



LEARNING CORNER

Palangudi: A game by many names

Eliza Cherian

*Sitaramanito omana guntaladi gelucuta cetano
Okarikokaru juci a bhavamerigi
Saketadhipa nijamagu premato balkukonna muccata
Vatamaja bharatulu vinnadula tyagarajasannuta*

In this kriti Tyagaraja presents a picture of Rama's domestic life after his return from exile to Ayodhya. It is a portrait of conjugal bliss where Rama relaxes as king, plays a game of pallanguzhi with Sita, wins the game and enjoys his banter with Sita. Hanuman and Bharatha look on.

The game of Pallanguzhi used to be played in the south of India and interestingly mostly by women. This game is being revived in India and around the world and has the most fascinating history. As old as the time of Valmiki is certainly old, but it may well be the oldest board game in the world.

The history

Stone Mancala boards have been found carved into the roofs of temples in Memphis, Thebes and Luxor. Tracing its history, it appears that the game might have evolved in Egypt from boards and counters which were used for accounting and stocktaking.

Mancala variations are played all over Africa. They are also found throughout the Caribbean and on the East Coast of South America, having emigrated with slaves during colonial times. In India the game is Halaguli Mane or Pallanguzhi, it is Olinda Kaliya in Sri Lanka, and Congkak, pronounced Chon-ka in Malaysia and the Philippines. Although the game is played in Europe, it never really gained much popularity. In Bosnia, Ban-Ban, as it is called, is still played today. USA has a larger mancala playing population, brought in by immigrants.

The name Mancala comes from the Arab word naqala (literally 'to move'). Mancala games in different regions often have slight rule variations.

The game

The Mancala consists typically of a board made of wood or stone, with two rows of seven holes. The playing pieces are seeds, beans, and stones and vary from country to country. In Tamil Nadu, tamarind seeds, cowries or a type of red seeds are typical.

How to play

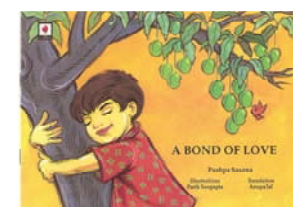
Seven cups on one side are assigned to each player. Each cup is filled with five seeds. The player who begins picks up counters from one of his cups and sows the seeds dropping one in each cup in a clockwise direction. This process continues by picking up counters from the cup next to where the first set of seeds finishes. This continues until you find more than one empty cup, and then your turn is over. You capture all the seeds in the cup next to the empty one. This is a sweep! After the sweep, the players change ends and play starts in an anti-clockwise direction. The objective of the game is to capture the maximum seeds, and the game is over when a player is unable to fill any more cups.



Mancalas are designed as games to travel!

Similar to chess, the game requires strategic thinking and quick mathematical skills. In Charles Goren's 'Encyclopedia of Games', he writes: Anthropologists have not undertaken to explain how it happens that the universal game of primitive peoples is one of pure intellectual skill. Mancala is wholly mathematical, akin to the game of drawing pebbles from a pile in an endeavour to win the last, but so complex as to remain a real contest.

Games like Mancala are good for getting children to count, develop motor skills, and also for social interaction. They can be used by children with visual impairment too. There are lots of mancala computer games available in the market but the traditional way of feeling the stones, counting them, dropping them into holes and playing with another friend on a rainy day or otherwise definitely has its own appeal!



WHAT'S NEW

Karuna kit: stories that make you think

Sutradhar has put together a pack of value-based books for the primary school library. Stories can lead to a nuanced and memorable understanding of values, and these stories capture the dilemmas and emotions that children face as they grow up. There are tales of courage and compassion, of community and collaboration!! Write in to sutra@vsnl.com for more details and help us make this list grow.

RELATED RESOURCE FOR CHILDREN

Sutradhar has different kinds of mancalas for sale. Counters could be red seeds called gulganjis, or small cowrie shells. For ages 8 plus.

WEB RESOURCES

www.gamesmuseum.uwaterloo.ca/VirtualExhibits/countcap/pages/



TEACHER TALK

The language of mathematics

Dr Vivek Monteiro

Some people like mathematics but most people do not. Some are even a little afraid of it. But everyone realises that mathematical skills are important and would like their children to be good at maths. Maths is more than just another subject. It is a type of universal language that equips one to enter the various disciplines of science. It is a way of thinking, useful wherever abstract or quantitative thinking is required, where structures and patterns are studied.

Mathematics is supposed to be difficult, accessible only to the smart and brilliant. Tamil is also supposed to be difficult, but not for those who are brought up in Tamil speaking families.

Learning new languages is supposed to be difficult. Yet slum children know three and four languages. The same children often fail mathematics in school. Obviously the problem is in the way mathematics is taught and learnt. If children were taught their mother tongue the way they are taught mathematics at school, they might never learn to speak.

Is it possible to teach and learn maths the way a mother tongue is learnt? Which is the best language in which to teach mathematics? I have been experimenting with teaching maths to young children. They learn maths, and I learn how children learn. I teach them, they teach me how to teach. The difficulties that students in Class 8 face is because they haven't learnt their Class 2 maths properly. Many kids do not know how to read large numbers, or the meaning of negative numbers. Fractions and decimals are Sanskrit to them.

The main problem is that there is a double level of abstraction in maths. Numbers and letters are abstract entities. Children have to perform abstract operations with these abstract entities. Abstract thinking is not a natural instinct but a learned skill. In the evolution of human society this skill was acquired in the last three thousand years or so. Human society is several hundred thousand years old. Have humans been stupid for so many years? What children have to learn in Class 3 today was advanced mathematics to our ancients.

Learning maths the traditional way involves a double level of abstraction – abstract operations (like +, x) with unfamiliar abstract symbols (numbers). Words and written symbols are new and unfamiliar to young children. With these unfamiliar symbols children are in the same position as intelligent vernacular medium students who fail college, because college education is in English. The problem is not in the ability to learn, but with the medium of instruction. But if we first teach the abstract operations with familiar things or concrete objects, learning become easier and more fun. How can we teach abstract operations with concrete things?

Since time immemorial, humans have been using concrete objects in abstract ways. Religious idols and rituals, dance, and children's toys and games are some such examples.

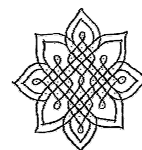
When women make beautiful symmetric patterns in rangoli they create concrete forms in advanced mathematical theory – group theory. You don't have to know numbers or symbols to do rangoli or Rubik's cube. Mathematicians make new patterns with abstract symbolic entities, but ordinary people constantly make new patterns with concrete things in their lives.

Let us introduce a new word "thingol" (i.e thing symbol) for that concrete thing which we are using in a symbolic, abstract manner. Take number, for instance. It is not easy to teach children large numbers and place value with pencil and paper. But if you work with cups, and make a ones cup, a tens cup, hundreds cup and so on, and use small stones instead of numbers, children soon learn to represent crores and lakhs. From this if one goes to a large chess board and uses the squares in a line in place of cups, one can add and subtract more easily.

Rods of different lengths (one, two, three, ...), each painted a different colour, known as Cuisenaire rods, are a wonderful way of teaching addition and subtraction before numbers are introduced. The child has to 'guess the missing length'. Place two rods of different lengths end to end and the child has to find the rod equal to the combined length. Children soon learn to judge distance correctly and select the rod of the right colour, thus grasping the abstract concept of addition in a non-numerical way.

Once the child is completely familiar with abstract operations using thingols, one must take the next step of translating this understanding into the language of schools: written numbers and symbols.

Society would be very different if every citizen thoroughly understood and enjoyed school mathematics. This appears to be possible with the language of thingols – an approach which requires almost no expenditure. Powerful thingols can be constructed almost free of charge, from objects of everyday use. Compared to this approach, the much touted 'multimedia' computer based approach is both flat and expensive. We can give our children 'world-class' mathematics education using the multimedia of real life. Changes, of course, will have to be made in teaching methods and the way school textbooks are written. Is this possible??



Everyday rangoli and maths

SPOT LIGHT

Understanding the rights of the young child

Dr Archana Mehendale

India ratified the UN Convention on the Rights of the Child (UNCRC) in 1992. This treaty places a legal obligation on the ratifying states to protect and fulfill the rights of people **under 18 years** with the help of appropriate policies, laws and programmes. The 54 articles of the UNCRC provide for civil, political, economic, social and cultural rights of children. A separate Committee on the Rights of the Child monitors the implementation of the convention by reviewing reports submitted by countries.



Even though children in the early childhood years are considered as rights-holders under the UNCRC, there has been a great deal of ambiguity with regard to the implications of bestowing very young children with rights.

In 2005, the committee made its comment on implementing child rights in early childhood in order to "encourage recognition that young children are holders of all rights enshrined in the convention and that early childhood is a critical period for the realisation of these rights". Some key observations:

- 1) Young children are holders of all rights enshrined in the convention, entitled to special protection measures and, in accordance with their evolving capacities, the progressive exercise of their rights.
- 2) The CRC is to be applied holistically in early childhood, taking into account the principle of the universality, indivisibility and interdependence of all human rights.
- 3) The Committee encourages States parties to take appropriate measures to ensure that the concept of the child as rights holder with freedom to express views and the right to be consulted in matters that affect him or her is implemented from the earliest stage.
- 4) Parents (and others) have the responsibility to continually adjust the levels of support and guidance they offer to a child, taking account of a child's interests and wishes as well as a child's capacities for autonomous decision-making and comprehension of his or her best interests.
- 5) The Committee calls on States parties to ensure that all young children receive education in the broadest sense, which acknowledges a key role for parents, the wider family and community, as well as the contribution of organised programmes of early childhood education provided by the State, the community or civil society institutions.

IMPORTANT COMMENTS ON ECE

The Committee recommends that States parties support early childhood programmes, including home and community-based preschool programmes, in which the education of parents (and other caregivers) are the main features. States parties have a key role to play in providing a legislative framework for the provision of quality, adequately resourced services, and for ensuring that standards are tailored to the circumstances of particular groups and individuals and to the developmental priorities of particular age groups, from infancy through to transition into school.

They are encouraged to construct high-quality, developmentally appropriate and culturally relevant programmes and to achieve this by working with local communities rather than by imposing a standardised approach to early childhood care and education.

Sutradhar, 59/1, 3 Cross, 10 A Main, Indiranagar Stg 2, Bangalore 560 038.

Phone: (080) 25215191, 25288545 Email: sutra@vsnl.com www.sutradhar.com

Do mail this on to colleagues and friends so we can create an early learning network!

We welcome your articles and feedback at sutra@vsnl.com. If you wish to unsubscribe, please write to sutra@vsnl.com with "Unsubscribe" in the subject line. To learn more about Sutradhar visit www.sutradhar.com.