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New Pedagogic Approaches and Administrative Processes in Public Primary Schools of the English-Speaking Sub-System of Education in the Anglophone Cameroon

¹ Roseline Jipuku Ngeh, ² Dr. Joseph Besong Besong, ³ Shey Patrick Fonyuy, ⁴ Dr. Tah Patricia Bih

¹ PhD Research Fellow, Faculty of Education, University of Buea, Cameroon

² Head, Faculty of Education, University of Buea, Cameroon

³ Professor, Faculty of Education, University of Buea, Cameroon

⁴ Registrar of ISEC Higher Institute of Health and Human Services, Limbe, Cameroon

Corresponding Author: **Dr. Tah Patricia Bih**

Abstract

The study sought to investigate the relationship between the new pedagogic approaches and head teachers' administrative processes in public primary schools of the English-speaking sub-system of education in Anglophone Cameroon. The study specifically intended: to find out the relationship between hands-on-minds-on approach and head teachers' administrative processes. The researcher adopted a research question from which a hypothesis was formulated. The mixed methods of quantitative and qualitative approaches with the cross-sectional/correlational survey designs and case study design to make up for the triangulation of data collection. A questionnaire and a semi-structured interview guide were used to gather data. The accessible population was 915 head teachers and 5004 teachers. The multi-stage sampling procedures were used to select a sample size of 300 teachers. The purposive and expert sampling techniques were used to select 10 key informant head teachers for the interview. The instruments were validated with content validity index (CVI) of 0.75 and reliability checks through split-half technique with a Cronbach's coefficient of 0.805 for the questionnaire. Meanwhile, the interview was trial-tested with two primary

school head teachers and verification of the instrument was also sought from experienced researchers like the supervisors, departmental heads among others. Data from questionnaire were analyzed through descriptive statistics of observed frequencies, percentages, sum, mean scores and standard deviations. Data from the interview were interpreted thematically, to corroborate the findings from the questionnaire. Hypotheses were analyzed using Pearson Product-Moment Correlation. The findings revealed that there is a relationship between Hands-On-Minds-On Approach and head teachers' administrative processes ($\bar{x} = 3.32 \pm 0.50$). Further testing showed that it is a very weak inverse relationship ($r_{xy} = -0.034$). Hence, the study recommends that the Ministry of Basic Education, as well as other educational bodies should develop strategic plans on periodic sustainable capacity building workshops/seminars for teachers and head teachers on: The adaptation and innovation in instruction in efforts to stay abreast with new knowledge and trends in the teaching methods and strategies, teaching materials, content and technologies and to accommodate the learners with diverse needs when using Hands-On-Minds-On Approach to teaching and learning.

Keywords: New Pedagogic Approaches, Head Teachers' Administrative Processes, Public Primary Schools, English-Speaking Sub-System of Education

Introduction

The new pedagogic approaches introduced into the teaching-learning process in the primary schools in Cameroon in general and the Anglophone regions in particular are all efforts to meet up with the objectives of the Sustainable Development Goals (2015) [20] among others majors. Some of these objectives include: to align with world evolutions and to the 21st Century economy that is technologically driven and education-based. The Dakar Framework for Action focused among others, on improving all aspects of the quality of education and ensuring excellence of all so that recognized and measurable learning outcomes are achieved by all, especially in literacy, numeracy and essential life skills (World Education Forum, 2000). According to the Growth and Employment Strategy Paper (2009) [19], Cameroon has the quest in meeting up with modern changes in socio-economic, cultural, political and technological levels, in order to meet up with international standards and educational objectives. Fullan and Langworthy (2013) [11] argue that, unless a new pedagogy materializes, learners will become

increasingly bored and unmotivated and teachers will become even more stressed. They contend that new pedagogies will require changes in the relationships between teachers and learners, in teaching and learning strategies, and in how learning is assessed, as the skills needed in the 21st century may not be amenable to paper-and-pencil tests. Head teachers pilot the different administrative, pedagogic, financial and social activities of primary schools. Thus, the level in which head teachers manage administrative processes will depend on professional abilities to handle the new pedagogies coming into the system. This implies that in case a head teacher does not carry out his/her administrative functions well, educational objectives and international standards will hardly be achieved and the reverse will be true (Mbua, 2003) ^[13]. Furthermore, Achankeng (2004), makes us to understand that, since the 1995 national forum on education proposed certain modifications in the syllabuses of English-speaking primary schools and this was reinforced by Law No 98/004 of 14th April, 1998, the stages of writing weekly lesson plans and daily lesson notes have been undergoing modifications with respect to different new teaching approaches (Tambo, 2003) ^[26].

Historically, the indigenous (traditional) education identified five pedagogic approaches through which parents used in teaching their children. These approaches include: communalism, preparationism, perennialism, holism and utilitarianism/functionality (MacOjong, 2008) ^[12]. All these approaches helped to facilitate teaching learning process during the indigenous period in Cameroon. The people during that period used the various approaches in teaching their children so as to mold them up to become useful and functional in the society in which they lived. Before independent period, Achankeng (2004) explains that the teaching-learning process was based on the teacher-centered approaches because, children were considered to be empty vessels in which teachers filled knowledge, as learners only received and had nothing to offer. This type of teaching approach was published in a book by John Locke (1632-1704) and he termed it “tabular rasa” – a word borrowed from Latin, which means “blank slate” in English. Therefore, teaching approaches had undergone so many reforms and innovations from traditional approach of teaching that was practiced during the indigenous system of education before contact with the white man to the independence of Cameroon (Fonkeng, 2005) ^[8]. From post independent period, the child-centered teaching approaches (New Pedagogic Approaches) – Hands-On-Minds-On, Competency Based Approach, Project Based Approach, compensatory teaching, remedial teaching, mastery learning, cooperative learning and others have been in used till date (Ngeh, 2022) ^[14].

Conceptually, the New Pedagogic Approaches according to Nkeng and Mambeh (2013) ^[15] are approaches whereby teaching is child-centered. Child-centered pedagogy entails developing an inferential or critical thinking mind in the child. Children actively participate in lessons and the teacher guide them to learn through discovery and acquire problem solving skills, intellectual development. On the part of the teacher, the NPA require a change in procedure, behavior, and a high degree of adaptability. According to Besong (2016) ^[4], the philosophy of administrative process was first propounded in 1916 by Henri Fayol in what he described as “element of management”, which he explained as planning, organizing, commanding, coordinating and controlling. He

designated the five activities together as the administrative functions. He later on added a few more components-reporting, budgeting, communicating, decision making, resource allocation and evaluation, among others; and all of them collectively are referred to as administrative processes (Mbua, 2003; Fonkeng and Tamanjong, 2009 & Besong, 2016) ^[13,7,4].

Theoretically, this study was guided by the Change Theory (Fullan, 2003) ^[10] because the hands-on-minds-on is an approach incorporated with learning innovations stemming from learner-centered approach. Fullan’s Change Theory (2003) ^[10] is composed of three phases (initiation, implementation and continuation). Initiation phase which consist of process that leads to the decision to adopt or precede a change. The initiation stage is closely followed by implementation stage which deals with the first experience of attempting to put an idea or reform into practice. Next is the continuation stage which is concerned with verification if the change gets in built as an ongoing part of the system or disappears by way of decision discarded (Fullan, 2007). This Theory shows that, for a change to be successful, there are defined procedures to be followed, if not the objective will not be attained. Thus, bringing innovation or change in the educational sector or system, it is necessary to initiate the idea (that is, let the stakeholders especially teachers who are to implement the change understand the reasons for the change. Make use of qualified trained personal that could be able to explain to them during seminars/workshop the importance/benefits of the change to the educational sector and the country at large (Ngeh, 2022) ^[14].

Contextually, Anja (2000) ^[3] acknowledged the lack of formal policy guidelines in Cameroon education by noting that one of the ten top problems of education in Cameroon is “the problem of evolving a comprehensive national education policy which can stay while individual politicians and civil servants come and go.” According to him, the problem of procuring adequate legislations on the educational system and making it to operate within a legal framework that does not give room for individual idiosyncrasies on the nation remains a critical issue to tackle. Supporting the above position, Tambo (2003) ^[26] and Achankeng (2004) argue that, an overview of policy issues inherent in the Cameroon educational system reveals that Cameroon like some other countries in the world has no comprehensive educational policy that can be matched with policies such as the 1996 Education Policy of Zambia, the 2002 New Zealand First Education Policy, and the National Education Policy (NEP) (2004-2005) of the Federal Republic of Nigeria. Anja (2000) ^[3], Tambo (2003) ^[26] and Fonkeng (2010) ^[9] all agree that what exist as education policy in Cameroon is a myriad of legislations, presidential and ministerial decrees that orient educational practices at primary, secondary, teacher education and university levels. Thus, more often, what is term policy in Cameroon are more of political issues because different appointed politicians come in with their own policy, which may be for their personal interest and not for the interest of the state. For instance, Law No. 98/004 of 14 April 1998 on the orientation of basic, secondary and teacher education in Cameroon; Law No.2001/005 of 16 April 2001 on the orientation of higher education in Cameroon; Law No.2004/022 of 2nd July 2004 fixing rules relative to the organization and the functioning of private education in Cameroon; Decree No.2001/829/PM of 19th September,

2001 fixing the general rules applicable to private education institutions are some of the major legislations on education in contemporary Cameroon (Tambo, 2003 & Fonkeng, 2010)^[26, 9].

According to Ngeh (2022)^[14], this may be one of the reasons why the New Pedagogic Approaches keep changing without following the appropriate procedures as prescribed by Fullan (2003)^[10]. This could likely affect the administrative processes of school heads (the case of primary school heads not very different), she added. According to Tchombe (2019)^[29], many primary educational systems in the developing nations are unable to meet their objectives due to non-teaching of core value skills in national curriculum, non-provision of adequate educational opportunities to children of school-going age. The 1994 Jomtien Declaration on Education For All (EFA) and Darkar Framework for Action (2000) of which Cameroon as a nation was part, paved the way for the Universal Primary Education (UPE) program (Fonkeng, 2010 & Tchombe, 2019)^[9, 29]. Thus, the right to the acquisition of quality primary education by any individual irrespective of physical, economic, political and socio-cultural status is both a national and international concern (Ngeh, 2022)^[14].

At moment, the socio-political crisis in English-speaking Cameroon since 2016 and the global plague of the deadly pandemic Corona Virus Disease 2019 (COVID19) are great threats to these new instructional approaches and administrative processes among others. According to statistics from the regional delegations of Basic Education for North-West and South-West 2020/2021 school year, most schools are not functional because of the crisis. Meanwhile, those that are functional are challenged by the measures to curb COVID19 in the schools (Ngeh, 2022 & Tah, 2021)^[14, 25]. All these new pedagogic approaches may likely be a parlance in the teaching-learning process in the primary schools. This may likely affect head teachers' administrative processes, hence, pupils' outcome, the case of English-speaking public primary schools of North-West and South-West Regions not very different. Thus, the researcher was out to verify this claim with particular attention to the Hands-On-Minds-On teaching learning approach and its relationship with head teachers' administrative processes in order to establish facts from the findings.

Statement of the Problem

The acquisition of quality primary education by any individual irrespective of physical, economic, political and socio-cultural status is both a national and international concern. The New Pedagogic Approaches introduced into the system are some of the majors put in place to meet up with the required standards for primary school leavers. The New Pedagogic Approaches (Learner-centered approaches) like: Hands-On-Minds-On Teaching Approach, Competence Based Approach and Project Based Approach among others are yet to be mastered by most teachers and head teachers. Most teachers are yet to actually understand what it takes to teach using these approaches and to differentiate them to address individual pupils' diverse needs in the classroom. Most educational infrastructure and the teaching-learning equipment and environment of the primary schools are yet to be adapted and adopted to suit the NPAs of the teaching-learning process.

All of these among others, can likely affect negatively the head teachers' administrative processes particularly in decision making, planning, communicating, organizing, supervising, controlling and evaluating the teaching-learning process. The researcher observed that most head teachers are less able to manage these administrative processes in their schools. This is especially with schools that have overcrowded classrooms and are under staffed or are located in areas with no or limited internet network and electricity. The blame for head teachers' ineffectiveness in executing adequate administrative processes is perhaps shifted to the bottle-necks associated with the New Pedagogic Approaches introduced into the school system. Therefore, the researcher decided to carry out a study to investigate the relationship between the New Pedagogic Approaches (with particular attention to hands-on-minds-on teaching learning approach) and administrative processes in public primary schools of the English-speaking sub-system of education in the South-West and North-West Regions of Cameroon to ascertain this claim.

Objective of the Study

This study sought to find out the relationship between hands-on-minds-on teaching learning approach and head teachers' administrative processes in public primary schools of the English-speaking sub-system of education in the South-West and North-West Regions of Cameroon.

Research Question

The research question was: What is the relationship between hands-on-minds-on teaching learning approach and head teachers' administrative processes in public primary schools of the English-speaking sub-system of education in the South-West and North-West Regions of Cameroon?

Statistical Hypothesis

Ho: Hands-On-Minds-On teaching learning approach has no significant relationship with head teachers' administrative processes in public primary schools of the English-speaking sub-system of education in the South-West and North-West Regions of Cameroon.

Ha: Hands-On-Minds-On teaching learning approach has a significant relationship with head teachers' administrative processes in public primary schools of the English-speaking sub-system of education in the South-West and North-West Regions of Cameroon.

Justification of the Study

Improvement in the new pedagogic approaches to teaching and learning can enhance head teachers' administrative processes in their schools. Relatively, little is known about the effects of the new pedagogic approaches on head teachers' administrative processes in primary schools. Head teachers entrusted with the responsibility to supervise instruction in the mist of other administrative duties, ought to possess certain knowledge and skills to plan, observe, assess and evaluate teaching and learning processes through the hands-on-minds-on teaching learning approach among others. That is why the researcher was interested to verify about the relationship between these variables in the study. The justification for the choice of hands-on-minds-on as a variable for the study was to verify its relationship with head teachers' administrative processes. For the head teacher to understand the level of lesson preparedness by the teacher

and level of attainment of lesson objectives among others, he/she must have mastery of the hands-on-minds-on approach in the teaching-learning process.

The justification for the choice of English-speaking sub-system of education in Cameroon for the study was that the regions have faced challenges with achieving adequate improvement in the new pedagogic approaches to teaching and learning that can enhance head teachers' administrative processes. Some teachers assumed teaching responsibility without adequately understanding the new teaching learning approaches put in place into the primary school system. This situation poses a concern on the administrative duties of the head teachers as internal instructional supervisors among other functions and further raises doubt about teachers' relevance in the changing educational system in Cameroon in general and English-speaking regions in particular.

Scope of the Study

Geographically, the study was delimited to English-speaking sub-system of education in Cameroon. These are the two English-speaking regions: South-West Region and North-West Region. Furthermore, only the public English-speaking primary schools were considered in the study owing to the shortage of sufficient empirical research investigating the above problem. The head teachers and their members of staff constituted the population of the study. Head teachers were used in the study because they play a key role in supervising the pedagogic approaches in schools. They interact with teachers almost on a daily basis in and out of classrooms and indirectly influence instruction. Head teachers are the internal supervisors who offer support, motivation, encouragement and professional support to teachers. The research was delimited to the teachers because they work under head teachers and are the subjects of head teachers' supervisory roles. Teachers influence pupils' academic achievement by their good instructional skills developed through effective head teachers' pedagogic supervision. The teachers are also in a position to share information relating to the head teachers' supervisory roles in their schools and suggest ways for improvement.

With regard to content, the study investigated the relationship between the new pedagogic approaches particularly, hands-on-minds-on teaching learning and head teachers' administrative processes. The independent variable was the new pedagogic approaches with hands-on-minds-on as the main indicator. The dependent variable was head teachers' administrative processes with indicators as: planning, communicating, decision-making and evaluation processes and others. The study focused on head teachers' administrative processes because they play a central role in supervising the pedagogic approaches in their schools. Theoretically, the study was delimited to the Change Theory (Fullan, 2003) ^[10] that matched with the objective and informed the research venture.

With regard to methodology the study was delimited to the cross-sectional/correlational survey and case study research designs. The mixed methods were used with the quantitative and qualitative approaches employed. The different approaches used in the study were to provide room for triangulation which contributed to the objectivity of the data collected. The cross-sectional survey research design was used because the participants in the study were selected from across public primary schools in North-West and South-West Regions of Cameroon and the data were

collected once across the sample from different sub-divisions. It was also correlational because the study aimed to find out the relationship between the variables under study. The case study design on the other hand was for the purpose to select specific information-rich participants to answer the interview for corroboration of findings and triangulation of data collection.

Research Design

The quantitative and qualitative research approaches were used. The use of mixed methods was for the purpose of triangulation due to the fact that the individual strength of one method offsets the other method's weakness. Research explains that mixing methods is not primarily to search for corroboration, but rather to expand understanding of the phenomenon under investigation. However, corroboration reached by different approaches does provide researchers with greater confidence in their conclusions (Anim, 2005) ^[2].

Area of the Study

This study was carried out within the English-speaking sub-system of education in Cameroon. English-speaking Cameroon constitutes South-West and North-West Regions which are part of the ten regions of the country.

South-West Region has Buea as the regional capital. The region is divided into six major administrative divisions namely; Fako, Koupe-Muanenguba, Lebialem, Manyu, Meme, and Ndian. These are in turn broken down into thirty-one (31) sub-divisions. The South-West Region of Cameroon occupies a surface land area of 25,410km² (9,810sq.mi), a population of 1,553,320 (2015) and a density of 61/km² (160/sq. mi) (Kimengsi and Tasam, 2013). According to Google Scholar (2020), the region is largely inhabited by the Bakwerians (especially in Limbe), the Balong tribe (especially in Muyuka) and the Bangwas (especially in Lebialem). Some of these inhabitants are teachers and head teachers of public primary schools.

Important towns include the regional capital Buea and divisional capitals Limbe, Kumba, Fontem, Bangem, Mundemba and Mamfe. Limbe in particular is a popular tourist resort notable for its fine beaches, zoo and botanic garden. Korup National Park in Ndian Division is also a major attraction. The hanging bridge on the Cross River in Mamfe linking to Akwaya Sub-Division is also another touristic site. Buea itself sits at the foot of Mount Cameroon and possesses an almost temperate climate markedly different from the rest of the regions. The region is notable for having the first English-speaking University in Cameroon which is the University of Buea, "a place to be" as is often called.

The North-West Region is made up of seven administrative divisions. They are: Boyo, Menchum, Ngo-Ketunjia or Ngoketunjia, Mezam, Bui, Donga Mantung and Momo divisions. Each division is further sub-divided into sub-divisions, a total of thirty-four. Bamenda is the regional capital of North-West Region. Important towns include the regional capital Bamenda and divisional capitals are Bamenda, Kumbo, Nkambe, Mbengwi, Fundong, Wum and Ndop. It has one major metropolitan city, Bamenda, with several other towns such as Mbengwi, Wum, Ndu, Batibo, Bambui and Oshie.

It is situated on the western high plateau with a cold climate. The North-West Region of Cameroon occupies a

surface land area of 17,300 km² (6,700 sq. mi), population of 1,968,578 (2017) as the third most populated region in the country and a density of 110/km² (290/sq. mi). The North-West Region has many ethnic groups, including immigrants from other regions and countries among who are public primary school teachers and head teachers. Nigeria is well represented, as it borders the region to both the north and the north-west. The native population comprises a variety of ethnic and linguistic groups. The main ethnic groups are of Tikar origin: Tikari, Widikum, Fulani, and Moghamo. The most widely spoken languages in the region include Mungaka, Limbum spoken by the Wimbun people of Donga Mantung Division; Yamba, spoken by the Yamba people also of the Donga Mantung Division; Bafmen, Oku, Noni, Lamnso, Ngemba, Pidgin English, Balikumbat, Papiakum, Moghamo and Nkom.

The North-West Region has unique attractions, including the second highest mountain (Mt Oku with height 3011m) in West Africa. It is home to many rare birds such as the distinctive red crested Bannerman's turaco, which is unique to this region. There are also many crater lakes such as Lake Oku, Lake Awing and Lake Nyos. The largest remaining mountain forest in the North-West Region is the Kilum-Ijim Forest. Menchum Falls in Wum and Abbi Falls in Mbengwi Sub-Division are also located here.

The principal public hospital for the Region is the Bamenda Regional Hospital. The Catholic General Hospital Shisong Kumbo, Bansa Baptist Hospital, Kumbo, Belo and Mbingo Baptist Hospitals are among the most renowned mission hospitals. These have helped to resolve the health needs of the region. The region is notable for having the second English-speaking University in Cameroon which is the University of Bamenda.

However, English-speaking Cameroon as a whole is located in the "armpit" of Africa; it is sandwiched between Nigeria, to the east with French-speaking Cameroon and to the south

with the Equatorial Guinean Island of Bioko. The regions equally have many secondary, primary and nursery schools scattered in the various divisions and sub - divisions being; public, mission and lay-private schools with teacher training colleges and technical schools inclusive.

Population of the Study

The target population of this study was made up of all head teachers (4,029) and teachers (13,416) of public primary schools in English-speaking sub-system of education in Cameroon. This was according to statistics from North-West and South-West regional delegations of Basic Education in 2021. The research targeted the entire population for purpose of generalization of results of the findings.

The accessible population was 5,004 teachers and 915 head teachers because most schools were not functional at the time of the study due to the socio-political crisis in the two regions. They represented the population and provided adequate information about head teachers' instructional supervision and its impact on staff professional development.

Sample and Sampling Techniques

The sample size was 300 teachers and 10 head teachers. The researchers used multi-stage sampling involving the simple random sampling and purposive sampling techniques in the process of selection of the sample size for teachers. The researcher used simple random sampling to come out with 60 schools in Fako and Mezam from where the teachers were drawn purposively. The researcher purposively left out all class six teachers because it is an examination class where instructional supervision may not likely follow the stipulated trends. The purposive and expert sampling techniques were used to select 10 head teachers for the interview.

Table 1: Distribution of the Sample Size of the Study

| Division | Subdivision/council Area | No. of Public Primary Schools | No. of Teachers | No. of Head Teachers |
|--------------|--------------------------|-------------------------------|-----------------|----------------------|
| Fako | Buea | 10 | 50 | 1 |
| | Limbe I | 6 | 50 | 1 |
| | Limbe II | 1 | 5 | 1 |
| | Limbe III | 2 | 10 | 1 |
| | Tiko | 10 | 25 | 1 |
| | West coast | 3 | 10 | 1 |
| Mezam | Bamenda I | 10 | 25 | 1 |
| | Bamenda II | 20 | 50 | 1 |
| | Bamenda III | 10 | 40 | 1 |
| | Santa | 8 | 35 | 1 |
| Total | 10 | 60 | 300 | 10 |

Source: (Regional Delegations of Basic Education for North-West and South-West, 2021)

Table 1 above shows that the sample size constituted three hundred (300) teachers and ten (10) head teachers drawn from sixty (60) schools in ten (10) sub-divisions/council areas of Fako and Mezam Divisions.

Description of the Research Instruments

The researchers used a questionnaire and an interview guide. Each of the statements on the questionnaire contains four possible responses: strongly disagree (SD) = 1, disagree (D) = 2, agree (A) = 3 and strongly agree (SA) = 4. The respondent taking the test reacts to every statement by marking a tick on one of the response options. The

questionnaire was made up of four sections of 43 items. Section A: demographic information; section B: head teachers' classroom visits; section C: head teachers' monitoring of teachers' professional records and section D: evidence of staff professional development. The interview guide focused on the following: demographic information, the instructional supervisory activities of the head teacher in enhancing staff professional development according to the stated objectives.

Validity and Reliability of the Research Instruments

Content validity and face validity were used. In order to

ascertain face validity, the researchers prepared the instruments and gave to experts to read through and make sure necessary corrections and suggestions on grammar, organization of questions, presentation, typographical quality, clarity of instructions, ease of completion and timing of instruments were adequate. Further, content validity for the questionnaire was estimated at 0.75 and the rule is that $CVI \geq 0.7$. This implied that the instrument was accepted valid.

The reliability of the instruments was done through test re-test process in two (2) primary schools in Buea, South-West Region of Cameroon. The exercise was repeated after a period of two weeks using same respondents. These primary schools did not take part in the actual study. The results obtained at the different periods were compiled and computed to get the Cronbach's alpha (α) coefficient estimated at 0.805 which implies that the internal consistency of the instrument was high and correct for data collection.

Data Collection Procedures

The researcher presented a permit to relevant offices during the collection of data from the field. The researcher also obtained some basic information concerning the schools, from the regional delegation offices. The researcher and research assistant then planned and visited seminar grounds to seek permission and administer the instruments. The questionnaire was administered to all the 300 teachers and 10 head teachers were interviewed.

Data Analysis Procedures

The researchers prepared a marking guide for the questionnaire together with the analyst. This was followed by preparing a respondent code. The items on the Likert scale were also coded as follows: strongly agree, agree, disagree and strongly disagree were assigned 4, 3, 2 and 1 for positively worded items respectively. Meanwhile, negatively worded items took the reverse, that is: 1, 2, 3 and 4 respectively.

Hypotheses were analyzed using Pearson product-moment correlation. This was because non-parametric statistics are distribution free statistics that can describe some attributes of the study population and also the relationship with some other attributes across the population. Pearson Product-Moment Correlation Analysis computed using the following formula:

$$r_{xy} = \frac{n \sum xy - \sum x \sum y}{\sqrt{[n \sum x^2 - (\sum x)^2][n \sum y^2 - (\sum y)^2]}}$$

Where: x = independent variable, y = dependent variable and r_{xy} = correlation coefficient for x and y . The magnitude of the relationship between the variables ranged from 0 to 1. When it falls between 0.3 and 0.59 it is rated as moderate. Finally, when it is rated between 0.6 and 1, it is considered high. The sample of the study was large enough to give sufficient power to the analysis of the hypotheses.

Ethical Considerations

A permit was presented to the authorities who organized the various seminars in Fako and Mezam Divisions in order to seek permission to administer the instruments. A cover letter was attached to the instruments stating the identification of the researcher (name, university, department and research topic, purpose of the study and researcher's contact). The researcher respected other norms of research.

Presentation of Findings

Research Question: What is the relationship between Hands-On-Minds-On Approach and head teachers' administrative processes?

Descriptive data analysis for each item about the survey statements on hands-on-minds-on is presented in table 2 below. The mean scores, standard deviations and decisions arrived at are shown on the table. The mean response score gives the overall decision arrived at with regard to the relationship between hands-on-minds-on and head teachers' administrative processes.

Table 2: Hands-On-Minds-On Approach and Head teachers' Administrative Processes

| S. No | Section B: Hands-On-Minds-On: The teacher ensures: | \bar{X} | S | Decision |
|-------|--|-----------|-----|----------|
| 1 | Learning by doing. | 3.68 | .49 | A |
| 2 | Trial and error learning. | 3.24 | .65 | A |
| 3 | Learning from simple to complex | 3.44 | .55 | A |
| 4 | Practical learning exercises | 3.41 | .51 | A |
| 5 | Use of common salvage gadgets | 3.37 | .53 | A |
| 6 | Learners find answers by themselves | 3.22 | .49 | A |
| 7 | Learning by manipulating objects | 3.25 | .48 | A |
| 8 | Learners sort out solutions to problems | 3.18 | .46 | A |
| 9 | He/she acts as facilitator of learning | 3.22 | .46 | A |
| 10 | Learners gain knowledge by experience | 3.21 | .45 | A |
| | MRS | 3.32 | .50 | A |

MRS = Mean response score \bar{x} = Mean score, S = Standard deviation

From table 2 above, the respondents agreed that learning is done by doing, by trial and error, from simple to complex, and by practical exercises. Pupils use common salvage gadgets; find answers by themselves, manipulating objects, sort out solutions to problems, teachers act as facilitator of learning, and learners gain knowledge by experience. Conclusively, there is a relationship between Hands-On-Minds-On Approach and head teachers' administrative processes in public primary schools of the English-speaking

sub-system of education in the South-West and North-West Regions of Cameroon ($\bar{x} = 3.32 \pm 0.50$).

The scores obtained on table 2 above were further used to compute the Pearson Product-Moment Correlation to test the hypothesis to obtain a coefficient to further establish level of significance of the relationship between the variables.

Ho: Hands-On-Minds-On Approach has no significant relationship with head teachers' administrative processes in public primary schools of the English-speaking sub-system

of education in the South-West and North-West Regions of Cameroon.

Ha: Hands-On-Minds-On Approach has a significant relationship with head teachers’ administrative processes in

public primary schools of the English-speaking sub-system of education in the South-West and North-West Regions of Cameroon.

Table 3: Relationship between Hands-On-Minds-On Approach and Head Teachers’ Administrative Processes (N=292)

| Variable | $\sum X$ | $\sum X^2$ | | | |
|---|----------|------------|-----------|---------------|---------|
| | $\sum Y$ | $\sum Y^2$ | $\sum XY$ | Γ_{xy} | p-value |
| Hands-On-Minds-On Approach (X) | 9704 | 325090 | 198029 | -0.034 | 0.561 |
| Head teachers’ administrative processes (Y) | 5963 | 128125 | | | |

$p^* < 0.05$; $df = 290$; critical $\Gamma_{xy} = 0.113$; (N= 292)

Verification of Hypothesis One

Data analyses on table 3 above shows that, at alpha level of significance 0.05 with degree of freedom 290, the calculated or computed correlation coefficient value r_{xy} -computed is - 0.034 which is lower compared to the critical value of 0.113 (Γ_{xy} -critical). Also, given that the calculated p-value is 0.561 which is far higher than 0.05, the interpretation here is that there is no significant relationship between the two variables. We therefore do not reject the null hypothesis and conclude that Hands-On-Minds-On Approach has a very weak inverse relationship with head teachers’ administrative processes in public primary schools of the English-speaking sub-system of education in the South-West and North-West Regions of Cameroon. The negative sign of the r_{xy} -computed value implies that as Hands-On-Minds-On Approach to the teaching-learning process improves, most head teachers’ administrative processes are declining. This implies that if Hands-On-Minds-On Approach to the teaching-learning activities by the teachers has to improve, most of the head teachers’ administrative processes have to decline to enable them pay greater attention to supervision by creating more time to supervise instruction in school.

Interview of Head Teachers on Hands-on-Minds-on Teaching Approach

About how the head teachers carry out instruction using the hands-on-minds-on teaching approach, the respondents said that they expect the teacher to act like a facilitator. They equally expect teachers to involve learners in the teaching-learning activities by enabling learners to participate actively in answering questions in class and carrying out practical activities. With regard to observations during classroom visits, respondents stated that they observe how pupils carry out practical activities during the teaching learning process. They observe the actions of both the teacher and the pupils during teaching learning process, classroom management, manipulation of the given materials to bring out solution to given problem, and to bring out solutions of their problems by themselves. Considering techniques or strategies used to supervise teachers during this teaching approach, the respondents said they use classroom observation, clinical supervision, workshop technique during supervision, classroom visitation and demonstration techniques.

Discussion of findings

The study found out that Hands-On-Minds-On Approach has a relationship with head teachers’ administrative processes in public primary schools of the English-speaking sub-system of education in the South-West and North-West Regions of Cameroon. It was further established that Hands-On-Minds-On Approach has a very weak inverse

relationship with head teachers’ administrative processes. This implies that if Hands-On-Minds-On Approach to teaching-learning by the teachers has to improve, most of the head teachers’ administrative processes have to decline to enable them pay greater attention to supervision by creating more time to supervise instruction in school. The head teacher in supervising instruction expect the teacher to act like a facilitator, involve learners in the teaching learning activities by enabling them to participate actively in class, giving them practical activities to do or participate in answering questions session (Ngeh, 2022) [14].

The findings confirm with Tchombe (2019) [29] who asserts that Hands-on-minds-on is one of the new pedagogic approaches introduced into the teaching-learning process in the primary schools and sees the approach as mainly any instruction involving activity and direct experience with natural phenomena, environment or any educational experience that actively involve pupils manipulating objects to gain knowledge or understanding. These findings confirm with the ideas of Tambo (2012) [27], who said that this concept consists of two things which work together to build up the given teaching-learning approach. That is, it involves “hands-on” which means learners should be doing, touching or feeling something with their hands during the teaching learning process and “minds-on” which means pupils should be active by thinking, reasoning, reflecting to sort out solution for something as their hands are working on the activity. Therefore, hands-on-minds-on, simply refers to the teaching-learning process whereby learners are fully active in class by doing some practical activities to ensure better understanding. In support to these findings, Sergiovanni and Starratt (2008) [24] sees hands-on activities as based on the use of everyday gadgets, simple set-ups or low-cost items that can be found and assembled very easily. This implies that some materials for hands-on activities can be done for lesser amount and a few can have zero cost. Thus, it will be no disaster if a piece breaks or disappears as they are used for pupils to truly learn science concepts. They need practical opportunities to apply knowledge and also need help in integrating or exchanging the knowledge they gained (Ngeh, 2022) [14].

In acceptance to the findings of this study Esudu (2010) [5] agrees that children learn better when they can touch, feel, measure, manipulate, draw, and make charts, record data and when they find answers for themselves rather than being given the answer in a textbook or lecture. He adds that children also learn better when the teacher serves as a facilitator, who only guides them during the teaching-learning process.

More so, the study has established that hands-on-minds-on approach to learning can equally be termed experiential teaching-learning approach. This establishment is accepted

by Torf (2003) ^[30] who said that the terms “experienced-based learning” and “trial and error” learning to explain inductive learning processes (from simple to complex). Hands-on-minds-on or experiential learning is participative, interactive, and applied. It allows contact with the environment, and exposure to processes that are highly variable and uncertain. It involves the whole-person; learning takes place on the affective and behavioral dimensions as well as on the cognitive dimension.

Yadar (2007) ^[31] confirms to these findings and opines that no course in Science and Mathematics can be considered as complete without including some practical work. The practical work ought to be carried out by individuals either in Science laboratories or in classes. At school level, practical work is even more important because of the fact that pupils learn by doing. Scientific practices and applications are thus rendered more meaningful. It is an established truth that an object handled impresses itself more firmly on the mind than the object merely seen from a distance or in an illustration. Thus, practical work forms an important feature in any Science and Mathematics Course (Yadar, 2007) ^[31]. Thus, learners will be able to apply knowledge learnt to other situations in classroom or their environment in solving or constructing useful things around, thereby enabling them, to be sustainable when they complete school (Ngeh, 2022) ^[14].

For example, learners cannot learn how to ride a bicycle in a solely traditional classroom because the learners will be required to get outside, to try out the bike for practical lesson. Thus hands-on-minds-on teaching-learning approach allows learners to directly observe, do and understand what the exercise is all about. This enables learners to grab concept faster and easily. They will not easily forget and would be able to apply when necessary. This is a good method for teaching a kinesthetic learner who learns best by practical examples. This approach enables learners to do things on their own which goes a long way to enable them to be able to apply what they have learnt in solving problems or for sustainable learning that will ensure a future career upon graduation. This ensures sustainable education on the part of the learners and society at large (Tawil & Locatelli, 2015) ^[28] supporting these findings with their own views.

From the qualitative analysis of the interview directed to head teachers on hands-on-minds-on teaching-learning approach, majority said that they expect the teacher to carry out practical lessons where learners do practical activities and to see the pupils carrying out teaching learning activities by themselves. They observe how pupils are manipulating the given materials to bring out solution to a given problem and classroom management. Pertaining to techniques or strategies they use in supervision of instruction when hands-on-minds-on teaching-learning approach is concerned, most of the head teachers said they use classroom observation, clinical supervision, workshops and demonstration techniques.

These findings confirm with Mbua (2003) ^[13] who posits that the purpose of school administration under the leadership of the head teacher is to enable members of staff of the school, community members and the pupils to work together as a team in order to achieve the desired goals and objectives of the school. The head teacher is the person responsible for coordinating and controlling all the scarce factor resources of the school in order to achieve set objectives. His/her responsibilities revolve around most of

the administrative processes, such as planning, coordinating, communicating, controlling, decision-making and organizing.

Collectively, Mbua (2003) ^[13], Oluremi (2008) ^[17], Fonkeng and Tamajong (2009) ^[7] and Obi (2010) ^[16] agree to these findings accepting that the critical task of any administrator including the head teacher is to set out methods or procedures that will guide him/her in attaining the goals for which the organization was intended to achieve. A key function of such an administrative role is to develop an administrative process that is capable of accommodating to the complex and dynamic quality of evolving educational programs. The administrator must therefore possess both the personal qualifications and expertise necessary to carry out his/her changing role since this role implies an adaptive, innovative, flexible and loosely structured administrative approach, a person in such a role must, above all, possess a high tolerance for ambiguity.

The Change Theory (Fullan, 2003) ^[10] confirms to these findings by reiterating that to achieve effective implementation of the change process with regard to instruction, there is need of maximum support from head teachers. The teachers need the provision of the necessary materials needed for successful implementation of the process and frequent organization of seminars/workshops to enable teachers to grasp the concept and the change to build in the system. Teachers could equally be motivated by prize award given to those who apply the concept in the field properly. These will enable the teachers to put more efforts in learning and apply the concept in the field which will enable the concept to build in the system easily. There is need of constant supervision to ensure that practices tie with what is expected of the new concept (Fadipe, 2002) ^[6] accepting the views of Fullan (2003) ^[10] and supporting the findings of this study.

An administrator must also be people-oriented. He/she must be sensitive to human differences and be able to build upon those differences. He/she must foster informal, open relationships and delegate responsibility through a decentralized and horizontally oriented administrative structure. He/she must ensure a free flow of communications in all directions, and must be tuned and sensitive to formal and informal communication channels. He/she must be able to organize in such a way that their diverse interests and collective efforts are channeled towards an acceptable direction (Mbua, 2003 & Oluremi, 2008) ^[13, 17] added in confirmation.

Oyedeji (2006) ^[18] and Oluremi (2008) ^[17] confirm to these findings by outlining qualities of a good administrator (head teacher): 1) a head teacher from the foregoing discussions must possess the ability to achieve good human relations in order to be fair to and sympathetic with his staff. 2) He/she should be prudent or wise in order to work co-operatively with the teachers and students in the school. 3) He/she should be flexible and easily adaptable to modern changes which will effect development in school administration. 4) He/she should be an authority and in authority. Being an authority depicts an acquisition of professional qualifications in education. A head teacher is in authority when he/she possesses the legal power backing him/her as an administrator. This legal power is the letter of appointment. 5) A head teacher should possess skills by being knowledgeable, tactful, and friendly in performing his tasks. 6) He/she must be a man of integrity, frankness, and

dedication. 7) He/she must always be fair, impartial, dedicated and courageous. 8) A good head teacher must be appreciative of what other people have done, and exhibit good attitude towards others. 9) A head teacher must maintain a good moral conduct. 10) He/she must be innovative and creative in nature to enable him/her easily adapt to changes in curriculum and instructional development. 11) He/she should have high aesthetic value. 12) He/she must be decent in dressing and noted for cleanliness and orderliness and 13) He/she must be known for his/her sense of determination, self-confidence and self-respect. To conclude, the overall progress and achievement of any school, is purely depended on the skills and competence of the head teacher in adopting acceptable processes geared towards achievement of the school's goal (Oyedeji, 2006 & Oluremi, 2008)^[18, 17].

Conclusions

Based on the reasonable interpretations and discussion of the findings above, some conclusions were made. Pertaining to Hands-On-Minds-On Approach to teaching and learning: It was concluded that the approach has a relationship with head teachers' administrative processes in public primary schools of the English-speaking sub-system of education in the South-West and North-West Regions of Cameroon. It was further established that Hands-On-Minds-On Approach has a very weak inverse relationship with head teachers' administrative processes. This implies that if Hands-On-Minds-On Approach to teaching learning by the teachers has to improve, most of the head teachers' administrative processes have to decline to enable them pay greater attention to supervision by creating more time to supervise instruction in school. Therefore, the relationship is not very significant.

Recommendations

The study recommends that the Ministry of Basic Education, as well as other educational bodies should develop strategic plans on periodic sustainable capacity building workshops/seminars for teachers and head teachers on: The adaptation and innovation in instruction in efforts to stay abreast with new knowledge and trends in the teaching methods and strategies, teaching materials, content and technologies and to accommodate the learners with diverse needs when using Hands-On-Minds-On Approach to teaching and learning. This can enable the head teachers to ensure that teachers and pupils carry out learning by doing; trial and error learning; learning from simple to complex; practical learning exercises; use of common salvage gadgets; learning by manipulating objects; teachers act as facilitators of learning; learners gain knowledge by experience among others.

Contributions of the Study to Knowledge on the NPA and Administration

The study has established the relationship that exists between administrative processes and the New Pedagogic Approaches with particular attention to Hands-on-Minds-on Approach in the primary schools. The study established that the head teachers' administrative processes are poorly related to the Hands-on-Minds-on Approach in public primary schools of the English-speaking sub-system of education in the South-West and North-West Regions of Cameroon. The study has increased knowledge on what it

takes to achieve effective supervision of instruction alongside other pressing duties that need administrative attention of head teachers. The study has informed the teachers on their need to be acquainted with the modern modes of instruction using Hands-on-Minds-on Approach and to stay in collaboration with their head teachers for effective teaching and learning in the schools.

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