

Nurturing Creativity Across the World

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Different cultures co-exist in South Africa - from a typical Western-oriented culture to an indigenous African culture. I will briefly describe two examples of creativity, one typical of Western culture, the other typical of African culture, namely: (1) creativity as a process of conceiving and utilizing opposite or contradictory ideas or concepts which emphasize the antonymous characteristic of creativity; -and (2) traditional story-telling as an imaginative experience. Then I will look at the implications of these two examples for the planning of learning experiences which may nurture these specific forms of creativity.

In our attempts to grasp what the nature of creativity is, we use different words that we believe characterise the process of creativity as fluency, originality, flexibility, elaboration, divergent thinking and non-conforming thinking. Creativity may also be seen as a process of conceiving and utilizing opposite or contradictory ideas or concepts. Janus, the Roman deity, was variously portrayed as having two, four or six faces and was therefore capable of looking in

various directions at the same time. Some therefore, refer to creativity as Janusian thinking (Rothenberg, 1979). This kind of thinking may proceed by diverging from or not conforming to specific rules, crossing accepted boundaries, or violating accepted principles so as to produce something of value which is new or original. What emerges, according to Tannenbaum (1983), is not simply a blending of antagonistic elements but rather a newly conceived coexistence among them.

Mathematics provides a nice example of this form of creative thinking. When Euclid (about 300 B.C.) organized plane geometry as a deductive system, he listed ten axioms (five postulates and five common notions) as the foundation of the system. Almost immediately the fifth postulate became a subject of controversy. It states that through a point not on a given straight line there is one and only one straight line that does not intersect the given straight line (Playfair axiom). (Popularly stated, parallel lines never meet).

Other mathematicians were of the

opinion that its inclusion among the axioms was an error in judgement. They thought that it should be proved as a theorem, rather than assumed as an axiom, i.e. as a self-evident truth. For two thousand years, ranging from the first century B.C. to the nineteenth century A.D., mathematicians tried to prove that the fifth postulate was a consequence of Euclid's nine other axioms. The failure of all attempts to prove the fifth postulate gave birth to a new conviction in the minds of Gauss, Lobatschewsky and Bolyai, mathematicians of the first half of the 19th century. They decided that the fifth postulate was really independent of the other axioms and that a contrary postulate could be substituted for it, namely: through a point not on a given straight line there is more than one straight line that does not intersect the given line. (Popularly stated, parallel lines meet).

By crossing the boundaries of Euclidean geometry they created a new kind of geometry - a non-Euclidean geometry which has since been shown to be free of contradiction and hence is just as valid as a mathematical system. This geometry is known as hyperbolic geometry (Adler, 1966). In a sense the three mathematicians associate seemingly

incompatible elements, or perceived contradictions in a new way and then allowed themselves to conceive the inconceivable, namely (popularly stated): parallel lines meet.

The question arises: Can one nurture creativity in children by providing learning experiences which enable them to explore what happens in specific cases when e.g. a rule or principle is not adhered to or violated, or an alternative rule is substituted for an existing rule? Which rules or conventions do children encounter during the course of their education and which are suitable for planning such learning experiences?

Van Parreren (1982), the well-known Dutch learning psychologist, identified four types of rules:

1. Rules or laws which exist within academic disciplines, i.e. scientific proven principles/logical requirements. If these are not adhered to, one may end up with untruths or invalid conclusions within the context of a specific discipline. E.g. the commutative law which applies to addition ($a+b = b+a$) and multiplication ($axb = bxa$) but not to subtraction and division.
2. Procedures or algorithms which are prescriptive in specific cases. E.g.

to write a symbol for a number greater than nine in the decimal system two or more digits are used and written according to a pattern determined by a base 10 place-value system. If these fixed procedures are not followed correct solutions may not be found or inefficient methods may result.

3. Rules with respect to conventions/ agreements or ways of cooperating. E.g. (1) A conversation is conducted in an orderly fashion by adhering to the rule that participants do not all talk at the same time. (2) In mathematics certain conventions, notations and symbols are used to represent specific quantities and operations. Otherwise confusion results.
4. Conventions which apply in specific communities as to what is aesthetically or morally acceptable, beautiful, good style, etc.

In organizing learning activities through which children explore the effect, consequences or outcome of not adhering to or not applying a rule or principle it is important that children understand the working and reasons or grounds for the existence and authority of such rules or

conventions. The different bases of authority of these rules should be clear to the child - be it the authority of logic or the scientific method, the authority of the group to which one may belong, the authority of tradition and custom, or the demand for efficiency. It is also important that children are helped to understand that the authority of rules are not absolute; that violations of rules and the grounds on which the violations occur differ in each case. Violation of a rule or principle may produce unexpected and novel results, it may even be dangerous. That which is truly creative produces something new of value. At the same time, however, an existing or established value may be affected. It is important that the value which may be affected must be known and understood. Creative thinking does not proceed in a thoughtless, irresponsible way. In assisting children to explore the violation of a rule, or alternatives to present valid ones, it is important that they understood the background and the grounds for the authority of a rule.

Algorithms in Mathematics provide an opportunity to nurture creativity in this respect. At an appropriate level children who have learnt the decimal system of numeration may be guided to change

the pattern or rule used in this place-value system and construct an alternative place-value system. This may then lead them into an exploration of the binary system. Although they are not inventing a new system they may, at that stage of their development, be working at the edge of their competence and experiencing a crossing of a boundary.

My second example of creativity is storytelling which uses imagination, has a strong experiential and emotive base, and is typical of indigenous African culture. This form of creativity which is found particularly among people from Africa, India and the Caribbean is referred to as spoken art or oral literature. In Africa the most common forms are storytelling, drumming, dancing and singing. African cultural tradition ascribes greater weight to social than technological facts of intelligence, and views interactions with people as inherently more important than objects, thus fostering a more socially oriented set of cognitive skills. For example, the African custom exists whereby a young child addresses a visiting chief in drum language while another sings his praises in terms of traditional poems. Each praise is sung spontaneously with no rehearsal and often no prior knowledge except the

name of a chief and where he came from. Such a performance requires quick thinking, imagination and creativity.

During the inauguration ceremony of South Africa's President Mandela praise singer Sithembile Mlanjeni got the President grinning and nodding, won loud cheers from the crowds and back home in the Transkei, his mother wept with joy. Sithembile rendered *umbongo* i.e. traditional poetic praise tracing the Mandela family genealogy. For Sithembile Mlanjeni it all began in 1974 when he was in grade 8. He was top of his class for the rendering of poems. Later he teamed up with an older pupil and his skills were sharpened. Praise singing was and still is done at weddings, tribal meetings and sports events. These opportunities act as incentive and motivation.

I wish, however, to come back to story-telling. In indigenous African culture, stories are most frequently told when people are sitting around together soon after nightfall, relaxed and having enjoyed the evening meal. All are encouraged and permitted to tell stories in turn but there are also acknowledged experts to be listened to and learned from. As far as the oral performance of a story goes each occasion is a unique artistic creation

(Willis, 1978).

The artistry of a particular individual performance rather than any verbal 'correctness' of rendering, is highly valued. There is not necessarily an authentic version, and when a particular literary piece is being transmitted to an audience the concepts of extemporization or elaboration are often more likely to be to the fore than that of memorization. The story-teller composes and performs simultaneously. Traditional as the theme of a story may be, it is in effect created anew with each retelling. On each occasion a new and individual creation is produced. In the traditional phrase, the story-teller is 'taught by the dead and his own heart'! For the oral poet the moment of composition is the performance. An oral poem is not composed for but in performance. It is *in* the performance of a story that one sees the essential character of oral literature as distinct from written literature, that is, as a created in the warm presence of an audience as against the cold prior the written work (Okpewho, 1992).

The audience is very much part of the activity of traditional story-telling. Besides the general participation by listeners in story-telling (e.g. murmurs of

agreement or sympathy, exclamations of surprise or horror, loud laughter) there are two special ways in which members of the audience formally take part in story-telling (Finnegan, 1967).

The narrator sometimes chooses a special friend and designates him as the answerer, to reply to the narration. The answerer must interject phrases like "yes", "fancy that" at appropriate moments, react quickly with laughter, exaggerated amusement, or dismay at events related in the story. He often repeats important points, or interpolates clarifying words. The more common type of formalized audience participation is when the group of listeners takes up the chorus of a song. The narrator sings the first line, which is then repeated or added to by the rest. Story-telling, therefore, is a joint activity by both speaker and listeners, the one leading, the others replying and supporting.

The story-teller presents his story dramatically. There must be a certain appeal not only in what the performer is saying but in the way it is said. Hence the importance of style and technique of delivery. The story-teller himself enacts the tale, depicts the action with more or less, characterization, mimicry, exaggeration and effect through the use of tones,

length, speed, singing or onomatopoeia in order to make his narrative vivid, attractive and amusing to his audience.

Increasing interest is being shown in education today in story-telling. Listening to a told story, becoming personally involved in the story and identifying with the characters, calls forth the linguistic and imaginative potential of children. Given the opportunity to participate in creative retellings children may also explore and experience the freedom to abandon a fixed version and endow the tale with personal resonances and significance, to reinterpret, to elaborate, to develop new perspectives, to challenge assumptions in the original stories (Sharpe, 1989).

An approach which is becoming popular in the elementary school and appeals to the imagination of children is the so-called storyline approach (European Association for Educational Design, 1991). It has as central element collaborative storymaking. In this activity children are involved in a coordinated joint activity building a context of shared understanding. In the development of a narrative through collaborative class discussion the children are assisted by a more experienced person(s), the teacher, who provides the storyline and key

questions. The children however are active persons in the continuing story, interacting with one another and bringing to the task in hand what he/she knows or can imagine.

Together with Egan (1988), we may, in conclusion, ask if the child who manipulates concrete materials derived from everyday experience, (he seems to be referring to school science) is the same child whose mind is brimming with star-warriors, monsters and wicked witches? And whether it is more less important for his/her future development that a child be able to create and mentally manipulate these imaginary creatures than that the child be able to conserve liquid volume?

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