are universally recognized good practices which support such development. It has also relied heavily on instrumental justifications for early childhood programmes and repeats the argument that children who participate in early childhood programmes will do better in school, be more economically active adults and be less inclined to take to a life of crime. Both the universalistic approach and the instrumental approach rely in turn on highly specific research evidence from North America (and to a lesser extent Europe). Some commentators argue that it is relevant to take such evidence into account, because all societies will follow the same path as the USA in the end:

> …[F]actors commonplace in industrialized countries are inherited by developing countries as they advance. Thus the developmental outcomes of poor children in the United States may be predictive of outcomes of children in developing nations.
> (Scott et al 1999: *Food and Nutrition Bulletin*)

Other commentators are much more critical and argue that child development, if it is worth its salt, must engage more with the everyday contexts of the majority of the world's children. At the very least the early childhood lobby needs to engage with the conceptual boundaries of child development and the limitations of the evidence on which it draws. The new emphasis on child participation makes it more urgent that they do so. Child development is intrinsically concerned with young children. Psychologists attempt to define and explain what children can do in what kind of circumstances, and how those working with or caring for them can support or foster various kinds of skills and attributes. These are important aims. But as Gerison Lansdown has also pointed out, children do not live in a world apart, they are also thinking, feeling people, living their lives with us adults. They live and experience life with all its victories and vicissitudes in the present, as we all do – perhaps more intensely. As well as being the object of psychologist's scrutiny, they are movers and shakers in their own right. Gerison has argued that the Convention on the Rights of the Child is a legally binding obligation that requires us to take children's views very seriously indeed. This is a timely lesson for child development, which has so far erred in the other direction.

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The school under the mango tree

Mighty children grow from little seeds

An interview by Rosangela Guerra with Tião Rocha, President at Centro Popular de Cultura e Desenvolvimento

The Popular Centre for Culture and Development (CPCD) is a non-profit-making NGO based in Minas Gerais, south east Brazil. Founded in 1984, it has won national and international acclaim for its creative work in combining popular education with community development. This interview explores the Sementinha ('little seed') Project, which creates schools distinguished by their lack of a physical base and their determination to treat young children as equal partners in their own education.

Sementinha was the first project created by the CPCD. Aimed at 4–6-year olds, it focuses on such objectives as developing mutual respect and cooperation, self-esteem and identity, citizenship and awareness of hygiene and health. It was held up as an 'exemplar of an educational model for third world countries' by the Organização Mundial de Educação Pré-Escolar (World Organisation for Pre-School Education) in 1987 and has since spread to 13 locations in Brazil and been replicated in Mozambique.

Can you tell us why the Sementinha Project is also known as the 'school under the mango tree'?
We started this project because many young children were not attending school in the city of Curvelo in Minas Gerais. It was clear that something had to be done, but it would be a problem to put up new school buildings. So we posed the question: 'Is it possible to provide an education without making buildings?' Because there were a lot of mango trees in the city, we asked: Is it possible to make a school under a mango tree?

And that was how the Sementinha, or school under the mango tree, was created. The name is a metaphor for a school that does not necessarily need a building to be able to offer quality education for early childhood. The Sementinha is an itinerant school. Teachers and children meet somewhere in the community that is known to them all – it could be a church hall, a room belonging to some district association, or somebody's house.

The children move around various community spaces, doing activities that entertain them,

challenge them and form them as citizens. The school is the neighbourhood, the streets, the squares, the houses. The education is inspired by the community's culture, the knowledge and practices and aspirations of the local people. The teachers are all those who sit in the circle: the schoolteacher, the children, their parents and grandparents. We believe that education must be an equal relationship that involves learning on all sides.

You first developed the Sementinha Project 20 years ago. Who was involved and how did you come up with the idea?
We were a group of around 26 community members, teachers and volunteers who were interested in discussing these issues. We got talking and thinking about what such a school would be like, what its concept and design would be. In the end we observed that we spent more time talking about the kind of school that we didn't want than the kind we did. So we turned all of this into 13 'non-objectives'. In other words the project started off back-to-front, with the things that we didn't want to reproduce.

So what were the 'non-objectives' established for the Sementinha?

School should not be a place of authoritarianism and punishment, governed by oppression and swamped in inequality. It should not be a place where children go but don't want to linger, where they study but don't learn with pleasure. Teachers and children should not simply be well-behaved individuals who perform tasks and parrot ideas. There mustn't be an unequal relationship between children and adults. We should not present our knowledge as the only true knowledge.

We must not see children as lacking a will and life of their own, as blank pages on which to write our story, or as adults who have not yet grown up. Education must not cut short children's dreams, creativity or cultural identity. It must not stunt their critical, curious and observant spirit.

We, as teachers, should not teach that the world belongs to those who are stronger, smarter or richer. We should not foster individualism, competition, neglect and alienation.

These are doubtless all great ideas, but how is it possible to put them into practice?

We established 13 classes with children of 4, 5 and 6 years old, and in each class there were two teachers so they could think about and construct their work together. Every day all the teachers would meet in a big circle to discuss our plans, and after our work with the children we would meet again in the circle to assess the activities we developed. These are the principles of the educationalist Paulo Freire: action, reflection and action. We were constantly discussing our experiences and also creating a space where everyone could look each other in the eyes and express themselves freely.

The circle helped us to constantly improve our teaching practice. In the little things, the trifles of everyday school routine, we kept on questioning, tweaking and telling ourselves that if we couldn't justify something, we shouldn't do it.

For example, the 'crocodile' – when we need to go out with our pupils, teachers almost automatically put the little ones at the front and the bigger ones at the back. We asked ourselves: 'Does walking in line

teach anything?' Our discussions convinced us that a line organises but doesn't educate. Because our role is to educate, we decided we needed to teach the children to walk independently, respecting the traffic. In this way we managed to take possession of the street, turning it into school space.

What kind of methodology do you need to achieve these non-objectives?

It's based on two ideas: the circle and play. All group questions are resolved in the circle, which is a horizontal space where we can talk, listen, argue, reflect and reach consensus. The circle is not always led by adults; when it's time for playing a game with dolls, for example, a little girl is in charge of coordination. If there's a falling out within the group, everyone can discuss it. The circle has to develop alternatives for listening and trying new things. It has to be tolerant, generous, a constant exercise in inclusion.

Our search for a happy, pleasant and good-humoured school led us to start developing toys. From the start of the project, we decided that we would only buy toys when we couldn't make them ourselves; and over the 20 years that the CPCD has been in existence, we have never bought toys. The children bring in anything of interest they find in the streets – scraps of cloth, bottles, seeds, stones, little branches, leaves and clay – and turn it all into toys. They're not only having fun but developing manual dexterity and an aesthetic sense, and also being challenged to sort out any problems and find alternative ways of doing things with the resources at their disposal, such as making paints from earth pigments and leaves.

All of the toys are tested by the children themselves. They refine the rules of play and re-build toys with other materials until they achieve the quality level required by the game. The results can be surprising. The children from the Sementinha in the city of Curvelo make kites of different sizes and shapes and from unexpected materials such as banana leaves. They have become so adept at this that they now form part of the judging panel for the kite competition which takes place in the city every year.

From the very start of the project, the children have made an effective contribution. To what extent has their age (4 to 6 years) affected their participation?

Children and teachers meet somewhere in the community that is known to them all

Yes, we thought that children's participation was important right from the start. We believe that everyone should contribute, regardless of age or size. We used to start the day's activity with the children sitting in a circle and asking them "What shall we study today?" In the first few days the children hardly expressed themselves at all, but the teachers encouraged them and they opened up more and more, putting forward their opinions and suggestions for activities.

In the beginning, we held a vote to choose what we would do that day. But over time we noted that that was an excluding process – those whose ideas were not chosen ended up participating less and less and withdrawing from the group. We discovered that we had to seek consensus rather than hold a vote. The more they felt that they were being heard and heeded, the better the children got with their suggestions.

For example, one day the children suggested visiting a colleague who hadn't come to the group meeting because he was sick. From that point, all of the children suggested visiting their own houses, so they could introduce their parents, grandparents, brothers and sisters. This also helped involve the families in the educational process.

Another day, the children expressed curiosity about how rice is planted, harvested and processed up to the point where it arrives on their plates. They had the idea themselves of inviting someone who lived in the neighbourhood and who had a rice processing factory to come and join the circle. So he came along and answered the children's questions, and afterwards they all made drawings and little figures out of rice husks that were sent to the man as a thank you. He was charmed by the presents and reciprocated by sending the children a sack of rice, which the group all enjoyed eating.

The children's suggestions led to other people being invited to take part in the circles – for example, teaching how to make teas from regional plants, or telling stories about the old local customs. Little by little, the Sementinha won over the community. One of the responsibilities of the teachers is to make those links, getting community members increasingly involved in educating the community's children.

Small children like to ask questions, and the teacher can use this curiosity to stimulate group involvement – the children feel they own the project when the teacher listens to what they ask and propose. But some children find it difficult to express themselves verbally, so the teacher also has to motivate participation in other ways, like drawing, dancing, running, playing with clay, or even such small but significant things as asking a child to give a message, find a material or hold a classmate's hand at walk time. It is very important that the circle provides the greatest variety of opportunities for trying different things so that each of the children can find a way of expressing themselves and joining in.

We have to remember that the age of 4 to 6 is when children emerge from their closed little world centred on the 'ego' and start the socialisation process, so we have to focus on identity formation, strengthening self-esteem and helping them to form relationships outside the family with their little friends from the street and the neighbourhood.

How do the children influence the day-to-day running of the programme? And how do the teachers adapt to the children's proposals?
The children not only suggest the activities, they also assess them. The teacher asks if they liked the day's activity, and they speak up and give their opinion; for example, they might say that they liked the outing, but they didn't like it when one classmate fought with another. They are encouraged to consider all aspects of their activities, not only at the good sides, and the exercise is not purely verbal – the children can record what made an impact on them through drawings, creating stories, singing and in many other ways.

The children's assessment represents immediate feedback, so the teacher can discover which parts

of an activity made sense for the group and which didn't, what caused conflicts and what was an inspiration. The teacher records all this every day in a work record, which helps her to reflect and propose further activities or changes in direction. She must be ready to make connections, to realise if the group needs greater stimulation or provocation or organisation. The work cannot be left to free-wheel because it will lose itself.

Are there any concrete examples where the children's assessment has led to a change of direction in the programme, in any of its areas?
Yes. In fact, each Sementinha evolves its own dynamic through the many changes that result from consensus in the circle. Some are very musical now while others are always involved in telling stories. In one Sementinha the children don't go for long walks because they want a little colleague who has a physical handicap to be included. In many groups, the times when the school is open are chosen by the children, and some even have activities at weekends in response to the children's wishes.

Another example is from Santo André, in the state of São Paulo, where the children revealed that they didn't like the packed lunch provided by the local council. So the packed lunch came to be prepared by volunteers from the community, as it is in many other Sementinhas, and at assessment time the children now recount proudly that the cake or tea that was served was made by the mother of someone in the group.

You need teachers who are convinced that that kind of education is effective. What is the teacher training like and what relevance does it have for the project?
It is perfectly possible to educate without a school, but it you can't educate without good teachers. When we set up a Sementinha Project somewhere, one of our first jobs is training teachers to be instigators of change, creators of opportunities, formers of citizenship and promoters of generosity.

It all starts with a deconstruction of the traditional, teacher-centred, authoritarian curricular school model. In most infant schools, for example, the teachers want to teach the children to read and write, but we know that this is the time for them to be imaginative, have fun with others and learn

to share. During training, the teacher comes to understand that her role is not to teach, but to create the opportunity for the children to learn.

Teachers are encouraged to question everything rather than follow tradition. "Does this game set challenges and open up new perspectives? Is it really educational? What do we have to change for there to be more joy, less arguing, more solidarity?" For example, we observed that musical chairs – a very common game in Brazil – is excluding, because the rule is that if you make a mistake, you're out. We turned things around so that it was the chairs that were out, not the children. This of course brought a new challenge of what the children were going to sit on when the chairs were taken away, which they solved by using their arms and legs to become chairs for each other.

Applying the same logic, we re-thought the game of football, where usually only the best players get a turn. We started playing football with the children in pairs, holding hands and with their feet tied together. It's great fun and everyone can play on equal terms, because the important thing becomes the solidarity of the pair rather than the outcome of the game.

And community participation, how does that come about?
You don't need to make invitations or have large-scale mobilisations to get the community involved in the Sementinha. Usually the only time parents go to their children's schools is for meetings, on days when there are no classes. But when the children and teachers are constantly moving around the community, parents can really see their children learning. Many mothers come to play an active role in the project, volunteering to make the snacks, to tell stories or help in activities.

That doesn't mean we've never met with resistance. Some parents say it could be harmful for their children to have the sun on their heads when they walk in the streets, and so we learned to make hats, out of newspaper or cloth or leather. Some mothers complain that their children get their clothes dirty because they sit on the ground, so we came up with the idea of making carpets. We listen to the community and move forward with the project. The

Photo: Rosângela Guerra

When the children and teachers are constantly moving around the community, parents can really see their children learning

point is that every difficulty can and must become grounds for education.

Like teachers, parents tend to have in their heads a traditional model of education – they want their children to use an exercise book and pencil to learn to read and write at nursery school. The project's methodology can scare people, but we resolve this by having the parents talk to the teachers in the circle. And as time goes on, they start to notice changes in their children at home. The quieter ones become more conversational, less inhibited. They start to take part in domestic life, cooperate in household matters and show themselves to be curious and observant.

They become more stimulated and developed than children who didn't go to the Sementinha. Some

parents even recount that when their children see family arguments, they propose that everyone sit in a circle to resolve the issues.

Do the children take part in the overall assessment of the project?
When the project had been running for 10 years, we wanted to develop quality indices to assess our performance under 12 headings: acquisition, creativity, protagonism, cooperation, happiness, dynamism, aesthetics, harmony, coherence, efficiency, opportunity and transformation. The problem was that we had no point of reference. How were these items to be measured? We decided to ask questions of teachers, parents and children.

The most difficult thing was to come up with questions that would illustrate each concept. For example, to assess the project's coherence, we asked: "Do the children and teachers respect what is discussed in the circles?" To assess opportunity: "What new things did you learn here?" Sometimes the questions were made up during a game, so that everything arose in a natural way, informally and spontaneously. We quantify all the replies and put them into a graph, and the replies from children and adults have the same weighting.

In the assessment process we also make a photographic report to capture the essence of the project, the expressions of joy and harmony on the children's faces. And we also make note of individual responses from children; one little girl once said that to study through playing at the Sementinha was as good as eating ice-cream.

What contributions has the children's participation brought to the CPCD?
We've learned that we need to see children in their entirety. In our training we put great stress on preparing the teacher to keep all her senses alert and fine-tuned. The teacher has to pick up on the slightest indications to read a situation and realise what the children are feeling. She has to be sensitive to subtle hints from children who come to us with problems, and decide if we need to orient our work with particular individuals in a different way. This is the crux of educational work, turning 'problem children' into 'solution children'.

We have learned that, given time, children take over the world around them and start to participate in the community. And it's interesting to see how the more the children own the project, the more the community comes to own it too. The children are the bridge to the community, they stir up the inhabitants and become little mobilisation agents for education. When they leave the Sementinha to go into basic education, they demand that class decisions are collective. They're a big surprise to any know-it-all teacher who has never been aware of her pupils' opinions

How has the original Sementinha project been replicated elsewhere?
In Brazil there is a great demand for nursery education but a lot of children are not in school because the town councils don't have the resources or policies for this level of teaching, so the CPCD has been called in to set up the Sementinha in a number of places. It already exists in 13 town councils in the states of Minas Gerais, São Paulo, Maranhão, Bahia and Espírito Santo, and the needs of around 3,300 children are being met this year by 165 Sementinha teachers. The project has already reached Africa, too – it has been set up in Nampula and Maputo, in Mozambique.

In each of these places, the project was adapted to local circumstances. When we started out, many people thought it would only work in small cities or a country setting, but the development of the project has shown that this is not the case. Santo André, in São Paulo, has around 660,000 inhabitants and the project there is considered to be highly successful and now forms part of the town council's public policy. In the Santo André Sementinha there are reading cases which open up into small bookcases holding around 25 books, a kind of mini travelling library which goes wherever the children and teachers meet. These cases also carry texts by the children and community members – recently, one mother put into the case a book she had written herself telling the story of her daughter.

The CPCD's involvement is to help set up the Sementinha and keep pace with it for a while, and then the project has to stand alone, using the partners and strategies at its disposal. In Porto Seguro, Bahia, the teachers and mothers formed an

NGO – Associação das Mães Educadoras de Porto Seguro (Association of Teaching Mothers of Porto Seguro) – to guarantee the continuity of the project even if there are changes in municipal policy.

To conclude, what do you think are the main challenges confronting the Sementinha project today?
We are perfectly aware that the Sementinha is not a panacea for all problems, but we are sure that the project offers a good start in early childhood and that it stimulates families to become involved in their children's education. A lot of ex-pupils have now become enthusiastic young workers in the project, and some of those who were involved at the outset are now teachers and coordinators in the CPCD.

The CPCD's current goal is to systematize our practices and communicate what we have learned to others. But how can we bottle seawater without losing the blueness? We need to make sure we don't lose our dynamism, because the value of our actions comes from their uniqueness. We want to make available to all interested parties what we have learned over these 20 years, but we don't want to create a prescription book.

So we are trying to present the essence of our experiences in an objective manner – for example, by suggesting games that have been very effective in practice. We have games that stimulate positive attitudes, such as respect, solidarity, overcoming conflicts and cutting through lethargy, that deadened look of those who see no future.

We also want to relate the common factors of work by our teachers that has proved successful. The idea is not to standardise, but to demonstrate the degree to which certain actions succeeded. We are working to discover an effective language that can communicate to interested parties the educational technology constructed by the CPCD.

Other CPCD projects

The CPCD has also gone on to develop other projects with the same philosophy that informed Sementinha: innovative methodology, an emphasis on training teachers to think creatively and question traditional assumptions, and a commitment to treating the community as partners rather than merely beneficiaries. An example is the Bornal de Jogos ('bag of games') project, in which games and toys made by children are used to enliven the teaching of conventional subjects and to spark discussions on issues such as human rights, sexuality, ethics, the environment and violence.

The CPCD's projects, which are found all over Brazil, are made possible by partnerships with local authorities and national and international institutions such as the Fundação Orsa, W.K. Kellogg Foundation and the Bernard van Leer Foundation. Its growing success has led the local council of the Minas Gerais town Araçuaí, which has 36,000 inhabitants, to invite it to take over responsibility for municipal education – the first time an NGO has performed such a role in Brazil. The CPCD's plan to tackle high rates of illiteracy and turn Araçuaí into an 'educational city' includes training community education agents and 'caretaker mothers', using games and toys for learning and setting up a book bank.