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play • learn • grow
cyfnod sylfaen 3–7 foundation phase

Learning and Teaching Pedagogy

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Welsh Assembly Government

Learning and Teaching Pedagogy

Audience   Headteachers, teachers, practitioners, governing bodies of maintained schools and practitioners and management committees in the non-maintained sector in Wales; local education authorities; teacher unions and school representative bodies; church diocesan authorities; national bodies in Wales with an interest in education.

Overview   This guidance relates to the skills, knowledge and understanding that are essential to learning and teaching across the Foundation Phase.

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Background

The proposals in the Welsh Assembly Government's document *The Learning Country: Foundation Phase 3–7 years* included developing a curriculum that linked and strengthened the principles and practice in ACCAC's document *Desirable Outcomes for Children's Learning before Compulsory School Age* (2000) with the programmes of study and focus statements in the Key Stage 1 national curriculum, to create a rich curriculum under seven Areas of Learning for children in the Foundation Phase. The Foundation Phase curriculum advocates that positive links between the home and the providers of care and education are fostered and promoted.

The Welsh Assembly Government's approach to education and lifelong learning is set in the broader context of our vision for children and young people overall.

We have seven core aims for children and young people developed from the United Nations Convention on the Rights of the Child. These will underpin all of the activities of the Department for Children, Education, Lifelong Learning and Skills (DCELLS).

We aim to ensure that all children and young people:

- have a flying start in life and the best possible basis for their future growth and development

- have access to a comprehensive range of education, training and learning opportunities, including acquisition of essential personal and social skills

- enjoy the best possible physical and mental, social and emotional health, including freedom from abuse, victimisation and exploitation

- have access to play, leisure, sporting and cultural activities

- are listened to, treated with respect, and are able to have their race and cultural identity recognised

- have a safe home and a community that supports physical and emotional wellbeing

- are not disadvantaged by any type of poverty.

Introduction

This guidance relates to the skills, knowledge and understanding that are essential to learning and teaching across the Foundation Phase. It complements the *Foundation Phase Framework for Children's Learning for 3 to 7-year-olds in Wales*, the guidance material supporting the seven Areas of Learning, *Play/Active Learning: Overview for 3 to 7-year-olds*, *Observing Children* and the *Skills framework for 3 to 19-year-olds in Wales*.

The guidance aims to support Foundation Phase practitioners in understanding the learning and teaching pedagogy and how to implement it. The *Building the Foundation Phase Action Plan* (WAG, 2006) requires initial teacher training institutions and further education colleges to ensure that courses include appropriate reference to child development, learning and teaching pedagogy, planning and assessment. The guidance will also be useful for students training to work with young children.

The following sections outline key issues that are relevant for Foundation Phase settings/schools with respect to learning and teaching pedagogy.

Learning

The Foundation Phase Framework emphasises the importance of:

- every child's entitlement to equal opportunities and access to a broad, balanced, relevant and differentiated curriculum that meets their developmental needs
- the impact of children's pre-school experiences on their subsequent development
- positive links between the home and providers of care and education, and an appreciation of parents/carers as the children's first educators.

All aspects of learning are interlinked for young children.

The Personal and Social Development, Well-Being and Cultural Diversity Area of Learning is at the heart of the Foundation Phase. This Area of Learning concentrates on the development of relationships with peers and adults, the importance of motivation, perseverance, self-esteem and a positive disposition to learning. These all have a significant role to play in children's learning and development.

Empowerment is seen as a central concept so that children are better equipped to take greater charge of their lives in order to enhance their self-confidence, competence and self-esteem.

The holistic nature of learning

All aspects of learning are interlinked for young children; they do not compartmentalise their learning and understanding into curriculum areas. The seven Areas of Learning are complementary. During a single activity a child may be acquiring skills, knowledge and understanding in more than one Area of Learning; for example, in an action-song children's number, language and physical skills may all be developing. Additionally, through enjoyment of the activity children's emotional disposition to learn will be promoted.

Children are learning from birth and their earliest experiences have an impact on their learning and development in the Foundation Phase.

Building on prior learning

When motivating children to learn, it is of paramount importance to ensure that the curriculum responds to their needs and interests and builds on prior experiences. Children are learning from birth and their earliest experiences have an impact on their learning and development in the Foundation Phase. A curriculum approach that starts with children will make learning meaningful for them as well as encourage their disposition to learn.

Children's interests

An activity should provide sufficient stimulus and challenge to engage children's interest and involvement. Professor Laevers (*A Process-Oriented Child Monitoring System,* 1993) introduced the term 'involvement' to describe the deep concentration that children demonstrate when they are engrossed in an activity that interests them.

The disposition to learn and motivation to persevere with a learning activity will depend on the effect of the learning stimulus, which may not be the same for each child. Depending on previous knowledge and experience a child may or may not want to pursue a particular activity, but may choose a different interest if given the opportunity. This is acceptable as the same outcomes can be achieved in different ways.

I love trains

Please note: This case study is written in the first person as the text is taken from Osian's ongoing report to parents/carers which is presented in the form of a story.

Nursery – Every morning I go for the train set. I love trains and know a lot about them. I sometimes find it difficult to share the trains!

Reception – Well, I thoroughly enjoyed myself today! I spent all morning in the graphics area. I made a long, long, train with my friend. We drew a carriage on each piece of paper and stuck them together. It's great!

Year 1: February – I still enjoy playing with trains during the golden hour and my friends always say that I like trains! Harry and Sulmain and I have been building a road with the large wooden blocks. I like racing cars and trains now!

Year 1: June – We were supposed to work in groups to design and create a board game in the number area, but I have designed my own board game as no-one else wanted to make a train track like me! I have numbered the track and put bridges to make short cuts! I can't wait to draw the game onto card and play it with my friends!

The role of play in children's learning

Through play/ active learning children can develop transferable skills that apply across all seven Areas of Learning.

An essential part of the curriculum for all 3 to 7-year-olds is their entitlement to structured educational play/active learning (see *Play/ Active Learning: Overview for 3 to 7-year-olds*).

The purpose of play/active learning is that it motivates, stimulates and supports children in their development of skills, concepts, language acquisition/communication skills and concentration. In addition to consolidating learning, it also provides opportunities for children to develop positive attitudes, demonstrate awareness/use of recent learning, skills and competencies.

Well-planned play:

- supports the development of children's thinking
- allows children to express their ideas creatively and imaginatively
- promotes language development and communication through a range of mediums
- enables children to develop and apply number skills
- introduces children to ICT
- helps children to make sense of the world around them and solve problems
- actively involves children in their learning indoors and outdoors.

Through play/active learning children can develop transferable skills that apply across all seven Areas of Learning. Learning through being actively involved in experiential learning activities provides a foundation for continuity and progression. The *Skills framework for 3 to 19-year-olds in Wales* highlights the progression of skills in thinking, communication, ICT and number.

The child as a learner

Children are naturally curious and interested in the world around them, and enjoy exploring and investigating. Children learn in many different ways.

Sensory experiences play a large part in the way very young children build up concepts. By repeating a learning experience they develop schema or patterns of thoughts that are strengthened until they are able to make connections.

Active, experiential play enables children to:

• develop, practise, repeat and consolidate new skills

• explore, investigate, solve problems and make discoveries

• imitate, act out roles

• be imaginative and creative

• express their ideas through a variety of media such as construction materials, drawing, painting or writing, or through movement such as gesture, drama or dance.

Social interaction and talk/communication helps children learn with and from others. They learn to take turns, and as their vocabulary and language skills develop they are able to talk about their experiences and communicate with others in group activities.

Disposition to learn

Children's disposition to learn is affected by their feelings; for example, if a child is happy, well nourished, contented and relaxed the effect on learning will be positive.

When activities are enjoyable and fun as well as suitably challenging children will respond with interest. Children also develop a positive attitude to learning when given praise and encouragement that acknowledges their efforts and the value of their play activities.

Learning styles

For children's learning to be most effective the learning experiences need to be meaningful for the children.

Individual children have different learning styles or preferred ways of interacting with the environment. When learning styles are taken into account learning can be enhanced. Some children learn best if they have a visual stimulus, others if they have an auditory one or a kinaesthetic (practical) task. Research into brain development has shown that individual learning styles are affected by the environment, the type of learning activity and whether the individual is working independently or in a group. For example, throughout children's development their disposition to learn will be influenced by their understanding and exploration of attitudes, attributes, values, feelings and emotions.

Examples of positive influences on learning indoors and outdoors include:

- a visually stimulating environment indoors and outdoors
- opportunities for active and quiet times indoors and outdoors
- a balance of practitioner-directed and child-initiated activities
- opportunities for experiential learning and reflective discussion
- playing carefully chosen background music as stimulus or a calming device.

For children's learning to be most effective the learning experiences need to be meaningful for the children. Opportunities should always be given for them to make choices according to their preferred style of learning, or to choose through a combination of learning styles.

Gender differences and equal opportunities

Evidence from neuro-scientific research suggests that differences in brain structure and function between boys and girls also lead to differences in learning styles. Boys often respond more readily to active learning challenges that involve physical play and girls often prefer quieter activities that require more social interaction.

While equal opportunities policies have shaped the way all children are given the same opportunities, there is scope to consider whether individuals are achieving the best outcomes in relation to ability or whether more suitable activities could be provided to meet their needs.

Developmental progress

The period from birth to age 7 years is a time of tremendous growth and development.

The period from birth to age 7 years is a time of tremendous growth and development. While every child will progress through the same developmental continuum they will do so at widely differing rates. The variations along the continuum of development and learning can be considerable within a typical group at any given age; for example, a child whose physical skills are well developed may not necessarily be equally well developed cognitively, socially or emotionally. There is also a need to be aware of where child development is not within an explicit pattern or is completely out of kilter; thereby 'flagging-up' the need for an additional needs assessment.

Owing to the range of individual differences in development it is important that observation informs planning in order that each child's needs are met appropriately. The observant practitioner will be sensitive to any physical, sensory, emotional, social or cognitive difficulties that suggest a child may have additional needs, which in turn may require special support.

(*Routes for Learning* provides detailed information on assessment for learners with profound learning difficulties and additional disabilities.)

Teaching

In the Foundation Phase it is essential that all practitioners have a thorough knowledge/understanding of child development.

The Foundation Phase requires a teaching approach that is best suited to the active learning that characterises this phase of education and the multiple ways in which children learn.

The role of the practitioner

Central to the Foundation Phase approach is the practitioner as a facilitator of learning, with the child at the heart of learning and teaching. Care should be taken to ensure that the teaching approach used is based on the needs of the child in each Area of Learning and development.

In the Foundation Phase it is essential that all practitioners have a thorough knowledge/understanding of child development. Emphasis should be placed on learning as a continuum that will need to be taken into account when planning a curriculum that meets the needs of individual children and facilitates progress.

Sensitivity to barriers that impede the progress of individual children will enable the practitioner to identify any intervention strategies that might be needed.

Planning

It is essential that there is continuity when planning for children's development. As such it is important to consider children's backgrounds and early learning experiences at home as a starting point when planning. This can be done through conversation with the children's parents/carers as described below.

'When the children start in playgroup we ask parents/carers for a broad picture of the child's development to date, preferences, colour awareness and social awareness (for example, whether the child has been to a parent/carer-and-toddler group).'

Practitioners will also need to be aware of what has been taught in the previous year as well as the achievement/attainment of each individual child.

The practitioner will need to plan and resource a variety of learning opportunities and activities that cover all Areas of Learning and all types of play. Planning will be based on the *Foundation Phase Framework for Children's Learning for 3 to 7-year-olds in Wales* and the policy statements and curriculum documents of the setting/school.

A practitioner's planning might be holistic, taking a thematic approach across all Areas of Learning. Children's ideas can be included when planning topics/projects, for example, by involving them in discussion and mind mapping. A theme or topic that interests the children will enable them to develop understanding through learning experiences that are meaningful to them.

Practitioners might want to undertake discrete planning for each Area of Learning. However there will inevitably be connections between Areas of Learning as children's learning and development are interrelated.

Knowledge and Understanding of the World – medium-term planning

Possible learning outcomes	Planned opportunities and activities	Resources	Assessment opportunities
Material world Be able to explore materials and begin to recognise their purpose and use.	Punching holes in card, using sticky tape dispenser, using split pins, paperclips, staplers, etc., exploring any tools used to join in the art area.	Fully equipped art area.	Artefacts or materials created using tools. Anecdotal evidence of children's purpose for using certain materials and tools.
	Moulding modeling clay and salt dough.	Modelling clay and salt dough.	
	Freezing water and melting ice.	Ice.	
	Shaping wet sand.		
	Pulling, stretching and crushing a wide variety of paper, card and fabric.	Elastic, card, a wide variety of papers, tissue, crepe, corrugated card, stretchy fabric, fur fabric, tree off-cuts, etc.	
	Wooden tree off-cuts to roll, hammer and feel.		

Possible learning outcomes	Planned opportunities and activities	Resources	Assessment opportunities
Living world Be able to problem solve using real experiences and predict possible outcomes.	Develop planning skills to be able to identify themselves, the materials they might use and how they predict the possible outcomes of their play. Small groups start with 'What if' scenarios. Sending balls down long tubes. Building with various construction materials, found and commercially produced.	A selection of different materials. Building blocks, plastic tubes, balls and long cardboard tubes.	Anecdotal evidence of children's predictions and explanations of outcomes.

Personal and Social Development, Well-Being and Cultural Diversity should be an integral part of planning across all Areas of Learning regardless of whether a practitioner's planning is holistic, discrete or involves a combination of approaches. Care should be taken to ensure that there are frequent opportunities to develop self-esteem, confidence, self-control and independence, to listen, and to communicate in small and larger groups. Planning should incorporate a combination of approaches that ensure all Areas of Learning and types of play are given consideration.

Written plans should take the form of flexible working documents that include:

- essential elements with respect to the seven Areas of Learning
- learning and development opportunities, including reference to the Skills framework

- provision for different learning styles (VAK)
- learning resources
- roles of practitioners
- differentiation, which may be through a variety of methods, such as:
  - resources
  - questions
  - activities
  - outcomes
  - individual support
  - small-group support
- opportunities for observation and assessment of children's progress
- reflective evaluation of provision.

There should also be flexibility to be responsive to children's interests, their choice of activities, their need for support as activities progress and time for children to continue with unfinished activities.

Planning for progression

Relevant and engaging learning experiences will enable children to make steady progress appropriate to their stage of development.

As children will move along the learning continuum at different rates, it is important to observe children's skills, consider individual needs and take account of these when planning.

Relevant and engaging learning experiences will enable children to make steady progress appropriate to their stage of development. There should be a balance of activities that are initiated by a practitioner, including planned, structured play activities, and those initiated by children according to their interests and the resources available.

Children's involvement in planning and decision making will enhance the learning experiences for them.

A child's planning

It was a hot, sunny summer's day and the Barty stories *Barty's Ketchup Catastrophe* and *Barty's Scarf* were to be our planned stimuli for the week. The children knew that whichever story they listened to, whichever poem they learned or whichever song they sang, it would be the source for all the weekly activities. When considering which items Barty would take to his friend's house for his sleepover, a spotty green ball was always prominent in each illustration. Suddenly, Cerys put up her hand and said "What if Barty lost that ball – we could go on a treasure hunt to find it!"

As a staff we hadn't planned such an activity, but all that was needed was eye contact from the teacher and learning assistants because we work closely as a team. The children chose Barty's favourite number and while the story was still being read to the children that particular number of balls was collected and hidden around Barty's meadow – our field. There were small balls, large balls, soft balls, stripy balls, spotty balls, tennis balls, a rugby ball even.

The children enjoyed finding the balls, counting the balls, describing the balls – and all of this originated from a young child's comment. Cerys was just five years' old. Her enthusiasm was infectious and children suggested some other activities, including a game of subtraction using these balls.

The Foundation Phase gives opportunities for children to be listened to and their meaningful suggestions acted upon.

Progression in children's skills can be supported by opportunities for:

- **play** – structured play opportunities should be planned for children to explore, experiment, investigate, predict/estimate, measure, construct, make decisions, solve problems, be creative and imaginative, express their ideas in multiple ways including talking, drawing and writing

- **practising, consolidating and reviewing** – there should be opportunities for children to build on previous learning, develop the confidence to try new things, express/communicate their feelings, experience success and failure and develop the perseverance to try again. Children should be encouraged to review their work and develop simple evaluative skills.

Organisation of the learning environment

A range and variety of resources should be used and selected to support children's learning indoors and outdoors.

To support children's development the learning environment both indoors and outdoors should be safe, secure, attractive and a constant source of stimulation for children's learning. There should be a good variety of differentiated resources to suit children's physical and language development and enable every child to make progress according to their ability. The resources should be of good quality, well maintained and should invite participation, offer challenges and cater for different learning styles and stages of development. Welsh, English and bilingual signs, displays and resources should be an integral part of the learning environment.

Resources should provide for equal opportunities and meet individual needs. Resources and activities should be developmentally appropriate, enable consolidation of existing learning and acquisition of new skills, knowledge and understanding through enquiry and investigation. A range and variety of resources should be used and selected to support children's learning indoors and outdoors. The way resources are organised should ensure that there are a wide range of opportunities for children to make choices, select and return resources after use and engage in experiences that interest them.

A useful resource for the learning environment can include visitors from the local communities, from various cultures and from areas of particular interest to the children. These visits can provide first-hand experiences for the children and provide ideal speaking and listening and role-play/imaginative-play activities. They can extend children's

knowledge and understanding; for example, of various roles people have in the community and important traditions of different cultures.

Space should be organised to facilitate:

- planned and spontaneous activities, indoors and outdoors, in all Areas of Learning
- activities that cater for different learning styles
- a wide range of resources that are accessible for children to select and return after use
- physical and social activities
- independent learning
- collaborative group work
- larger groups with a practitioner
- active and quiet learning
- mark-making and writing
- interactive displays for exploring and investigating
- multi-sensory resources for stimulating creativity and imagination
- storage of work in progress
- displays of children's completed work for stimulating, motivating and reinforcing learning
- opportunities for accessing fiction and non-fiction books at all times
- opportunities for using ICT, with practitioner support or independently.

Linking cylch meithrin to a nursery unit in a primary school

Children leaving cylch meithrin (pilot setting for Foundation Phase) were finding it difficult on transfer – they were used to having a choice of indoor and outdoor activities and being able to move freely between the two. Nursery staff noticed that the children would congregate at the glass doorway, staring at land at the side of the building. They also became very aware of the need to implement the Foundation Phase in the nursery unit and reception class.

Changes have been made gradually over the last year, and the grounds immediately adjacent to the nursery building have been used daily with children having a choice of indoor and outdoor activities. Despite the children having use of a purpose-built playground at the front of the unit they prefer to use the grass area which is more easily accessible. More and more activities are being introduced each half-term. Changes have also been made in the reception class, where the children are increasingly using the outdoors, and the classroom has been reorganised to provide more space for role play as well as sand, construction and creative play.

Teachers and support staff have been keen to implement the changes and have seen the benefits. The children seem much more independent and confident since these changes have been made.

Observation

- It is essential that the process of observation is an integral, daily part of the practitioner's role in order to monitor:

  – the learning process
  – children's concentration
  – dispositions to learning
  – social interactions
  – independence
  – strengths and abilities across all Areas of Learning
    and development
  – additional learning needs.

- Observation-based assessment enables practitioners to provide constructive feedback and helps inform their planning for progression, and evaluating provision for learning.

- Observation may also draw attention to particular schema or patterns of thinking that predominate in a child's play.

- In addition to routine observations of learning activities during which significant information will be noted, different types of planned observations can be undertaken for specific purposes, such as mapping a child's choice of activity, or evaluating the use of a structured play activity.

- It is important to spend time observing children in different activities to show that these are equally valued.

Supporting the learner

Practitioners can support or 'scaffold' learning effectively by working alongside an individual or small group of children, observing, participating and intervening if necessary. Development can be supported by providing additional resources, making suggestions or asking open-ended questions to challenge and extend thinking. As a result of participating a practitioner may decide to initiate a new activity to consolidate learning or extend existing learning. Observant practitioners will plan structured play opportunities in response to cues from the children.

Interactions between practitioners and children should promote language and communication skills at every opportunity. Practitioners should be skilled at matching language to children's understanding, introducing relevant new vocabulary and asking questions that

require children to express their own ideas and respond to the contributions of others. The practitioner should set an example alongside the children, modelling the language and learning skills that are needed.

Cognitive and social skills can both be enhanced when the practitioner and child engage in solving a problem together. The practitioner can develop children's thinking across the curriculum through the processes of planning, developing and reflecting, which helps them acquire deeper understanding and enables them to explore and make sense of their world.

The processes of developing thinking, namely plan, develop and reflect, should not be seen as a set style of learning and teaching. Each process does not have a specific place in a task. The three processes should be interchangable.

Direct teaching

There will be times when direct teaching of a new skill will be required through a planned activity with a small group.

There will be times when direct teaching of a new skill will be required through a planned activity with a small group. This will complement the balanced programme of structured play activities available.

Learning outcomes should be shared with children in a way that they can understand and children should be encouraged to discuss their work in order to introduce an element of self-evaluation. Regardless of outcomes children's efforts and perseverance should be praised and encouraged not only in activities directed by the practitioner but in structured and child-initiated play activities.

Teaching strategies

Practitioners should select appropriate teaching strategies according to the activities in which they are involved. A directed activity might include demonstrations of new skills and clear explanations of information. A play-based, problem-solving activity might require intervention to support or 'scaffold' learning, pose challenging questions or give reinforcement with praise and encouragement. A role-play activity might require interactive participation to extend language skills, with the practitioner and child involved together in the activity.

A structured play situation might require intervention with additional resources or suggestions to extend thinking and move the play on. The practitioner should recognise when to intervene sensitively in play and when to allow children to continue without support until they reach their own conclusions.

Partnership with parents/carers

Practitioners should work closely with parents/carers to ensure that there is continuity in provision at home and setting/school by:

• inviting information about children's interests
• sharing information about learning activities
• discussing children's development
• consulting on children's progress.

Parents/carers are also the most constant adults in a child's life. They are able to ease the transition process for the child, providing they are kept well informed about the process as the child progresses from home through Foundation Phase settings/schools and into Key Stage 2.

Managing the process of learning

The role of the lead practitioner in a setting includes managing other practitioners and developing a team approach that involves all the practitioners who work with the children, and their parents/carers.

The most effective practice is based on shared aims and principles, recognition of the strengths of each team member and involvement of the whole team in decision-making, planning and assessment. Shared understanding of the teaching strategies to be employed will ensure consistency of approach in supporting learning.

All members of the team should have high expectations of the children, be knowledgeable about child development and learning, be aware of planned learning outcomes, make observations on children's progress and development, and contribute to discussions about planning and assessment.

Time should be made for the team to engage in reflective practice as this leads to greater understanding of child development, how children learn, the needs of children and how best to meet those needs.

Sharing good practice and reflecting on up-to-date educational research is a valuable part of continual professional development and can enhance the pedagogical knowledge, understanding and skills of each practitioner as well as quality of provision within a setting/school.

Pedagogy in the Foundation Phase

The term 'pedagogy' refers to the complex relationship between learning and teaching. It embraces the concept of the practitioner as a facilitator of learning, responding to the needs of individuals, willing to learn alongside the children, using appropriate methods to manage the process of learning and continually reflecting on and improving practice in the light of research.

The reflective Foundation Phase practitioner will have:

- knowledge and understanding of child development and how young children learn
- knowledge of the seven curriculum Areas of Learning
- skills and knowledge of providing the best learning environments and experiences to motivate children and stimulate their learning
- skills and knowledge of good practice in teaching young children
- skills and knowledge of good practice in observation and assessment of children's progress and planning for the continuum of learning
- skills and knowledge of working collaboratively with others to share good practice and reflect on educational research
- continually developing professional skills, knowledge and understanding.

This case study features the reflections of two practitioners in the Foundation Phase pilot project who were sharing their experiences of introducing the Foundation Phase into their settings/schools.

The journey

"As we move towards a problem-solving approach to all learning and develop children's skills, we need to step back and really develop authentic relationships with the children in our care. Remember we are not working towards helping them achieve an end result but towards going on a learning journey with us. They need to be comfortable in the environment and have ownership of that environment. We need to be so aware of their emotional well-being, help them to express their emotions and feelings, and to develop a positive self-image and a willingness to persist at an activity.

"Don't let us get so preoccupied with the activities that we overlook the needs of the child with whom we are working."

" 'We take children to the starting line – they take us to the finishing line.' It is not a race, it is a journey. It is a process. They need to learn and develop, and they need help and support along the way, but it is their finishing line."

Educational theorists and psychologists

The following are some educational theorists and psychologists whose theories/research support the learning and teaching pedagogy strategies in the Foundation Phase.

Friedrich Froebel (1782–1852)

Froebel, the German educationalist who founded kindergartens, has probably had the most far reaching influence on early childhood education. Central to his theory was the development of the whole child through play and active learning. Froebel was the first person to formulate a theory of pre-school education with a carefully planned curriculum based on key learning experiences, offering structured teacher-directed activities within which children had the opportunity to play. The activities included stories, singing games, drawing, modelling and playing with sets of objects called 'gifts', such as spheres, cubes and cylinders. The holistic, integrated approach promoted four basic ideas: play and language, actions, feelings, and thoughts. The family was recognised as the child's first educator and the community was seen as the link between the family and the school.

Maria Montessori (1870–1952)

Montessori was a doctor in Rome who initially developed structured teaching methods and sensory resources to support children with learning difficulties. She believed that children learn independently through handling learning materials that are designed for a particular purpose, and then progressing through increasingly complex tasks. Montessori stressed the importance of a planned learning environment and introduced child-sized equipment and 'children's houses'. Like Froebel, Montessori believed in active learning and the importance of developing the whole child, but she did not value imaginative play, and the emphasis was on the intellectual development of the child.

Rudolf Steiner (1861–1925)

Steiner, an Austrian scientist and philosopher, established a distinctive form of education that stressed the child's individuality, feelings and personal and social learning. Steiner schools feature an ethos that is spiritual and aesthetically pleasing, with learning activities that are

rooted in day-to-day life (for example, food preparation, cooking and sewing), with the teacher setting the example. The daily routine includes stories, poems, singing, movement, outdoor games, and creative and imaginative play with natural materials and coloured fabrics. The school is designed to be a homely place and parental involvement is generally high.

Margaret McMillan (1860–1931) and Rachel McMillan (1859–1917)

Margaret McMillan was a trained governess who focused on health and social reform. She pioneered medical inspections and treatment for school children, and with her sister Rachel set up an open-air nursery school in a disadvantaged area of London. While practice was based on Froebelian principles the emphasis was firstly on improving children's health, at a time (the beginning of the twentieth century) when disease spread rapidly in overcrowded conditions. The involvement of parents was also an important aim in order to promote children's development and learning.

Susan Isaacs (1885–1948)

Isaacs used systematic observations to develop understanding of children's intellectual growth. She set up the first Department of Child Development at the London Institute of Education and encouraged teachers to record observations of children's behaviour and learning. Like Froebel, Isaacs believed in the importance of play in children's learning as a means of solving problems, expressing feelings, gaining confidence and developing social relationships with other children. She also believed in the importance of working with parents.

Jean Piaget (1896–1980)

Piaget was a Swiss psychologist who made a major contribution to education in the 1960s with his theory of cognitive development. He suggested that there are four distinct stages through which cognitive skills develop:

0–2 years	the sensory–motor stage
2–6/7 years	the pre-operational stage (symbolic development of concepts; play)
7–11/12 years	the concrete operations stage (logical and mathematical)

11 years onwards   the stage of formal operations
(abstract thinking).

Piaget's constructivist theory is based on the belief that children are active participants who construct learning by interacting with their environment and making connections between new experiences and previous learning. Constructivist theory acknowledges children as active not passive learners. Critics of Piaget's stage theory have challenged the idea of age-related stages given that children's rates of development vary and they can operate at different levels in different areas of learning. Constructivist theory was extended by Vygotsky and Bruner, who emphasised that children construct learning, not only from interacting with the physical environment but through language and interaction with adults and other children.

Lev Vygotsky (1896–1934)

The Social Interaction Theory of the Russian psychologist Vygotsky has made a significant contribution to our understanding of children's learning. He maintained that play and speech development are important factors in the learning process. Through communication and social interaction with adults or more knowledgeable peers children can achieve higher levels of understanding than they would independently. The gap between what children can achieve unaided and what they can achieve with support and guidance he called the 'Zone of Proximal Development' (proximal = next). He pointed out that what a child can achieve with assistance today, a child will be able to achieve independently tomorrow.

He emphasised the role of the practitioner in matching learning activities to the child's level of development and encouraging progression in a child's thinking. The term 'social constructivist theory' is sometimes used to describe the collaborative approach to learning that involves interaction between the learner and more knowledgeable others.

Jerome Bruner (born 1915)

The American psychologist Bruner identified three broad modes of learning: enactive (actions), iconic (pictures) and symbolic (words and numbers). He also stressed the importance of adult intervention to support or 'scaffold' learning and enable a child to make progress. In order to scaffold effectively the practitioner needs to be aware of what the child already knows in order to build on it. Scaffolding often takes the form of a dialogue between the adult and child. Bruner is well known for introducing the idea of a 'spiral curriculum', wherein a topic can be re-introduced at a more complex level as thinking skills develop.

Howard Gardner (born 1943)

The Harvard psychologist Gardner worked as a young researcher for Bruner and later put forward his Theory of Multiple Intelligences. He believed that intelligence was often narrowly viewed in terms of linguistic and mathematical skills at the expense of developing all-round potential. He suggested that learning potential encompasses eight different intelligences:

• linguistic intelligence (words)
• logical-mathematical intelligence (numbers or logic)
• visual-spatial intelligence (pictures)
• musical intelligence (music)
• intra-personal intelligence (self-reflection)
• bodily-kinaesthetic intelligence (physical experience)
• interpersonal intelligence (social experience)
• naturalist intelligence (experience of the natural world).

Over the last two decades interest has developed in this theory, which indicates the range of experiences that children should have access to in order to achieve their potential.

Our understanding of learning theory is continually developing in the light of new research and evolving society. Sometimes our previous assumptions are challenged by new theories. However many of the above theories are well established and remain at the heart of good practice in early childhood education.

Areas of current research/learning theories

Many of the theories on the previous pages are well established and remain at the heart of current good practice in early childhood education.

Understanding of learning theory is continually developing in the light of new research and the evolving needs of society. Sometimes our previous assumptions are challenged by new theories. The following are some of the more recent aspects of research that are influencing current practice. A common thread through all of these theories is greater understanding of the development of the individual (socially, emotionally, physically and cognitively), and the interdependence required between all aspects of development for a child to reach his/her learning potential. Technological advances in the last decade have enabled researchers to learn a great deal about the brain, which has made a significant contribution to learning theories.

Emotional intelligence/emotional literacy

Emotional Intelligence theory originated in the work of American psychologists during the 1970s and 1980s including Howard Gardner, and interest in its application in education and in the workplace grew after the publication of Daniel Goleman's book *Emotional Intelligence: Why it Can Matter More Than IQ* (Bloomsbury Publishing PLC, 1996). The theory maintains that understanding one's own feelings and understanding others and their feelings can lead to greater ability to manage personal and social situations. As a result self-esteem benefits, challenges are met more confidently and performance can be improved. Programmes designed to promote emotional literacy such as SEAL (Social and Emotional Aspects of Learning) and PALS (Playing and learning to socialise) aim to help children to develop self-awareness, learn how to recognise and manage their emotions, become self-motivated, build relationships and empathise with others.

Neuroscience/brain development

More is known about the physical structure of the brain than about how it actually functions. The brain develops most rapidly between birth, when it is around 25 per cent of its adult size, and ages 5 to 6 when it reaches 90 per cent of its adult size. Therefore more learning

takes place in the first five years of life than at any other time. Neuroscience has identified that soon after birth the number of brain cells increases particularly rapidly. The connections between cells are established through multisensory experiences and repeated use, but without stimulation many cells die off. The remainder will not reach their full capacity unless continually developing their function through new experiences and mental stimulation. Critical periods have also been identified when brain development is particularly receptive to specific types of learning. For instance, the first eight years of life is a critical period for language acquisition. Similarly, social and emotional awareness and attention span develop significantly in 3 to 6-year-olds.

The brain is organised in three main parts: the reptilian brain (associated with instincts and survival), the midbrain (linked with emotions, self-identity, attention span and long-term memory), and the neocortex (where academic learning and higher order thinking skills take place). The neocortex is divided into two symmetrical hemispheres, each of which is thought to specialise in different aspects of learning. The left hemisphere has been linked with language, logic and number, while the right hemisphere has been linked with non-verbal, visual, imaginative and musical aspects. In the 1990s structured teaching approaches such as brain-compatible learning and accelerated learning began to develop with a focus on helping the right and left sides of the brain to work together most effectively. Techniques such as concept mapping and Brain Gym were devised to try to improve the quality and rate of learning, and improve concentration. Music is sometimes used to create a stimulating medium for learning, and as a means of engaging the left hemisphere as well during a range of activities.

Learning styles

Greater understanding of how the brain processes information led to interest in the role of the senses in learning strategies. Three categories were introduced to describe the main styles of learning: visual, auditory, and kinaesthetic (VAK). If all styles are catered for through a range of activities learners can access learning in their chosen style or a combination of styles. Older children may begin to show a preference for a particular learning style but will use other styles to some degree. Teaching strategies in all early childhood settings cater for different learning styles through visual aids, songs, stories, movement and active play.

Well-being and involvement

Well-being is linked with personal and social development, ability to concentrate and motivation to engage in learning. Research by Professor Laevers (1994) focused on motivation as one of the main characteristics of a child's involvement in learning. Laevers introduced the Child Involvement Scale to assess how deeply involved children were in learning. Pascal and Bertram (1997) drew on Laevers' work in their Effective Early Learning Project, which is a research and development project aimed at improving the quality of provision in early years settings. They used the Child Involvement Scale to assess the level of a child's involvement in learning activities and Adult Engagement Scales to analyse the role of the adult in adult–child interactions. Personal, social and emotional development has been found to impact on all other learning.

Health and well-being

Definitions of health have broadened in recent years to include physical, mental, social, emotional, spiritual and societal aspects. Positive influences on health and well-being include a balanced diet, regular exercise, supportive relationships, stimulating work, education and leisure activities. Healthy children enjoy active play and are generally well motivated to learn. For various reasons there are inequalities in child health that prevent some children from engaging with the educational opportunities available to them. Reducing health inequalities for children is a national priority that affects all early years professionals. The importance of outdoor play to health, development and learning is well recognised. Child health is influenced by many factors, both genetic and environmental, including poverty. Recent initiatives that aim to promote health in children include breakfast clubs, Sure Start, community health schemes, anti-smoking campaigns and national fruit schemes. The issue of healthy eating has become a major priority as more and more children are in danger of becoming obese owing to unhealthy diets and lifestyles, thus limiting their ability to participate fully in learning activities.

Communication

Research by Professor Trevarthen over the last 30 years has shown that communication between babies and their caregivers is evident soon after birth. Babies begin to interact, take turns, respond to patterns of speech, rhythm and tone of voice. These interpersonal exchanges form the basis for language skills through eye contact, movement and sounds. Listening and speaking skills are also

acknowledged as essential to the learning process, while linguistic theorists believe in the value of talk in the development of thinking. They have identified that children need good adult 'talk partners' to listen to them and build on what they say. While Piaget believed that the child developed concepts through interacting with the learning environment, later theories recognised that language plays an important part in learning. Vygotsky and Bruner emphasised the importance of social and cultural influences on a child's language development and cognitive skills. Brain research shows that young children's minds are particularly receptive to language and therefore the early years are an ideal time to introduce a new language. This supports the introduction of Welsh Language Development as an Area of Learning in the Foundation Phase.

Sustained shared thinking

By engaging in a dialogue with a child, encouraging the child to talk about his/her interests and asking open-ended questions, a practitioner can support and extend the child's thinking. This reflects the social interaction theory of Vygotsky and the socio-constructivist theory of Bruner. Sustained shared thinking describes the process where practitioner and child act as co-constructors in learning, both contributing to solving a problem. Interaction and dialogue between practitioner and child introduces relevant vocabulary, prompts discussion, challenges the learner and encourages reflection. The role of the practitioner is crucial in helping children develop their thinking skills.

There are different approaches to teaching thinking skills, all of which include the need to make connections between existing skills, knowledge and understanding, and new learning. McGuinness (1999) in her Research Brief for the DfEE (*From Thinking Skills to Thinking Classrooms*, Department for Education and Employment, Research Briefs, Research Report No.115) distinguished between approaches where thinking skills are introduced within everyday teaching and learning (infusion) and those approaches that involve teaching thinking skills directly (discrete). Examples of programmes for teaching thinking include Philosophy for Children, Let's Think and Activating Children's Thinking Skills (ACTS).

Useful information and contacts

Effective Early Learning – Case Studies in Improvement by C Pascal
and T Bertram (Paul Chapman Publishing Ltd, 1997)
ISBN: 9780761972938

*Effective Teaching and Learning in the Primary Classroom: A Practical
Guide to Brain Compatible Learning* by S Shaw and T Hawes
(Equip, 1998) ISBN: 0953353109

*Enhancing Learning Through Play: A Developmental Perspective
for Early Years Settings* by C Macintyre (David Fulton Publishers
Ltd, 2006) ISBN: 9781853467615

*Foundation Phase Personal and Social Development, Well-Being and
Cultural Diversity* (WAG, 2008)

Frames of Mind: The Theory of Multiple Intelligences by H Gardner
(Fontana Press, 1993) ISBN: 9780006862901

Observing Children (WAG, 2008)

Play/Active Learning: Overview for 3 to 7-year-olds (WAG, 2008)

Promoting Children's Learning from Birth to Five by A Anning and
A Edwards (OUP, 2000) ISBN: 9780335219704

Skills framework for 3 to 19-year-olds in Wales (WAG, 2008)

Supporting Early Learning: The way forward by V Hurst and J Joseph
(OUP, 1998) ISBN: 9780335199501

The Thinking Child – Brain-based Learning for the Foundation Stage
by N Call with S Featherstone (Network Educational Press Ltd, 2003)
ISBN: 9781855391215

Understanding Pedagogy and Its Impact on Learning edited
by P Mortimore (Paul Chapman Publishing Ltd, 1999)
ISBN: 9781853964534

A Process-Oriented Child Monitoring System (research started 1976) by F Laevers (*Experiential Education* series, Centre for Experiential Education, Belgium). This is a programme for observing and assessing children's well-being and their involvement. The English learning tools section of it, and other related materials, can be accessed by visiting www.cego.be

Wales Pre-school Playgroup Association:
www.walesppa.org

Further information on Professor Trevarthen's research can be found in:

Early Childhood Education by T Bruce (Hodder & Stoughton Ltd, 2007) ISBN: 9780340889725

Language and Literacy in the Early Years by M R Whitehead (SAGE Publications Ltd, 2004) ISBN: 9780761944706

Music and child development by Professor T David, an article available on the Literacy Trust website at www.literacytrust.org.uk

Foundation Phase glossary

Active learning
This term relates to children being active and involved in their learning. Children learn best through first-hand experiences. It is crucial that children have active experiences indoors and outdoors that build up the skills, knowledge and understanding that will support their future learning.

The purpose of play/active learning is that it motivates, stimulates and supports children in their development of skills, concepts, language acquisition/communication skills and concentration. It also provides opportunities for children to develop positive attitudes and to demonstrate awareness/use of recent learning, skills and competencies, and to consolidate learning.

Assessment profile
The assessment profile provides guidance on key child developmental stages and skills that children develop and acquire from approximately 18 months through to 84 months.

Child initiated/centred
The Foundation Phase curriculum should focus more on children's interests, development and learning rather than the curriculum and pre-determined outcomes. It is important to note that the planned curriculum has to have structure and clear learning objectives but enough flexibility to enable the children to follow their interests and their needs.

Careful observations of the planned curriculum and how children respond to it should provide evidence of whether the children are focused on their learning and not playing aimlessly. An understanding of child development is crucial to ensure that the children are extended in their learning.

Cognitive development
Cognitive development is the development of the mind. It focuses on children's thinking and understanding, imagination and creativity (including problem solving/reasoning/concentration and memory).

Communication/language development

Language is made up of different forms and skills which include speaking and listening, reading, writing, thinking and observation. The tone of a voice is a powerful form of communicating meaning. Some children may use alternate systems to the voice such as signing.

Non-verbal communication also takes on different forms such as facial expressions (smiling), gestures/body movements (shoulders slouching and eye contact).

Cooperative/group play

Children start to play together, they share their play. Children become more sociable, take on roles in the play and take account of the roles of other children. They begin to be aware of the needs and wishes of their peers, so that gradually the play becomes more complex. Rules are sometime devised and some cooperative play will be revisited over several days.

Cultural diversity

The Foundation Phase supports the cultural identity of all children, celebrates different cultures and helps children recognise and gain positive awareness of their own and other cultures. Positive attitudes should be developed to enable children to become increasingly aware of and appreciative of the value of the diversity of cultures and languages that exist in Wales.

Curriculum

Seven Areas of Learning have been identified to describe an appropriate curriculum for 3 to 7-year-olds that supports the development of children and their skills. They complement each other and work together to provide a curriculum that is holistic. Each Area of Learning includes the statutory education content (skills and range) that needs to be followed.

Curriculum Cymreig

The Foundation Phase contributes to the Curriculum Cymreig by developing children's understanding of the cultural identity unique to Wales across all Areas of Learning through an integrated approach. Children should appreciate the different languages, images, objects, sounds and tastes that are integral to Wales today, and gain a sense of belonging to Wales, and understand the Welsh heritage, literature and arts as well as the language.

Differentiation
The curriculum should be flexible to match children's abilities, skills and developmental needs.

Emotional well-being
Emotional development focuses on the development of children's self-esteem, their feelings and their awareness of the feelings of others.

Fine manipulative skills
The development of children's fine manipulation/motor skills begins within the centre of their bodies and moves out. Through appropriate development, children will eventually be able to undertake fine and intricate movements. Fine manipulation skills include using finger movements and hand–eye coordination.

Gross motor skills
The development of gross motor skills starts with the young baby controlling head movements and then, moving down the body, controlling other parts of the body. Gross motor development includes using whole body movements, coordination and balance.

Holistic curriculum
The holistic curriculum is one where Areas of Learning are interlinked and learning and teaching support many aspects of the children's development rather than focusing on one specific stage or need. The curriculum is viewed and delivered as a whole.

Imagination
Imagination is having the skills and ability to form images, ideas and concepts that either exist but are not present, or that do not exist at all.

Independence
Independence refers to having the ability and skill to be less dependent on others. Skills of managing and coping should be progressively developed throughout the Foundation Phase.

Learning styles
There are different learning styles or preferred ways of interacting. The learning styles are: visual, auditory and kinaesthetic. When learning styles are taken into account learning can be enhanced.

Some children learn best if they have a visual stimulus, others an auditory one or a kinaesthetic (practical) task. Research into brain development has shown that individual learning styles are affected by the environment, the type of learning activity and whether the child is working independently or in a group.

Memory
The memory is the part of the brain where information is collected, saved and later retrieved. Initially information has to be taken in and understood; it is then saved and recalled when needed. All of these processes are needed for learning to take place.

Outcomes
The Foundation Phase Outcomes incorporate baseline assessment scales and descriptions and the national curriculum level descriptions. They have been developed to support the end of phase statutory teacher assessment. There are six Outcomes per Area of Learning and for information purposes Outcomes 4–6 broadly cross-reference to the current descriptions for Levels 1–3.

Outdoor learning
There is a strong emphasis on outdoor learning in the Foundation Phase. The outdoor learning environment should be an extension of the indoor learning environment. Structured experiential activities should be planned for throughout the day, and children should as far as possible (taking account of health and safety issues) be able to move freely between the indoors and outdoors.

Parallel play
Children may appear to be playing together, but closer observation reveals the children are actually playing alone and not interacting with each other. Children can be using the same equipment, or sitting or standing next to each other, but both are working independently of each other, with no interaction (either positive or negative) between them in their play.

Partnership/associative play
Children operating in the partnership/associative stage of play will begin to become aware of other children. They start to communicate with each other and are more aware of the play/games that other children are involved in. They begin to explain to each other what they are doing. Gradually one child will become involved in the other child's play.

Pedagogy
Pedagogy refers to the relationships between learning and teaching. It embraces the concept of the practitioner as a facilitator of learning, responding to the needs of individuals, willing to learn alongside the children, using appropriate methods to manage the process of learning and continually reflecting on and improving practice.

Personal development
Personal development focuses on the children's awareness of themselves and the development of their self-help skills.

Physical development
Physical development focuses on increasing the skills and performance of the body. Physical and cognitive development are closely linked, especially during the early years. Physical development can be divided into gross motor skills and fine manipulative skills.

Practitioners
This generic term refers to the adults that work with children in the Foundation Phase. It includes teachers and classroom assistants in the maintained sector, and staff that work in the funded education settings in the non-maintained sector.

Practitioner/adult guided
Practitioners need to plan an appropriate curriculum that engages children in their learning. They need to encourage, motivate and develop attitudes. Practitioners need to be aware of when it is appropriate to intervene sensitively to extend children's learning, when to challenge their problem-solving and thinking skills, and when to allow the children to come to satisfactory conclusions on their own. Practitioners should support/'scaffold' children's learning, observing, monitoring and assessing children's progress to ensure that they are moving on to the next stages of their development and that their skills are being extended.

Problem solving
Problem solving focuses on developing the ability to assess a problem/ situation then gathering information to find a solution/answer. As children's skills increase they will be able to draw on previous experiences when attempting new activities and solving problems.

Self-esteem
This refers to the way children feel about themselves. Positive feelings indicate a high self-esteem, while negative feelings about themselves are an indication of low self-esteem.

Skills framework
The non-statutory *Skills framework for 3 to 19-year-olds in Wales* outlines progression in developing thinking, communication, number and information and communication technology (ICT).

Social development
Social development focuses on children's social interactions and relationships with their peers, practitioners and adults.

Solitary play
Children play contentedly alone. They are involved in their own play and will move from activity to activity regardless of any other children. Often in this stage of play children enjoy imitating everyday activities.

Spectator play
Children observe other children but do not join in. They like to watch other children playing. Often they can be observed standing/sitting on the fringes of where other children are playing. Although they can appear to be alone or lacking in confidence, they can often be concentrating while observing the play in order to develop an understanding of what to do.

Statutory assessment
Within the Foundation Phase there are two statutory assessments that have to be implemented: the baseline assessment and the end of phase statutory teacher assessment.

Structured educational play
Structured play experiences have specific planned outcomes to extend children's learning, skills and development. Structured play should be planned with flexibility so as to allow children opportunities to choose and extend an activity according to their interests and knowledge.

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