Utilization of Instructional Media For Quality Training In Pre-Primary School Teacher Training Colleges In Nairobi County, Kenya

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ABSTRACT

Since teachers play a major role in the education of young children, the quality of their own training is a matter of concern. Among important aspects in pre-primary teacher training is the utilization of instructional media to reinforce learning, motivate learners and make learning real. However, reviewed studies on pre-primary schools have established inadequate use of instructional media by pre-primary school teachers, likely to have resulted from inadequacies during training among other factors. Given the importance of instructional media in any learning outcome there was need to investigate the factors influencing their utilization by pre-primary school college tutors during training, a concern that formed the focus of this study. It was out of this concern that this study was conceived. The study aimed at investigating the types of instructional media in pre-primary school colleges and tutors’ utilization of instructional media during training. The study was carried out in public and private pre-primary school teacher training colleges in Nairobi County. Herzberg’s two factor theory was used to guide the study. The study adopted both qualitative and quantitative research approaches. The key study respondents were all pre-primary school college tutors who taught activity area units in the selected colleges, the programme officers and managers of the selected pre-primary school teacher colleges. A questionnaire for the pre-primary school college tutors, an interview schedule for the programme officers and managers of the selected pre-primary school teacher colleges and an observation checklist were used to gather data. The Statistical Package for Social Sciences (SPSS) was used in the analysis of data. The results revealed that variety of instructional media were available and used in teaching by the college tutors. The study also revealed that private college tutors utilized instructional media more than public college tutors.

1. INTRODUCTION

It is widely recognized that qualified and competent teachers are an essential component of school programmes that result in improved outcomes for learners at all levels of education (Barnet, 2004). Early childhood teacher training in particular requires the use of appropriate skills and attitude by tutors so as to produce learners with adequate skill to teach young children. For this to happen the curriculum in place for both public and private institutions that train pre-primary school teachers should enable the trainers to instill the necessary content and pedagogical skills to help them bring out the expected outcomes among the learners. An important aspect in pre-primary school teacher training is in relation to the use of instructional media by the tutors to reinforce learning. Such instructional media include three dimensional objects, for example realia, specimens, models, television boxes and mobiles, audio-visuals, projectors, graphic designs, template maps, chalk boards, digital equipment among others.

Ogunranti and Ihongbe (1981), define visual aids as any picture, model, object or device which provides tangible visual experience to the learner purposely for introducing, building up and enriching ideas. They add
that it clarifies difficult notions which could otherwise be difficult to explain. However, the unskilled use of visual aids can do more harm than good, resulting in waste of time for both the teacher and the learner. Therefore, during the training of pre-primary school teachers it is important to equip them with all skills, knowledge, pedagogy and rudiments about how instructional media can help the teacher make the delivery of instruction successful with learners.

The inclusion of instructional media by tutors during training enable pre-primary school teacher trainees to access new ideas such as ways to study themes, how to access information that is difficult to find and how to present information using different instructional media. Besides, instructional media can provide continuing support for trainee teachers during and after courses end (USA Congress Office of Technology Assessment, 1995) and many teachers who use instructional media find that it can help them improve motivation and learning, address students with different learning abilities, expose students to a wider world of information and experts and implement new teaching techniques. Case studies on pre-service teachers showed that the use of instructional media could capture the reality of the classroom (Kadzera, 2006).

According to Means (1994), the use of instructional media by teacher trainers helps trainee teachers develop new models of teaching the required content areas. As observed by Zhao and Frank (2001), instructional media helps teachers put together different aspects of the curriculum, direct student learning, model an idea or activity or connect curriculum to real world tasks. Confirming the same, Worth (1986) notes that for every hour a teacher speaks only 8-10 minutes of the information given is retained in the learner’s mind. But when visual aids are brought in, interest can be increased a great deal.

People acquire much of their knowledge by use of their senses (Narayan, 1995). Psychologists have matched human senses with the respective percentages of learning that takes place. According to Mwololo (2009), the sense of taste accounts for 1%, touch 1 ½ %, smell 3 ½ %, hearing 11% and sight 83% of the total learning. Most learners engage the sense of sight in communicating and gaining learning experiences. It is suggested that teachers need to engage use of instructional media during teaching as these will prompt learners to use their eyes during instruction. Berndt (1977) suggests that teachers should stimulate learner’s sense for attention to what can be seen. This relates closely to early childhood teacher training since it would arouse the interest of learners and improve learning outcomes. According to Seefeld (1984), students learn best when allowed to manipulate and interact with instructional media. Thus, the use of instructional media in pre-primary school teacher training increases retention and enhance production of teachers with a hands-on teaching experience.

Researchers have called for and emphasized the importance of inclusion of instructional media in teacher training (Barbara, 1993; Craig 2005). This inclusion would enhance imitation by teacher trainees and has the potential for future teachers to improve their teaching practices in classroom situations (Mangal & Mangal, 2010). The studies contend that instructional media form a focal point and attract attention, arouse interest
hence promoting a desire to learn, supplement description. This helps to explain words and processes, stimulate the learners’ imagination, illustrate relationships, and promote retention and memory besides saving teaching time.

In a study of primary school teacher training colleges in Nigeria, Onasanya (2008) confirmed that instructional materials stimulate learning because firstly, student teachers get more attentive. Secondly, student teachers’ positive attitude generates more interest for lessons they learn or teach. This enhances student teachers participation in class activities, promotes their performance in teacher examinations and improves their teaching process (Adeyanju, 2003; Kadzera, 2006; Onasanya, 2002).

The vital role of instructional media (I.M) in the successful implementation of PPS teacher training curriculum cannot be over emphasized. Jimo (2009) noted that the use of I.M. in teaching is a necessary practice for effecting learners’ behaviour change in all fields of learning and especially in pre-primary school teacher training since they are being prepared to handle children who are in their formative years. With a variety of these in the classroom, both teaching and learning becomes pleasant experiences where learners enjoy to the maximum. The tutor goes through less stressful moments since instructional media brings reality in the classroom.

Studies in Kenya on pre-primary school performance have established that there is low use of instructional media in pre-primary school centres (Aila, 2006; Begi, 2007; Ikumi, 1985; Mwololo, 2009). In a survey of pre-school teachers’ knowledge and use of instructional media in some selected primary schools in Kibwezi district, Mwololo (2009) established that primary school teachers had minimal knowledge of instructional media. These studies suggested that most pre-primary school teachers in Kenya are afraid of failure in their attempt to use unfamiliar media in their teaching. To enhance the observations of the above studies, this paper established different types of instructional media used in teaching by pre-primary school college tutors.

The objectives of the study were to:

- Determine the instructional media used in teaching by pre-primary school college tutors in both public and private institutions.
- Assess the utilization of instructional media in teaching by public and private pre-primary school college tutors.

2. THEORETICAL AND CONCEPTUAL FRAMEWORK

This study was guided by the Two Factor Theory by Frederick Herzberg (1968). The theory suggests that people are influenced by two factors which motivate their performance namely motivators and hygiene factors.
The theory stipulates that motivation may be **extrinsic** or **intrinsic**. In this study **extrinsic factors** include the tutors teaching experience, availability of instructional media, and the tutors’ motivation from the college management.

### 2.1 TYPES OF INSTRUCTIONAL MEDIA

Instructional media is designed to provide realistic images and substitute experience to reach curriculum experiences. The media is considered the most efficient facilitators in the education set up. This media is not a substitute for the teacher. Its utilization however, calls for an imaginative approach by the teacher who needs to constantly be on the alert for new ideas and techniques to make the lessons presented with different instructional media achieve effective outcomes (Talabi, 2001).

Literature reviewed in this study noted various instructional media identified by other scholars that have been used in teacher training. Such media include chalkboards, flip charts, computers, slides, real objects, print media including books and charts (Aila, 2005; Begi 2007; Blythe – Lord, 1991; Kadzera, 2006; Mwololo, 2009; Ngaroga, 1996; Onasanya, 2008; Wankat and Oreovicz, 2001; Williams, 2003).

Flip charts are certainly one of the most popular instructional media though not the most sophisticated visual aids available today. They are simple, inexpensive, versatile and when used with thoughtful creativity, they are highly effective (Naimova, 2008). Although materials for flipcharts production in the Kenyan context are inexpensive, readily available and can be easily improvised from old calendars and other plain papers, teachers do not exploit their knowledge and creativity to improvise them as trained (Ngaroga, 1996). This study was done in primary teacher training colleges whose results cannot be generalized to pre-primary teacher colleges. This is a gap that the current study was set to fill.

Improvised slides are prepared on strips of paper rolls that are divided into sections to tell parts of a story. Sequenced pictures of stories are drawn on the long rolls which are then fixed in closed carton boxes using rod sticks on either end. Teachers can use slide projectors and improvised slides to enrich their instruction (Onasanya, 2008). The study also explains that print media is one of the oldest and most widely used media in education. Such media are useful for informational or motivational purposes. They include textbooks, syllabuses, course books, pre-school guidelines, periodicals, encyclopedia, newspapers and magazines, file records, minutes of meetings and so on.

The use of local resources is usually associated with improvisation where the teachers devise a substitute when the original material is not available. Kadzera (2006) gave an example of a globe made from clay and articulated by a bamboo, which can be used to illustrate rotation of the earth. Improvisation here emphasizes the ability to make the item look like and function in the same way as the original material. This helps students to have a true picture of the situation. Pre-primary school college tutors need creativity and skills to enable them use available materials to produce instructional media. Realia eliminates distortion in students’
knowledge on topics being taught (Adeyanju, 2003; Onasanya, 2001). Any other instructional media found being used by the tutors in pre-primary school teacher training colleges was given the necessary regard in this study.

2.2 TUTORS’ UTILIZATION OF INSTRUCTIONAL MEDIA IN TEACHING

Instructional media is perceived as very important in the teaching-learning process (Kadzera, 2006). The use of instructional media in teaching stimulates learning because students become more attentive. It also rouses students’ interest and enhances their participation in class activities. Consequently it improves the teaching process since it promotes performance in classroom situations. This is confirmed in a study by Alssen (2012) which investigated university students’ perceptions of learning English for Specific Purposes (ESP). The study conducted on 53 students gives a report about four design courses taught at the Language Centres. Instead of teacher-centred methods, the courses used a student-centres method where by small groups of students designed ICT-enhanced instructional materials for learning English for specific purposes-ESP. The materials were published on the Internet where they were available for all students. The students reported improved skills especially in speaking, reading and writing, as well as in domain-specific vocabulary. This means that student teachers who are exposed to preparation and utilization of instructional media would post improved performance and hence tutors are called upon to use instructional media to reinforce learning.

The utilization of media in instruction can provide tutors’ access to new ideas such as ways to study themes, how to access information that is difficult to find, clarification of difficult terms or concepts and how to present information using different instructional media. Besides, media can provide continuing support after courses end (USA Congress Office of Technology Assessment, 1995). Many teachers who use instructional media find that it can help them improve student learning and motivation, address students with different learning abilities, expose students to a wider world of information and experts and implement new teaching techniques in all levels of learning including teacher training colleges.

Interactive instructional media has been used with pre-service teachers to improve their training and hence the quality of elementary education (Bitner &Bitner, 2002; Clark et al 2006). The potential of interactive multimedia for teaching has been discussed extensively. Falk &Carlson (1991) in a study of a group of pre-service teachers using multimedia program, found multimedia to be an effective approach for providing pre-service teachers with pre-observational experiences. This would also benefit pre-primary school teacher trainees if their tutors would effectively utilize them during training.

3. FACTORS INFLUENCING THE USE OF INSTRUCTIONAL MEDIA

Some of the factors which appear to influence the use of instructional media are teaching experience, tutor motivation, availability of instructional media, and attitude towards instructional media as discussed.
1) Teaching Experience

The number of a tutor’s years of teaching experience influences the use of instructional media. In a study on how personal familiarity with instructional media influences its implementation, Barnard (2007) found that “acquisition of computer skills is neither smooth, nor linear; it takes time and aspiration”. Barnard (2007) further explains that the more experienced a teacher is with any form of instructional media, the more he or she will appreciate it and implement it in his/ her field.

A study done by Moore, Morales & Carel (2004) found that more than 50% of the 298 teachers with (0-2 yrs) years of experience in teaching received high scores on the section concerning implementation of instructional media. The authors assert that the factor could be attributed to recent graduation from teacher training and exposure to instructional media than their senior colleagues. The current study set to establish whether the teaching experience of pre-primary school college tutors has any influences on their utilization of instructional media.

2) Tutor Motivation

Tutor motivation refers to the application of certain measures that tend to energize the tutor in the work place and which in turn encourages the use of instructional media. Motivators are the factors that energize workers to perform in order to achieve set objectives (Herzberg 1968). For instance how interesting it is, how much opportunities does it avail for success, how much does it yield to recognition and promotion of the worker.

In Kenya a study was conducted by Mwololo (2009) on pre-school teachers’ knowledge and attitude towards use of visual media in instruction in Kibwezi district. The sample consisted of 120 pre-school teachers. A questionnaire was used to collect the required data. Results revealed that neither the schools nor the parents supported pre-primary school teachers with any instructional media for teaching. This implies that teachers who lack creativity, motivation and initiative would find it imperative to teach using the most common media at their disposal; that is, chalk and chalkboard to the detriment of learners’ performance. This lack of support therefore demotivates tutors in the use of instructional media in teaching at the pre-primary school level. It is for this reason that the current study was found necessary in order to establish whether a similar factor impeded the use of instructional media in pre-primary school teacher training colleges.

Since the successful performance of a pre-primary school teacher trainee is the result of various factors, this study will investigate whether the tutors receive motivation to enhance sourcing, production, use and storage of instructional media, intended to promote performance of trainees in pre-primary school teacher colleges.

3) Availability of Instructional Media

Availability of instructional media encourages its usage. According to Majed (1996), for technology to be exploited in an environment, it must first exist. This means that if college tutors are to use instructional media
in their teaching, then the resources should be made available in the college environment. The qualitative study which was conducted on 143 student teachers on their use of instructional media found that more than half of the respondents indicated unavailability of instructional media in classrooms. This was echoed by Kadzera (2006) in a survey on use of instructional technologies in five teacher training colleges in Malawi” where classroom facilities like power sockets were vandalized or were not there at all for use with instructional media. This was also confirmed by Asegedom (1998) observation in an earlier study in Ethiopia which noted the lack of required instructional media resources is one of the reasons for teachers’ limited use of instructional media.

This study intended to establish whether similar circumstances influence the use of instructional media in pre-primary school teacher colleges in Nairobi County, Kenya.

4) Attitude towards Instructional Media

According to Yaghi (1996) in a survey to establish the role of the computer in schools, he confirmed that well trained teachers tend to be more comfortable and efficient with instructional media while poorly trained teachers may model bad experience that could cause negative attitude towards instructional media among students. The mandate of this study was to find out the tutors level of acquaintance with usage of instructional media.

When instructional media is available and the management is committed to implementation, change effects can be seen. This would exhibit the administration’s commitment and hence facilitate the change process making it easily acceptable by the subordinates (Kadzera, 2006). Onasanya (2008) observes that this change of attitude and behavior from the tutors would be beneficial to the learners. Even when the resources are available or the management shows commitment and the implementers (pre-primary School College tutors) do not see the need for these instructional media, no use can possibly occur. The innovative tutors would spend time to prepare and use instructional media in their instruction while those with negative attitude towards instructional media might not make any effort to prepare and use the instructional media during instruction (Begi, 2007; Kadzera, 2006)

4. RESEARCH METHODOLOGY

4.1 RESEARCH DESIGN

The study adopted both a qualitative and quantitative research design. Creswell (2003) observes that recognizing that all methods have limitations, researchers felt that biases inherent in any single method could neutralize or cancel the biases of other methods. This is also referred to as triangulation where qualitative and quantitative data collection methods are used in research. It has been argued that the two paradigms, qualitative and quantitative, only constitute different perspectives on the most appropriate method.
to adopt for a particular research question (Davood & Mohsen, 2001). Chaudron (1983) points out that the two paradigms are mutually dependent and can therefore be used in combination.

Qualitative research includes measures and techniques that produce non-statistical data. Such data includes words, symbols, pictures and other non-numerical records (McNabb, 2004; Mugenda & Mugenda, 2003). This kind of data is useful for describing, creating understanding for subjective interpretation as well as for critically analyzing the subjects under study. This study used both qualitative and quantitative orientations to assist in explaining some phenomena in the research that could have been difficult to explain using one orientation.

The descriptive aspect was purposively used to enable probing deep and intensively analyze the multifarious aspects of the utilization of instructional media by pre-primary school college tutors. It allowed for collection and presentation of information in a way that gave insights as to why the aspects under study took place in the direction they did.

4.2 VARIABLES OF THE STUDY
The independent variables in this study were: tutor motivation, availability of instructional media and attitude towards instructional media. On the other hand the dependent variable was utilization of instructional media in teaching by pre-primary school college tutors. It included instructional media used by pre-primary school college tutors like print media, chalk board, flipchart, computers, slide, projectors, and locally available resources.

4.3 LOCATION OF THE STUDY
This study was conducted in public and private pre-primary school teacher training colleges in Nairobi County where implementation of The Kenya Institute of Curriculum Development Curriculum for Early Childhood Education teacher training takes place. Nairobi County is the habitation of a highly heterogeneous population with large disparities in social and economic dynamics. It was selected because it has several pre-primary school teacher training colleges both public and private unlike other counties that have either one or none of these colleges. The County has 2 public and 19 registered private pre-primary school teacher training colleges which are located in both high and low income areas.

The public colleges are located in 2 public primary schools and tutors are posted by the government from the District Centres for Early Childhood Education (DICECEs). They are all qualified personnel with diplomas or degrees in early childhood studies and are managed by DICECE Programme officers from the district education office.

The aspect of both public and private pre-primary school teacher colleges in Nairobi County was considered because although these colleges used the same curriculum (prepared by the Kenya Institute of Curriculum
Development) and sat for the same KNEC examination, their management, endowment of resources, provision of instructional resources and teacher dynamics differed greatly.

4.4 RESULTS
The study established the frequency of use of instructional media by pre-primary school college tutors plus the factors that influenced pre-primary school college tutors to utilize instructional media since this would translate into production of pre-primary school teachers with the same attributes as their tutors.

A variety of instructional media was available in all the colleges, both commercial and improvised. The latter were prepared by some tutors and the researcher noted with satisfaction a lot of interdependence in the utilization of the available instructional media. However, only a few tutors really took time to use the instructional media as observed in the following sub-sections that denote the variety of units covered by the diploma students.

4.5 TARGET POPULATION OF THE STUDY
The study targeted two public colleges, 19 private pre-primary school teacher training colleges and tutors who handle the activity area units in these colleges. These tutors were selected because a lot of instructional media is expected to be utilized during the teaching of mathematics, science, language, social studies and music and movement. There are 168 tutors. Each college has 4 diploma classes, two in first year and two in second year of study. Each class in both the public and private colleges is assigned to two lecturers who teach two study units each.

The 2 public pre-primary school teacher training colleges were included in the study as well as all the diploma tutors in both types of colleges. Stratified random sampling technique was used to pick 8 private pre-primary school teacher training colleges out of the 19 making a sample of 50%. This enabled the researcher to investigate how varied the instructional media was. The total number of pre-primary school teacher training colleges included in the study was 10.

Since the study aimed at getting an in-depth analysis of the use of instructional media in teaching pre-primary school teacher trainees, tutors attitude and administrative support in the application of pedagogy, informants included all the tutors handling diploma classes in the 10 colleges as the key information resource persons. This gave a total of 80 tutors.

<table>
<thead>
<tr>
<th>Category</th>
<th>Total No. of colleges</th>
<th>No. of diploma classes</th>
<th>No. of Program officers/managers</th>
<th>No. of tutors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public</td>
<td>2(all)</td>
<td>8</td>
<td>2</td>
<td>38</td>
</tr>
<tr>
<td>Private</td>
<td>8(50%)</td>
<td>28</td>
<td>8</td>
<td>42</td>
</tr>
<tr>
<td>Sub-Total</td>
<td>10</td>
<td>32</td>
<td>10</td>
<td>80</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td></td>
<td>90</td>
</tr>
</tbody>
</table>
4.6 RESEARCH INSTRUMENTS
Three instruments were used to obtain data. These included a questionnaire, interview schedule and observation checklist.

4.7 QUESTIONNAIRE
A questionnaire was used to gather information on the demographic data of the tutors and the apparent factors motivating their level of use of instructional media. The instrument consisted of three sections. Section A, items 1-5 which gathered background information of the pre-primary school college tutors. Section B with activities a-f established pre-primary school college tutors’ level of use of instructional media in teaching activity areas, while Section C items 1-18 consisted of an attitude scale which measured pre-primary school college tutors’ attitude towards instructional media. This was used to measure cognitive, affective and behavioral components of attitude. The items were adapted from those used by Begi (2007) which was modified to suit this study. Section D, items 1-9 is a motivational scale that measured the level of support that pre-primary college tutors received from the college administration. Section E consisted of items 1-3 to collect information on the factors influencing the use of instructional media.

Demographic information was analyzed using qualitative description methods.

In section B, respondents were required to select the items of instructional media used by choosing one of the appropriate responses. Always (A), Sometimes (S) and Never (N) scores of these responses were weighed from 3 (always) to 1 (never). They were quantified as follows: - A=3, S=2, N=1. There were 17 items each scoring a maximum of 3 marks. Scores for each item were added to calculate the means by dividing with the number of respondents. Overall mean was calculated by adding these means and dividing by the number of items.

Section C of the instrument consisted of 9 items to measure tutors’ motivation.

Respondents were required to choose one of the appropriate responses. Strongly agree (SA), Agree (A) and Disagree (D) scores of these responses were weighed from 3 (strongly agree) to 1 (disagree). They were quantified as follows:-

SA=3, A=2, D=1. There were 9 items and scores for each item was added to calculate the means by dividing with the number of respondents. Section E of the instrument consisted of three open ended questions on the factors which influence the use of instructional media. The collected data was analyzed using qualitative methods.

4.8 INTERVIEW SCHEDULE
An interview schedule for managers of pre-primary school teachers’ colleges items 1-10 was used to collect data that confirmed the information obtained through the tutors’ questionnaire concerning availability of
instructional media. It also helped probe for more information regarding tutors’ responses on use of instructional media and gave an opportunity to seek clarifications as need arose.

An observation checklist, collected background information about the institutions and their storage of instructional media. Section B activity areas “a-f” was used to check on the availability of instructional media and it helped cross-check information obtained from the questionnaire and interview schedule concerning the availability of instructional media, and tutor motivation. Mode of response and scoring of observation checklist was done the same way as in the questionnaire.

4.9 PILOT STUDY
Pretesting of research instruments was done in two pre-primary school teachers’ colleges in Nairobi County. The two colleges were not part of the main study. Piloting of the instruments ensured clarity and wording of the items. The process also ensured validity and reliability of the research instruments.

Content validity was used to test the validity of the instruments and was achieved by ensuring that test items covered all variables and objectives of the study. A test is considered valid if it measures what it is expected to measure successfully. Content validity refers to the degree to which the test actually measures the traits for which it is designed. Individuals knowledgeable in this area were consulted and requested to assess the content of the instruments and also give advice on whether these instruments contained adequate items to measure all the important areas of the study variables. These were lecturers from the Department of Early Childhood Studies, Kenyatta University. Since the instruments were noted to be reliable at a percentage above 76% as demonstrated in Table 3.2, they were also regarded as valid.

4.10 RELIABILITY OF THE INSTRUMENTS
Reliability of an instrument is the degree of consistency with which an instrument measures the attribute it is designed for. An instrument is reliable when it measures to expectation consistently. Reliable instruments are stable in all that they measure and yield comparable scores upon repeated administration (Kirk & Miller, 1986; Kombo & Tromp, 2006). This was tested during the piloting stage. Test-retest method was used to test the reliability of the instruments, that is, the instruments were administered to tutors in two colleges twice, within an interval of two weeks.

Cronbach’s Alpha Coefficient was computed from the data collected to confirm the reliability of the scales. Cronbach’s Alpha is a model of internal consistency, which is maintained through a system of repeatability to check on inter item correlation (Begi 2007). Reliability analysis was used to determine the relationship between the items in the questionnaire and the overall index of repeatability for each of the scales was also calculated. Table 3.2 presents the results of Cronbach’s Alpha Coefficients which were computed from the data collected from the pilot study of the two administered instruments.
Reliability Test Results

<table>
<thead>
<tr>
<th>Instrument</th>
<th>Cronbach’s Alpha Coefficients</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>First administration</td>
</tr>
<tr>
<td>Professional qualifications</td>
<td>.871</td>
</tr>
<tr>
<td>Types of instructional media</td>
<td>.966</td>
</tr>
<tr>
<td>Utilization of instructional media</td>
<td>.763</td>
</tr>
<tr>
<td>Attitude</td>
<td>.822</td>
</tr>
<tr>
<td>Motivation</td>
<td>.961</td>
</tr>
<tr>
<td>Availability of instructional media,</td>
<td>.782</td>
</tr>
<tr>
<td>Tutors’ experience</td>
<td>.875</td>
</tr>
</tbody>
</table>

The table indicates that the alpha coefficients of the scales range between 76-96% and were therefore reliable since the coefficients of the first administration were highly correlated with those of the second one. Hence the instruments had favourable test-retest reliability. The reliability coefficient was 0.7.

4.11 DATA COLLECTION PROCEDURE

The current study was done in 10 pre-primary school teacher training colleges, where the ten programme officers/managers plus the 80 tutors that handled diploma students. The programme officers were interviewed during their break time while the tutors were supplied with the questionnaires with a two day deadline to which they all agreed.

Data was collected in three stages. In stage one, there were organized sessions with the research assistants to clarify the purpose, methods and procedure of data collection in terms of administration of the interview schedules and questionnaires (to the programme officers in the pre-primary school teacher colleges) and then administer the questionnaire to tutors in their respective colleges. The respondents were given a day to fill in the questionnaires which were then collected at the end of the day to avoid loss or misplacement. The timeline was reached at after a consensus since their session of teaching was brief and congested with work. They agreed to give the document priority in the evenings for two days and to hand them over to their administrators. This was effectively done and the research assistants were able to collect them from the programme officers or college managers.

In stage two, programme officers and college managers were interviewed. Lastly observations of the instructional media available in the public and private pre-primary school teacher training colleges were done by the researcher directly. The researcher ticked against the available instructional media in the pre-primary school colleges.

5. DATA ANALYSIS

Data was analysed using qualitative and quantitative methods. Descriptive statistics were calculated to give results which were presented in form of frequencies, percentages, means and standard deviations. The inferential statistics that were calculated included t-tests and Multiple regression. The Statistical Package for Social Sciences (SPSS) was used.
Before any data could be gathered, the participants (tutors) were made aware that their responses were confidential and that the information was purely for academic purposes. In conducting the observations and interviews, high levels of honesty was exercised. The interviewer limited him/herself to the questions pertaining to the study as outlined in the interview schedule (Appendix B and C). In administering the questionnaires, observation checklist and interviews, the researcher considered time of the year as all the pre-primary school teacher training colleges selected operate during the school holidays in April, August and December.

Additionally, the interviews were conducted in a private place with only the teacher (interviewee) and the researcher (interviewer). This ensured some privacy and confidentiality during data gathering. In the analysis and dissemination of results, a number of measures were taken to ensure privacy, anonymity and confidentiality of participants. First of all, the names of the colleges and the names of the participating tutors were not used. The colleges were coded using the first two letters of the college name thus DN, DS, PW, HR, IM, AM, TC, NE, NW and SD. The tutors were correspondingly coded using a capital letter for the college codes followed by T and a number thus DNT1 for the first teacher or DNT2 for a second teacher in college one. The rest of the coding followed that order.

The demographic result implied that most of the tutors’ had been in the teaching profession long enough and were therefore adequately equipped to prepare and utilize instructional media in instruction. This was also confirmed by the observation checklist that revealed a number of instructional media available in the classrooms ranging from realia, pictures, charts, print media and writing resources. In the questionnaire tutors agreed that they had instructional media from different sources including individual improvisation.

This is in line with Barnard (2007) who remarks that the more experienced a teacher is the more he or she is likely to appreciate and use instructional media in teaching.

As shown in Table 4.1, seven tutors (7.8%) were diploma holders, eighty (88.9%) of them had attained degree qualifications, whereas 3 of the tutors had master’s degrees.

<table>
<thead>
<tr>
<th>Academic Qualifications</th>
<th>Number of College Tutors</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Masters’ degree</td>
<td>3</td>
<td>3.3</td>
</tr>
<tr>
<td>Bachelor degree</td>
<td>80</td>
<td>88.9</td>
</tr>
<tr>
<td>Diploma</td>
<td>7</td>
<td>7.8</td>
</tr>
<tr>
<td>Total</td>
<td>90</td>
<td>100</td>
</tr>
</tbody>
</table>

The results show that the majority of the tutors were graduates and hence were professionally qualified to use instructional media.
Similar findings have been reported by other studies done in East and West Africa. In a study on the use of instructional media in teaching and learning in selected schools in Nigeria, Adegbija and Fakomogbon (2012) found that teacher qualifications and in-service training through workshops and conferences promoted utilization of instructional media. In addition, Onasanya (2006) in a study on preparing primary school teachers on selection, production and use of instructional media for effective classroom teaching in Nigeria, found that the skills acquired by teachers during training equipped teachers to produce instructional media. Mwololo’s (2011) also found that teachers’ knowledge and skills influenced the used of visual media in teaching in Kibwezi district.

**Instructional Media Used in Teaching by Pre-Primary School College Tutors and their Frequency**

To address the first objective of this study namely “to determine the instructional media used in teaching by pre-primary school college tutors in both public and private colleges,” selected tutors were asked to indicate the instructional media they were using to teach the prescribed ECE teacher training units. The specific units selected for this study are referred to in the syllabus as “activity areas” namely language, mathematics, science, creative, music and movement.

The study established a variety of media for utilization during instruction ranging from realia, print, pictures, models and writing materials. The overall frequencies of the instructional media available for teaching in pre-primary school colleges teachers are presented in the Table 4.8.

<table>
<thead>
<tr>
<th>Instructional media</th>
<th>Frequency</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Writing Materials</td>
<td>1530</td>
<td>100</td>
</tr>
<tr>
<td>Realia</td>
<td>203</td>
<td>13.26</td>
</tr>
<tr>
<td>Pictures</td>
<td>176</td>
<td>11.50</td>
</tr>
<tr>
<td>Cards</td>
<td>63</td>
<td>4.11</td>
</tr>
<tr>
<td>Models</td>
<td>26</td>
<td>1.69</td>
</tr>
</tbody>
</table>

Table 4.8 indicates that there were a variety of instructional media for pre-primary school college tutors to use in teaching. The results also show that the most common media was writing materials like blackboard which were predominantly used in the classrooms followed by realia and pictures. These media were both commercial and improvised where some were provided by the college management as noted especially in the public colleges. This was also confirmed by the interview for college managers (private colleges) and programme officers from the 2 public colleges who agreed that tutors were asked to submit lists of required teaching media at the beginning of every teaching period (school holiday) when teaching units were allocated.
This study also noted that the management of some private colleges provided certain instructional media like laminated cards, dioramas, charts and models but which were neglected in the teacher training process. Audio visual media like computers, overhead transparencies and video recorders are not available at all as observed in both public and private pre-primary school teacher colleges regardless of their great usefulness in enhancing teacher training.

Similar results were found by Chakravarthi (2009) in a study on pre-school teachers beliefs and practices of out-door play and environments at Greensboro North Carolina noted that realia like balls were the most commonly used media in teaching. Further, Brown (2009) in a study on social and environmental factors associated with preschoolers’ non-sedentary activities also found that majority of the respondents used balls during lessons. The study recommended that if the goal is to increase children’s activity and participation in instruction then carefully selected real media need to be availed for particular activities.

**Utilization of Instructional Media in Teaching by Type of College**

Pre-primary school college tutors in the sampled public and private colleges were asked to indicate how frequent they were using the instructional media in teaching language, mathematics, science, social studies, music and movement activity areas. This was in response to the second objective of the study which focused on comparing the utilization of instructional media in teaching between public and private pre-primary school college tutors. To understand how the tutors utilized the media in teaching, overall mean scores were calculated. Results in Table 4.10 show that the overall mean score in the utilization of instructional media for tutors in public colleges was 1.325 with standard deviation of 1.003, while that of tutors in private colleges was 1.562 with a standard deviation of 1.00.

<table>
<thead>
<tr>
<th>College Type</th>
<th>No. Of Tutors</th>
<th>Min.</th>
<th>Max.</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public</td>
<td>40</td>
<td>1</td>
<td>3</td>
<td>1.325</td>
<td>1.003</td>
</tr>
<tr>
<td>Private</td>
<td>50</td>
<td>1</td>
<td>3</td>
<td>1.562</td>
<td>1.00</td>
</tr>
</tbody>
</table>

The result implies that private college tutors utilized instructional media more than those in public colleges.

The findings of this study are consistent with that reported by Begi (2007) who found that private pre-primary and lower primary school teachers were using computers more than public pre-primary and lower primary school teachers. In a study on pre-primary school teachers’ use of culturally relevant instructional materials, Waigera (2013) also found that private pre-primary school teachers used instructional materials more than public pre-primary school teachers. The percentage was 61.1% compared to 51.7%.

Similarly Jimo (2009) investigated the use of instructional media in the teaching of S.S. in schools in Kabba Bunu local Government area of Kogi State, Nigeria. Results indicated minimal use of I.M. in the teaching of
social studies. Most teachers depended on text books and chalkboards as instructional materials with other relevant I.M e.g. maps, charts, TVs and pictures sparingly used. The research also noted other problems associated with the use of instructional media including reluctance of teachers to improvise, lack of resource rooms for storage of instructional media, limited time allocation to social studies in the school time table and lack of skills on the part of the teachers.

In an evaluation on the use of instructional media in the teaching of social studies in primary schools in Botswana, Jotia and Matlale (2011) found that teachers’ utilization of instructional media was very inadequate and this invariably had impact on pupils’ performance in their primary school final examination. Similarly, Abdo and Semela (2010) reported low use of instructional media in primary schools of Gedeo Zone of Southern Ethiopia. In Malawi, Kadzera (2006) noted infrequency of use of higher order instructional technologies like overhead projectors, videos and computers in teacher training colleges. The author identified lack of creative thinking and initiative in their teaching.

Dahar and Faize (2011) noted that there was great deficiency in the use of instructional media in schools in Punjab district of Pakistan.

To test whether the difference in use of instructional media between public and private college tutors was significant, the following null hypothesis was generated and tested.

\[ H_0: \text{There is no significant difference in the utilization of instructional media between private and public pre-primary school college tutors.} \]

To test this hypothesis, t-test was used to determine whether tutors in public and private colleges differed significantly in the utilization of instructional media. Table 4.11 shows that the difference between the mean scores for public and private college tutors utilization of instructional media was 0.237 with 0.021 level of significance (2-tailed).

| T-test Statistics for Comparison of Utilization of Instructional Media between Private and Public Pre-Primary School College Tutors |
|---|---|---|---|---|
|          | T     | df   | Sig. (2-tailed) | Mean Difference | Std. Error Difference |
| Equal variances assumed | 2.350 | 88   | .021*            | 0.237           | 2.362             |
| Equal variances not assumed | 2.118 | 15.188 | .051            | 0.236           | 2.621             |

*Significant at \( p<0.05 \) level

The results imply that there was a significant difference in the utilization of instructional media between public and private college tutors at \( p<0.05 \) level of significance. The null hypothesis was therefore rejected.
and its alternate form accepted, that: There is a difference in the utilization of instructional media between private and public pre-primary school college tutors.

These results concur with those of Butt and Kausar (2010) in a comparative study of using differentiated instructions of public and private school teachers in Rawalpindi, Pakistan. In a population of 180 respondents using questionnaires and observation checklists like the current study, the results indicated that teachers from private colleges differentiated their instructions than those from public schools. This concept of differentiation was used to refer to utilization of variety of teaching methods and instructional media to cater for individual differences in a given classroom. The teachers from public schools were aware of the benefits of differentiation in instruction but due to overcrowded classes, lack of teacher training, lengthy syllabus and lack of motivation they do not give them preference. Hence the mean scores for private school teachers were 11.50 while the public school teachers scored 7.70. The p value was less than 0.05. Overall, comparison showed that private school teachers differentiated their instructions more than those of public school teachers. Results therefore indicated that the difference in the teaching practices between the public and private school teachers was highly significant.

Similar results were reported by Afolabi (2010) in a comparative study of public and private schools products performance in Mathematics and English language from educational technology perspective. 50 respondents were drawn from private school students where instructional media were used and 50 from public schools. t-test analysis on the math and English grades at 0.05 level of significance were 19.24 (private) and 10.54 (public) for English and 17.52 (private) and 10.54 (public) for Math. Results revealed that there is a significant difference in the scores of pupils from private schools where instructional media were used and those of public schools where instructional media were not utilized.

In the current study the tutors in private colleges utilized instructional media more than the tutors from public colleges because of several possible reasons. As already noted some of these private colleges are owned by well-to-do proprietors. They are financially able to provide the instructional media or enforce their use by motivating the tutors who use them.

6. SUMMARY OF THE FINDINGS

The first objective of the study was to determine the instructional media used in teaching by pre-primary school college tutors in both public and private colleges. The results revealed that variety of instructional media were used in teaching by the college tutors. The instructional media were inadequate. The available instructional media include: Realia, print media like pictures, course books, cards, and writing resources. The instructional media were commercially obtained, prepared by the tutors, collected from the local environment or selected from among the best made by teacher trainees for examination. A variety of materials whether
commercially obtained, gathered from the local environment or improvised by the tutors were utilized for instruction in most of the activity area units.

With regard to the second objective which was to assess the utilization of instructional media in teaching by public and private pre-primary school college tutors. The study revealed that private college tutors utilized instructional media more than public college tutors. The mean score in the utilization of instructional media for tutors in public colleges was 1.325 while that of private colleges was 1.562.

The difference in the utilization of instructional media between public and private college tutors was significant at $p<0.05$ level of significance. The mean scores for public and private college tutors utilization of instructional media was 0.237 with 0.021 level of significance (2-tailed).

7. **CONCLUSION**

A variety of instructional media were available in the private and public colleges for teaching which were acquired by the colleges from the market and developed the tutors and students. The utilization of instructional media by private and public college tutors in teaching was low.

Successful pre-primary schools teacher training is dependent on the quality of teaching. Most tutors did not use instructional media during the training and process, a factor that reduces students to mere passive participants in the learning process. Worse still is the realization that pre-primary school teachers lay the foundation of responsible professionals and citizens in the education of early childhood scholars. This consequently erodes teaching/learning enthusiasm by denying the tutors and learners the opportunity to rise to the occasion of the learning process.

8. **RECOMMENDATIONS**

Several stake holders should to be involved in order to encourage and enforce the utilization of instructional media in pre-primary school teacher training colleges. This would ensure the production of competent teachers to be entrusted with the duty of imparting knowledge, skills and attitude to young children.

- The Ministry of Education should ensure proper implementation of curriculum which requires effective use of instructional media in teaching. This would ensure production of pre-primary school teachers who are capable of utilizing instructional media in teaching. This is because the current study established that there was variety of instructional media in most of the colleges which were unfortunately not utilized.

There should be a well-articulated, planned process of using instructional materials, curriculum development and instructional strategies which effectively link teacher training colleges with other education agencies. Given that tutors reported such limited time to plan, the Ministry of Education
should consider ways to make media resources known to teachers, so that they don’t have to search for them and the MoE should also to provide teachers with tools that expedite planning.

- The Kenya Institute of Curriculum Development should review the current diploma pre-school teacher training curriculum with an aim of either off-loading some of its content or spreading it into another one year, that is another three school holidays, to ensure a relaxed teaching schedule that would allow for development and use of instructional media. This would also ensure that all ethos of teaching which include the appropriate utilization of instructional media is put in place. This is because the current study found from the tutors report that time limitation hindered their preparation and utilization of instructional media in teaching. This ended up into a hurried and time limited content coverage that left both the tutors and the teacher trainees fatigued and possibly led to production of inadequate teachers who may be incapable of preparing and using instructional media at pre-school level.

- The Management of the colleges should sponsor pre-primary school college tutors to attend in-service training to promote the use of instructional media in teaching.

8.1 AREAS FOR FURTHER RESEARCH

A similar study should be carried out in rural counties to establish the dynamics of utilization of instructional media in these colleges which would create a good platform for comparison with the findings of the current study. There is also need to conduct an inquiry into the characteristics of their own training at the university or college level to establish the use of instructional media by their lecturers is recommended.

9. REFERENCES


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