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DECONSTRUCTING VISUAL IMAGERY BY THE MENTALLY RETARDED: IMPLICATIONS FOR METHODOLOGY THEORY

Attwell Mamvuto

(University of Zimbabwe)

Abstract

This paper presents a deconstructive analysis of drawings by the mentally retarded children. It analyses the visual images for their symbolic meanings and significance to the young artists. Data were collected qualitatively using document analysis, observations and informal conversational interviews. The study revealed that the mentally retarded are potentially creative and go through the same universal developmental stages as their normal counterparts. Their configurations and symbol systems are perceptually diverse and individual. The study recommends use of instructional strategies tailored to suit the intellectual levels of the learners as well as other disabilities that normally characterize the mentally retarded. Implications for curriculum change are also suggested.

Introduction

Among reforms after Zimbabwe's independence in 1980, was considerable expansion of special education. The reforms meant educational equity and equality among all the categories of school children. Inclusive and exclusive educational provisions were also among the reforms. Special schools such as St Giles school for the

disabled, St Catherines and Sibantubanye schools for the mentally retarded, Kapota school for the visually impaired and Emerald Hill school for the hearing impaired were established with the prime mandate of special education provision.

However, it is in the provision of subject specific content that insignificant changes were noted in schools for the handicapped. Succinctly, Art and Design is one such subject that has been taught using instructional strategies and methodologies meant for normal children. This is despite its centrality in the education of the mentally retarded. It is against this background that this study was conducted at two institutions for the mentally retarded.

Background

Visual representation is one of the critical ways through which children express themselves. This view has resulted in creativity and aesthetics being considered key constructs in core objectives of art education through the various art curricula reforms (Lanier, 1975; Freedman & Popkewitz, 1985; Lewis, 1974; Till, 1971). Dow in Lanier (1975) views creative power as an endowed domain in every human including the mentally retarded. A child is born intuitively aware and responsive to design elements such as form, rhythm and harmony (Lancaster, 1982). This creative energy is mostly vented out through expressive activities such as drawing, painting and modelling. Through such activities the three domains of human behaviour namely, the emotional, the intellectual and the

physical operate in unison as catharsis for healthy development. Eisner (1988) notes that failure to include the arts in the curriculum is tantamount to short-changing the mind.

The child-centred movement of the 1920s focused on self-expression of innate capabilities (Pavri & Luftig, 2000; Clahassey, 1986), 'serving the ends of creativity, wholesomeness of personality and social adjustment' (Lanier, 1975:182). This became the dominant philosophy that guided instructional theory and classroom practice. In his reflection on psychoanalysis Thompson (1995) notes that expressive visual arts serve a therapeutic function in addition to development of perceptual and conceptual skills. He distinguishes between a neurotic experience and an artistic expression. Art as therapy has through a number of curricula reforms been a core objective in art education (Freedman & Popkewitz, 1985; Lancaster, 1982; Lanier, 1975).

Various institutions for the mentally retarded have developed curricula based on the envisaged therapeutic function of visual expression (Case & Dalley, 1990) as explained by Hamblen (1993:116) 'Art as providing therapeutic benefits has been an underlying justification for many programmes'. Case and Dalley (1990) cite several institutions and programmes that were established in Britain and elsewhere with the prime goals of providing art therapy to children with special needs.

The mentally handicapped are often characterised by disorders such as retarded physical growth and gross psychomotor development. Some also have speech problems that negatively impact on their effective communication. Despite these seemingly handicaps, the mentally retarded have been found to possess creative powers equalling or surpassing those of their normal counterparts (Timmerman, 1986). Communication of these primary creative thoughts (symbolic ideas that have not undergone any verbal interpretation), by the mentally retarded is comparable to any other normal children.

Gardner (1993) whose work was significantly influenced by semioticians such as Nelson Goodman, Ernst Cassirer and Suzanne Langer, proposed the theory of multiple intelligences. He identifies seven core intelligences as musical, linguistic, spatial, logico-mathematical, bodily-kinesthetic, interpersonal and intrapersonal. He came to the conclusion that human cognition is not controlled by a single intelligence but by a multiplicity of intelligences of varying capacities and each with a different focus. Competency in one intelligence does not necessarily entail competency in another as demonstrated by performances by idiot savants and prodigies. Their abnormal performances including mathematical, musical and visual expression are widely found among the mentally retarded.

In his study of musical creativity, Baltzer (1988:236) concluded that 'creativity and intelligence are largely independent constructs'. He quotes correlations of the two variables as weak as .20 and .06. Thus artistic creativity is a semi-independent domain in every human including the mentally retarded. There is no single intelligence that controls artistic performance but performance largely depends on how an individual articulates a range of intelligences in different desired combinations (Gardner, 1989). For example, linguistic intelligence can be used in normal conversation or can be used aesthetically in poetry writing. Spatial intelligence however dominates visual expression.

Timmerman (1986) found positive correlation between feeling and thought and the visual image produced through manipulation of artistic media. Arnheim (1969) in Mitzel (1982:164) treats visual perception as a cognitive process for 'artistic activity is a form of reasoning in which perceiving and thinking are divisibly intertwined'. The artistic process compliments the cognitive and intellectual domains (Gardner, 1973 in Mitzel, 1982). Studies by Sterreberg cited in Timmerman (1986), have shown that although the mentally retarded cannot effectively communicate their thought processes verbally, their art still reveals strong expressive qualities and cognitive engagement.

Studies by Anderson (online) found positive correlations among the domains of expressive visual representation, academic achievement and self-concept. Pavri and Luftig (2000) and Budoff and Siperstein (1987) cited in Peresuh (1996) noted that mental disabilities delay social development and retard academic attainment.

Despite these invaluable findings, visual arts for the mentally retarded are still being viewed as peripheral to educational processes and practices as well as ancillary to the curriculum. Educational policies for the handicapped in Zimbabwe seem to neglect the value of the visual arts to match their educational and practical significance. This is evidenced by lack of deliberate policies on the visual arts for the mentally retarded.

According to the secretary for education's circular minute number P36, the special needs students should benefit from the provision of specialist teaching (The SADDCC Regional Workshop on Inclusive Education at Primary School Level Held in Windhoek, Namibia in 2004). This entails having specialist art teachers who have done child studies in graphic development and art therapy in a bid to promote educational goals of aesthetics and creativity as contained in the secretary's circular number 3 of 2002. The provisions are not evident in contemporary educational institutes, policies and practices.

Lack of specialized art training facilities and programmes for the mentally retarded and documented research studies focusing on the artistic needs of the mentally retarded in Zimbabwe has systematically alienated such students both in inclusive and exclusive educational practices (Peresuh,2001:23-24; Kibooli et al, 2002: 68; Maunganidze & Kasayira, 2002). Inadequate facilities, resources and ill-preparedness by stakeholder institutes to handle the mentally retarded have hampered full integration of the mentally retarded. It is important that research inquires into the visual representations by the mentally retarded pupils as these are critical to their educational, social, intellectual and emotional needs.

Purpose of the study

Children are naturally bound to express themselves through manipulating artistic media such as paint, clay and pencil. They produce images and symbols peculiar to their individual mental cognition, perceptions, experiences and emotions. These covert processes can be made public as we try to deconstruct and respond aesthetically to the presented visual imagery.

Short (1985) notes that in order to understand an artwork, one has to examine both internal information such as formal properties as well as descriptive content. To this he added contextual considerations such as historical background and cultural settings. Koroscik (1982) cited in Short (1985) developed a theoretical interpretational model based on such approach to understanding artworks.

This study therefore aimed at analysing drawings by the mentally retarded for meanings and significance to such students. It also aimed at identifying the artistic needs of the mentally retarded as well as teachers' pedagogical and instructional needs to enable them to effectively manage the artistic efforts of the mentally retarded.

Research objectives

The specific objectives of the study were to:

- Analyse drawings and their meanings and significance to the mentally retarded.
- Establish the critical role of visual representation in self-expression by the mentally retarded.
- Propose methodological and pedagogical strategies for enhanced artistic learning by the mentally retarded.

Research Questions

More specific questions for the study were drawn from the objectives as follows:

- Do the mentally retarded possess creative powers?
- How do the mentally retarded visually represent their perception and interpretation of phenomena?
- What iconographic imagery, schemas and symbol systems characterize art by the mentally retarded?
- What values, meanings and significance do the mentally retarded attach to their visual representations?
- What artistic problems do the mentally retarded have in visual representation?
- What teacher instructional strategies can be recommended for enhanced artistic learning by the mentally retarded?.

Methodology

This was a case study involving two purposively selected schools for the mentally retarded that provide special education.

Participants

The study involved mentally retarded students of varying degrees of retardation, age ethnicity and both gender. Because of the relatively small class sizes, all the pupils in each of the three classes

constituted the purposive sample (N=35). The participants were drawn from non-academic classes. For ethical considerations, the identities of the participating students and institutions were strictly confidential. Pseudonyms were used instead.

Procedure and Instruments

The researcher gave specific themes for drawing that had a potential for self-expression. The themes were: My friend, Our house and My favourite pet. The themes were within pupils' experience. No teaching was done except clarifying the themes. After a series of drawings, the artworks were analysed qualitatively. Children had a full range of colours (complete palette) to choose from and were not restricted in any way in their choice of colours. The analysis schedule used was adapted from Court's (1989), Short's (1985) and Winner and Simmons' (1992) analysis criteria, which have been tested for validity and reliability. Court's criteria have seven items under spatial organization and ten items under imagery. Winner and Simmons' criteria have five items namely, cultural awareness, originality, visual awareness, aesthetics and perceptual awareness. The criteria were adapted to suit the study's design and context. Other interpretive criteria included expressive features and related symbolism, critical discourse and relationships of formal qualities to compositional structure (Short,1985).

The following sub criteria were also considered in the analysis

- Importance of the individual image
- Types of representation
- Form and content
- Detail and differentiation
- Spatial arrangement and relationships
- The importance of the whole drawing (Court, 1989)

The researcher was also a non- participant observer as he observed students engage in drawing activities. This is a characteristic feature of qualitative research (Tuckman, 1994; Bogdan & Biklen, 1992). Observations enabled capturing of salient features such as artistic procedures, processes, media use, manipulation of tools and equipment, and students' artistic orientations. Such data augmented data from analyses of artworks. Data from the observations were recorded as field notes.

The researcher conducted informal conversational interviews (Gall, Borg & Gall, 1996; Marshall & Rossman, 1999; Bogdan & Biklen, 1992) with students of mild mental retardation. Questions were generated spontaneously in the natural settings to suit the intellectual levels of the participants. The interviews focused on artistic processes, visual imagery, interaction with media and interpretation of themes as perceived by the students.

As procedural with qualitative research, the researcher has to be accepted as an insider (Bogdan & Biklen, 1992: 80) before formal data can be collected. Rossman & Marshall (1999: 82) observe that 'At times, the best entry is one, like this one, when there is an insider who provides sponsorship and helps the researcher seem non threatening'. The researcher made an initial familiarisation visit to each of the three classes. This procedure is critical if students are to participate freely and volunteer information. The visits involved informally talking to the participating pupils and teachers. This allowed the researcher to explain fully the purpose of the study. Formal data collection only commenced after the researcher had been fully accepted as an insider. The researcher however sought relevant permission from the school heads.

Validity and Reliability

Data collection instruments were constructed and given to an expert for validation before actual data collection. The instruments were however not tested in a pilot study. The instruments were constructed based on validated ones used in other studies elsewhere. Thus the instruments had some theoretical bases in their construction.

Description of the two sites

Site A

This was a special school that catered for children with a wide range of disabilities from hearing impaired, physically disabled to the mentally retarded. Purposive sampling was used to select the two classes consisting mainly of the mentally retarded. The classes selected were not exclusive to the mentally retarded but had other handicaps such as physical and speech. The classes were non-academic meaning pupils do not sit for any formal school or national examinations but the school has a curriculum meant for the acquisition of daily living skills, emotional and social adjustment skills. Class B from the site had more physically handicapped pupils. The pupils' ages ranged from eight to sixteen years.

Site B

Site B was also a special school located within greater Harare. One class was purposively selected from the multicultural and multiethnic school. The school was predominantly for the mentally retarded mostly with downs syndrome. A few had physical and speech handicaps. The selected class was also non-academic. This gives art a critical role to play in the development of emotional, social and intellectual skills and serving a therapeutic function. Pupils' ages ranged from eleven to twenty two years.

Findings

Table : 1 Dominant Disabilities and Degrees of Disability among the Participants (N=35)

DISABILITY	DEGREE OF RETARDATION					SITE A		SITE B		TOTAL	
	1	2	3	4	5	F	%	F	%	F	%
Cerebral palsy	3	2	2	1	0	8	40	0	0	8	22,86
Spastic quadriplegia	2	0	0	1	0	3	15	0	0	3	8,57
athetoid	1	0	0	0	0	1	5	0	0	1	2,86
hydrocephalus	0	0	0	1	0	1	5	0	0	1	2,86
microphany	0	0	0	1		1	5	0	0	1	2,86
Dystonic cerebral palsy	1	0	0	0	0	1	5	0	0	1	2,86
Downs syndrome	0	4	3	0	0	0	0	7	47,7	7	20
Slurred and absence of speech	0	0	1	0	0	1	5	0	0	1	2,86

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Downs and physical disability	1	2	2	1	0	0	0	6	40	6	17,14
Hearing impaired	0	0	0	0	0	0	0	0	0	0	-
Multiple disability	3	2	1	0	0	4	20	2	13,3	6	17,14
TOTAL	11	10	9	5	0	20	100	15	100	35	100

Key: 1. Mild retardation

5. Severe retardation

It can be noted from the table that the majority of the children suffered from cerebral palsy (22,86 %) and downs syndrome (20 %). Of significance are pupils with multiple disabilities (17,14 %) and those with a combination of downs syndrome and physical disabilities (17,14 %). The rest of the disabilities were minimal ranging from 2,86 % to 8,57 %.

Table: 2 Gender of participants (N=35)

GENDER		SITE A		SITE B		TOTAL	
		F	%	F	%	F	%
	BOYS	7	35	5	33	12	34,3
GIRLS	13	65	10	67	23	65,7	

Table: 3 Ages of Participants (N=35)

AGE RANGES (YEARS)		SITE A		SITE B		TOTAL	
		F	%	F	%	F	%
	5-10	8	40	0	0	8	22,9
11-15	10	50	7	46,7	17	48,6	
16-20	2	10	6	40	8	22,9	
21+	0	0	2	13,3	2	65,7	
TOTAL		20	100	15	100	35	100

Of significance to this study was the age ranges of the pupils. There were two pupils who were adults (21 + years) and eight who were in the 16-20 year category. The majority were however in their teens (48,6 %). Also of importance was the fact that the number of girls with disabilities was double that of boys. It would be important to find out how gender affects performance in terms of visual expression.

The Drawing Process

Pupils were full of enthusiasm and physical energy to draw. Drawing was a spontaneous activity. There was no evidence of reflection time upon the context of the problem before commencement of drawing. In one of the classes with more physically handicapped pupils, drawing involved muscular shoulder movements (a preliminary stage in graphic development). Pupils had problems in finer motor movements and manipulation of drawing implements.

Pupils talked about their work as they went about the production. The talks were mostly egocentric and involved giving titles to the works and talking about the drawing processes. Themes were given during the drawing process and also after the act (a process called romancing). Most pupils were eager to show the researcher their work for approval.

Self- expression was mostly marred by physical disabilities as pupils had problems in handling the drawing implements. This resulted in some uncoordinated images by some of the pupils. Some tended to align images in a single plane and line across the page. However, they did not have problems in comprehending and conceptualising given themes. There was a general tendency among the learners to ask for assistance in drawing realistic images,

which means they were aware of the goal of perspectival drawing. Pupils generally drew in outline form and later on coloured in the drawings. They aimed for conventional means of portraying images eg man, house and car as in pin figure and X-ray drawing. The areas of emphases in the compositions were put in different colours eg blue house with a distinct red door. Thus colour was used arbitrarily but with a specific purpose. It was difficult to discern any distinguishable shapes and forms from some of the scribbles made.

Analysis of Drawings

The drawings were analysed under Winner and Simmons' (1992) six categories namely spatial organization, configuration and symbolic systems, cultural awareness, visual awareness, aesthetics and perceptual awareness. The categories relate to the three art domains of production, perception and reflection that characterize the Arts Propel curriculum model. The categories can be used to assess the range of artistic performance.

Spatial Organisation

There was generally a universal approach to drawing. Although the quality tends to be behind that of the normal children in aspects such as delicacy of line and subtle colour use, the pupils' drawings evolved from uncontrolled scribbles or loco-motor scribbles to

lines and circles and lastly to well structured and recognisable objects of study.

Pupils tended to start by outlining the objects of study in one colour or in pencil and later on filling in the spaces so created in other colours. The colours were either well coordinated or were used arbitrarily.

Significant details were sometimes captured eg earrings in bright pink. These stood out and seemed to be the foci. Pupils seemed to be aware of the need to have an area of emphasis – an important design principle. Generally drawing orientation commenced from the top (a conventional approach). They left a lot of space at the bottom of the drawing surface and images were squashed at the top and mainly in one corner of the paper. In some cases pupils failed to confine colouring within the given two- dimensional space. This was especially noticeable among those with severe physical handicap who had problems in handling drawing implements.

A conventional road leading from the main house to the hut was characteristic of some of the drawings. This was an attempt to produce a coherent composition with all the various elements well linked. Eight hesitant pupils drew tiny objects but these however

depict all the essential details. Thus image size seemed to be related to level of confidence a pupil has.

Configurations and Symbol Systems

There was arbitrary and non-objective use of colour eg yellow frogs and human figures. Colour was used expressively according to creative intentions. Those with severe physical handicaps produced scribbles and these were however given new names and titles. It was however impossible to discern any configurations resembling real objects in the scribbles. Twenty produced characteristic schematic drawings using conventional symbols eg a cat made of two circles, two whiskers and a tail, a hut made of a triangle and a square. This was indicative of the impact of the teacher's instructional strategies (enculturation). Such conventions were also evident among sixteen year olds. This showed that the mentally retarded also go through the same graphic stages except that their progress is grossly delayed.

There was also use of self-invented symbols and symbol systems. Self-invented images such as baby snake and rabbit had no resemblance at all to real objects. This is suggestive of either perceptual differences or inability to articulate representational figures. There was evidence of both phantasies and fantasies. The former is subconscious while the latter is a conscious process.

Older pupils seemed to be aware of their sexuality and wanted this portrayed. For example, a female figure was portrayed with emphasis on female sexual organs. This characteristic feature was repeated on every figure drawn and was roughly located on the bottom edge of the dress. The pupils were aware of the right location of the organ but had to render it visible.

There was a general tendency to copy and repeat popular titles from colleagues eg donkey. Some of the themes were also self-generated as the researcher had not sanctioned them. Overall, there was no deliberate attempt to use tones to achieve three-dimensional effect. Subjects were depicted flat. Objects were located roughly on the same plane with no use of relative sizes to depict perspective and distance. Instead, size was used to depict perceived significance rather than spatial depth and perspective.

Cultural Awareness

The term is difficult to define. The term could imply being aware of cultural conventions, beliefs, norms and other variable traits. It could imply being contextually conscious of immediate environment. This is achieved through various ways in a work of art.

The need to recognize one's identity was portrayed by a few pupils who wrote their names on their work. Being aware of one's sexual identity is a cultural trait that was also portrayed by the kinds of subjects attempted by both boys and girls. Girls drew culturally feminine subjects such as flowers, dolls, elaborate dresses and earrings while boys preferred animals, cars, boats and trucks. Some of these themes were self-generated. The researcher did not however stop the pupils from drawing such objects.

There was also depiction of detail that was peculiar to gender eg on dresses, earrings, hair, shoes etc. Girls used feminine colours such as pink, light purple, pale orange, the heart symbol and general patterning of ladies' trousers and dresses. Feminine colours are those colours that have been found to be culturally associated with females. Such colour use is acquired rather than innate. Universal cultural conventions include teaching of perspectival realism and use of conventions such as a circle for a head and a triangle for a roof of a hut. These were evident in most drawings. Pupils however failed to portray the convention of three-dimensionality. In four cases conventional approaches to drawing of three-dimensional houses were evident. This included depicting the three sides of a house on the same plane.

Boys as culturally more assertive than girls, tended to use colour boldly evident of high levels of confidence. A culture that seemed to have been adopted by most pupils was commencement of drawing by outlining and then colouring in the shapes so created.

The following were conventions universally adopted by the selected sample:

- w-shaped nose
- the heart symbol
- figures and images in profile
- a circle for the head, eyes and trunk
- star patterned flowers
- triangular dress and hut roof
- x-ray images
- straight lines for limbs

Visual Awareness / Aesthetics

Aesthetics is a problematic term that is variably defined. The general understanding is however on perception of beauty not in the sense of high levels of finish but on relative nature of perceptual differences. Romancing was characteristic of all children in this study. This involved naming of subjects that had not been preconceived but as pupils engaged in the process of drawing. It was difficult to separate the action of drawing from the emergence of the theme. Some of the subjects were named as baby frog, mother frog and father frog.

The relative sizes of the subjects related to their practical significance eg the baby frog is smallest while the mother frog is biggest. The mother feeds for the baby hence her size. A big house can accommodate many people and a teacher is a significant other. Pupils were aware of the social roles and significance of the various subjects. Almost all the pupils preferred to work in colour and each pupil demonstrated personalized colour preferences.

Perceptual Awareness

Pupils tended to work towards visual realism and this appeared to be the main instructional strategy used by the teachers. Realism was one of the conventions emphasized by all the teachers. A number of pupils fall on the continuum of graphic development as evidenced by X-ray drawings such as wheels on a bus in profile. Colour was used arbitrarily as in the colourful friend and on a bus where each window had a different colour.

Twelve pupils with downs syndrome were more competent in visual realism. Their drawings were more representational. It was observed that at twenty two years a pupil was still drawing radial compositions and human figures in profile. There were also unconventional ways of drawing certain objects eg a cat with thirteen legs, a bus with three wheels and a duck resembling a boat. Other conventions indicative of the level of perception included a

stick figure, a cat consisting of two circles and a hut made of a triangular roof and square walls.

Disability and Performance

As aluded to earlier on, those with downs' syndrome tended to perform better than those with any other type of mental disability. They produced better- controlled drawings and used colour more discretely. Their drawings were more expressive. The majority were in the 15-22 year age range. They also demonstrated greater maturity in taking and following instructions.

Those with cerebral palsy tended to have little control of media. They produced scribbles but a few produced fairly recognizable forms. Drawings by those with dystomic cerebral palsy and hydrocephalus produced images difficult to discern. Marks were made all over the drawing surface and were uncontrolled scribbles. The marks ranged from dots to short dabbing strokes. Those with right hemisphere and cerebral palsy and spastic anadriplegia performed generally at par. There was generally good control of media. They used colour expressively, and also conventional symbols such as W-shaped nose and lines for limbs.

Girls' versus Boys' Performance

Generally girls produced more perceptive and competent drawings than boys. They produced better human forms and were more discriminate in their use of colour. Their compositions were more balanced on the sheet of paper and showed better occlusion. There was however a general tendency to confine figures and images to the top section of the drawing surface. Their work was neater and colouring was better controlled and confined to drawn shapes. Line quality was more definite.

Boys on the other hand tended to scatter images all over the paper. Line quality was suspect as they tended to go over the same lines several times. Their lines were bolder showing high confidence levels. Shading by both boys and girls was done to show the ground rather than depth and distance.

Age and Performance

Chronological age was found to be co-related to quality of drawing. Older pupils in the sample were found to be better at media control thus produced better quality drawings. Subjects were more expressive. The 8-10 year olds tended to rely more on conventional symbols and those below tended to scribble. There were however some variations where 9-11 year olds also scribbled because of mainly physical disability that tended to hamper proper

handling of media. There was therefore a general trend to follow graphic development stages proposed by Piagetians.

Discussion

Creativity is a domain of every child including the mentally retarded. The sample studied demonstrated that the mentally retarded are as creative as their normal counterparts. The pupils showed personal response to themes and subjects. Whilst pupils drew from the same given themes, their drawings revealed considerable diversity in interpretation, rendering techniques and other presentational strategies. This is in line with Timmerman's (1986) findings that the mentally retarded are potentially creative despite their handicap.

The findings also revealed that the mentally retarded go through the same universal and hierarchical graphic stages as any other normal children. However their development is grossly delayed as evidenced by some old students (now adults 18-22 years) who were still operating in the radial and X-ray stages (stages for 6-8 year olds). Causes of the delays are speculatively maturational, intellectual and gross physical disabilities. Naturally their mental capabilities are behind those of their colleagues and this in turn affects their perceptual development. Physical disabilities also imposed limitations in the way they handled media and tools.

There was general use of conventional symbol systems and configurations. These were a result of enculturation where teacher methodologies seemed to play a significant intermediate role. It was clearly evident that teachers introduced and stressed upon certain symbols and configurations that have been universally accepted as epitomizing en-route to fortuitous realism (Case & Dalley, 1990). Such findings, were made by researchers, such as Court (1989) who found that teacher intervention has impact on graphic development. However contemporary researchers emphasize the need to avoid imposing conventions, as these tend to stifle development of personal symbol systems.

The study also revealed that perception and interpretation of phenomena among the mentally retarded differ significantly. They differed according to background experiences although there was a general tendency to draw in a similar style. The goal of perspectival realism is general to all children including the mentally retarded. Pupils made strenuous efforts to capture the close resemblance of objects as accurately as possible.

It was however interesting to note that shyness and despondency that normally characterize young children was visibly non-existent among the participants. This was despite their failure to render the objects as accurately as possible, which normally leads to pupils

losing interest in their work. This emerges as a critical factor among normal students in the U-shaped trajectory to graphic development. Despondency generally shapes teacher methodologies and material provision to learners in that teachers need to be patient and accommodative at this critical stage.

Enthusiasm, use of muscular hand movements and romancing characterized art production. There was also quantitative and qualitative increase and diversity in drawing. The researcher did not however come across idiot savants whose performance levels are normally ahead of their peers. Pupils' drawings were significantly influenced by sub-cultural conventions. Boys as culturally more assertive than girls (Mamvuto, 2001) drew subjects such as cars, while girls were restricted to feminine subjects. Such gender related conventions are also found among normal children. There was therefore no significant departure from the normal trajectory. This is likely to be the result of teacher intervention and socialization practices similar to Court's (1989) findings on cultural influence on drawing.

Some cultural perceptions were unconsciously used. These included the role played by the significant other in pupils' lives. Relative sizes of drawn objects revealed their significance to the child. A small object appears to be of little significance while

relatively big objects signify profound value. Elaborate and meticulously drawn objects seemed to be of sentimental value to the pupils. Similar findings were made by Court (1989), who found that drawings by the Luo and Samburu Kenyan children depicted enlarged male figures indicative of male domination in their cultures.

As characteristic of all children, the mentally retarded are also egocentric and focus is always on the self. They feel their drawing is the best and unique and therefore deserve the teacher's attention. This implies that art as therapy could be a very useful programme if implemented on these children. Six pupils appeared withdrawn while three others were hyperactive. Art could therefore be positively utilized for personality development as proposed by various studies cited by Case and Dalley (1990). Drawings can reveal a lot about pupils' behaviour, which could help shape their social development.

The tendency to repeat a particular visual image seemed to reveal the level of confidence pupils had. The less able tended to repeat the same image they felt they had successfully mastered. The more confident pupils were adventurous and exploratory and experimented with a variety of images, spatial organization and space usage than the less confident. This has methodological

implications. Use of whatever drawing tool within reach also presents instructional obligations to the teacher.

Whilst art media is expensive and should be economically used, efforts should be made to provide the mentally retarded with adequate resources for experimentation and exploration. This enables them to quickly scaffold to the next higher levels. It would be naïve to think that the mentally retarded can perform at the same level with their normal counterparts in skill application. Efforts should therefore be made to promote skill acquisition and development.

The teacher should be conversant in the diverse cultural symbols, conventions and values so that the themes and subjects that he gives the class are accommodative of the diversity that exists among the mentally retarded. Themes should be within pupils' experiences if they are to be beneficial to the learners.

Colour was an art element that featured prominently in pupils' drawings. Colour can reveal a child's personality, mood, emotion and feelings. As such, teachers should enable pupils to fully explore the element by providing varied coloured media to the pupils. Similar to the phenomenon of colour, symbols and configurations in expressive art are consciously pupils' individual

inventions or are intuitively created. This implies use of methodologies that are free from cultural imposition which have a limiting effect on self-expression. It is however important to note that teaching of specific skills is necessary for personal growth and development. Pupils should be taught spatial organization, theme interpretation and use of other art elements. Provide a variety of drawing surface of various sizes. The physically handicapped were mostly marred by lack of special equipment and media such as monster crayons, 'pencil strappers' and special tables and chairs. Such provisions could enable the pupils to successfully handle art media and equipment.

Pupils appeared to enjoy self-generated themes. Subjects for drawing should therefore, accommodate both boys and girls of different ages and social backgrounds. Enculturation is important and pupils should be left to develop naturally on their own. There is need to teach concepts but at the same time giving them latitude to explore and experiment with media, techniques and approaches.

Conclusion

The findings from the study pose methodological challenges to the art teacher. Whilst the mentally retarded have demonstrated great creative potential, methodologies and instructions need to be selectively applied in order to accommodate the intellectual

capacities of the learners. Students' diverse images and approaches to drawing have significant implications for art as therapy for this cohort of learners. Material provision is a dimension that teachers need to seriously consider in the educational provisions for the mentally retarded. It is important that the art curriculum, in its broadest sense, be reviewed so that it is relevant to the needs of this group of learners. It should be qualitatively different from that of the normal children. The study has revealed unresolved knowledge gaps in the teaching of art to the mentally retarded. These gaps could initiate further debate and research in the area of visual representation.

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APPENDIX 1

CRITERIA FOR ANALYSING MENTALLY RETARDED STUDENTS' ARTWORKS [Adapted from Court (1981), Short (1985) and Winner and Simmons (1992)]

DATE.....
SCHOOL (code).....
SCHOOL TYPE.....
SCHOOL LOCATION.....
STUDENT'S NAME (code).....
GENDER.....
AGE IN CLASS (years and months).....
CLASS / GRADE LEVEL

MEDIA USED.....
WORKING SURFACE SIZE.....
TYPE(S) OF DISABILITY

IQ (if tested).....

Attwell Mamvuto

DEGREE OF RETARDATION (tick) 1.....2.....3.....4.....5.....

key: 1 mild retardation 5 severe retardation

FAMILY

BACKGROUND.....
.....

Comment on the following giving as much detail as possible

Domain	Qualitative Description
1. Spatial organisation -composition -location : position -aspect -enclosure -repetition -occlusion (overlapping) -relative size	
2. Imagery -kind of imagery (style) -theme -specificity of subject matter -content -setting -comparative detail -comparative figure size -line/ brush stroke quality -surface treatment -human figure structure, action, gender	

<p>3. Cultural awareness</p> <ul style="list-style-type: none">-understanding art objects and traditions in the context of time, space and function-use of cultural motifs-acculturation-cultural content-gender	
<p>4. Originality</p> <ul style="list-style-type: none">-subject interpretation-techniques/ approaches-style-media use	
<p>5. Visual awareness/ Aesthetics</p> <ul style="list-style-type: none">-analytical skills-use of art elements-use of principles of art-presentation and organisation-ability to communicate intentions-manipulative skills	
<p>6. Perceptual awareness</p> <ul style="list-style-type: none">-knowledge and understanding	



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