

Guidelines
and
Suggestions
for the
Implementation
of the
Curriculum
in
Kindergarten

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January 2002

A Loving Parent

by

Renee H. Davis

Dear Teacher,

**I am sending you my most precious possession today,
trusting in your care what to do and say,
Be gentle and loving and encourage him too,
I'm trusting in you to know what to do,
Show him things and let him draw,
So he'll remember the things he saw,
Let him jump and run and play,
He'll tell us all about his day,
Let him do things on his own too,
But please help him when he looks to you,
Give him a hug and smile a lot,
Memories of you will never be forgot.**

Educating a child is like lighting a candle. The match is struck and for a moment, the match and wick burn together. When the match is removed the candle glows alone.

Author Unknown

A high quality curriculum encourages children to learn for themselves

A curriculum programme can be thought out and offered carefully, but in the end it is only going to work out for children if it makes sense to them. When children have received the curriculum and actively taken it on board then valuable learning will have taken place – and they can only do this for themselves.

We should point out the difference between learning and occupation. It can be fairly easy to occupy children by giving them a picture to colour, for instance, or sitting them in front of a television whilst you do other things. Very occasionally this activity has a place but it has little to do with real learning.

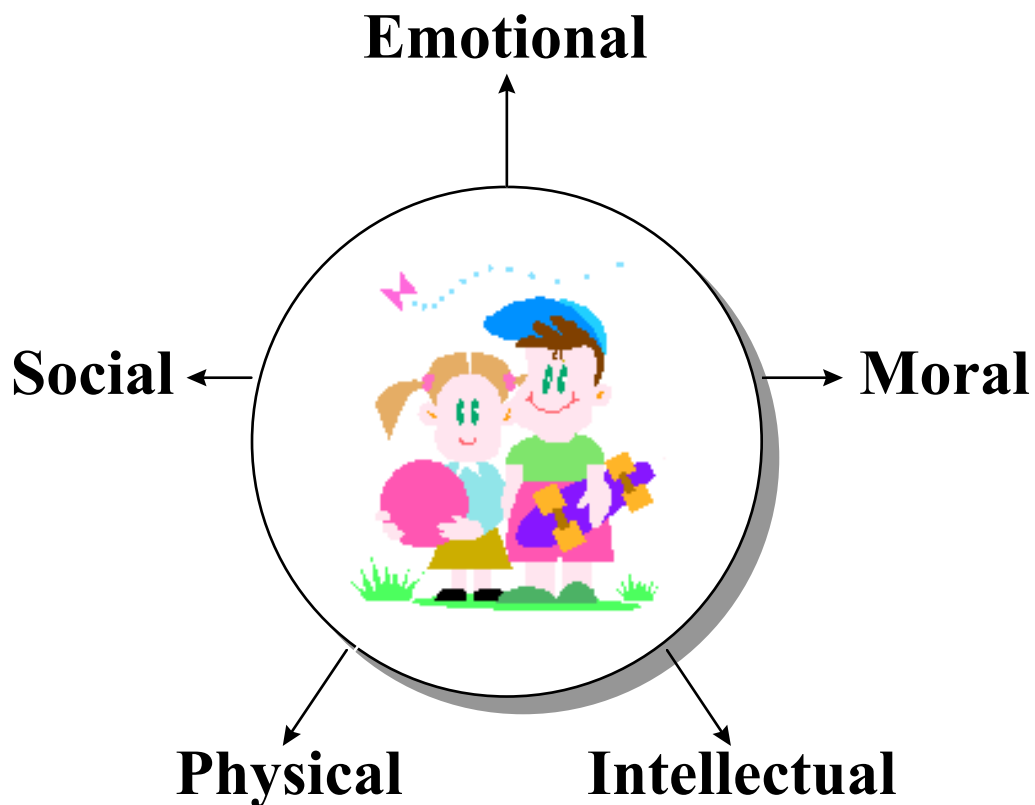
There are also different types of learning. You can help children to learn numbers and rhymes or to recite the alphabet by heart. This rote learning can be useful to children but it should be recognised as a lower level of learning. The most important learning involves children having an idea and testing it out; as result of this they may adapt the model they are making, try out a different way of dancing, take a new direction in their imaginative play or ask you a probing question. This learning is active, creative and personal for each child. It involves much more than ‘painting by numbers’ – merely carrying out someone’s instructions. Sometimes it’s quite difficult to describe to parents or to write down, but it’s what progress is all about.

Young children are wonderful learners but active learning doesn’t just happen. Children of all abilities need first to feel sure about the setting and secure with the people they are with. They need to be independent – to be able to make choices and decisions about activities they take part in and materials that they use. Above all they need to be interested in what they are doing. Active learning is hard work – they need to feel that it is worth their while and relevant to their lives.

(Part of the introductory keynote presentation by Marion Dowling in *A United Approach Towards Providing A High Quality Foundation Stage Curriculum – Ensuring Sound Foundations: From Principles To Practice*, DFEE 2000)

Holistic Education

The main aim of the Curriculum at Kindergarten level is to enhance the holistic development of children. (N.M.C. pg 72)



... each area of human development is important.

... no aspect of this process of development is privileged or marginalised.

(N.M.C. pgs 34, 35)

SOCIO-EMOTIONAL DEVELOPMENT

The kindergarten centres should provide the kind of emotional environment that supports learning. In an appropriate emotional environment, the children develop a sense of hope and security that enables them to strengthen their self-confidence. The confidence they acquire through learning in a positive emotional environment enables them to become more curious, active, creative and expressive. They use these skills during individual activities as well as during group play. (N.M.C. pg 73)

Social skills are important because they enable us to get along with other people. They are the key to children making and keeping friends and to the enjoyment of life. Piaget describes young children as being egocentric because they find it difficult to see the world from another person's point of view. They need to be helped to develop appropriate patterns of behaviour through small and large group activities.

Children learn as they:

- Feel wanted and needed in Kindergarten
- Make rules for their activities
- Behave in an acceptable manner
- Subordinate personal desires to group interests
- Clean up after themselves
- Follow rules
- Take turns and wait turns
- Respect their teacher and classmates
- Share materials
- Listen to others
- Care for materials
- Use equipment carefully
- Assume classroom responsibilities
- Face and solve their own problems
- Take turns as leaders and followers
- Are encouraged to complete what they begin
- Make choices
- Are helped to control their tempers
- Use materials conservatively
- Learn to use "indoor" voices
- Respond to "quiet" signals
- Alternate activity and rest
- Work with others

(<http://www.tesd.k12.pa.us/hillside/kichildl.html>)

Children learn to get along with other children and adults by:

- becoming sensitive to other people's feelings;
- greeting people or thanking them whenever it is required;
- forming and maintaining friendships;
- responding appropriately to others;
- showing respect to others, adults and children;
- learning the polite forms of address: *please, thank you, excuse me, pardon*, etc.

Children have the opportunity to share experiences with others when:

- eating food in a group;
- sharing toys and other play materials;
- playing in small and large groups, e.g. during sand and water play, table top toys activities, indoor and outdoor games, in the home corner, etc.

Children develop responsibility for themselves when they are:

- given the responsibility of free choice while being guided in making sensible and responsible choices.

Children learn to accept and follow rules by:

- waiting for their turn;
- taking adequate care of the school property;
- obeying rules, e.g. in the classroom, during games, school policies, etc;
- understanding why rules exist and why they must adhere to them.

The development of self-confidence: *this goal can be achieved through an early educational programme that promotes confidence through the acquisition of success, the strengthening of the process of social independence and the development of a personal identity.* (N.M.C. pgs 73, 74)

Children come from different backgrounds. One comes across the over-protected child who is afraid to break off from the parents' apron strings as well as the over-confident bossy child who might seem to be the terror of the class. It is up to the Kindergarten management to obtain the happy medium.

Developing self-esteem

Self-esteem is what one believes he/she is worth. It is important because it affects one's outlook on life and can determine what one tries and, therefore, what one achieves. It is established at a young age and research evidence shows that it remains stable throughout life. It is vital, therefore, that children are helped to develop positive self esteem while they are young by:

- feeling that they are loved and respected;
- being encouraged to persevere and to complete tasks and activities;
- being encouraged to express their feelings as well as all other needs;
- feeling that what they say is important;
- understanding what is acceptable in their behaviour rather than what is not acceptable. It is to be assumed that a child is essentially good and so means to do right not wrong.

Experiencing success in school work

It is important to recognise and to develop children's abilities and to accept their limitations by:

- providing stimulating and developmentally appropriate activities;
- giving children tasks they can manage but also being aware when a child is ready for new challenges.

Praise should be given for effort as much as for achievement. A child who receives praise for trying a new task is more likely to continue to persist at it than a child who is told that he/she has got it wrong. Praise should not, however, be given when not deserved.

Becoming more independent

Children become less dependent on adults as they grow. Independence gives them a sense of control over their own lives impinging upon their self-esteem. In Kindergarten children need opportunities to develop this independence by being encouraged to:

- go to the toilet on their own;
- eat food in a group;
- distribute plates and food during break;
- clear the table and tidy up after break or after an activity;
- help the teacher put the classroom in order and in various activities.

If the development of these skills is handled sensitively this independence will enable children to feel more confident about themselves and begin the process of becoming self-reliant by:

- choosing an activity;
- choosing resources;
- asking for help when needed;
- initiating ideas;
- solving simple problems.

Problem solving

Children develop problem-solving skills by:

- putting a jigsaw puzzle together, etc;
- answering questions: e.g. *How would you ...? What would you do if ...?* etc;
- being presented with situations where they have to find the correct route to a goal or destination.

Feeling “at home” at school

The National Minimum Curriculum points out that a child's transition from one educational phase to another, including that from home to school, “*can constitute a very delicate moment in their educational development.*” (N.M.C. pg 33)

The First Transition – From Home To School

Children coming to school for the first time should not get the shock of having to fit into a structured atmosphere at the tender age of three. In order to make the transition from home to Kindergarten easier for them they should be allowed to be brought into

the classroom by their parents, especially in the first two months of their attendance. Preferably they should also be encouraged to bring a favourite toy from home which would serve as their link between home and school.

The Second Transition – From Kindergarten To Year One

The following is a list of Personal and Social Development (PSD) learning outcomes prepared by the School Curriculum and Assessment Authority (SCAA, 1996). These are described as an important component of the goals for learning of children by the time they enter compulsory education, that is, when they leave Kindergarten.

- children are confident
- they show appropriate self respect
- they are able to establish effective relationships with other children and with adults
- they work as part of a group and independently
- they are able to concentrate and persevere in their learning and to seek help where needed
- they are eager to explore new learning
- they show the ability to initiate ideas and to solve simple practical problems
- they demonstrate independence in selecting an activity or resources and in dressing and personal hygiene
- they are sensitive to the needs and feelings of others
- they show respect for people of other cultures and beliefs
- they take turns and share fairly
- they express their feelings
- they behave in appropriate ways
- they develop an understanding of what is right, what is wrong and why
- they treat living things, property and their environment with care and concern
- they respond to relevant cultural and religious events
- they show a range of feelings, such as wonder, joy or sorrow, in response to their experiences of the world

Elkind (2001) believes that at this stage social skills are more important than academic skills. He points out that *to be successful in first grade a child must have three basic social skills:*

1. *He or she must be able to listen to an adult and to follow instructions.*
2. *He or she must be about to start a task and to bring it to completion on his or her own.*
3. *He or she must be able to work cooperatively with other children, to take turns, stand in line, and share.”*

MORAL DEVELOPMENT

The Kindergarten curriculum should develop a sense of what is just and good.

At this level, children must be made to realise that they have to live in a moral community that can distinguish between good and bad and between types of individual and collective action that either helps or results in hindering or helping others. (N.M.C. pg 33)

At this stage children have no real moral sense. ‘Good’ is something that works for them. In Kindergarten children should be helped to become aware that their actions and attitudes affect other persons, and that there are rules to be kept. These skills need to be developed and encouraged for children to begin to have an awareness of morality.

Religious Development (for those who believe)

Rather than teaching religious concepts or formulae, the learning environment at kindergarten level should create those conditions, through which together with the teachers, pupils can live those concrete experiences that provide the foundation for the spiritual/religious development that will follow.

In particular, the learning environment is to develop in the children:

- *a sense of awe and joy in the face of the greatness and beauty of creation;*
- *a sense of joy, gratitude and security that derives from one’s relationship with God;*
- *an ability to participate in celebrations (singing, sense of friendship, sense of joy, community spirit, symbolic activities) especially those surrounding events in the life of Christ;*
- *a positive exposure to some of the basic elements from everyday life such as bread, water, silence, listening and other gestures which constitute basic symbols in the Christian message. (N.M.C. pg 75)*

The Kindergarten Assistant should be aware of and be sensitive to the fact that there may be children who come from different religious backgrounds.

Please refer to:

“Proġett Edukazzjoni Reliġjuża - Gwida għall-ghalliema tal-Pre-School”
by
Kummissjoni Kateketika Nazzjonali - Malta (1998)

PHYSICAL DEVELOPMENT

At Kindergarten level, the Curriculum must enhance one's physical development.

Research concerning early physical development makes it clear that children must consider themselves physically comfortable and healthy to succeed in other areas of development. (N.M.C. pg 74)

We should be aware of the rapid physical development of the body at this stage. It is necessary to help children form good health habits and to stimulate the muscles by constant use. Various activities should be provided to develop muscle co-ordination of the large and fine muscles.

Children practise good health habits by learning:

- what makes a good breakfast, e.g. the importance of drinking milk;
- about good nourishment, e.g. the importance of vegetables, fresh fruit, meat, fish;
- about the preference of bread or fresh fruit to biscuits or sweets;
- about the importance of ways of eating, e.g. sitting at table; not eating while playing/running;
- how to handle cutlery while sitting at table, how to drink from a glass.

They learn about:

- keeping bodies clean. e.g. the importance of baths and showers, of washing hands before touching food or after using the toilet;
- taking special care of teeth, hair, skin and nails;
- keeping the classroom and its surroundings clean;
- not eating things picked up from the floor;
- having their own personal tumblers, face-cloths, napkins, comb, etc;
- using handkerchiefs.

They should also:

- be aware that boys and girls are different;
- learn to respect and protect their own body.

They practise good health habits by:

- cleaning and tidying up after creative activities;
- wiping tables after eating or indulging in messy activities;
- washing tumblers;
- washing dolls, shampooing their hair, brushing their teeth, changing their clothes.

The home corner can be transformed into a kitchen, bedroom, playroom, clinic, hospital, hairdresser's salon, etc.

They should be made aware of:

- the proper way of airing a room to avoid draughts;
- the proper use of heaters;
- the importance of proper clothing for indoors and outdoors;
- the benefit of sunny weather through play activities outdoors;
- the hazards of staying for long periods exposed to the hot sun without proper headgear.

They learn about personal safety through:

- the proper use of sand, e.g. why it should not be thrown at other children, etc;
- the proper use of pointed articles, e.g. pencils, knives, scissors, etc;
- wiping water or other liquids immediately, e.g. talking about the hazards of a slippery floor;
- riding a bicycle, a scooter, etc. safely;
- playing in a safe area, e.g. talking about the danger of rushing to the middle of the road for the ball, etc;
- using the zebra crossing;
- walking on the pavement, crossing the road, e.g. looking right, looking left and right again before crossing; not crossing from behind parked cars; etc;

Participating in games and activities means:

- planning games and activities to meet the needs of the whole ability range;
- providing a challenge to every child at a level that is appropriate for the individual;
- accepting the fact that some children will not feel ready to participate and will need time to watch before they join in;
- encouraging them but allowing them to participate at their own pace;
- presenting opportunities to practise the same skill many times to help them become competent;
- **SAFETY MUST HAVE A HIGH PRIORITY** - check equipment, provide safe surfaces, ensure proper supervision, make sure that the children understand the rules of playing safely.

Developing large and small muscle co-ordination

Using one's senses as educational tools: through the Kindergarten curriculum, the children: strengthen their sense-related abilities; learn how to distinguish between different noises, tastes, smells, textures and appearances; develop a sense of balance; respond creatively to different rhythms; provide better co-ordination of eyes and hands; appreciate the importance of the senses in everyday life. (N.M.C. pg 74)

1. Gross Motor Development

2. Fine Motor Development

Gross Motor Development:

(whole body and limb movements, balance, whole body co-ordination)

A specific goal for physical development is:

“the strengthening and confident use of the large muscles: by means of the children’s controlled and creative movements, the curriculum should help them develop their muscles. These goals can be achieved in an environment equipped with the necessary apparatus and which does not pose any danger.” (N.M.C. pg 74)

Activities that help gross motor skills are:

- walking, marching, running;
- bending to touch the toes standing up or lying down;
- jumping, climbing;
- throwing, catching, kicking, bouncing a ball;
- balancing by walking on balancing boards, hopping on one foot;

- crawling and creeping;
- rhythmical experiences, e.g. pedalling, rocking boats, jumping/walking to music;
- imitating animals' walk, e.g. elephant, frog, duck, etc;
- playing on outdoor equipment, e.g. slides, climbing frames, etc.

Fine Motor Development

(manipulative skills, hand-eye co-ordination)

Another specific goal for physical development is:

The strengthening and confident use of the small muscles: this area includes: co-ordination of eye and hand movement; the use of small muscles during free and controlled activities; the use of small muscles for personal purposes; controlled manipulation of things; effective use of the tools for writing and similar activities.

(N.M.C. pg 74)

Opportunities for children to develop their fine motor skills exist in everyday routine tasks. Children need to be presented with activities that are within the range of their capabilities like:

- tearing and cutting paper with or without scissors;
- cutting potatoes, apples, cucumbers, etc;
- screwing on jar lids, nuts and bolts;
- working with play dough;
- finger and brush painting;
- gluing and pasting;
- building with blocks;
- threading beads, reels, buttons, etc;
- lacing cards, shoes, etc;
- buttoning clothes, fastening zips, etc;
- playing with sand, small toys, snap beads, jigsaw puzzles, etc;
- holding a book and turning pages.

INTELLECTUAL DEVELOPMENT

At this level, the Curriculum should stimulate curiosity, exploration, experimentation and the creative use of resources provided by the school. This should enable children to learn how to solve problems, understand better the relationship between cause and effect and prove capable of planning their own learning. (N.M.C. pg 72)

Piaget's theory of cognitive development has two especially important implications for the education of young children:

1. *Cognitive growth in each stage is dependent on activity appropriate to that particular stage. Children must engage in these activities in order to develop fully and effectively.*
2. *The stages of cognitive development cannot be accelerated. We cannot speed up the process of intellectual growth by special training or instruction. (____, 1970)*

Expanding language skills

The practice encouraged by the National Minimum Curriculum is that which can be found in all other European countries: knowledge of foreign languages is developed following one's knowledge of the native and national language, Maltese. (N.M.C. pg 37)

The development of the first language:

- *provides a context for problem solving and the creation of knowledge;*
- *facilitates the formal teaching of the same language;*
- *maintains the linguistic tradition of Maltese society; and*
- *facilitates the development of other languages. (N.M.C. pg 38)*

Each school must develop a linguistic strategy which reflects the particular linguistic needs of its students. In so doing, it should not overlook the fact that Maltese society has its own native language and recognises English as an official language that has also developed into an international lingua franca. Equal importance should be given to the teaching of the first and second languages at all levels. (N.M.C. pg 38)

Language development is the basis of all learning. We must therefore help the children develop their listening and speaking skills, which are the earliest skills that they acquire.

Developing Listening Skills

Although most people are born with the ability to listen and take it for granted, it is in fact quite a complex skill. Listening involves sifting out and selecting relevant information from all the incoming information.

This skill of active listening demands good powers of concentration. A child needs to be able to attend and focus their attention on the task. Young children need the opportunity to acquire these skills. (Neaum & Tallack, 1997)

Children should be given various experiences throughout the day, such as:

- making them sensitive to sounds around them: whistles, sirens, splashing of water, animal sounds, musical instruments, outside traffic, different tones of car horns, children playing, people walking, running, etc;
- playing silence games;

- enabling them to listen appreciatively and to respond in a variety of ways to stories, poetry and rhymes;
- giving them opportunities to listen thoughtfully to discussions, descriptions, explanations and directions;
- giving simple instructions for them to follow;
- repeating a story to recall what they have heard;
- asking them to look out for a particular event or character in a story;
- helping them to listen critically to ideas presented to them;
- **MODELLING CAREFUL LISTENING YOURSELF.**

Developing Speaking Skills

The development of verbal communication: this goal can be reached during the early education period during which the emphasis is placed on storytelling, songs and rhymes. The kindergarten environment should encourage children to express their ideas and emotions, communicate with other children at play or during other daily activities, make effective use of their native language and begin to familiar themselves with the second language. (N.M.C. pg 73)

Speaking with others is necessary for children to pick up language and to adjust and to refine their language skills. They should be taught the proper language if they are not to use baby talk. Situations should be created so that those children with limited vocabulary will have many opportunities to use language and to discriminate and classify experiences meaningful to them.

Children should be given opportunities to:

- experiment with language and become more confident in its use by repeating words, trying out new ones and enjoying using them;
- clarify ideas through expressing them in talk;
- take part in the interchange of ideas through informal conversation with the teacher and other children during work and play activities;
- learn to talk easily and spontaneously with adults;
- express themselves in dramatic play, simple puppetry and storytelling;
- give instructions, explanations and accounts of happenings.

Neaum & Tallack (1997) present the following points for adults to consider:

- **tone of voice** - *Does the tone of your voice convey warmth and an interest in the child?*
- **rate of speech** - *How quickly do you speak? Do you speak at a pace that is appropriate to the child or children you are talking to?*
- **waiting** - *Do you leave enough time for the child to respond?*
- **questions** - *Do you ask too many questions? Are your questions closed questions that require one-word answers, or are they open-ended that have a range of possible answers allowing children to practise their language skills and develop their ideas?*
- **personal contribution** - *Do you contribute your own experience and/or opinions to the conversation, demonstrating interest and involvement with the child?*
- **language experiences** - *How much of your time is involved in management talk, conversation and chatting, explanation or playful talk?*

- **developing talk** - Do you ask for and give reasons and explanations when talking to children?
- **the audience** - Do you give all children the opportunity to practise and develop their language? Does your planning ensure that there is some time and opportunity to talk with all children on an individual basis? Since there will be a range of developmental levels are you sure that each child's needs will be met?

Listening and speaking skills are developed throughout the day while the Kindergarten Assistant and the children 'talk about' the activities they are involved in and 'listen to' each other in turn.

Expressing creativity through art, drama and music

The learning environment at Kindergarten level should provide opportunities for children to engage in symbolic representation, imaginative play, art and crafts, drama, movement and music. This process of aesthetic and creative sensibility should also include the appreciation of one's own creative work and that of others.

(N.M.C. pg 75)

One of the main aims of the National Minimum Curriculum is to value the child as an individual and to provide opportunities for him/her to discover and develop this individuality.

Creativity gives one the opportunity to express ideas and feelings in a personal and unique way. Children need to know that their creative work is accepted for its own worth and uniqueness. Adult intervention should not undermine or inhibit children's creativity, but rather support it by:

- providing a rich and stimulating environment;
- providing interesting and appropriate activities, e.g. modelling with clay, plasticine, dough, junk material, free drawing and painting, collage, etc;
- displaying children's work;
- providing for imaginative play;
- providing opportunities for children to talk about their work with other children and adults;
- creating a mood with music and getting the children to respond: sad music, cheerful music, frightening music, etc;
- providing opportunities to respond physically to music;
- encouraging children to make their own instruments;
- showing interest and encouragement on an individual basis;
- valuing children's individual interpretations and responses.

Listening to stories and rhymes

Young children enjoy listening to stories and rhymes. These expose them to richer and more varied language experiences which go beyond everyday situations and help to enrich their own expressive (spoken) language.

Children are involved in a story by:

- relating events to things they have done or to what you might have done together;
- talking about what they think will happen next;
- being allowed to join in the words with you when the story is repeated and words are remembered.

Stories and rhymes also help to foster in children a love for books, which in turn help them understand the uses and purposes of reading and writing.

Developing age appropriate pre-reading and pre-writing skills

Children need years of play with real objects and events before they are able to understand the meaning of symbols such as letters and numbers. Throughout childhood children's concepts and language gradually develop to enable them to understand more abstract or symbolic information. Some four-year olds display a growing interest in the functional aspects of written language, such as recognising meaningful words and trying to write their own names. Activities designed solely to teach the alphabet, phonics and writing are much less appropriate for this age group than providing a print-rich environment that stimulates the development of language and literacy skills in a meaningful and purposeful context.

Neaum and Tallack (1997) point out that most children of Kindergarten age are not yet intellectually or physically mature enough to begin reading and writing. They need to develop a range of skills and concepts to be able to successfully learn to read and write. It is very important, therefore, that the curriculum in the Kindergarten classroom focuses on the development and consolidation of these necessary early skills and concepts as they form a foundation for later learning.

Many pre-reading and pre-writing skills and concepts are the same and development of them can be integrated.

Developing Pre-Reading Skills

It is never too early to start looking at books and sharing stories with children. Children who are read to and enjoy books from an early age are most likely to become fluent and successful readers themselves in the future. We want children to know that reading is fun and worthwhile.

Parents and teachers who care, who respond warmly and consistently, who thus create an environment conducive to reading and support children's efforts, greatly facilitate children's learning to read. Motivation of this kind evidently does more for children's reading than exerting undue pressure to achieve or conducting special early school or other training programmes. (Moore RS & DN, 1982)

Children are prepared for reading by planned activities in:

- auditory discrimination, e.g. identifying and matching sounds, following directions;
- visual discrimination, e.g. matching pictures, shapes, colours;
- left to right orientation, e.g. matching from left to right;
- sorting, e.g. sorting various objects, colours;
- classifying, e.g. odd man out, choosing clothes for the family;
- sequencing, e.g. patterns, what comes next?
- recalling, e.g. what is missing?

Developing Pre-Writing Skills

The first stages in the development of writing skills: the Kindergarten years should pave the way for the early stages of writing during the first years of primary school. One of the principal aims in this area of intellectual development is the confident use of the skills employed to write or to produce graphic signs. The Kindergarten years

should make one become keen on writing and foster a love of books. Such interest should constitute the foundation for the production of symbols during the initial primary school years. (N.M.C. pg 73)

Prepare a child for writing by:

- making sure that the desk or table is the correct height;
- seeing that the child sits upright against the back of the chair;
- encouraging him/her to hold implements correctly;
- giving him/her as many opportunities as possible to practise and consolidate the fine motor skills. (See *Fine Motor Development* pg 13)

The task of writing is not merely forming letters on a page. Children need a lot of practice:

- to develop their holding skills;
- in making basic strokes;
- to develop skills in making circles that are round and closed;
- to draw lines that are straight and smooth;
- to develop hand-eye co-ordination;

Barbe and Lucas (1974) suggest that there should be handwriting readiness programmes that cover prerequisite skill areas. They indicate that:

- many young children cannot hold a pencil adequately because they lack the small muscle control;
- pencils are very difficult tools to manipulate and should be the last material children learn to hold;
- one has to have the muscle control to have the hand do what the eye and brain want it to do.

Those children who are ready to write on paper can be provided with big sheets of paper that can accommodate large-muscle controlled line and squiggles. They should be allowed to practise writing with large crayons, large non-permanent felt-tip markers, large pieces of chalk and large pencils. Lamme (1983) observes that many children will learn to write their names and others will go beyond that. However, pushing those who do not have the skill needed to write discourages them and develops poor writing habits, which are later difficult to overcome.

For most children it will be towards the end of pre-school that they progress to any form of copywriting. It is important that this is not introduced too early. A child needs to have a good chance of succeeding, as constant failure is likely to produce a negative association with writing. As writing is fundamental to the learning process children need to feel that they can be successful at it. (Neaum & Tallack, 1997)

Workbooks have no place in the Kindergarten classroom, and handouts should be meaningful, well within each individual child's ability and kept to a minimum. However, it is not appropriate to give out the same handout to the whole group at the same time, or to leave children working entirely and constantly on their own.

Only if and when the children are ready for it, may they be asked to write simple letters/words/or numbers on ruled paper, towards the end of the four-year old class.

Exploring the world we live in

This area provides the foundation for geographical, historical and scientific learning.

Geographical Concepts

Geography in Kindergarten should be concerned with:

a) an awareness of both natural and man-made features in the local environment:

- buildings and their usage: house, school, church, shops, etc.
- the weather
- relevant geographical features: hills, sea, etc.
- symbols used: simple road signs and markings, e.g. STOP, No Entry, zebra crossings, etc.

b) the concept of spatial relationships:

- bigger than/smaller than
- under/over
- next to
- behind/in front
- right/left

c) the concept of distance and direction:

- talking about the journey from home to school
- talking about the mode of transport used and why
- talking about travelling to different places, e.g. to school, to the shops, to grandparents' house, to Gozo/Malta, going on holiday, etc;
- listening to stories and taking part in activities that involve a journey.

Historical Concepts

Past and present are very difficult concepts for young children, who tend to live in the here and now. The passage of time needs to be linked to concrete situations. The routine of a day or a session in Kindergarten provides valuable markers of time for young children. The routine needs to be explicit to the children and discussed in terms of what comes next.

It is also difficult for young children to understand the different ways in which people lived through time. They are not able to clearly differentiate between fantasy and reality, therefore what may be a historical fact to adults may appear unreal and story-like to a young child.

In Kindergarten history is concerned with direct experiences to help young children to assimilate and accommodate the concept of the passage of time and to understand the different ways in which people live and lived through time, for example:

- putting up pictures of various activities to show the routine of the day. Children are then asked to say what comes next after each activity by looking at the pictures;
- displaying and talking about photographs of adults and children as babies;
- talking about the different stages of a child's growth through a series of photos;
- talking about the stages of growth of a flower, a frog, a bird, etc. through a series of pictures;

- inviting grandparents or older people to talk to the children about their own childhood;
- showing and talking about items that are no longer in use, e.g. manual sewing machine, manual coffee grinder, heat iron, etc.

All festivals are celebrated in Kindergarten and children should be made aware of the significance of these festivities through stories, pictures and songs. Tradition and customs should be included:

- St Martin's Bag (borza ta' San Martin);
- the honey rings for Christmas (qagħaq tal-qastanija);
- the pocket money on New Year's Day (l-Istrina);
- the almond pastry during Lent (kwareżimal);
- the Easter pastry (figolla);
- the village festas: marches, processions, fireworks, etc.

Scientific Concepts

The development of logical thinking skills: this goal can be reached, for example, by means of activities that enable children to compare and choose objects having common characteristics, and other activities which provide children with the opportunity to solve problems, establish cause and effect relations and organise events in sequential order. (N.M.C. pg 72, 73)

At Kindergarten level the scientific skills that are appropriate include:

a) sorting and classifying

Initially young children will be able to sort according to only one criterion. Once this skill is established two criteria may be introduced.

Opportunities for children to sort, classify and compare include:

- sorting according to one criterion, e.g. red/blue, circles/triangles, balls/blocks, etc;
- selecting items to put into particular containers;
- tidying up and putting everything in the right place.
- selecting according to two criteria, e.g. red /blue circles, wooden/plastic blocks, etc.

b) asking questions

Children are by nature curious and inquisitive but they need practice to ask how and why questions. Initially the questions may come from the Kindergarten Assistant while the children are encouraged to seek explanations. Questions need to be open-ended and the Kindergarten Assistant's attitude should be positive and encouraging. One must remember that the children's responses may not always be accurate, because of their limited conceptual development.

c) investigating

Children need to investigate in order to understand how and why things happen.

- Things which change their substance when mixed:
 - salt and sugar dissolve in water;
 - flour turns into dough when mixed with water;
 - colours change when mixed:

yellow and red	make orange
blue and red	make purple
yellow and blue	make green

- Changes caused by heat:
 - butter melts if left in the sun or is heated;
 - wet clothes dry in the wind or in the sun;
 - water turns into steam when boiled;
 - paper and wood turn into ashes when burnt.
- Forces:
 - pushing, pulling, rotating;
 - talking about the effect of cogwheels;
 - talking about the weather-cock, windmills;
 - experimenting with magnets.

d) observing

Children need a lot of practice and encouragement to observe closely and carefully, and, where appropriate, to describe details of what they have seen:

- Things that float and sink
- Light:
 - sources of light: sun, moon, bulbs, torches;
 - daytime and night time;
 - mirror reflects images, use also spoons to observe images formed on the different sides;
 - light passes through transparent but not through opaque glass.
- The weather:
 - peculiarities of the four seasons;
 - keeping a daily weather chart.
- Nature Study:
 - plants;
 - trees;
 - animals: domestic, tame and wild;
 - fish;
 - insects.

Opportunities for children to develop all these skills arise during:

- storytelling;
- play and other activities;
- walks and outings;
- lunch breaks.

Mathematical Concepts

Maths for pre-school children needs to be approached through practical activities guided by adults who are aware of the learning potential of the activity. Children who 'do' maths through firsthand experience are most likely to develop confidence and understanding in the subject. (Neaum & Tallack, 1997)

It is up to the Kindergarten Assistant to be aware of the potential for mathematics in any activity and to relate this to the individual child's capacity to understand.

Mathematics in Kindergarten is concerned with pre-Maths activities in:

a) *Sorting and Classifying*

Sorting and classifying objects into sets contribute to the development of logical thinking.

- recognising a group or set of objects: tea set, pastry set, bathroom set, etc.
- one to one correspondence: 1 egg - 1 egg cup, etc.
1 cup - 1 saucer - 1 spoon
- determining if one group is more or less than another or equal to one another:
3 hats - 6 children
2 forks - 2 knives
- finding one more or one less than a number from 1 to 10.

b) *Pattern*

Children need to become aware of the regular and predictable features of pattern by:

- being helped to look for and talk about pattern in the environment: on floor tiles, on curtains, on carpets and on clothes, in plants, etc;
- being provided with opportunities to create their own patterns during painting, potato/sponge printing and collage activities;
- being helped to make patterns with beads, blocks, etc;
- being encouraged to continue patterns.

c) *Shape*

Children handle objects that are solid long before those that are flat. One must also point out that flat shapes form part of solid ones, for example:

- the squares on the sides of the cube;
- the rectangles on the sides of the cuboid;
- the circle at each end of the cylinder.

Children should be given opportunities to recognise and understand the properties of common solid and flat shapes. They should be:

- helped to identify shapes in the environment such as balls as spheres, wheels as circles, doors/windows as rectangles, etc;
- given plenty of opportunities to handle and feel shapes;
- allowed to draw round shapes;
- allowed to cut and make their own shapes out of play dough.
- helped to use language such as 'circle' or 'bigger' to describe the shape and size of solid and flat shapes;
- encouraged to use everyday words to describe position such as 'above, below, over, under, next to', etc.

N.B. It is important to always use the correct term.

d) *Measuring*

Length and Area

Children should be:

- helped to acquire an idea of length and distance by pacing the room toe touching heel, or by pacing the room in strides;

- encouraged to compare and talk about their sizes (tall, taller than - short, shorter than) and then to put themselves in order: tallest to shortest, shortest to tallest;
- helped to mark their height on a wall chart;
- asked to draw around hands, feet or even whole bodies to make them aware of area;
- shown different kinds of measuring implements.

Weight

Children should be:

- allowed to handle different objects to feel the weight;
- given plenty of practical experiences of holding things and talking about heavy and light, then comparing 'heavier than' and 'lighter than'. They should be encouraged to predict before holding;
- encouraged to discuss size and weight. A packet of cereal and a packet of washing powder may be the same size but are they the same weight?
- shown different kinds of scales and allowed to weigh ingredients during the cookery session.

Volume and Capacity

Sand and water play is essential in giving children the concept of volume.

Children should be:

- given as many opportunities as possible in pouring water from bottle to bottle, bottle to cup, jug to tumbler, etc;
- helped to become aware that water in a bottle standing vertically is the same amount as when the bottle is lying horizontally;
- allowed to fill and empty containers of various shapes and sizes in the sand and water areas;
- introduced to language associated with capacity such as 'full', 'empty';
- encouraged to fill large containers with smaller ones;
- helped to estimate which container holds the most, or the least, and helped to devise a way to test this;
- involved in activities to see how many teacups the teapot will fill or whether a number of blocks will fit into a box;
- allowed to stack blocks in a box without leaving any empty corners.

Time

The concept of measuring time is a very difficult one for children in this age group.

The Kindergarten Assistant can help the children to start developing the concept of time by:

- talking about day and night, morning and evening, morning and afternoon;
- emphasising the daily programme to show how the day is broken into sections;
- helping them align themselves with where they are in the day by means of a pictorial chart of the daily programme. Children will respond to markers such as lunch time, story time, going home time;
- talking about past and future events, and special events such as birthdays, Christmas, Easter, etc.
- showing different kinds of clocks and watches.
- talking about events of today, yesterday and tomorrow; when and if the children are ready.

Money

Children should be :

- provided with role play areas to use money, such as the grocer, the hairdresser etc;
- provided with plenty of opportunities to handle money and to sort coins.

e) Number

“Many pre-school children can recite numbers up to 10, 20 and beyond. This does not mean that they are competent in counting yet, but that they know the words for numbers and their order.” (Neaum & Tallack, 1997)

In counting, the one-to-one principle must be followed, for example:

- matching eggs to egg cups;
- matching buttons to button holes;
- matching hats to people;
- distributing items.

Numbers are not learnt just by repeating them by rote but by counting in meaningful situations. Children should be helped to count reliably everyday objects from 1 to 10. Activities for this include:

- counting coats, lunch boxes, coats, chairs, tables;
- counting cups, glasses, handkerchiefs, tissues, napkins;
- counting different units, eg blocks, circles;
- counting children present, in a line going into the playground or going to the toilet;
- the use of number songs and rhymes and stories to make the children familiar and confident with the order of counting words.

Recognition

Numbers are part of the child’s environment in the same way that words and letters are. Children should be helped to recognise the numbers 1 to 9 in:

- house numbers;
- car registration numbers;
- bus route numbers;
- price tags;
- book pages;
- food packs, cartons;
- age on birthday cards/ badges;
- clock faces.

Writing Numbers

The criteria for writing numbers should be the same as that for the writing of letters. (See *Developing Pre-Writing Skills* Pgs. 17, 18)

The relationship between written numbers and real objects is a difficult concept and a challenging task for Kindergarten children and much practical work needs to be done before children can understand the principle of representation of quantities.

Number Operations

Young children in Kindergarten are introduced to simple addition and subtraction, by linking them to concrete objects in meaningful situations.

Addition: Relate addition to combining two groups of objects:

- add together the boys and girls in the group;
- add together the green and yellow blocks.

Subtraction: Relate subtraction to “taking away”:

- give children the opportunity to “take away” a number of objects from a group and encourage them to say what is left.

- Begin to use the vocabulary involved in addition and subtraction.
 - add together, how many are there altogether?
 - take away, what is left?
- By drawing cats’ ears, dogs’ legs and shoes on people’s feet the children are incidentally being introduced to grouping for use in multiplication later on.
- When sharing items between members of a group, the children are incidentally dividing;
- Cutting up a cake and sandwiches introduces them to an awareness of fractional parts.

N.B. Neither reading, writing, nor mathematics should be formally taught in Kindergarten. However, children should be developmentally well prepared in view of the formal teaching at the primary level.

Glossary

The following is a brief explanation of phrases as they relate to the curriculum in Kindergarten.

Incidental teaching (pg 5)

Learning opportunities embedded in the planned activities.

Management talk (pg 16)

Language used to give instructions.

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My thanks go to

Ms Doris Borg, E.O. Chemistry & Biology
Ms Connie Borg Xuereb, ex-E.O. Kindergarten
Mr George Calleja, E.O. History
Ms Grace Izzo, Pre-school Education Course Co-ordinator
Ms Elizabeth Mallia, E.O. Home Economics
Dr Joseph Mangani, A.D.E. Curriculum Implementation
Mr Lawrence Muscat, E.O. PSE
Mr Joseph Psaila, E.O. PE
Mr Philip Said, E.O. Social Studies
Ms Maryanne Spiteri, E.O. Complementary
Mr Peter Vassallo, E.O. Mathematics

for their co-operation

and to

Ms Mary Vella, Director Curriculum Management

for her support.

Monica Attard

E.O. Pre-Primary & Junior