PRE-SCHOOL TEACHERS' KNOWLEDGE AND ATTITUDE TOWARDS USE OF VISUAL MEDIA IN INSTRUCTIONAL DELIVERY IN KIBWEZI DISTRICT, KENYA

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ABSTRACT

The purpose of this study was to investigate pre-school teachers' knowledge and attitude towards use of visual media in instructional delivery. Descriptive research design and survey technique were used. Stratified random sampling technique was used to select the sample. It was found that trained pre-school teachers used instructional visual media more than the untrained pre-school teachers. There was no significant difference between trained and untrained pre-school teachers' knowledge and attitude. The relationship between pre-school teachers' knowledge and use of instructional delivery visual media was not significant, but the relationship between pre-school teachers' attitude towards visual media in instruction and use were positive and significant in Mathematics, Science, Social Studies, Music and Movement and Art and Craft and specifically the overall. It was concluded that pre-school teacher training was important and pre-school teachers need to be motivated to continue using instructional visual media.

Keywords: *Pre-school, Teachers, knowledge, attitude, visual media, instructional delivery*

INTRODUCTION

Teacher training programmes are meant, among other reasons, to equip teachers with the appropriate instructional knowledge, skills, and for teachers to develop required attitude towards use of instructional media. The literature reviewed emphasised the importance of visual media in instruction. Accordingly, Katigula (1981), Onibokum (1989), Kivuva (1996) in their studies reported that trained pre-school and untrained pre-school teachers are found teaching in pre-schools in Kenya. In nearly all the studies, researchers point out that visual media accounts significantly for increased learning since visual media help children retain 83% of that which they learn. A diversity of instructional visual media was discussed. Large number of these instructional visual media can be improvised using locally available materials. Teachers' training was revealed to be a factor that may contribute to teachers' continued use of visual media in instruction and that the level of education pre-school

teachers attained perhaps determined their ability to use instructional visual media. Aila, (2005); Gumo, (2003); Ndalo, (1991); Wambua, (1988) & Oure, (1985) gave evidence that teachers' knowledge and attitude towards use of visual media play important role in determining teachers' use of visual media in instruction.

In Kenya, most studies have been done in teacher training institutions above pre-school level. Reviewed studies about pre-school level were focused on one geographical location and were not conclusive on whether or not pre-school teachers had adequate knowledge, skills, and training on how to use visual media in instruction. This led to the following very important questions: Are pre-school teachers properly trained on how to teach using visual media? Is there a difference in the use of visual media in instructional delivery between trained and untrained pre-school teachers? Do trained and untrained pre-school teachers have the same knowledge, and attitude towards use of visual media? To what extent do pre-school teachers use their knowledge of visual media in instructional delivery? In response to the research questions advanced, the following research hypotheses were formulated to guide the study.

Ho_1: Trained and untrained pre-school teachers differ in their instructional use of visual media.

Ho_2: Trained and untrained pre-school teachers differ in their knowledge of instructional visual media.

Ho_3: Trained and untrained pre-school teachers differ in their attitude towards use of visual media in instructional delivery.

Ho_4: Pre-school teachers' knowledge of visual media is related to their use in instruction.

Ho_5: Pre-school teachers' attitude towards visual media is related to their use in instruction.

METHODOLOGY

The study employed descriptive research design and survey technique. Pre-schools in Kibwezi District were scattered throughout the District. The target population was all practising trained and untrained pre-school teachers in Kibwezi District during the sampling time frame. Information from Kibwezi District Education Office revealed that there were 251 trained and 169 untrained pre-school teachers distributed across the three Divisions. The researcher used stratified random sampling technique. Stratified random sampling yielded two categories of teachers from each of the three administrative divisions. From each category of teachers, a sample of 60 pre-school teachers was randomly obtained from the three divisions. The categories were comprised of 20 untrained teachers and 20 trained teachers, randomly selected from each of the three divisions. For actual selection of subjects to participate in the study, simple random sampling technique was used. The researcher considered a sample of 120 teachers out of 420 teachers to be large and representative of the population. The sampling results are shown on Table 1.

Table 1: Distribution of Pre-school Teachers Sampled

Division	Pre-school Teachers		Total
	Trained	Untrained	
Mtito Andei	20	20	40
Kibwezi	20	20	40
Makindu	20	20	40
Total	60	60	120

A Questionnaire was used. This instrument had four parts A, B, C and D. Part A sought background information of the teachers and the availability of visual media in instructional delivery. Part B sought information on teachers' use of visual media in instructional delivery. Part C sought information on teachers' attitude towards visual media. A Likert Scale was used. Stability of the test items of 0.94 was determined using the test-retest method. Part D sought information on teachers' knowledge of visual media in instruction. Inferential statistics were employed to determine whether there was statistical significant difference between the variables. The overall mean scores for trained and untrained pre-school teachers' use of instructional visual media were computed.

RESULTS AND DISCUSSION

Table 2: Overall Mean Scores of Pre-school Teachers' Reported use of Visual Media in Instruction

Pre-school Teachers	No. of Teachers	Level of Use		Mean	SD	
		Min.	Max.			
Trained	60	2.67	5	4.26	0.53	
Untrained	60	1.71	5	3.96	0.89	

Table 2 shows the mean score for trained pre-school teachers' use of visual media in instruction was 4.26 while that of untrained pre-school teachers was 3.96. The results imply that both trained and untrained pre-school teachers do use visual media in instruction. Trained pre-school teachers' use of instructional visual media standard deviation was 0.53 and that of the untrained pre-school teachers was 0.89. This implies that trained pre-school teachers were more homogeneous in their use of instructional visual media while untrained pre-school teachers had more diversity in their frequency of reported use of instructional visual media. T-test results are presented on table 3.

Table 3: Means of Trained and Untrained Pre-school Teachers' Independent Samples t-test for Reported Use of Instructional Visual Media

Visual media use in Instruction

	t-test for Equality of Means			
	t	Df	Sig. (2-tailed)	Mean Difference
Language	0.499	118	0.618	0.072
Mathematics	0.977	118	0.331	0.331
Science	1.243	118	0.216	0.227
Social Studies	1.287	118	0.201	0.233
Music& Movement	2.311	118	0.023(*)	0.472
Indoor &Outdoor	2.052	118	0.042(*)	0.388
Religious Education	2.973	118	0.004(**)	0.588
Art and Craft	2.210	118	0.028(*)	0.433
Overall use	2.252	118	0.026(*)	0.302

** P < 0.01 significant * P < 0.05 significant

Table 3 shows the mean difference in use of visual media in instruction between trained and untrained pre-school teachers was significant at alpha value 0.05 ($N = 120$, $t = 2.252$, $p = 0.026 < 0.05$). The null hypothesis was rejected and the alternative hypothesis retained. Trained pre-school teachers used visual media in instruction more than the untrained pre-school teachers. In particular content areas, significant difference was in Music and Movement, Indoor and Outdoor, Religious Education and Art and Craft and the difference was highly significant in Religious Education. The current study findings confirm results of study by Agbo (1993), who found that trained pre-school teachers in Ghana were using a variety of instructional media more often than the untrained pre-school teachers. Gakuru (1999) points out that training adds value to the abilities of pre-school teachers. Swedner, Kabiru and Njoroge (2000) compared trained pre-school teachers with untrained pre-school teachers and reported that trained pre-school teachers use instructional media more than the untrained pre-school teachers. Aila (2005) found trained pre-school teachers used non-projected instructional visual aids more than the untrained pre-school teachers. Begi (2007) found that instructional computer training to teachers contributed to teachers' use of computers in instruction. Trained pre-school teachers therefore, tend to generally use visual media in instruction more than the untrained pre-school teachers. Knowledge of instructional visual media by trained and untrained pre-school teachers was determined (Table 4).

Table 4: Mean Scores for Trained and Untrained Pre-school Teachers' Knowledge of Instructional Visual Media

Pre-school Teachers	No. of Pre-school Teachers	Min.	Max.	Mean	Std. Deviation
Trained	60	1.13	2.00	1.26	0.09
Untrained	60	1.10	2.00	1.25	0.12

Table 4 shows the mean of trained pre-school teachers' knowledge of instructional visual media was 1.26, while that of untrained pre-school teachers was 1.25. The results show that there was not much difference in knowledge of instructional visual media between trained and untrained pre-school teachers. However, trained pre-school teachers' knowledge of instructional visual media had standard deviation of 0.09 while that of untrained pre-school teachers was 0.12. This implies that though the means of knowledge of trained pre-school teachers and untrained pre-school teachers were similar, trained pre-school teachers were more homogeneous in their level of knowledge of instructional visual media compared to the untrained pre-school teachers. After the above analysis, the researcher sought to find out if the difference in knowledge of instructional visual media between trained and untrained pre-school teachers was statistically significant. A t-test for independent samples was used to find out whether there was significant difference between trained and untrained pre-school teachers' knowledge of instructional visual media. The results are presented on Table 5.

Table 5: Independent Samples t- test for Equality of Means of Knowledge of Instructional Visual Media by Pre-school Teachers

Knowledge of Instructional Visual Media		**t-test for Equality of Means**	
T	df	Mean Difference	Sig.(2-tailed)
-0.406	118	-0.008	0.685

Table 5 shows the overall mean difference between trained and untrained pre-school teachers' knowledge of instructional visual media was low (-0.008) and was not statistically significant at alpha value 0.05 (N = 120, t = -0.406, p = 0.685 > 0.05). The null hypothesis was, therefore, retained. The results imply that trained and untrained pre-school teachers had similar knowledge of instructional visual media. Begi (2007), found similar results. In his study on use of computers in instruction, he found that pre-school teachers' computer knowledge was similar to that of the lower primary school teachers. Ikumi (1985) found primary school teachers had minimal knowledge of instructional visual media. Oure (1985) reported that primary school teachers in Amagoro Division, Busia District had low knowledge of instructional visual media. Wambua (1988) observed that in primary teacher training colleges, teachers did not have the required knowledge of identifying and using instructional visual media. To determine the difference in attitude towards use of instructional visual media between trained and untrained pre-school teachers, the overall mean scores in attitude towards instructional visual media by pre-school teachers were computed (Table 6).

Table 6: Trained and Untrained Pre-school Teachers' Attitude towards Instructional Visual Media

Pre-school Teachers	No. of Pre-school Teachers	Min.	Max.	Mean	Std. Deviation
Trained	60	3.10	5	4.24	0.45
Untrained	60	2.53	5	4.23	0.50

Table 6 shows the mean score of attitude towards instructional visual media of trained pre-school teachers was 4.24 while that of the untrained pre-school teachers was 4.23. The results revealed that there was no difference between trained and untrained pre-school teachers' attitude towards instructional visual media and that pre-school teachers had positive attitude towards instructional visual media. The standard deviation of trained pre-school teachers' attitude towards instructional visual media was 0.45 while that of untrained pre-school teachers was 0.5. This implies that both trained and untrained pre-school teachers had very favourable attitude towards instructional visual media with trained pre-school teachers being more homogeneous in their attitude towards instructional visual media than the untrained pre-school teachers. To find out if the difference in attitude towards instructional visual media between trained and untrained pre-school teachers significantly differed, a t-test was done and the results are presented on Table 7.

Table 7: Independent Samples t-test for Equality of Means of Pre-school Teachers' Beliefs, Feelings, and Intentions towards Instructional Visual Media

Overall Mean Scores for Attitude Components

	t-test for Equality of Means				
	T	df	Sig(2tailed)	M D	Std. Error Diff
Beliefs	-0.429	118	0.669	0.043	0.100
Feelings	-0.669	118	0.505	-0.733	0.109
Intentions	0.615	118	0.540	0.075	0.087
Overall Attitude	-0.171	118	0.864	-0.015	0.087

Table 7 shows the differences between mean scores for trained and untrained pre-school teachers attitude components (beliefs, feelings, and intentions) towards instructional visual media was 0.043, -0.733, and 0.075 respectively with 0.669, 0.505, and 0.540 corresponding levels of significance (2-tailed). The results revealed that the difference between the two means in each attitude components for trained and untrained pre-school teachers was not statistically significant at alpha value 0.05 and the overall mean score difference was also not significant at alpha value 0.05 (N=60, t=-.171, df =118, p=0.864>0.05). The null hypothesis was, therefore, retained. This means trained and untrained pre-school teachers had similar attitudes towards instructional visual media.

Jahoda and Warren (1966) report that teachers' positive attitude towards instructional media influence them to improvise the unavailable instructional visual media. Teachers with positive attitude towards instructional media are reported to commit their finances in acquiring instructional media. Richard (1986) remarks that pre-school teachers' positive attitude towards instructional visual media prompt teachers to develop, acquire, and use visual media in instruction. Begi (2007) found that pre-school teachers had positive attitude towards computers and that pre-school teachers' attitude towards computer use significantly contributed to instructional computer use.

To test the relationship between pre-school teachers' knowledge of instructional visual media and reported use, Pearson's Product-Moment Correlation of Coefficient (Pearson's r) was computed. The results are presented on Table 8.

Table 8: Pearson' r of Pre-school Teachers' Knowledge and Reported Use of Instructional Visual Media

Content Area	No. of Pre-school Teachers	Pearson's r	Sig.(1-tailed)
Language	120	0.056	0.747
Mathematics	120	0.030	0.697
Science	120	-0.036	0.663
Social Studies	120	-0.040	0.366
Music & Movement	120	-0.083	0.463
Indoor & Outdoor	120	-0.068	0.767
Religious Education	120	-0.027	0.476
Art & Craft	120	-0.066	0.476
Overall content knowledge	120	-0.046	0.617

Table 8 shows the relationship between pre-school teachers' knowledge of instructional visual media within the various activity areas and their use

was negative, weak and not statistically significant at alpha value .05 (N = 120, r = -0.046, p = 0.617 > 0.05). The null hypothesis was retained. This implies that pre-school teachers' knowledge of instructional visual media was not related to use. Pre-school teachers who reported high knowledge of instructional visual media tended to have low use. The study further sought to find out whether there was relationship between pre-school teachers' attitude towards visual media and use in instruction. Pre-school teachers' overall mean for each of the three components of attitude was calculated. The results are presented in Table 9.

Table 9: Mean Attitude Scores in Each of the Components of Attitude towards Instructional Visual Media by Pre-school Teachers

Pre-school Teachers	No. of Pre-school Teachers	Mean Scores			Av Score
		Beliefs	Feelings	Intentions	
	120	4.20	4.36	4.12	4.23

Table 9 shows pre-school teachers had positive attitude towards instructional visual media and most of the teachers were using visual media in instruction. The results further show that most of the pre-school teachers believe that instructional visual media are important and would like to use visual media in instruction. To determine whether the relationship between pre-school teachers' attitude and reported use of visual media in instruction was significant, Pearson's r was used. The results are presented in Table 10.

Table 10: Pearson's r of Attitude towards Instructional Visual Media and Pre-school Teachers' Reported Use

Use of Instructional Visual Media	**No. of Pre-school Teachers**	**Attitude**	
		Person's R	Sig.(1-tailed)
Language	120	0.175	0.056
Mathematics	120	0.181*	0.048
Science	120	0.330**	0.000
Social Studies	120	0.304**	0.001
Music& Movement	120	0.323**	0.000
Indoor & Outdoor	120	0.107	0.245
Religious Education	120	0.153	0.095
Art & Craft	120	0.206*	0.024
Overall content of use	120	0.301**	0.001

** P < 0.01 significant * P < 0.05 significant

Table 10 shows that the relationship between pre-school teachers' attitude towards instructional visual media and reported use was positive low, and statistically highly significant at alpha value 0.05 (N = 120, r = 0.301, p = 0.001 < 0.05). The null hypothesis was rejected and the alternative hypothesis retained. This means pre-school teachers' reported use of visual media in instruction was highly related to their attitude towards instructional visual media. Content areas where this relationship was very significant were in Mathematics, Science, Social Studies, Music and Movement and Art and Craft.

CONCLUSION

In conclusion, the findings of this study show that pre-school teacher training is an important factor for pre-school teachers' use of visual media in instruction. Trained pre-school teachers tend to use visual media in instruction more frequently than untrained pre-school teachers. The difference in use of instructional visual media between trained pre-school teachers and untrained pre-school teachers was found significant. There is need for pre-school teachers to be sensitized to go for training and those already trained to enroll for higher pre-school courses. Pre-school teachers had similar knowledge and attitude towards instructional visual media. This may mean that the training pre-school teachers receive is low and needs improvement.

Pre-school teachers' relationship between knowledge of visual media in instruction and use was found not significant. This means that pre-school teachers may not be adequately motivated to use the knowledge they have about visual media in instruction. The relationship between pre-school teachers' attitude towards instructional visual media and use was found to be positive, strong and significant.

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