

## RESEARCH PAPER

---

# CREATIVE ARTS TEACHERS JOB SATISFACTION IN THE IMPLEMENTATION OF INCLUSIVE CREATIVE ART EDUCATION

---

William Kwabena Nantwi<sup>1\*</sup>, Harry Barton Essel<sup>2</sup> and Patrick Osei-Poku<sup>2</sup>

<sup>1</sup>Offinso College of Education, Offinso Ghana

<sup>2</sup>Department of Educational Innovations in Science and Technology, Kwame Nkrumah University of Science and Technology, Kumasi Ghana.

\*Corresponding author: [williamnantwi28@gmail.com](mailto:williamnantwi28@gmail.com)

### ABSTRACT

*Job satisfaction of teachers and educational administrators are vital to effective implementation of inclusive Creative Arts curriculum. Teachers' performance could be influenced by their level of Job satisfaction. However, Creative arts Teachers do not have adequate financial and material supports for inclusive education. This study examined teachers' job satisfaction and how it affects the implementation of inclusive Creative Arts curriculum. In this study, the descriptive research method with a 5-point Likert scale questionnaire consisting 20 items was used. Census with disproportionate stratified sampling technique was employed to sample 226 teachers in Offinso Municipality, Ghana. The study was underpinned by Maslow's theory of human needs and Herzberg's Motivation-Hygiene theory which posits that motivation factors in an organization have the potential to generate job satisfaction. The study found that 71.7% of teachers are dissatisfied with their job compensation and 73% are dissatisfied with the available teaching logistics needed for the effective implementation of inclusive Creative Arts curriculum. Teachers' job satisfaction has an impact on inclusive education for all children. Therefore, the Ministry of Education and Government must provide teachers with improved working conditions, logistics, attractive compensations and work incentives.*

**Keywords:** Job satisfaction, competence, inclusive education, creative arts, teachers' perception

## **INTRODUCTION**

Inclusivity is one of the key crosscutting issues in the National Teacher Education Curriculum Framework and it is backed by Ghana's philosophy for education which seeks to develop the citizen to become useful to his or her society and the nation as a whole (NTECF, 2019). Inclusive education was borne out of the universal human right for all learners, including those who have all forms of physical, intellectual, and mental disabilities and the call for inclusive education is supported by local and international human right laws (UNESCO, 2006). Ghana's 1992 constitution states that, "All persons shall have the right to equal educational opportunities and facilities and with a view to achieving the full realization of that right thus; basic education shall be free, compulsory and available to all" (Government of Ghana, 1992, article 25, section 1(a)). The key to success in teacher education depends on the cross-cutting issues (NTECF, 2019). To some extent the effective implementation of inclusive education depends on effective delivery of the Creative Arts curriculum (Valentino, 2016). An effective Creative Arts curriculum offers physical and intellectual experiences and processes which allow one thing to lead to another. This promotes participation of pupils with diverse learning styles and educational needs. Undoubtedly, if well taught, the Creative Arts curriculum will enable all children to be useful to themselves and the society at large regardless of their physical or intellectual disabilities.

Alter, Hays and O'Hara (2009) as cited in (Boafo, 2010) has bemoaned the poor attitudes and perception of Creative Arts teachers in the discharge of their mandates. To take up the mantle, Creative Arts teachers are expected to show mental fortitude, willingness, knowledge, and understanding of the inclusive education concept, however, there is still much to be done to get them ready for the task. Majority of teachers still

lack adequate knowledge, and attitude for effective inclusive practices (Valentino, 2016). This makes it difficult to achieve successful implementation of inclusive education.

It is imperative to appreciate the fact that, attitude and perception of teachers may be influenced by their job satisfaction. According to Kumari (2011), job satisfaction is considered as one of the wheels on which productivity among employees (teachers) strive. Happier employees are more productive. Job satisfaction is determined by salary, promotion, resources, scope of work, condition of service and relationship with colleagues and supervisors. Lack of satisfaction leads to laxity, absenteeism and low productivity (Levinson, 1998). Teachers' effective classroom management, class control and instructional strategies may depend on their job satisfaction.

An inclusive art classroom prepares children to acquire social, mental and manipulative skills needed for independent life (Guay, 1994; Alter, Hays, and O'Hara, 2009). Yet, Teachers and learners do not have adequate financial and material support for inclusive education (Agbenyega, 2007). There are no incentives and compensations to teachers for the additional tasks that come with the implementation of inclusive education. Records in 2017 show that, most pupils with disability drop out of school and few who are able to progress do not perform well academically (UNESCO, 2006).

Again, the challenges faced by learners with special educational needs are very well discussed in the academic circle, but only few studies have been undertaken to evaluate Creative Arts teachers' job satisfaction in the implementation of inclusive Creative Arts education (Muller, Nutting, and Keddell, 2019; Parke, 2012 and Fuss, 2015). The study therefore assessed Creative Arts teachers' perception of job satisfaction under the

inclusive education policy and its effect on implementation of an inclusive art curriculum.

### **Objective**

1. To assess Creative Arts teachers Job satisfaction under the inclusive education policy
2. To examine the impact of Creative Arts teachers' Job satisfaction on the implementation of Inclusive Creative Art curriculum.

### **Research Questions**

What is Creative Arts teachers' Job Satisfaction under the implementation of Inclusive education policy?

To what extent will Creative Art teachers' Job satisfaction influence the implementation of the Inclusive Creative Arts Curriculum?

### **Hypotheses**

**H<sub>0</sub>1:** Job satisfaction of Creative Art teachers is not likely to encourage inclusive education for all children.

**H<sub>0</sub>2:** Job satisfaction of Creative Art teachers is not likely to encourage pupils' active class participation.

**H<sub>0</sub>3:** Job satisfaction of Creative Art teachers is not likely to reduce incidences of school dropout among pupils.

### **Theoretical underpinning of the study**

The study is underpinned by Herzberg's Motivation-Hygiene Theory also known as Herzberg's Two-factor theory. According to Herzberg, motivation and hygiene are the key factors that drive employees' job satisfaction. The theory posits that *motivation factors* in an organization have the potential to generate job satisfaction and they come in the form of reward, responsibility, growth and promotion. However, lack of *hygiene factors* generates dissatisfaction among employees. For instance, poor relationship

among superiors and subordinates, lack of job security, unfriendly policies, poor pay/salary, working tools and materials and irregular flow of electricity militate against optimal performance of employees (Herzberg, 1976).

This theory has been used by several authors and researchers. Nonetheless, it has been criticized for its disregard for individual differences thus people do not react to stimuli in the same manner. Generally, teachers are confronted with several challenges in their work. But then, the nature of Creative Arts education in the Primary schools requires dedicated and committed teachers to combine both theory-based and practice-based pedagogical strategies for effective curriculum delivery. Teachers' commitment is a trait that comes as a result of job satisfaction hence the adoption of Herzberg's Motivation-Hygiene Theory for the study. The Theory was adopted due to its versatility to examine all factors that account for employees' job satisfaction in an organization. It emphasizes on leadership, logistics, motivation and relationship that exist among superiors and subordinates in an organization.

### **Review of Related Literature**

#### **Concept of Inclusive Education**

Universally, Inclusive education has been accepted as an educational development strategy intended to create opportunity for learners with diverse educational needs in mainstream regular education (Ahmed, Sharma & Deppeler, 2012). Banerjee & Khare (2020) also stressed that Inclusion is an educational philosophy which recognizes the potentials of children with special educational needs and allows them to be integrated into mainstream education by means of flexible curriculum, appropriate teaching methods, support services and community partnership. It must be emphasized that inclusion should be considered as a long-term process which needs time, effort, skills, know-how, pedagogic

abilities and strong conviction by all those involved in students' education, particular school administrators and teachers. Globally, the goal of inclusive education is to create equitable learning opportunities for all children of school-going age to have access to education and be treated in the same way as their colleagues without disabilities. This agenda aligns with Classical Liberal Theory of Equal Opportunities by Sherman & Wood.

The concept of inclusive education is based on the fact that all children of school-going-age regardless of their social, cultural and economic background will be given equal opportunity to enroll in schools (UNESCO, 2008). UNESCO highlights that education system, school administrators, curriculum developers and implementers should focus on creating inclusive environments that uphold individual differences, values of respect and understanding of cultural diversity (Eunice, Nyangia, & Orodho, 2015).

There is a global acceptance of inclusive education policies and procedures in most countries since the concept is underpinned by fundamental human right laws. However, curriculum implementers and school administrators are still beset with infrastructural challenges, lack of logistics and misconceptions of its viability (Cambridge-Johnson, Hunter-Johnson, & Newton, 2014). All over the world, Inclusive education paves way for learners with disability to be integrated into regular classrooms and be guided by generalist teachers. It is therefore imperative to recognize children with diverse learning needs and develop inclusive plans to assist them to overcome their challenges (Dev & Kumar, 2015).

The philosophy backing the concept of inclusive education increased popularity across the world after the presentation at the Salamanca World Conference on inclusive and special needs education in 1994. From this time, curriculum planners and implementers

in different countries worldwide realized the need to introduce educational policies that aims at providing educational opportunities for all children with diverse needs (Opoku, Agbenyegah, Mprah, Mckenzie, & Badu, 2017).

In the Ghanaian context, the operational definition for inclusive education is important in providing understanding on how the programme must be implemented. However, the definition of inclusive education regarding its scope has been veiled in controversy due to the way it has been misunderstood, and this adversely affects the way inclusive education ought to be implemented (Ainscow, Booth, & Dyson, 2006; Kauffman, 1999). One belief is that, inclusive education should focus on the integration of children with varying degrees of disabilities to be accommodated in the regular classroom (Opoku et al., 2017). The mission of *inclusion Ghana*, a branch of Inclusion International (a network group established in 2009) is to bring to the lowest level, all forms of stigmatization that often deprive young people from different cultural and social background from being integrated fully into the society. They seek to provide all-inclusive opportunities for all person with all forms of disabilities (Botts & Owusu, 2013).

### **Job Satisfaction**

Many scholars and researchers have attempted to define job satisfaction in various ways. Locke (1969) explains job satisfaction as a gratifying experience that results from the assessment of one's occupation. Again, Spector (1997) describes job satisfaction as the degree to which employees find contentment or discontentment with their assigned duties at workplace. To some authors, job satisfaction is the contentment employees have about their job (Ivancevich, Olekalns, & Matteson, 2005). In support of previous authors, Kumari (2011) defines job satisfaction as a set of feelings that drive the behavior of employees towards their job.

Job satisfaction is considered as one of the wheels on which productivity among employees (teachers) strive. Happier employees are more productive (Spector, 1997). Job satisfaction is determined by salary, promotion, resources, scope of work, condition of service and relationship with colleagues and supervisors. The lack of satisfaction leads to laxity, absenteeism and low productivity. Teachers' effective classroom management, class control and instructional strategies may depend on their job satisfaction (Levinson, 1998).

To assess the impact of job satisfaction on employees' performance, several studies have been conducted, they include, the Hawthorne Studies (1924-33), Principles of Scientific Management (1911), and Hierarchy of Needs or Motivation Hygiene (1943). Motivation at workplace goes a long way to increase employees' job satisfaction. According to Maslow's theory of human needs, when a person's need is realized it does no longer stimulate. This however, suggests that a higher level of need should be satisfied to motivate an employee to feel gratified (Luthans, 2005).

Several factors influence Job satisfaction of employees. For example, a worker's relationship with superiors, the working environment, logistics, and the extent of contentment in their work etc. (Mankoe (2002)). Armstrong (2006) identified teamwork, job challenges, and low wages as key elements that influence employees' job satisfaction. Again Pocztowski (2003, p 450) explains that job satisfaction is often determined by salary, promotion, the scope of work, resources, relationship with supervisors, conditions of service, interpersonal relationship and corporate reputation. The conceptual framework delves into theories that suggest that salary, scope of work, promotion, recognition, condition of service and relationship with colleagues and superiors contributes to job satisfaction. According to

Sypniewska & Barbara (2014) factors that influence the feeling of job satisfaction include interesting work, good salary, job advancement, good supervisors and cordial relationship with other co-workers.

Considering Abrahams Maslow's hierarchy of need (1954), when the basic needs such as water, food and shelter of an individual are not fulfilled it affects their general wellbeing and job performance. The process theory of job satisfaction propounded by Adam (1963) and Vroom (1982) indicates that the behaviour of employees towards work is based on their needs. Adam and Vroom explain that employees consider their job as sequence of input and outcomes. Input factors include experience, ability and effort while outcome consist of salary, recognition and promotion. The theory state that Job satisfaction is based on employee's perception of how fairly they are treated in comparison with coworkers. When chances are created for promotion and other opportunities the more likely the individual becomes fulfilled with his or her job.

#### **Inclusive Education Policy and Creative arts Education**

In 2015, the government of Ghana developed the inclusive education policy in line with the international policies and treaties on inclusive education. The policy document defines the strategic guidelines for the smooth implementation of the policy to ensure every child of school-going age has access to regular education. This policy is underpinned by the 1992 constitution, the National Development Agenda, the Education Strategic Plan, the Disability Act, and International Commitments to achieve national as well as international goals for creating an environment for addressing the diverse educational needs of Ghanaians. The primary goal of the Inclusive Education policy is to redevelop effective strategies and all-inclusive pedagogical practices to respond to the diverse needs of all learners within the framework of Universal

Design for Learning and Child Friendly School Concept. The benefit of the inclusive policy is expected to create hands on learning opportunities for all learners including the disabled and non-disabled through Creative Arts education. According to Muller, Nutting, and Keddell, (2019) and Fuss (2015), the Creative Arts activities improve children’s ability to read social situations and, develops their social and emotional skills. The Creative Arts provide psychotherapy that empowers children with disabilities the wherewithal to express themselves through painting, drawing, music making and music listening.

## **MATERIALS AND METHODS**

### **Design and Instrumentation**

The study used quantitative design with descriptive research methods and questionnaire as data collection instrument. Census with disproportionate stratified sampling technique was employed to sample 226 teachers from 18 Primary schools within the Offinso Township using Krejcie and Morgan sample size formula. Using the Krejcie and Morgan sample size formula for the population of 548 class teachers, the study arrived at 226. This is shown in the calculation below;

$$\begin{aligned} \text{Population size (N)} &= 548 \\ \text{Chi square (x2)} &= 3.841 \\ \text{Margin of error (e)} &= 0.05 \\ \text{Population of proportion (P)} &= 0.5 \\ \text{Sample size (n)} &= x^2 NP (1-P) \\ &= e^2 (N-1) + x^2 P (1-P) \\ n &= \frac{3.841 \times 548 \times 0.5 \times (1-0.5)}{(0.05)^2 \times (548-1) + 3.841 \times 0.5 \times (1-0.5)} \\ n &= 526.217 \\ &= 0.025 \times 547 + 0.96025 \\ n &= 526.217 \\ &= 1.3675 + 0.96025 \\ n &= 526.217 \\ &= 2.32775 \\ n &= 226.0625 \\ n &= \mathbf{226} \end{aligned}$$

### ***Krejcie and Morgan sample size formula (1970)***

A 5-point likert scale questionnaire with 20 items going from strongly disagrees to strongly agree was made available to the respondents through School staff online platforms. The questionnaires were uploaded onto Google document and sent through online and social media platforms specifically WhatsApp and Emails.

## **Reliability and Validity of the Instrument**

The questionnaire was pre-tested in Abofour in the Offinso South Municipality on 20 creative Arts teachers in public basic schools. The researcher used the pilot test data to test for reliability, using Cronbach's Alpha test. The Cronbach's Alpha test for each component of the questionnaire produced an alpha score of at least 0.7 ( $\alpha \geq 0.7$ ) indicates that the entire questionnaire is reliable (Cronbach, 1983). The study further used the pilot data to test for validity using the convergent validity method. In this, the factor loading analysis was used to enable the researchers examine the phenomenon easily. According to Awang, Afthanorhan, Mohamad & Asri (2015) any item which has a factor loading less than 0.6 and R2 less than 0.4 has a weak influence on the variable and therefore should be deleted from the measurement model. In this study, all factor loading scores were more than 0.6 indicating that all items had strong influence on the variable and can therefore be considered valid.

## **Data Analyses**

The Statistical Package for Social Sciences (SPSS) application software, Microsoft Excel programme and ATLAS. were employed for data analysis. Raw data collected from the field through questionnaires were categorized, coded and analyzed through descriptive, narrative and econometric analysis and statistics that includes frequencies, means and percentages based on the research objectives, questions and hypotheses.

The study further adopted binary logistic regression to estimate the impact of job satisfaction of Creative Arts teachers in the implementation of inclusive creative Art education in the selected schools. The mean score range of 1.00-1.49; 1.50-2.49; 2.50-3.49; 3.50-4.49 and 4.50-5.00 represented strongly disagree, disagree, neutral, agree and strongly agree respectively.

## **Ethics**

The researcher obtained research permit from Directorate of Ghana Education Service; Copies of the research permit were presented to Head teachers and teachers of Basic schools to seek for their participation in the study.

## **PRESENTATION OF RESULTS AND DISCUSSIONS**

### **Socio-Demographic Characteristics of Respondents**

The socio-demographic characteristics included in the study comprise age, sex, highest educational level, religion, and respondents' years of work, rank of respondents, marital status and whether or not the respondents have children. A summary of the results is displayed in Table 1.

**Table 1: Socio-Demographic Characteristics of Respondents**

Variable	Category	Frequency	Percentage (%)
Age	21-30	100	44.2
	31-40	99	43.8
	41-50	23	10.2
	Above 50 years	4	1.8
Sex	Male	113	50.0
	Female	113	50.0
Highest Educational Level	Diploma	107	47.3
	Degree	108	47.8
	Masters	11	4.9
Religion	Christianity	204	90.3
	Islamic	19	8.4
	Traditional1	3	1.3
Number of Years Worked	Less than 5 Years	85	37.6
	5-10 Years	97	42.9
	Above 10 Years	44	19.5
Respondents Rank	Superintendent I	79	35.0
	Superintendent II	19	8.4
	Senior Superintendent I	11	4.9
	Senior Superintendent II	32	14.2
	Principal Superintendent	50	22.1
	Assistant Director I	2	0.9
	Assistant Director II	33	14.6
Marital status	Single	124	54.9
	Married	102	45.1
Children	Yes	126	55.8
	No	100	44.2

*Source: Field Data, 2021*

The results from Table 1 show that majority of the respondents were aged between 21 to 30 years, representing 100 (44.2%). Following closely are those aged between 31 to 40 years, also representing 99 (43.8%). Also, the results indicate that 23 (10.2%) and 4 (1.8%) of the respondents were aged between 41 to 50 years and above 50 years respectively.

It can also be observed from Table 1 that, with regards to sex, the results were evenly distributed. The results show that 113 (50.0%) of the respondents were females while

the other half were males. With regards to educational level, the results show that 108 (47.8%) of the teachers had attained degree education. Also, the results show that 107 (47.3%) and 11 (4.9%) of the respondents had attained Diploma and Maters degrees respectively. The results in relation to children show that majority of the respondents representing 126 (55.8%) indicated that they have children while 100 (44.2%) reported that they do not have children.

Furthermore, the results with reference to the number of years worked, the results show that majority of the respondents representing 97 (42.9%) had worked for 5 to 10 years. Also, the results show that 85 (37.6%) of the respondents had worked for less than 5 years while 44 (19.5%) of them had workers for over 10 years. With regards to rank, the results show that over a half of the respondents representing 124 (54.9%) were single while 102 (45.1%) of them were married. Lastly, the results presented in Table 1 show that with regards to the rank of respondents, majority of the respondents (79) representing 35.0% had attained the rank of Senior Superintendent I, while 19 of them had attained the rank of Senior Superintendent II. On the other hand, the results in Table 1 indicate that 11 (4.9%), 32 (14.4%) and 50 (22.1%) of them had attained the rank of Senior Superintendent I, Senior Superintendent II and Principal Superintendent respectively. Additionally, the results show that 2 (0.9%) and 33 (14.6%) of the respondents had attained the rank of Assistant Director I and Assistant Director II respectively.

**Research Question i:** What is Creative Arts teachers' Job Satisfaction under the implementation of Inclusive education policy?

This section of the study focuses on the research objective one which seeks to assess teachers' perception of job satisfaction under the inclusive education policy.

This section covers results and discussions on teachers' perception of job satisfaction under the inclusive education policy. Respondent were asked to express the extent of their satisfaction or dissatisfaction to indicators used to measure the teachers' perception of job satisfaction under the inclusive education policy. With regards to this study, 20 job satisfaction indicators were used to measure teachers' perception of job satisfaction under the inclusive education policy. The analyses are grouped into two parts namely: descriptive analysis, and econometric analysis

### ***Descriptive analysis***

The first analysis for the responses was done descriptively, using mean scores and standard deviations for each job satisfaction indicator. The mean score range of 1.00-1.49, 1.50-2.49, 2.50-3.49, 3.50-4.49 and 4.50-5.00 represents very dissatisfied, dissatisfied, neutral, satisfied and very satisfied to job satisfaction indicators respectively. In addition, the job satisfaction indicators measuring teachers' perception of job satisfaction under the inclusive education policy were ranked. The results of the descriptive analysis are presented in Table 2.

Table 2: Job Satisfaction of Creative arts under the Inclusive Education Policy

Job Satisfaction indicator	VD	D	N	S	VS	MEAN	STD	RANK
Compensation	34 (15.0%)	128 (56.6%)	0 (0.0%)	48 (21.2%)	16 (7.1%)	2.49	1.186	19 <sup>th</sup>
Security	0 (0.0%)	18 (8.0%)	0 (0.0)	35 (15.5%)	173 (76.5%)	4.61	0.848	2 <sup>nd</sup>
Social service	0 (0.0%)	17 (7.5%)	11 (4.9%)	82 (36.3%)	116 (51.3%)	4.31	0.876	3 <sup>rd</sup>
Ability utilization	0 (0.0%)	15 (6.6%)	0 (0.0%)	33 (14.6%)	178 (78.8%)	4.65	0.792	1 <sup>st</sup>
Technical Supervision	0 (0.0%)	21 (9.3%)	10 (4.4%)	89 (39.4%)	106 (46.9%)	4.24	0.912	4 <sup>th</sup>
Human Relations Supervision	13 (5.8%)	22 (9.7%)	0 (0.0%)	92 (40.7%)	99 (43.8%)	4.07	1.160	5 <sup>th</sup>
Variety	21 (9.3%)	33 (14.6%)	39 (17.3%)	66 (29.2%)	67 (29.6%)	3.55	1.303	15 <sup>th</sup>
Moral values	23 (10.2%)	49 (21.7%)	23 (10.2%)	46 (20.4%)	85 (37.6%)	3.54	1.433	16 <sup>th</sup>
Activity	16 (7.1%)	28 (12.4%)	29 (12.8%)	70 (31.0%)	83 (36.7%)	3.78	1.260	11 <sup>th</sup>
Achievement	26 (11.5%)	51 (22.6%)	55 (24.3%)	46 (20.4%)	48 (21.2%)	3.17	1.310	18 <sup>th</sup>

## Creative Arts Teachers Job Satisfaction

The results presented in Table 2 show that 15 (6.6%) of the teachers indicated that they are dissatisfied with being able to utilize their ability in school. On the other hand, the results show that 33 (14.6%) of the teachers and 178 (78.8%) of them indicated that they are satisfied and very satisfied with their ability utilization respectively. Again, the results show that none of the teachers was very dissatisfied or had a neutral opinion on ability utilization. With a mean score of 4.65 (std. deviation=0.792), depicting “Very Satisfied” and ranked first among indicators of job satisfaction among teachers, it can be inferred that the teachers are content with their ability utilization in school. This finding corroborates a study conducted by Willard (2004) aimed at examining teachers job satisfaction in selected schools that are implementing inclusion model in Georgia and found that teachers are satisfied with their ability utilization.

From Table 2, the results show that 18 (8.0%) of the teachers indicated that they are dissatisfied with their job security. On the other hand, the results show that 35 (15.5%) of the teachers and 173 (76.5%) of them indicated that they are satisfied and very satisfied with their job security respectively. Additionally, the results show while 11 (4.9%) of the teachers held a neutral view with regards to their job security, none of them was however was very dissatisfied with their job security. Having a mean of score of 4.61 and a standard deviation of 0.848 which indicates “Very Satisfied”, this factor is ranked second, implying that teachers are comfortable with their job security in the schools. This finding is consistent with findings by Baluyos, Rivera, and Baluyos (2019) that highlighted that teacher are very satisfied with their job; hence their job security influence their work performance this finding is in consonant with Herzberg’s Motivation-Hygiene Theory which places premium on job security as a key factor for determining workers performance.

Recognition	0 (0.0%)	19 (8.4%)	22 (9.7%)	114 (50.4%)	71 (31.45)	4.05	0.865	6 <sup>th</sup>
Authority	0 (0.0%)	26 (11.5%)	49 (21.7%)	86 (38.1%)	65 (28.8%)	3.84	0.971	10 <sup>th</sup>
Advancement	18 (8.0%)	41 (18.1%)	33 (14.6%)	65 (28.8%)	69 (30.5%)	3.56	1.306	14 <sup>th</sup>
School Policies	22 (9.7%)	34 (15.0%)	33 (14.6%)	80 (35.4%)	57 (25.2%)	3.51	1.28	17 <sup>th</sup>
Logistics	75 (33.2%)	90 (39.8%)	39 (17.3%)	22 (9.7%)	0 (0.0%)	2.04	0.90	20 <sup>th</sup>

**Source:** Field Data (2022); VD=very dissatisfied; D=dissatisfied; N=neutral; S=satisfied; VS=very satisfied; STD=standard deviation

Again, it is observed in Table 2 that 17 (7.5%) of the teachers indicated that they are dissatisfied with their social service, that is the services they render to people in the community. However, the results show that 11 (4.9%) of the teachers are neutral, 82 (36.3%) are satisfied and 116 (51.3%) are very satisfied with the social services they render in the community. Again, the results show that none of the teachers was very dissatisfied with the social services rendered in the society to other people. With a mean score of 4.31 (std. deviation=0.876), depicting "Satisfied" and ranked third amongst indicators of job satisfaction among teachers, it can be inferred that the teachers are pleased with the social services they render in the community. This finding corroborates findings by Willard (2004) who reported that teachers are satisfied with the social services they render in society.

Furthermore, the result in Table 2 show that 21 (9.3%) of the teachers indicated that they are dissatisfied with their technical supervisory competence in school (technical competence). On the other hand, the results show that 10 (4.4%) of the teachers were neutral, 89 (39.4%) were satisfied and 106 (46.9%) of them very satisfied respectively with their technical supervisory competence in school. Again, the results show that none of the teachers was very dissatisfied with their technical supervisory competence in school. With a mean response of 4.24 (std. deviation=0.912), indicating "Satisfied" and ranked fourth, it implies that teachers are content with their technical supervisory competence in school. This finding corroborates findings by Baluyos, Rivera, and Baluyos (2019) who found that the teachers' satisfaction towards their heads' supervision has an enormous impact on teachers work performance.

Also, the results presented in Table 2 show that 13 (5.8%) of the teachers were very dissatisfied and 22 (9.7%) of them were dissatisfied with how their Head-teachers manage the school (human relations-supervision). On the other hand, the results show that 92 (40.7%) of the teachers and 99 (43.8%) of them indicated that they were satisfied and very satisfied with

how their Head-teachers manage the school (human relations-supervision). However, none of the teachers had a neutral opinion with regards to how their Head-teachers manage the school (human relations-supervision). Having a mean of score of 4.07 and a standard deviation of 1.160 which indicates "Satisfied", this factor is ranked fifth, implying that teachers are comfortable with how their Head-teachers manage the school (human relations-supervision). This finding is consistent with findings by Willard (2004) that revealed that teachers are satisfied with how their Head-teachers manage the school.

Moreover, the results presented in Table 2 indicated that 19 (8.4%) of the teachers indicated their dissatisfaction with the recognition they have in school. On the other hand, the results show that 22 (9.7%) of the teachers were neutral, 114 (350.4%) were satisfied and 71 (31.4%) of them very satisfied respectively with recognition they have in school. Again, the results show that none of the teachers was very dissatisfied with recognition they have in school. With mean of score of 4.05 (standard deviation= 0.865) which denotes "Satisfied", this factor is ranked sixth, implying that teachers are pleased with the recognition they have in school. This finding is consistent with findings by Travers and Cooper (2018) who found that lack of teacher recognition or status and promotion are the major predictors of job dissatisfaction among teachers.

Also, the results in Table 2 show that 30 (13.3%) of the teachers were very dissatisfied and 25 (11.1%) of them were dissatisfied with their responsibilities in school. On the other hand, the results show that 79 (35.0%) of the teachers and 92 (40.7%) of them indicated that they were satisfied and very satisfied with their responsibilities in school. However, the results show that none of the teachers had a neutral opinion with regards to their responsibility in school. Having a mean of score of 4.03 and a standard deviation of 1.026 which indicates "Satisfied", this factor is ranked seventh, implying that teachers are content with their responsibilities in school.

## Creative Arts Teachers Job Satisfaction

This finding is consistent with findings by Willard (2004) that revealed that teachers are satisfied with their responsibilities and roles in school

Lastly, the results show teachers are satisfied with other job satisfaction indicators included in the study such as achievement, variety, activity and moral values among others.

However, the results show that teachers are dissatisfied with their job compensation (including salaries, fringe benefits and incentives). Also, the results show that teachers are dissatisfied with the provision of teaching logistics (such as syllabus, text books, chalks) to aid their instructional activities. The mean statistics have been represented in fig. 1

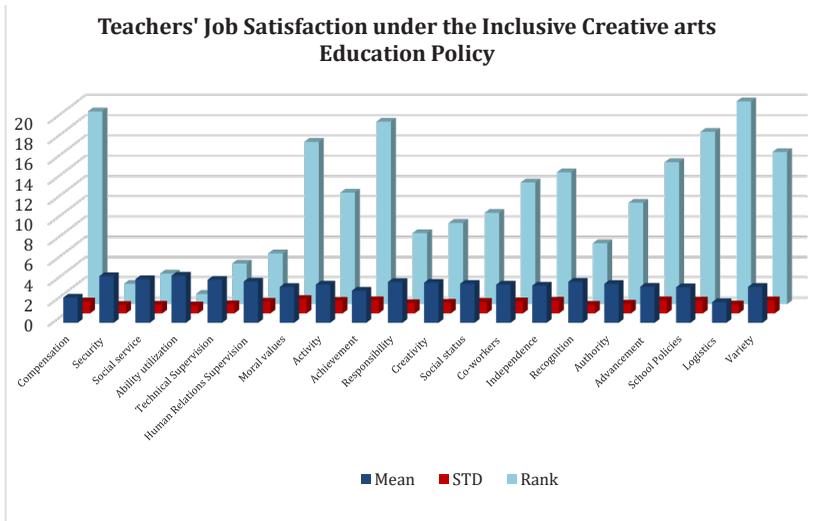


Fig. 1: Creative Arts Teachers' Job Satisfaction under the Inclusive Education Policy

### Field Data, 2022

**Research Question ii:** To what extent will Creative Art teachers' Job satisfaction influence the implementation of the Inclusive Creative Arts Curriculum?

#### Econometric Analysis

This section of the study focused on the impact of Creative Arts Teachers' job satisfaction on the implementation of inclusive arts curriculum. The study made use of research hypotheses which involved job satisfaction and inclusive education indicators. The hypotheses were further distributed as follows;

- i. H<sub>0</sub>: Job satisfaction of creative art teachers is not likely to encourage inclusive education for all children.
- ii. H<sub>1</sub>: Job satisfaction of creative art teachers is more likely to encourage inclusive education for all children.

iii. H<sub>0</sub>: Job satisfaction of creative art teachers is not likely to encourage pupils' active class participation.

iv. H<sub>1</sub>: Job satisfaction of creative art teachers is more likely to encourage pupils' active class participation.

v. H<sub>0</sub>: Job satisfaction of creative art teachers is not likely to reduce school dropout among pupils.

vi. H<sub>1</sub>: Job satisfaction of creative art teachers is likely to reduce school dropout among pupils.

This study constructed overall job satisfaction variable from 20 items and used it for the analysis. The binary logistic regression results were summarized in Table 2

Table 3: The Influence of Teachers' Job Satisfaction on the implementation of Inclusive Creative arts Curriculum

Variable	Categories	Inclusive Education For All Children	Expo B	Active Participation in class	Expo B	Reduction in School Drop Out	Expo B
Total Job Satisfaction		0.521 (4.327)**	1.684	0.131 (0.541)	1.140	0.400 (5.825)**	1.491
Age	21-30 (RC)						
	31- 40 years	-17.561 (0.000)	0.000	3.033(5.922)**	20.758	3.155 (5.965)**	22.449
	41- 50 years	-18.615 (0.000)	0.000	2.748(5.125)**	15.609	1.590 (4.613)	4.902
	Above 50 years	-19.055 (0.000)	0.000	3.134(5.459)**	22.965	0.692 (0.280)	1.997
Sex	Male (RC)						
	Female	-0.039 (0.006)	1.039	0.074 (0.040)	1.077	0.736 (5.639)**	2.087
Highest Educational Level	Diploma (RC)						
	Degree	2.514 (11.615)**	12.352	0.213 (0.064)	1.237	0.482 (0.487)	1.620
	Masters	3.026 (15.744)**	20.622	0.067 (0.006)	1.069	0.534 (0.599)	1.706
Constant		16.602 (0.000)	16231395.9	-1.802 (1.271)	0.165	-3.559 (5.160)	0.028
No. of obs.		226		226		226	
Correct Prediction		90.3%		83.6%		70.4%	
Nagelkerke R2		0.207		0.058		0.234	
Cox and Snell R2		0.098		0.035		0.172	
Model Chi2 (df)		23.269 (7)		8.005 (7)		42.644 (7)	
Wald Chi2		98.495		79.294		13.584	
P-value		0.000		0.000		0.000	

Source: Field Data (2021); \*\* significant at 1%; \* significant at 5%; \* significant at 10%; figures in the bracket= wald chi2; figure before bracket=beta coefficient

The results presented in Table 3 show that job satisfaction is statistically significant in predicting inclusion education for all children. The results indicate that teachers who are satisfied with their job are 1.684 times more likely to support the admission of all children in their respective schools than teachers who do not perceive overall job satisfaction. Thus, this study rejects the null hypothesis in favour of alternative hypothesis that teachers who are satisfied with their jobs are significantly more likely to encourage admission of children with disabilities particularly those with mild and moderate disabilities.

Additionally, as depicted in Table 3, the study recorded a Nagelkerke R<sup>2</sup> value of 0.207. This shows that about 21% of the variation in inclusive education for all children is explained by all variables included in the model. Also, a Cox & Snell R<sup>2</sup> value of 0.098 was obtained, implying that all the variables included in the study explains about 9% of the variations in school inclusive education for all children. Also, the model correctly predicts 90.3% of the response. Overall, the results show that the model is fit for predicting the impact teachers job satisfaction on inclusive education for all children' (Wald chi<sup>2</sup> 98.495; p= 0.000).

With regards to pupils' active participation in class, the results in Table 3 show that jobs satisfaction did not significantly predict active class participation among pupils. This study therefore accepts the null hypothesis that teachers who are satisfied with their jobs are not significantly more likely to encourage active class participation.

It could be seen in From Table 3 that a Nagelkerke R<sup>2</sup> value of 0.058 was obtained. This implies that about 5% of the variation in pupils' active participation in class is explained by all variables included in the model. Similarly, a Cox & Snell R<sup>2</sup> value of 0.035 was obtained, implying that all the variables included in the study explains about 3% of the variations in pupils' active participation

in class. Also, the model correctly predicts 83.6% of the response. Overall, the results show that the model is fit for predicting the impact of teachers' competence on pupils' active participation in class (Wald chi<sup>2</sup>=79.294; p= 0.000).

Moreover, with reference to school dropout, the results in Table 3 indicate that teachers' job satisfaction is a significant predictor of a reduction in school dropout among pupils. The findings indicate that school dropout is 1.491 times more likely to reduce among pupils taught by teachers who are satisfied with their jobs. Thus, this study rejects the null hypothesis in favour of alternative hypothesis that teachers who are satisfied with their job are significantly more likely to prevent school dropout among pupils. Overall, the results show that the model is fit for predicting the influence of teachers' job satisfaction on the implementation of inclusive education policy (Wald chi<sup>2</sup>=13.584; p= 0.000).

### **Summary**

With regards to the objective one that sought to assess teachers' perception of job satisfaction under the inclusive education policy, the study found that generally teachers are satisfied with their job under the inclusive education policy. The findings revealed that teachers are dissatisfied with their job compensation and logistics. However, they are satisfied with all the other job satisfaction indicators included in the study such as security, social service, ability utilization, technical supervision, human relations supervision achievement, variety, activity, moral values, responsibility, recognition, independence, school policies, advancement, authority, co-workers, creativity and social status. Furthermore, the findings indicate that the teachers portrayed a very high satisfaction in ability utilization, job security, social services, technical supervision, human relations-supervision,

recognition and responsibility in school. This corroborates Herzberg's Motivation-Hygiene Theory which emphasizes on job security, supervision, recognition and independence. Nonetheless, unavailability of teaching logistics, and unsatisfactory compensation and remuneration may stifle teachers' performance. From the objective two, the

study found that teachers' job satisfaction has an influence on inclusive education for all children. The findings showed that teachers who perceive total job satisfaction are more likely to support the admission of all children in their respective schools notwithstanding the children's condition or disability.

**Table 4: Summary of Key Hypotheses Test**

No.	Hypothesis (Null)	Results (Decision)
i.	Job satisfaction of creative art teachers is not likely to encourage inclusive education for all children.	Rejected
ii.	Job satisfaction of creative art teachers is not likely to encourage pupils' active class participation.	Accepted
iii.	Job satisfaction of creative art teachers is not likely to reduce school dropout among pupils.	Rejected

The results of the hypotheses tests as indicated in Table 4, suggest that job satisfaction of Creative Arts teachers have an impact on inclusive education for all children. Thus teachers who are satisfied with their job are more likely to encourage and support inclusive education for all children. This result is supported by findings of Choon et al. (2020), Hawawu & Inusah (2022), Dziuba, Ingaldi, & Zhuravskaya (2020) who posited that job satisfaction at workplace goes a long way to increase employees' Job performance.

On the contrary, the results of the second hypothesis as shown in Table 4 proved that, teachers' job satisfaction do not have any significant impact on pupils' active class participation in classroom activities. Lastly, the results of the third hypothesis showed that, job satisfaction of Creative Arts teachers has an impact on school dropout rate among pupils. Thus, dropout rate is more likely to reduce among pupils in schools where teachers are satisfied with their jobs.

## DISCUSSIONS

Generally, Creative arts teachers are satisfied with their job under the inclusive education policy. The findings revealed that with the exception of compensation and logistics that teachers indicated their dissatisfaction for, the teachers were satisfied with all the other job satisfaction indicators included in the study such as security, social service, ability utilization, technical supervision, human relations supervision achievement, variety, activity, moral values, responsibility, recognition, independence, school policies, advancement, authority, co-workers, creativity and social status. This satisfaction of teachers is backed by the Herzberg's Motivation-Hygiene Theory which believes in healthy supervision, reward, healthy relationship as effective ways of empowering workers. Again, Kumari (2011) stated that workers' performance is determined by their level of fulfillment and contentment. Furthermore, the findings indicate that the teachers portrayed a very high satisfaction in ability utilization, job security, social services, technical supervision, human relations-supervision, recognition and

responsibility in school. This findings endorses Dziuba, Ingaldi & Zhuravskaya (2020) and Sypniewska & Barbara (2014) that employees' satisfaction is largely based on good condition of service. Additionally, the study found that teachers' job satisfaction has an impact on inclusive education for all children. The finding confirms finding by Skaalvik & Skaalvik (2011) who reported that teachers who are satisfied with their jobs provide better support for pupils, quality instruction and hence support inclusive education policies.

The findings showed that teachers who perceive total job satisfaction are more likely to support the admission of all children in their respective schools irrespective of the children's condition or disability. This finding endorses Kumari's (2011) statement that, happier employees are more productive. However, the findings showed that teachers' job satisfaction was not statistically significant in predicting pupils' active participation in class. Lastly, in relation to school dropout, the findings showed that, teachers' job satisfaction is significant predictors of reduction in school dropout rate among pupils. The study found that school dropout more likely to reduce among teachers' who perceive total job satisfaction compared to their counterparts who do not perceive total job satisfaction.

## **CONCLUSION**

Generally, teachers are dissatisfied with their job compensation and teaching logistics needed for the effective implementation of inclusive Creative Arts curriculum. Nonetheless, they are satisfied with their ability utilization, job security, social services, technical supervision, human relations-supervision, recognition and responsibility in school. Teachers' job satisfaction has an impact on inclusive education for all children. Hence teachers who perceive total job satisfaction are more likely to support the admission of all children and will also put

adequate mechanisms in place to reduce the rate of dropout among pupils with disabilities in their respective schools.

## **RECOMMENDATIONS**

The study recommends that, the Ministry of Education and the Ghana Education Service must provide teachers with an improved working conditions and attractive compensations and work incentives. These arrangements when put together will provide a high job satisfaction for teachers. As a result, the satisfaction of teachers will enable them work effectively and efficiently by providing better support for pupils, quality instruction and also motivate them to support inclusive education policies.

Again, the Ministry of Education through Ghana Education Service must make sure instructional logistics (Creative arts syllabus, sketchpads, paints, brushes, pencils, musical instruments, textbook etc.) are supplied to schools.

## **LIMITATIONS**

A study of this nature should have included Pupils with disabilities in the sampled population since they are the direct beneficiaries of inclusive Creative Arts education but due to COVID-19 physical and social distancing measures at the time of data collection made it inappropriate. Therefore teachers and head teachers were sampled to respond to questionnaire.

Most of the teachers were not interested in filling the questionnaire online (Google forms) as most of them complained of lack of internet connectivity and lack of technical-know-how.

## **Recommendation for Future Studies**

i. The socio-demographic variables included in the models were limited; hence the study recommends future studies to include

other socio-demographic characteristics of teachers such as teachers' religious and cultural beliefs as well as the location of their schools as variables that can affect teachers support for inclusive education policies.

ii. Again, future researchers should involve pupils with/without disabilities since they are the direct beneficiaries.

## DECLARATION OF

## CONFLICTING INTERESTS

The authors declared no potential conflicts of interest.

## REFERENCES

Adam, J. S. (1963). Equity Theory Revisited (with Sara Freedman). *Advances in Experimental Social Psychology*, 9.

Agbenyega, J. (2007). Examining Teachers' Concerns and Attitudes to Inclusive Education in Ghana. *International Journal of whole schooling*, 3(1), 41-56. <https://files.eric.ed.gov/fulltext/EJ847471.pdf>

Ahmed, M., Sharma, U., and Deppeler, J. (2014). Variables affecting teachers' intentions to include students with disabilities in regular primary schools in Bangladesh. *Disability & Society*, 29(2), 317-331.

Ainscow, M., Booth, T., and Dyson, A. (2006). *Improving schools, developing inclusion*. Routledge.

Alter, F., Hays, T. and O'Hara, R. (2009). Creative Arts Teaching and Practice: Critical Reflections of Primary School Teachers in Australia. *International Journal of Education & the Arts*. Vol. 10 No. 9. <http://www.ijea.org/>

Armstrong, M. (2006). *A handbook of human resource management practice*. Kogan Page Publishers.

Awang, Z., Afthanorhan, A., Mohamad, M. and Asri, M.A.M. (2015). An Evaluation of Measurement model for medical tourism research: the confirmatory factor analysis approach. *Int. J. Tourism Policy*, Vol. 6, No. 1, pp.29-45.

Basic Education Division, Ghana Education Service. (2004). *Basic Education Division / Ghana Education Service - GES*. Ges.gov.gh. <https://ges.gov.gh/2019/07/15/basic-education-division/>

Boafo, A, R. (2010). **Creative Arts in Crisis: Teaching and Learning of Creative Arts in Selected Public Primary Schools in Kumasi Metropolis**. A Thesis Submitted to the School of Graduate Studies, Kwame Nkrumah University of Science and Technology, Kumasi in partial fulfilment of the requirements for the degree of Master of Arts. Faculty of Art, College of Art and Social Sciences

Botts B. H., and Owusu, N. A. (2013). The State of Inclusive Education in Ghana, West Africa *Preventing School Failure: Alternative Education for Children and Youth*, 57(3), 135-143. Taylor & Francis Group, LLC. ISSN: 1045-988X print / 1940-4387 online DOI:10.1080/1045988X.2013.798776

Cambridge-Johnson, J., Hunter-Johnson, Y., and Newton, N. G. (2014). Breaking the Silence of Mainstream Teachers' Attitude towards Inclusive Education in the Bahamas: High School Teachers' Perceptions. *Qualitative Report*, 19(42).

Choon O. H., Shi, C. H., Kowang, T. O., Fei, G. C. and Ping, L. L. (2020) Factors Influencing job satisfaction among academic staffs. *International Journal of Evaluation and Research in Education (IJERE)* Vol. 9, No. 2, June 2020, pp. 285~291 ISSN: 2252-8822, DOI: 10.11591/ijere.v9i2.20509

Cronbach's, L. J. (1983). Educational Psychology. *Educational Psychology: A Century of Contributions: A Project of*

- Division 15 (educational Psychology) of the American Psychological Society*, 289.
- Dev S. and Kumar, J. (2015). Teacher's Perception towards Integration of Learning Disabled Students into Regular Class Room – A study in Dubai & Abu Dhabi Schools. 2nd Global Conference on Business and Social Science-2015, GCBSS-2015, 17-18 September 2015, Bali, Indonesia.
- Dziuba, S. T., Ingaldi, M. and Zhuravskaya M. (2020). Employees' Job Satisfaction and their Work Performance as Elements Influencing Work Safety. *Scienco CzOTO 2020*, volume 2, issue 1, pp. 18-25
- Eunice L. A., Nyangia E. O. and Orodho J. A. (2015), Challenges Facing Implementation of Inclusive Education in Public Secondary Schools in Rongo Sub- County, Migori County, Kenya. *IOSR Journal Of Humanities And Social Science (IOSR-JHSS) Volume 20, Issue 4, Ver. VI (Apr. 2015), PP 39-50 e-ISSN: 2279-0837*
- Fuss R. (2015) The Impact of the Arts for Students with Moderate to Severe Disabilities. A Thesis Presented to The Graduate Faculty Central Washington University In Partial Fulfillment of the Requirements for the Degree Master of Education Special Education. CENTRAL WASHINGTON UNIVERSITY <http://digitalcommons.cwu.edu/etd>
- Ghana Education Service (2009). *Report on national inclusive education forum: The way forward*. Accra: Special Education Divisional.
- Hawawu, Y. and Inusah, M. (2022). The Impact of Job satisfaction on institutional citizenship behaviour in higher educational institutions in Ghana. Africa Development and Resources Research Institute. Vol. 19, No. 3(7), July, 2022-September, 2022 <https://journals.adrri.org/index.php/home>
- Herzberg, G., & Howe, L. L. (1959). The Lyman bands of molecular hydrogen. *Canadian Journal of Physics*, 37(5), 636-659.
- Ivancevich, J.M., Olekalns, M. and Matteson, M.T. (1997). *Organizational behavior and management*. Sydney: Irwin.
- Kauffman, J. M. (1999). How we prevent the prevention of emotional and behavioral disorders. *Exceptional children*, 65(4), 448-468.
- Khare, K. and Banerjee, M. (2020). Electron microscopy-based semi-automated characterization of aggregation in monoclonal antibody products. *Computational and Structural Biotechnology Journal*, 18, 1458-1465.
- Krejcie, R. V. and Morgan, D. W. (1970). Determining sample size for research activities. *Educational and Psychological Measurement*, 30(3), 607-610
- Kumari N. (2011). Job Satisfaction of the Employees at the Workplace. *European Journal of Business and Management* ISSN 2222-1905 (Paper) ISSN 2222-2839 (Online) Vol 3, No.4, 2011. [www.iiste.org](http://www.iiste.org)
- Levinson, D. M. (1998). Accessibility and the journey to work. *Journal of transport geography*, 6(1), 11-21.
- Locke, E. A. (1969). What is job satisfaction?. *Organizational behavior and human performance*, 4(4), 309-336.
- Luthans, F. (2005). *Organizational behavior*. McGraw-Hills International Edition.
- Mankoe, J. O. (2002). *Educational administration and management in Ghana*. Winneba: University of Education
- McKenzie, J. A. and Dalton, E. M. (2020). Universal design for learning in inclusive education policy in South Africa. *African Journal of Disability*, 9.
- Muller, E., Nutting, D., Keddell, K. (2019). ArtAbility: Using Multi-genre Arts Programming to Support Creative Engagement and Social and Emotional Learning in Middle-School Students with Autism. *The Journal of the Arts and Special*

- Education 1(1), 25-48 @2019 The Division of Visual and Performing Arts Education of the Council of Exceptional Children
- NTECF, (2019). The New National Teacher Education Curriculum Framework. Ministry of Education, Ghana.
- Opoku, M. P., Agbenyega, J., Mprah, W. K., Mckenzie, J. and Badu, E. (2017). Decade of inclusive education in Ghana: perspectives of special educators. *Journal of Social inclusion, 8*(1), 4-20.
- Owusu, N. A. and Botts, B. H. (2013). The State of Inclusive Education in Ghana, West Africa. Vol. 57, ISS 3. Preventing School Failure, 57(3), 1–9, 2013. ISSN: 1045-988X print / 1940-4387 online
- Parke S. (2012) Visual Arts for Special Needs: Issues, Planning and Strategies Planning a visual arts curriculum unit Photography and digital media, Written Proposal Submitted to Hong Kong Design Institute and Canon (HK) Ltd. In partial fulfillment of the requirements for B.Ed in Professional and Vocational Education | ABIPP
- Pocztowski, A. (2003). Human resource management in the new economy. *Human Resource Management, 1*, 9-23.
- Sharma, A. (2015). Perspectives on inclusive education with reference to United Nations. *Universal Journal of Educational Research, 3*(5), 317-321. Retrieved from <http://www.hrpub.org>. DOI: 10.13189/ujer.2015.030502
- Spector, P. E. (1997). *Job satisfaction: Application, assessment, causes, and consequences* (Vol. 3). Sage.
- Sypniewska, B. (2014). Evaluation of factors influencing job satisfaction. *Contemporary economics, 8*(1), 57-72.
- UNESCO, (2006). Annual report 2006: UNESCO Institute for Lifelong Learning. *Unesco.org*. <https://doi.org/151102>
- Valentino, D. (2016), “Using Fine Arts to Implement Inclusive Education: Inspiring the School through a School wide Art Project” (2016). Graduate Student Theses, Dissertations, & Professional Papers. 10731. <https://scholarworks.umt.edu/etd/10731>
- Vroom, V. H. (1982). Work and motivation. New York: John Wiley & Sons.
- Wood, R. E. and Sherman, J. M. (1982). Phagocytosis of *Pseudomonas aeruginosa* by polymorphonuclear leukocytes and monocytes: effect of cystic fibrosis serum. *Infection and immunity, 38*(2), 802-805.