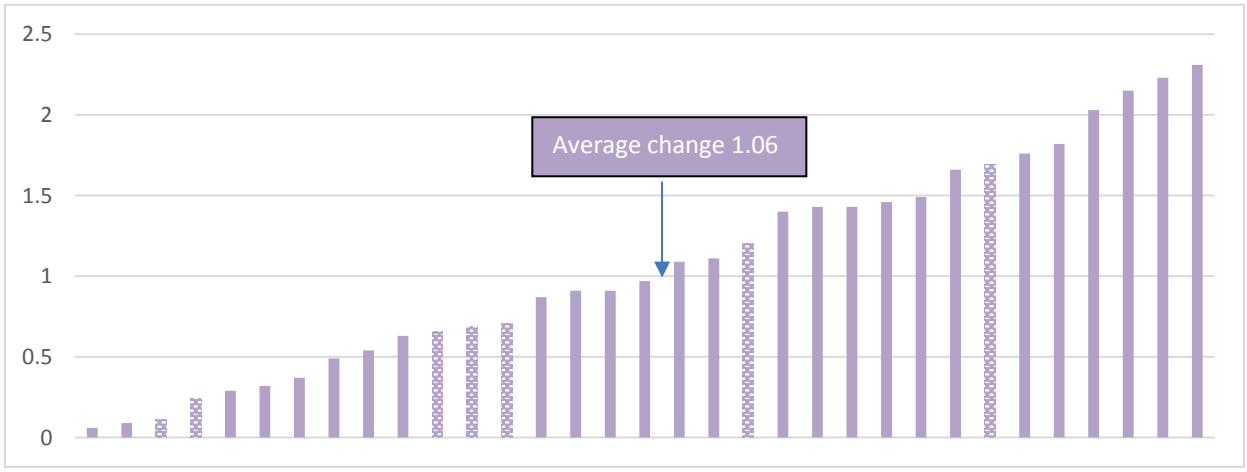
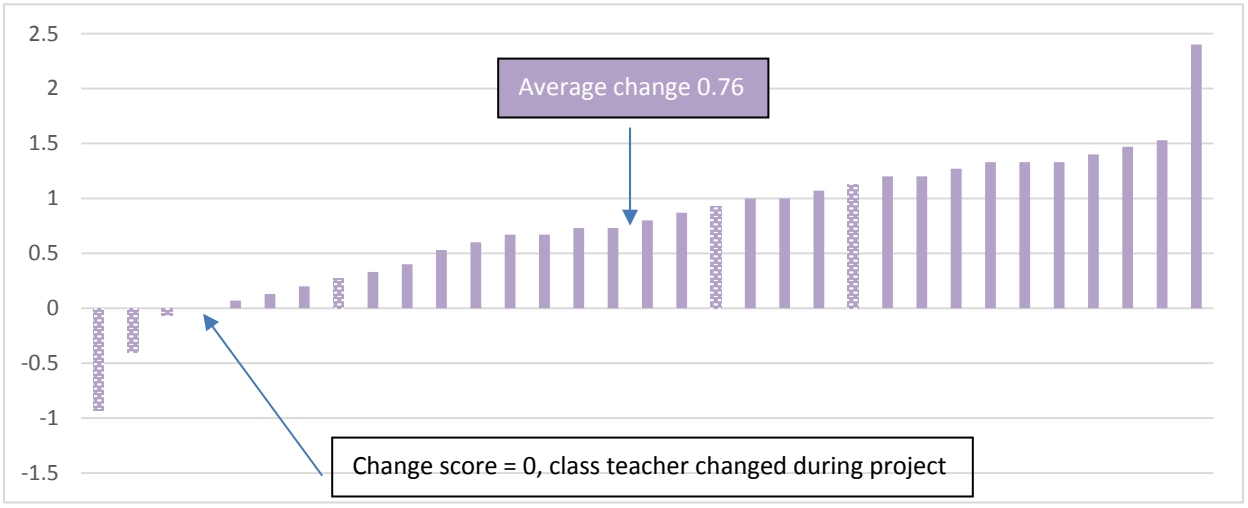


Figure 26. Variation in ECERS-E change-scores in the 33 classes



7. The teacher questionnaire

This section presents findings from the teacher questionnaire completed at baseline and at the end of the project[10]. For each dimension of quality considered by the ECERS scales (e.g. block play) teachers were asked to rate its importance in supporting children's development, and the current quality of provision within their class. Figure 27 shows:

- the average 'importance' rating awarded by teachers across all aspects **(green)**
- the average quality rating teachers gave to their own classrooms **(blue)**
- the average quality rating given by the external ECERS observers **(purple).**

Ratings at the beginning of the project are shown in solid fill, and at the end of the project in patterned fill. Teachers rated almost all aspects of quality as important, with an average (mean) rating of 6.6 at baseline and 6.4 at the end of the project. Self-evaluations of quality were somewhat lower, with a mean of 5.0 at baseline and 5.3 at follow-up. Ratings awarded by the external assessors increased from 3.3 to 4.3 between the two time-points.

The first thing to note is that teacher ratings were consistently higher than quality as assessed by the external auditors. This reflects the challenges of translating beliefs about how children learn into practice, and in accurately evaluating ones' own practice.

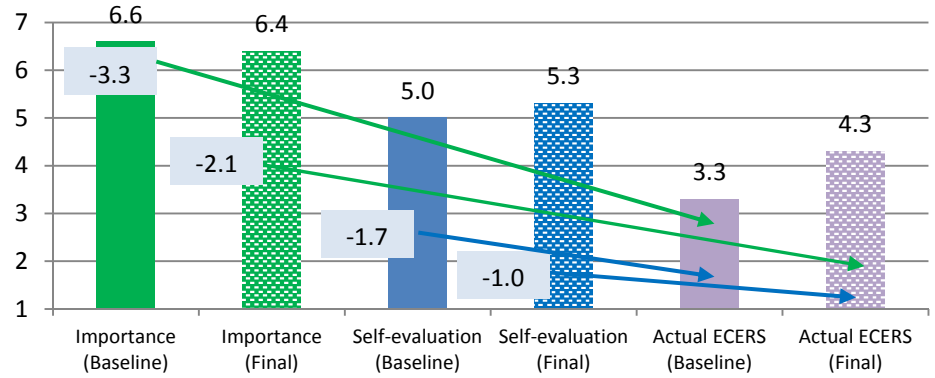
By comparing ratings at the beginning and end of the project we can see whether teacher ratings were closer to the external observer's ratings at the end of the project than at the beginning. Did they become more accurate in their self-assessments and were their quality values more clearly reflected in their provision? The data suggest that this was the case. The difference between teacher ratings of importance and the external ECERS scores for their classroom fell from 3.3 to 2.1, and the difference between teacher's self-assessments of their classrooms and those of the external assessors fell from 1.7 to 1.0. Although teachers rated their practice as higher overall at the end of the project, the ratings did not increase as much as those of the external assessors, perhaps reflecting their realisation that they had over-estimated the quality of their provision at the start of the project.

We do need to take care with interpretation, since closer alignment might simply reflect teacher's greater familiarity with ECERS at the end of the project[11]. However, the results do suggest that, by the end of the project, teachers were more able to translate their values into practice and to accurately evaluate the quality of provision within their classrooms, providing a good indicator of capacity for future improvement.

[10] The teacher questionnaire used a 5-point scale which was then converted to a 7-point scale (1=low, 7=high) to allow comparison with the ECERS. The ECERS items were also slightly adapted for the questionnaire to use terminology likely to be familiar to teachers as-yet untrained on ECERS at the baseline time-point, and also to avoid repetition where areas are assessed by both ECERS-R and E. Some ECERS items were combined within one teacher questionnaire item. For consistency, the ECERS mean reported in this section is that used elsewhere (i.e. giving equal weight to each item). The analysis was also carried out with an ECERS mean calculated using the structure of the teacher questionnaire and the results were not substantially different. This analysis uses data from the 25 teachers who completed the questionnaire at both time-points and were teaching in their class at the time the ECERS audit was carried out. Please ask for further details on methodology.

[11] There is also of course a wider debate regarding whether the ECERS ratings should be considered as the 'correct' measure against which teacher ratings should be compared. Although we acknowledge this issue, it cannot be fully addressed within the context of this report.

Figure 27. Comparing teacher ratings and external ECERS ratings (overall average scores)



8. Conclusions

The findings of the evaluation reflect the hard work of participating teachers throughout the project. Three important areas of practice were rated as being of good quality by the end of the project, creating firm foundations for learning:

- the quality of interactions
- the quality of support for language development
- effective structure and organisation of the day

An improvement of more than one ECERS point was seen in all the key areas of focus within the training. These included the role of the adult in supporting interactions, relationships, play and language; the structure and organisation of the day; the physical environment and resourcing; support for understanding of science and the environment; and opportunities and support for active play. The fact that greater improvement was seen on the aspects of practice evaluated by ECERS-R reflects the fact that these aspects were the primary focus of the training course and the support offered by Teaching and Learning Consultants. However it is encouraging that some change was also seen in the more specific areas of learning and development evaluated by the ECERS-E, suggesting that suggesting perhaps that general improvements in the quality of adult-child interactions were having a positive knock-on effect.

Although not specifically evaluated by the ECERS, the findings also suggest that the efforts of the Teaching and Learning Consultants to promote effective staff deployment may have been effective. ECERS is a global measure, which considers the interactions of all staff with children. It would be difficult to improve ratings on the interactions items of the ECERS scales by improving the practice of one staff member alone.

Overall, the teachers taking part in the project have made considerable progress in a short time-frame and built firm foundations for effective learning. Interactions and relationships are the cornerstones of effective practice, and early language skills – and particularly vocabulary skills – are strong predictors of children's later development. Comparison of self-evaluations with the external ECERS ratings at the start and end of the project also suggest that teachers became more skilled at evaluating the quality of their practice, which provides a further indicator of capacity for improvement.

Individually, there were some variations in the improvement made. Some teachers still have work to do in strengthening the foundations of effective practice. Others made very large improvements in practice, achieving good-to-excellent quality by the end of the project, and are ready to deepen and sustain existing improvements and begin work in other areas.

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