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Emotional personality of children as expressed in their drawings: Pointers for education

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Abstract

The paper aimed at using drawings for assessing the emotional personality of children. It thus explored drawings of some Ghanaian school children. Participant observation of the children and in-depth interviews of guardians, parents, teachers and peers concerning the children were noted. Data analysis showed that drawings can portray temperament in terms of emotions such as happiness, sadness and anger in the size of drawings and content of the drawings. From literature, it was established that art reveals emotion, temperament is the emotional element of personality and that learning is most effective when it links with emotional experience. It is suggested that effectiveness of teaching and learning could be enhanced with teachers' knowledge of pupils' temperament.

Keywords: Children, Temperament, Emotions, Drawing, Learning

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1. Introduction

Emotions arise from individuals' attempts to acclimatize to specific contextual demands with the result that a person's emotional responses cannot be separated from the situations in which they are evoked (Halle, 2003). How a person approaches life and reacts to situations emotionally and his behavioural style is temperament (Berk, 1994; Caprara and Cervone, 2000; Chess and Thomas, 1987; Papalia et al., 2004; Santrock, 2004). Temperament is also the emotional aspect of personality that can be deduced from observable behaviours such as happiness, sadness, anger and fear (Enti, 2008; Hirschy, 2001).

It can be inferred from the foregoing then that temperament involves emotional reactions and behaviour; and maturation and experiences in the environment modify the expression of an individual's temperament (Berk, 1994; Boateng, 1997; Caprara and Cervone, 2000; Chess and Thomas, 1987; Papalia et al. 2004; Santrock, 2004). Thus, temperament will be used interchangeably with emotional personality since its meaning will be restricted to the emotional aspect of personality that can be inferred from observable behaviours such as happiness, sadness, anger, frustration, shyness, and fear.

The emotional needs of pupils may not be discovered since their teachers may not know or understand their emotional personalities. They may also not be aware that for effectiveness of teaching and learning, education must be based on an understanding of temperament differences (Read, 1964). Similarly, most teachers may not be able to tap into the principle that positive emotions such as joy, contentment, acceptance, trust and satisfaction can enhance learning and negative emotions including anxiety, anger, or depression wane learning (Goleman, 1995; Vail, 2001) because they may not know. As such they neglect one aim of formal education which is to meet their learners' emotional needs (some of which are shaped by environmental factors including early parental rejection, abandonment and lack of care and affection) (Winnicot, 1964 as cited in Read, 1964).

Moreover, many teachers may not be aware that Art allows children to express their emotions and experiences; that Art is in fact one of the ways through which children express and interpret their living experiences (Lowenfeld and Brittain, 1970). Consequently, the research sought to answer the following research questions: 1) what are the emotional personalities in children? 2) how can teachers know about the emotional personalities of their pupils? 3) how are emotional personalities shown in drawings of children aged 7 to 10years? 4) how can children's emotional personalities be used to enhance teaching and learning?

2. Theoretical basis

2.1. Temperament

Most temperament theorists assume among others that temperament is a component of personality, temperament stays the same to some degree but can be minimized or intensified by experience and environment and that the traits of activity level and emotionality are integral traits of temperament (Hirschy, 2001). Temperament is seen to be stable and among the stable temperament traits indicated are

emotionality and activity level (Arcus, 2006; Turunen, 1988). Temperament theories of personality, also link one's personality to unique basic traits, emotions, body types as well as to being introverted or extroverted (Enti, 2008).

The Trait Approach is one approach of studying temperament. An example of this approach is the Emotionality, Activity, and Sociability (EAS) Model, where Buss and Plomin's theory of temperament holds that temperament can be measured along the dimensions of a child's emotionality, activity, sociability and shyness (Buss and Plomin, 1984). Unlike other measures that have very specific age ranges (e.g. infancy, childhood, etc) and as such cannot be used across a sample of differing ages; the EAS can be used with a wide age span hence its use in this study.

Emotional personality can be based on the introvert-extrovert attitudes and their functions – thinking, feeling, sensation, and intuition – originated by Jung (Read, 1964). According to what Jung called “the psychology of individuation,” introverts concentrate on thoughts and concepts and extroverts on people and things (Read, 1964).

In terms of measurement, “The Temperament in Middle Childhood Questionnaire (TMCQ)” (Simonds & Rothbart, 2004) was used in the study. This scale has been designed to measure temperament in children aged 7 to 10 years, so it was an appropriate choice for the study since the age range is also 7 to 10 years. Though, the TMCQ assesses seventeen dimensions of temperament, five were used: *activity level*, *affiliation*, *anger*, *approach/withdrawal* and *mood*; since they correlate with the research question as to whether specific observable behavioural patterns of children could appear in their work, such things as being happy, sad or angry (emotionality), high or low energy (activity level or activeness) and shy or outgoing (sociability).

2.2. Children's drawing

Art for a child is an activity that assembles his thinking, feeling and perception into a new form. Hence, to the child, art is mainly a mode of self-expression which he values (Lowenfeld and Brittain, 1970). In this study, the meaning of art which refers to the tangible expression of the child in the form of drawing would be used interchangeably with drawing.

Since a child's drawing is a spontaneous expression of an inner personality, it may not follow any known criteria of beauty. Thus, what Read (1964) calls all to realise is that the child's graphic activity is a specific mode of communication with its own features and laws. Thus, it is not canons of objective visual realism that control it, rather it is the pressure of inner subjective feeling. Consequently, it is essentially that adults' standards are not placed on children's art. Rather, children should be permitted to express themselves their own way since their art expressions serve as a crucial means to their growth regardless of the standard of beauty of the adult (Enti, 2008).

Enti (2008) quotes Alter-Muri (2002) and Michael (1986) who opine that it has been contended that Lowenfeld was in the know that any emotionalized aspect of a child's environment can greatly affect his artwork. That is to say, Lowenfeld believed that the evidence of the emotional and mental health of the individual is contained in his art expression.

In terms of size of children's drawings, Levy (as cited in Hammer, 1980) noted that the average drawing of a full figure is approximately seven inches long or two thirds of the available space. Hammer also observed that the size of the drawn concept holds clues about the child's realistic self-esteem, his characteristic self-expansiveness or his imaginary self-inflation. Traub and Lembke (as cited in Anastasi and Foley, 1940) independently found out that extremely small drawings were linked to feelings of inferiority (Hammer, 1980).

Feldman in concluding his discussion on the theories of child art indicates that any theory of child art explains what takes place when children make art works but an entire program of art education cannot be built on such theories. He linked the theory of child art and art education and noted that: first, child art is the usual rather than the forced product of normal human development. Second, the art works children produce are natural in the context of their needs but not basically that of the adult. Third, children must not be tricked into making art in order for their images to be used for diagnostic purposes or for mental measurements. It is noteworthy to indicate that my experimental work was not to mislead the children to draw so that these drawings could be used to diagnose them; instead they were permitted to express themselves freely through art work; though they were given themes with which to work and other times they chose their own themes in an effort to discover how drawings could disclose the emotional personalities of these children (Enti, 2008).

3. Materials and methods

3.1. Design

The qualitative research approach was primarily used for the study specifically descriptive research (Creswell, 1994; Depoy and Gitlin, 1998; Merriam, 1998). Descriptive research allowed detailed description of the behaviour of the children (Merriam, 1998; Yin, 1984; Leedy and Ormrod, 2005). The experimental method was also employed but here, the primary goal here was to establish correlation between the variables "emotional personalities", on one hand and "children's drawings" on the other.

3.2. Participants

The participants for the study were in two strata; children and adults. Purposive sampling was used as the name suggests, for a specific purpose (Leedy and Ormrod, 2005) of choosing children from three categories of schools; a metropolitan school, a local authority school, and an international school based on three criteria. One, the kind of school where art was offered as a subject, the school where art was not offered as a subject, and a school that had art as a fun activity in the form of a club. This criterion was selected because at the beginning of the study, Art was not a mandatory subject in Ghanaian schools, like it has turned into under the label "Creative Arts" in the New Education Reform that commenced in the September 2007-2008 academic year. Two, the calibre of pupils in the school; children from either vastly diverse socio-cultural and economic backgrounds, and/or similar socio-cultural and economic backgrounds. Three, the following were

considered; First, a metropolitan school with children from different social backgrounds ranging from the elite to the common; second, a local authority school but with children from similar backgrounds with average and low economic backgrounds, which seem to point up more of the childish manner with less of parental influence or interference than is wont to be present in a cultured home (Sully in Read, 1964); three, an international school where there is a mixture of children from different countries, who with high social-economic background.

Boys and girls between ages 7 and 10 were chosen from these schools. These children were chosen because at that stage they have arrived at a definite or precise form concept of man and his environment (Lowenfeld, 1970). In other words, they are at a stage where what they draw will be recognisable (Enti, 2008). However, the impossibility of having drawing sessions outside the routine classroom time meant that entire classes where there were children beyond the age range had to be used in the study. Thus, although a total of 145 children participated in the study, 90 were within the age group of 7 and 10 years.

The adult participants comprised art teachers, teachers and head teachers at the primary level as well as parents, art educators, psychologists and others who deal with children. The criteria for selecting a sample from these adults was based on one; whether the adult was a teacher, a head teacher, a parent or guardian, a psychologist, a counsellor or if the individual had some knowledge about children. The accessible population came to a total of 255, consisting of 230 adults who answered copies of questionnaire by simple random sampling procedure and 25 adults who were purposively sampled to be interviewed (Enti, 2008).

3.3. Measures and procedures

Krasner and Ullman (1973:13) assert that “theories influence what will be investigated in terms of topics and how they will be investigated in terms of measures and methods”; thus, some text that dealt with some theories on temperament, children, and art served as the source of secondary data and also lent support to the procedures for data collection of the primary data of the study. The primary sources of data were mainly obtained through observations and interviews made during visits to the selected schools in Kumasi copies of questionnaires as well as through the drawings of the children. Photographs of the children’s artworks were also taken.

3.3.1. Observations and interview of children

Both participant and non-participant observation were used in observing the children during their drawing sessions, classroom settings and break times by the researcher. The children were interviewed about their drawings as they drew or after they had drawn using post-drawing inquiries.

Behaviour was measured using field notes and a checklist (Hannan, 2006) made up of items from Thomas and Chess (1977) temperament scale and Simonds and Rothbart’s (2004) “The Temperament in Middle Childhood Questionnaire”. Thus the items included Anger/Frustration, Sadness, Activity Level, Affiliation, Approach/Withdrawal and Shyness. With these each item was rated on a three point scale; 1= low, 2= average, 3= high. Other items were mood and adaptability. Mood was rated as 1= negative, 2= both positive

and negative and 3= positive and Adaptability was rated 1= slow, 2= average, 3= adapts easily. For each item, the higher the score, the closer the child is to that trait being measured and vice versa.

3.3.2. Questionnaire and interview of adults

Questionnaire and interview were used in order to make up for each other's shortcomings since various data sources can be used to corroborate and cross-check findings (Patton in Merriam, 1998; Rothbart, 1995). Direct interviews were arranged with 25 people who ranged from parents and guardians of the children, to psychologists, as well as teachers at the primary level and some teachers of the children in the study using validated interview guides that had been designed from reviewing the literature based on the EAS model. Additionally, teachers at the primary level and parents and guardians of the children were given two sets of questionnaire consisting of three scales; emotionality, sociability and activity level (based on the EAS model) to answer. These had the same questions but while one was open-ended the other was close-ended. Copies of a five-item questionnaire (a compressed form of the other questionnaires) were also given to the classroom teachers (that is the teachers who are affiliated to the particular class) of the pupils in the study.

All items in the questionnaires were chosen from "The Temperament in Middle Childhood Questionnaire (TMCQ)" (Simonds and Rothbart, 2004) designed to measure temperament in children aged 7 to 10 years. Though the TMCQ assesses seventeen dimensions of temperament, these five were used: *activity level, affiliation, anger, approach/withdrawal* and *mood*. The five-item questionnaire consisted of three measures emotionality, activity level or activeness and sociability which correspond with the Emotionality, Activity level, Sociability (EAS) Model by Buss and Plomin (1984). Each item was rated on a five point Likert type scale (1 – 5); the highest score being five and the lowest, one. For each item the higher the score, the closer the child is to that trait being measured and vice versa. Four hundred copies of questionnaire were sent out with a return rate of 57.5% percentage amounting to two hundred and thirty copies.

3.3.3. Drawing activities

Drawing activities were designed for the children based on a modified form of the House Tree Person (H-T-P) drawing battery (Hammer, 1980) using both directive and non-directive approaches. This drawing battery (the house and the person) was used since the house has been found out to tap children's feelings about things related to home-life and intra-familial relationship, while both the tree and person tap the core of personality labelled as body image and self-concept (Hammer, 1980).

For their first drawing activity, the children were asked to draw anything they wanted. This was based on the premise by Kramer that when the child makes images with the materials that he is given "without strict adherence to prescribed patterns it inevitably takes on the image of its maker" (Kramer, 1987 p. 44 cited in Enti, 2008). Later on, the children were directed to draw about such themes as "What I like best", "How I spent my December Holidays", "What I will be in future", "My Family", and "My House". This was to find out how their temperaments were reflected in their artworks. They made drawings on A4 sized papers with 2B and 4B pencils, coloured pencils, felt pens and crayons between a minimum of thirty minutes and a maximum of sixty minutes and wrote their names, ages, class and dates behind their works and some in front of the

drawings. The children's comments or explanations of their works as well as theories explaining children's temperament and their art were noted.

In order to evaluate their drawings, a rating chart was developed based on 1) size, 2) positive affect (happy) or negative affect (sad, angry) and 3) introvert, or extrovert. Size of self-figure and house were measured with a 1 = very small size, 2 = average size, and 3 = large size; according to Levy's assertion (as cited in Hammer) that the average drawing of a full figure is approximately seven inches long or two thirds of the available space. Affect was defined as positive emotions (happy) or negative emotions (sad, angry) according to the explanation of some dimensions in the Temperament in Middle Childhood Questionnaire by Simonds and Rothbart (2004). Thus the children who showed more negative affect were tagged 1 = very negative affect, 2 = those who showed mixture of negative and positive affect and 3 = very positive affect. Introverts (based on Jung's classification) were assigned 1, and extroverts 2. Moreover, the Spearman's Rank Correlation was employed to ascertain the degree of association between the size of drawings and the children's temperaments.

4. Results and discussion

More than 960 drawings were gathered from all the 145 children however the ninety (90) children who fell within the ages 7 and 10 produced about 595 drawings. Data analysis was guided by the theoretical propositions on temperament, children, children's art suggested by the review of related literature as well as references to statements made by the children about the works, records of behaviour from parents and guardians, teachers and researchers' observations. For the purpose of this paper, the analysis would be based on the research questions that guided this paper.

4.1. Emotional personalities in children

To the question as to "how do teachers and parents understand the emotional personalities of children?" about 70% of the 25 interviewees revealed that temperament is a person's usual character or disposition and it is in two categories; extroverts and introverts, but depending on the situation some people can have both temperaments. With the questionnaire however, although 88.3% of the 230 respondents believed that there are more than two types of temperaments still only 42.6% of the respondents actually ticked that there are two types of temperament, introverts and extroverts, while the others indicated between three and six or even more types of temperaments. This is tabulated in Table 1.

Outcome of the questionnaire, interviews, characteristics that appeared in parents' reports and teachers' reports about the children as well as the researcher's observations were noted and compared with existing literature on cluster of traits that make up the temperament groups. Two groups that are based on the work of the Swiss psychoanalyst Carl Jung were used; *introvert* and *extrovert* (Archie, 2009). The children were thus put into these two categories.

Table 1. Types of Emotional Personalities of Children

Two Groups	Three Groups	Four Groups
introverts, extroverts	introverts, extroverts, both introverts and extroverts	those who sit still in class, those who jump walls during break,
children with good behaviour, children with bad behaviour	introverts, extroverts, problem children very active, active, less active.	those who will be out to eat or buy toffee, those who are active, run about and play
quiet type playful/talkative type	quiet children, children always asking questions, children usually fighting their peers	those who sleep in class, those who eat in class, those who skip classes, those who always come to school late
kinaesthetic type, calm type	unfriendly children, lazy children, bullies. extreme behaviour children, middle- way children, quiet children those who do what they are told, those who rebel and want to do the opposite, those who just want to be themselves quiet children, those who play for some time and sit, those who play a lot average group, positive extreme, negative extreme	those who pay attention, those who contribute by asking and answering questions, those who talk in class, those who do their work

Source: Enti (2008), Field Survey, September 2007 – January 2008

On a five-point Likert type scale (1 – 5); the highest score being ‘five’ and the lowest, ‘one’, introverts were children who scored high (4 or 5) on emotionality in this case negative emotion (i.e. anger and mood) low (1 or 2) in sociability (i.e. affiliation and approach/withdrawal) and middle to low (3, 2 or 1) in activity level on a five-item questionnaire (*activity level, affiliation, anger, approach/withdrawal* and *mood*) given to the classroom teachers of children who were part of the study. They also scored high (2 or 3) on a three-point scale behaviour checklist (highest score, ‘three’, lowest score, ‘one’) that was used to observe them which contained *anger/frustration, sadness* and *mood* (to denote emotionality) *affiliation, approach/withdrawal, adaptability* and *shyness* (to denote sociability) and *activity level* (to denote activity as the name implies). They were 34 (about 35%) out of the 98 children. Extroverts on the other hand were children with mainly positive moods, high in activity level, and high in sociability, on both the five-point and three-point scale. They were 64 children denoting about 65% of the 98 children.

However, there were differences in the behaviour of children who even belonged to the same group (either introvert or extrovert). Read quotes Jung who explains this phenomenon,

... in the same measure as outer circumstances [environmental factors] and inner dispositions respectively promote a predominance of extraversion or introversion, they also favour the predominance of one definite basic function (thinking, feeling, sensation and intuition) ... If one of these functions habitually prevails, a corresponding type results [thus] thinking, feeling, sensation and intuitive types. Every one of these types can moreover be introverted or extraverted... (Read, 1964 p. 86).

This implies that in the Introvert group, there were thinking-introverts, feeling-introverts, sensing-introverts and intuitive-introverts. The same applied to the Extrovert group. There were eight categories of children rather than the basic two; introvert and extrovert. Information gathered from parents, guardians, peers, and observations and interview of the children themselves was compared with literature to determine which group each child fitted.

4.2. Teachers and the emotional personalities of children

It could be deduced from the respondents who were largely teachers that temperament which is the emotional personality can be seen in the way children behave, since this is driven by emotions and moods as has been summarized in Table 2. Thus, it could be inferred that teachers know about the emotional personalities of their pupils through their emotional reactions and behaviours.

Table 2. Response about emotional personality, emotional reaction and behaviour

QUESTION/STATEMENT	RESPONSES			
	Yes	Percentage (%)	No	Percentage (%)
1 Does a child's emotional reaction to a situation show his temperament?	176	76.5	40	17.4
2 Temperament can be seen in how children behave.	True 192	Percentage (%) 83.5	False 26	Percentage (%) 11.3

Source: Enti, 2008, Field Survey, September 2007 – January 2008

4.3. Emotional personalities shown in children's drawings

This research question sought to find out what observable behavioural patterns of children as a result of their emotional personalities appear in their drawings and how they are shown in the drawings. Analysis of the drawings after they were compared with literature brought out two major findings; emotions that are expressed in the drawings and the size of the drawings. These are explained quantitatively and qualitatively.

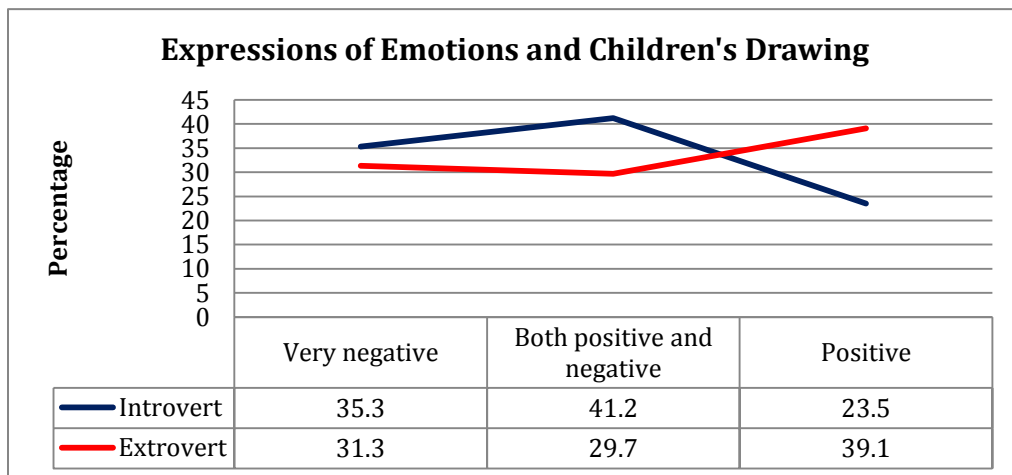


Figure 1. Percentage distribution of number of introverted and extroverted children who expressed different emotions in their drawings

4.3.1. Quantitative aspects: Emotions as expressed in children’s drawings

The drawings of the children showed some of their experiences and emotions such as anger, fear, sadness, aggression and isolation of self. These are behaviour traits that when excessively displayed according to literature and confirmed by responses from both interview and questionnaire could be linked to behaviour or emotional problems (Gregory, 1994; J. B. Asare, personal communications, May 5, 2008; Rosenberg, et al. 2004 as cited in Hickox, 2005). However, analysis of the drawings showed that the way of expressing experiences whether happiness, sadness, anger, activeness or sociability in children with different temperaments differed.

Generally 35.3% (12) of the 34 introverted children portrayed more negative emotions such as anger and sadness in their drawings as compared to the positive emotions such as happiness in their drawings. Their extrovert counterparts (39.1%, i.e. 25 children) portrayed more positive emotions than negative emotions (31.3% indicating 20 children). These are displayed in Figure 1.

It was noted from the findings that 23.5% (8) of the 35.3% (12) children who showed more negative emotions such as anger, fear, and sadness in their drawings were those from the local authority school. School performance of these children according to their terminal reports were average and below average. Remarks such as ‘poor’, ‘not encouraging’ ‘more room for improvement’, ‘dull’, ‘not active in class’ had been written on their report cards. Interviews with teachers and children themselves revealed that these are children coming from a low to middle income background; who came to school with most of their basic needs (like uniforms, exercise books, school bags and sandals) in school not provided. Some even came to school on empty stomachs at times.

What was implied was that since these children might not be happy because they lacked basic things for school it affected their learning since negative emotions such as depression and sadness wane learning and vice versa (Goleman, 1994; Vail, 2001).

4.3.2. Quantitative aspects: Size of children’s drawings

The sizes of drawings (self figure and house) of extroverted children were noted to be generally bigger than their introvert counterparts. That is not to say that all the extroverts made large drawings while all the introverts made small drawings. In view of this, the correlation between the size of drawings and the child’s temperaments was found. In other words, data collected on the number of children and the size of figures they drew was used to find the extent of association between them.

Since the size of figures drawn varied across the children, it was categorized into three sizes; very small, average and large sizes. The coefficient (r^2) was calculated using the Spearman Rank formula where the answer will always be between 1.0 (a perfect positive correlation) and -1.0 (a perfect negative correlation). When written in mathematical notation the Spearman Rank formula looks like this:

$$r_s = 1 - \frac{6 \sum d^2}{n^3 - n}$$

- All the values in the Difference square (d^2) column was added up to give **33.5** and multiplied by 6 to result in 201.
- The value n is the number of categories of the drawings. This is **6** as the drawings were broadly classified into two (self figure, house drawing) with each subdivided into 3. Substituting these values into $n^3 - n$ implied $216 - 6 = 210$.
- Thus, $r_s = 1 - (201/210)$ which gives a value for r_s $1 - 0.96 = 0.04$.

Table 3. Spearman Rank Correlation

	Size of Drawings	Introvert	Rank	Extrovert	Rank	Difference between the Ranks (d)	d^2
Self Figure	Very Small	15	1	12	5	-4	16
	Average	10	4	28	2	2	4
	Large	9	6	24	4	2	4
House Drawing	Very Small	10	4	8	6	-2	4
	Average	13	2	26	3	-1	1
	Large	11	3	30	1	2	4
							$\sum d^2$ =33.5

The closer r_s is to +1 or -1, the stronger the likely correlation. Thus, the r_s value of 0.04 suggests a weak positive relationship. Hence, in this study, it was found that, there is relationship though a weak one, between the size of drawings and temperaments. In a sense, what the correlation coefficient may mean is that, as one gets closer towards the extrovert end of the temperament scale, the size of his or her drawings increases, which may not always be the case. This is shown in Table 3.

4.3.3. Qualitative aspects: Expression of emotions and size of children's drawings

The overall picture given in the study indicated that sizes of drawings (self figure and house) of extroverted children were generally bigger than their introvert counterparts since a total of about 52 extroverts made average to large self figures and only 12 very small figures while their introverted counterparts drew 19 average to large self figures and also drew almost half (15) very small self figures.

There were four categories of both introverts and extroverts, totalling eight. Some of the children showed some other characteristics that belonged to other groupings of children. For instance some extroverted children showed both characteristics of a sensors and thinkers, or feelers and thinkers etc in their drawings and the same was true for the introverts. To further explain, Figure 2 is a large self figure drawn by a nine year old sensing-extroverted boy to the drawing activity "Draw anything you want". From interviews with him and corroborated by his friends, he is Muslim who enjoys going to the mosque and would not want to waste time playing with his friends after school on Fridays when he has to wait for his father to pick him to the mosque.



Figure 2. Sensing-extroverted boy (aged 9) shows himself as happy and going to the mosque

It is of note that in psychoanalysis, a house or any building is considered a symbol of one's self image which indicates how one views him/herself and would want the world to see him (Hammer, 1980). Thus, the child draws himself and 'his' mosque as well, in the process drawing our attention to his love of being a Muslim and his interest of going to the mosque. In this picture he explained that he was on his way to the mosque wearing his favourite 'smock'.

Sensors are careful about details and this is seen in the red horizontal lines and one diagonal line that suggest patterns in his 'smock'. Mention could also be made of the details of holes shown with small round shapes in the gold necklace around the figure's neck and the folds on his cap. Moreover, it can be seen that he is not wearing any footwear. This may be explained by Halpern's remarks (as cited in Hammer, 1980) that the child's concept of the human body derives from the experiences he has had with his body, the sensations he has known in relation with it, the uses to which he has put it and the perceptions which have come as a result of these experiences as well as his observations and contacts with others. In short, it is possible that he did not show footwear because he has learnt and also observed from others when going to the mosque that the worshippers enter the mosque barefooted. The drawing also showed aspects of a thinker. Thinkers link ideas in a logical way and this is seen in the placement of the mosque at the background to suggest distance.

Figure 3 is a work by a sensing-introvert girl. The figure was described as sad. Apart from the nine year old girl depicting the emotional state of the large self figure through the facial expression, especially the mouth, and the hands clutched in front of her, the attention was paid to the figure's dress, especially the skirt part. A pencil was used for the diagonal lines from one end of the skirt to the other. Several colours were then placed in between the diagonal lines; yellow, red, green, and then red, yellow and green in that order.



Figure 3. Sensing-introverted girl (aged 9) draws herself sad and shows details of her dress

According to Sayōl (2001), in their drawings of facial expressions, children show a preference for the mouth and some other representative indicators to reflect emotion in faces and this may be why she shows a small mouth to indicate her sadness. Furthermore, in the Akan culture, when one is extremely sad, he/she places the hands across the bosom and most times this is accompanied by wailing. The child's portrayal of this stance in her drawing may thus suggest that she is aware of this aspect of her culture. This may be further explained by an aspect of Socio-cultural theory which stresses how children integrate culture into their reasoning; and the fact that as a child's facility to discriminate details develop, the details that may be categorised and shown in his/her work will be that which is culturally significant to him or her (Thompson, 2008; Clarke, 1979).

Almost all the introverted children from the local authority and the metropolitan schools depicted figures that showed facial expressions of happiness, whereas most of those in the international school and about five children from the metropolitan school made drawings of themselves that seemed more expressive than the usual facial expression of happiness. Figure 4 is one such drawing made by an eight year old girl who did not just depict a small happy person (who was herself) but portrayed the cause of the figure's happiness (the figure in green and yellow outfit beating the red and yellow clothed figure and making him shout 'help me') in her drawing. She thus showed her joy in seeing the figure in red shirt shouting for help by putting one hand at her back and using the upturned thumb of the other hand to point at them, while smiling with her eyes closed. In this wise, it expresses an introverted intuitive child's work.

Intuitive-extroverts creatively make situations their own just like their introvert counterparts; but they tend to be more fun. The cartoon depicted in Figure 5 was explained to be a favourite character in some cartoon series the extroverted eight year old child artist enjoyed watching.

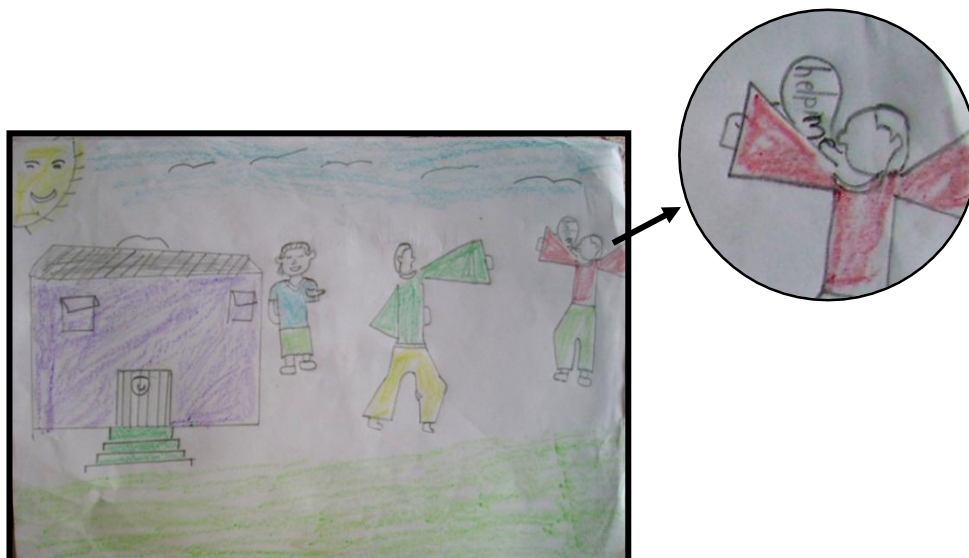


Figure 4. An introverted girl (aged 8) displays an active imagination and orderliness characteristic of intuitive-introverts in her drawing

He identified with the cartoon; perhaps that accounted for drawing a cartoon rather than a 'human' figure to show how happy he was. What was implied from this drawing and series of other drawings that were produced by this child and other children was that children are influenced a lot by their environment (including their way of life or their culture; what they watch, read; peers and family). Thus, the aspect of socio-cultural theory which emphasizes children incorporating their way of life into their reasoning and self understanding also applies here (Thompson, 2008).



Figure 5. An intuitive-extroverted boy's depiction of himself as a cartoon character because he was happy



Figure 6. A drawing by a ten year old introverted boy portraying the thinking attitude on how things are related

Another category of introverts is the thinking-introverted children. Thinkers understand reality through analysis; that is they understand how things are related. Figure 6 depicts two figures. The first figure is a big

headed figure that is very obvious when the picture is looked at. The second and not so obvious figure is a smaller figure (circled red) that is drawn attached to middle half of the big headed figure.

The explanation that the child gave was that the big headed figure was pregnant thus the depiction of the smaller figure in its 'belly'. It may be evident that the child who drew this figure has an intellectual understanding of things and how they are related and that accounted for not just drawing a figure with a big belly but depicting the 'child' in the 'belly' as well.

It is worth noting that from earlier interviews with this child, he revealed that he had a pregnant sister at the time he was brought to the orphanage (and subsequently enrolled in the school) about two and half years earlier. From observations, the guardian's report and interviews from some of the other children in his class, he was an extremely withdrawn child who did not easily mix with the other children. This particular drawing then may be portraying his feeling of mistrust, loneliness, and fear, judging from the way the drawing is cautiously pegged at one corner of the paper (Hammer, 1980). Moreover, his detail depiction of this subject matter of a showing the 'baby' in the belly of a pregnant woman based on the drawing activity "Draw anything you want"; may be in accordance with Luquet's finding that children consistently draw elements which they consider important and then include aspects which are known to be there but are not visible (Naumberg, 1955). The picture may also indicate that he still did not feel at home that was why he had not learnt to easily mix with the other children.

Figure 7 depicts three figures. The figure almost at the centre of the picture that seems closest to the viewer (wearing a pair of green coloured trousers) is the biggest of the three, while the other two (one on each side of centred figure) are made smaller maybe to denote that they are farther away. Closely related to this is the blue waves on which each figure is skiing. The wave under the biggest figure (which he described as himself) has been raised higher than the other two. The concept of space of a nine year old thinking-extroverted boy was thus brought to bear.



Figure 7. A thinking-extrovert boy (aged 9) used different sizes of figures to show perspective.

One extrovert expressed two emotions, sadness and anger in a single drawing (Figure 8). This feeling-extrovert explained that she felt angry for not being able to defend herself when her friends teased her, since she was a petite child for her age; and then cried as a result.



Figure 8. Girl (aged 9) drew an angry figure that is crying characteristic of feeling-introverts who are very expressive in portraying feelings.

According to Precker (1950), exaggerated size of drawing may be taken as a clue of aggressiveness or motor release (as cited in Hammer, 1980). This may explain the large size of the drawing in relation to the size of paper. The tears (denoted with a straight line under each eye) running down the cheeks of the figure, a drop of liquid between the nostrils, the open mouth with teeth and the stance of the figure with her pained expression may be indicative of the hostility she was feeling towards those who were teasing her. Moreover, with regards to showing emotions in their drawings, children show a preference for the mouth and some other representative indicators over the eyebrows to reflect emotion in faces (Hammer, 1980).

Figure 9 was made by a feeling-introverted boy aged 8. He described it as a sad scene. Two obvious figures showed in the picture. The first figure is outlined in green and is in front of the tree which is almost at the centre of the picture whereas the other outlined in pink is behind it. There is a skeleton outlined in red showing only the skull, neck and some part of the ribcage. Between the half skeleton and the green figure, is another figure in pencil, almost invisible lying on what he called a bed. The child artist explained that the green was his self figure and added that he was crying under the tree because someone had died. The pink figure he said was his mother and made no comment on the picture again.



Figure 9. A small self figure drawn by an introverted boy (aged 9) amidst a mood of sadness in his work

The centre of attraction in this drawing seems to be the tree. It has been drawn larger and coloured solidly compared to the figures that have been only outlined. The size and manner in which the tree has been depicted may indicate that something important to this child may have happened under that tree. It is possible that the dead person under the tree was significant to this child that is why he explained that he was crying because someone had died. This may buttress DiLeo's finding in his book "Interpreting Children's Drawings" where he explained that features depicting ideas significant to young artists are drawn larger than less significant thoughts (McDonald, 2002).

5. Pointers for education

Answering the research question as to how can children's emotional personalities be used to enhance teaching and learning, it was noted that Art activities the children indulged in were of themselves therapeutic and especially where some children were very aggressive, they were able to channel their energies in constructive ways through their drawings. This implied that teachers could use art as a form of therapy to handle children's emotional outbursts and as a result tap into the principle that positive emotions such as joy, contentment, acceptance, trust and satisfaction can enhance learning and negative emotions including anxiety, anger, or depression wane learning (Goleman, 1995; Vail, 2001).

Moreover, art could be used to assess children's temperament. However, categorising children into different temperaments should not be the focus but using that knowledge to handle the children and teach them better and also aid them learn better since their strengths and weaknesses would be known.

Furthermore, the finding that excessive portrayal of some of the temperament traits in the form of negative emotions such as anger, sadness, depression, bullying may be indicators of emotional problems could be a cue for teachers to take a second look at some of these traits as they show in their pupils. They could draw those identified children with emotional problems closer and encourage them instead of being hard on them when their classroom performances are below average. Where necessary these situations could be channelled to guidance and counselling units or art therapy units for appropriate measures to be taken. These could prevent onsets of other behaviour disorders and psychiatric disorders especially schizophrenia, since such children (most of them introverts) are not so open may be more susceptible since they become more depressed and have more mood swings. Some extroverts though may also be prone to these disorders especially since they are more hysterical and compulsive (J.B. Asare, personal communications, May 5, 2008) and should be factored in any intervention programme designed.

6. Conclusion

A child's art work reveals his/her emotional personality, which is his/her temperament. Emotions affect learning and memories, therefore through art, a child's temperament can be understood. The ultimate aim of achieving effective teaching and learning could thus be achieved in the light of teachers knowing the kinds of pupils they handle and subsequently adapting themselves in terms of methodology, and making the classroom environment friendlier and much happier for learning.

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