Effect of Mass Media on Knowledge and Skill Acquisition by Students of Tertiary Institutions (A Case Study of Moshood Abiola Polytechnic, Abeokuta, Ogun State)

Animashaun O. H.
Department of Food Technology,
Moshood Abiola Polytechnic,
Abeokuta, Ogun State
Nigeria
raji.oluwatoyin@mapoly.edu.ng

Abstract
This study was carried out to examine, document and assess the effects of mass media (instructional media) on knowledge and skill acquisition by students of Moshood Abiola Polytechnic, Abeokuta, Ogun State. It was done by using a survey method as the experimental design. A detailed questionnaire was designed based on the research questions to identify and query the availability, adequacy and the extent of functioning of instructional media. Relevant data collected on this study were subjected to both descriptive and inferential statistics. The result shows that the use of mass media influenced the performance of students and competency of lecturers in the process of knowledge impartation to students. The quality, quantity and availability of mass media in the school may not significantly affect the performance of the students. It is therefore recommended that adequate provision and maintenance of instructional media in our tertiary institutions is necessary as the quality of skill and knowledge received by students is being determined by the type of mass media that they are exposed to.

Keywords: Mass media; Students; Knowledge; Instructional media; Questionnaire

INTRODUCTION
Background to the Study
Mass media denotes a section of the media designed to reach a large audience. It can be referred to as a means of public communication such as television, radio and widely circulated newspapers that tend to reach a large audience with similar social characteristics (Mintz *et al*., 2005). Thompson (2004), defined mass media as books, magazines, newspapers, radio, television, cinemas, records, tapes and videos. The Encarta Encyclopedia (2009), defined mass media as communication media that reach a large audience, especially television, radio and newspaper. Media can be defined broadly as channels of communication. It is considered in terms of its software and hardware (Ogunmilade, 1984). Mass is a large number of people or objects gathered together or coherent body of matter with no definite shape while, media is the main means of communication (especially television, radio and newspaper) regarded collectively (Concise Oxford Dictionary, 10th Edition). Mass media is vital in the diffusion of knowledge and helps in developing individuals' academic morally and socially. It is the means through which opinions, ideas, information or news are disseminated to a large group of people. Carmen (1997), suggested that there are roughly four (4) broad areas within the many variations of media literacy. These include; the study of media texts, study of the audience, production and political economy of media.

The arrival of communication media such as television, tape recorders, radios, telephone and

internet has increased the variety that could be used in instruction. This has given rise to what is now termed "Instructional Media", "Educational Media" and "News Media" (Agun and Imogie, 1988). In 1999, Yusuf recorded that in technical colleges, such instructional materials such as audio and video tapes, record players, projectors, computers, monitors etc. are in everyday use. Also, Fadamiro (1999) listed some of the instructional media that are used in Universities of Technologies such as chalkboard, cameras, drawings and sketches, graphs, models, real objects, projectors, radios, videotapes etc. These instructional media have positive impact on the teachings, learning and knowledge acquisition in the technical colleges surveyed. Their proper usage, availability, quality and maintenance and the ability to produce alternatives or improvisations are the key to their successful usage.

Statement of the Problem

Mass Communication is one of the Departments in the School of Communication and Information Technology in Moshood Abiola Polytechnic with mass media and society as a course offered by the students. The ratio of students to instructional media in the Department has affected the standard of the instructional media in learning and knowledge acquisition by the students. This study is therefore to determine the effect which the mass media used as instructional media in the forms of laboratories, studio equipment, internet facilities and print media have assisted learning and knowledge acquisition by students of the Moshood Abiola Polytechnic, Abeokuta, Ogun State.

Purpose of the Study

This research work is aimed at the following:
- To examine the types, availability, usage of mass media and their effects on the quality of education and knowledge acquired using students of Moshood Abiola Polytechnic, Abeokuta, Ogun State as a case study.
- To suggest ways by which instructional media can be used to improve skill acquisition and knowledge by students of Moshood Abiola Polytechnic, Abeokuta, Ogun State.
- To determine the effect which the mass media used as instructional media in the forms of laboratories, studio equipment, internet facilities and print media have assisted learning and knowledge acquisition by students of the Moshood Abiola Polytechnic, Abeokuta, Ogun State.

Significance of the Study

Polytechnical and monotechnical education and training are aimed at the production and development of technically oriented people with required manipulative skills to propel our developmental goal as a nation (NBTE, 1989). This research work is of benefit to both student and lecturers as it helped to find out how:
- exposure of students to mass media affects their academic performance.
- informative skills and knowledge dissemination will be enhanced by instructional and educational media usage.
- it helps learning to become more meaningful to students
- it helps to develop the technical and intellectual thinking skills needed in their chosen vocation, decision making, problem solving.

Besides, this work would be useful to education policy makers since it exposes some problems associated with the use of mass media and the solutions provided will go a long way to help them in the formulation of policies. Lastly, this work would be another contribution to knowledge and would definitely expand its frontiers. This will lead to

research development.

Scope of the Study
This research work was carried out using both Ordinary National Diploma (OND) and Higher National Diploma (HND) students of Mass Communication Department in the School of Communication and Information Technology, Moshood Abiola Polytechnic, Abeokuta as a case study.

Research Questions
Most graduates from our tertiary educational institutions nowadays have been found wanting in their level of knowledge and education due to so many factors. These can be attributed to poor quality of educational instructional media, poor communication skills coupled with un-conducive learning environment among others.
This study is directed towards answering the following research questions:
1. Is the performance of students of Moshood Abiola Polytechnic, Abeokuta, related to the use of mass media in teaching?
2. Is the performance of students of Moshood Abiola Polytechnic, Abeokuta, related to the quality, quantity and availability of instructional media?
3. Is the performance of the lecturers of Moshood Abiola Polytechnic, Abeokuta, Ogun State enhanced by the availability of these instructional media?
4. Do these instructional materials prepare the students to meet the challenges of industry?
5. Is the relationship between the skill and knowledge acquired by students of Moshood Abiola Polytechnic, Abeokuta and the use of instructional materials advantageous?
6. How do the improvements on the use of instructional media affect knowledge and skill acquisition by students of Moshood Abiola Polytechnic, Abeokuta?

METHODOLOGY
Research Design
A survey method was used to collect data on the use of mass media on knowledge acquisition in Moshood Abiola Polytechnic, Abeokuta. The survey used questionnaire targeted towards the students, lecturers, instructors and technologists.

Population of the Study
For the purpose of this research work, about one hundred and fifty (150) students were used.

Sample and Sampling Techniques
To ensure accurate research findings, probability sampling technique on merit of giving each member of the population equal chance of falling into the sample was used. The final selection of the sample was made through the use of stratified sampling technique.

Research Instrument
Questionnaire as one of the effective and efficient research instrument for gathering data from the selected samples were administered to the respondents.

Validity and Reliability of the Instrument
To ensure validity and reliability of the research findings, the instrument of this study was given to a lecturer in the Department of mathematics and statistics to assess and validate. This was done in order for it to be well suited for the purpose it was meant.

Method of Data Analysis
Statistical method of analysis and graph design was accurately used to interpret the result of research findings.

DATA PRESENTATION AND ANALYSIS
Introduction
Relevant data collected in this study were subjected to both descriptive and inferential statistics. Statistical package for social sciences was used in the analysis.

Descriptive Analysis of the Variables Used
Table 1: Bio Data of the Respondent

		Gender	Marital Status	Educational Qualification	Mass media Channel
N	Valid	150	150	150	150
	Missing	27	27	27	27
Mean		1.6133	1.5600	2.4333	2.8667
Std. Deviation		.48862	.59618	.92262	1.00112

The table above shows the mean and standard deviation of the variable studied from the respondent which is put under the bio data of the respondent.

Table 2: The Gender Frequency

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	58	32.8	38.7	38.7
	Female	92	52.0	61.3	100.0
	Total	150	84.7	100.0	
Missing	System	27	15.3		
Total		177	100.0		

In all, 58 males representing 38.1 % of the total respondents were involved while 92 of the respondents were female representing 61.3% valid percent.

Table 3: The Marital Status Frequency

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Single	74	41.8	49.3	49.3
	Married	68	38.4	45.3	94.7
	Divorced	8	4.5	5.3	100.0
	Total	150	84.7	100.0	
Missing	System	27	15.3		
Total		177	100.0		

The table three of this presentation gives the breakdown of the marital status of the respondents of the study. The larger percentage of the respondents were single.

Table 4: The Mass media channel Frequency

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Radio	5	2.8	3.3	3.3
	Television	46	26.0	30.7	34.0
	Print	60	33.9	40.0	74.0
	Internet	28	15.8	18.7	92.7
	All of the Media	11	6.2	7.3	100.0
	Total	150	84.7	100.0	
Missing	System	27	15.3		
Total		177	100.0		

The frequency of the assessed mass media in the school or used by lecturers is given in the above table; the larger percentage goes to the print media.

Table 5: Respondent Qualification Frequency

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	ND	31	17.5	20.7	20.7
	HND/B.Sc	68	38.4	45.3	66.0
	M.Sc	37	20.9	24.7	90.7
	Ph.D	14	7.9	9.3	100.0
	Total	150	84.7	100.0	
Missing	System	27	15.3		
Total		177	100.0		

Many of the respondents were first degree holders while next to this is the Masters holder. All these are shown in the table 5 above.

Research Question 1

The first research question of this study states that: "Is the performance of students of Moshood Abiola Polytechnic, Abeokuta, related to the use of mass media in teaching?". Relevant data collected on this research question were subjected to both descriptive and inferential statistics. Since this hypothesis /research question centered on the relationship between the use of the mass media and the general performance of students in Moshood Abiola Polytechnic, the use of Pearson Product Correlation becomes inevitable. The results are presented below:

Table 6a: Descriptive analysis result of the use of mass media and the student performance

Variables	N	Mean	Standard Deviation
Students Performance	150	2.64	1.01
Use of Mass Media	150	2.7	0.93

A critical examination of the above table indicates that the mean and standard deviation of the students' performance is 2.64 and 1.01 respectively while that of the use of mass media stands at 2.7 and 0.93 respectively. Inferences can only be drawn with the use of inferential statistics which comes after this.

Table 6b: Correlation result of the students' performance and the use the mass media

Variables	N	df	rcal	rtab	∞	Decision
Students Performance	150					Accept that there is a significant relationship between the use of mass media and the students' performance
Use of Mass Media	150	298	0.537	0.195	0.05	

A critical examination of the above table of the result of the correlation analysis of the relationship between the use of mass media and the general performance of student indicates that the calculated r of 0.537 is greater than the r critical at 0.05 level of significant. The right decision here is to accept the fact that there is a significant influence of the use of mass media on the performance of students in the school.

Research Question 2

The second research question of this study states that: "Is the performance of students of Moshood Abiola Polytechnic, Abeokuta, related to the quality, quantity and availability of instructional media?". Relevant data collected on this research question were subjected to both descriptive and inferential statistics. This hypothesis /research question also aims at establishing the relationship between the quality, quantity, availability and the general performance of students in Moshood Abiola Polytechnic, Abeokuta, the use of Pearson Product Correlation becomes inevitable. The results are presented below:

Table 7a: Descriptive analysis result of the quality, quantity and availability of instructional media and the student performance

Variables	N	Mean	Standard Deviation
Students Performance	150	2.64	1.01
quality, quantity and availability of instructional media	150	2.69	1.12

The above table indicates that the mean and standard deviation of the students' performance is 2.64 and 1.01 respectively while that of the quality, quantity and availability of instructional media stands at 2.7 and 1.12 respectively. Inferences can only be drawn with the use of inferential statistics which comes after this.

Table 7b: Correlation result of the quality, quantity and availability of instructional media and the student performance

Variables	N	df	rcal	rtab	∞	Decision
Students Performance	150					Accept that there is no significant relationship between the quality, quantity and availability of instructional media and the students' performance in the school.
Use of Mass Media	150	298	0.127	0.195	0.05	

A critical examination of the above table of the result of the correlation analysis of the relationship between the quality, quantity and availability of instructional media and the general performance of student indicates that the calculated r of 0.127 is less than the r

critical at 0.05 level of significant of 0.195. The right decision here is to accept the fact that there is no significant influence of the quality, quantity and availability of instructional media on the performance of students in the school.

Research Question 3
The third research question of this study states that: "Is the performance of the lecturers of Moshood Abiola Polytechnic, Abeokuta, enhanced by the availability of these instructional media?". Relevant data collected on this research question were subjected to both descriptive and inferential statistics. This research question is postulated to establish the influence of the availability of media resources on the performance of lecturers in the school. The use of Pearson Product Correlation was employed. The results are presented below:

Table 8a: Descriptive analysis result of the lecturing effectiveness and the use of mass media

Variables	N	Mean	Standard Deviation
Lecturing effectiveness	150	2.6	0.94
The use of mass media	150	2.7	0.93

The above table indicates that the mean and standard deviation of the Lecturing effectiveness are 2.6 and 0.94 respectively while that of the use of media stands at 2.7 and 0.93 respectively. Inferences can only be drawn with the use of inferential statistics which comes after this.

Table 8b: Correlation Result of the Lecturing effectiveness and the use of the mass media

Variables	N	df	rcal	rtab	∞	Decision
Lecturing effectiveness	150	298	0.36	0.195	0.05	Accept that there is significant influence of the use of the mass media by lecturer on their effective delivery the school.
The use of media	150					

A critical examination of the above table of the result of the correlation analysis of the relationship between the use of the mass media and the lecturing effectiveness in the school, the calculated r of 0.36 is greater than the r-critical at 0.05 level of significant of 0.195. The right decision here is to accept the fact that there is significant influence of the use of mass media on the lecturing effectiveness in the school.

Research Question 4
The fourth research question of this study states that: "Is the relationship between the skill and knowledge acquired by students of Moshood Abiola Polytechnic, Abeokuta and the use of instructional materials significant?" Relevant data collected on this research question were subjected to both descriptive and inferential statistics. This research question is postulated to establish the relationship between the skill and knowledge acquired by the students and the use of mass media. The use of Pearson Product Correlation became necessary in this case. The results are presented below:

Table 9a: Descriptive analysis result of the skill/knowledge acquisition and the use of mass media

Variables	N	Mean	Standard Deviation
Skill/knowledge	150	2.96	0.95
The use of mass media	150	2.7	0.93

The above table indicates that the mean and standard deviation of the skill/knowledge acquisition are 2.96 and 0.95 respectively while that of the use of media stands at 2.7 and 0.93 respectively. Inferences can only be drawn with the use of inferential statistics which comes after this.

Table 9b: Correlation Result of the skill/ knowledge acquisition and the use of the mass media

Variables	N	df	rcal	rtab	∞	Decision
Skill/knowledge	150					Accept that there is significant influence of the use of the mass media on the skill/knowledge acquisition in the school.
The use of mass media	150	298	0.376	0.195	0.05	

A critical examination of the above table of the result of the correlation analysis of the relationship between the use of the mass media and the skill acquisition, the calculated r of 0.376 is greater than the r-critical at 0.05 level of significant of 0.195. The right decision here is to accept the fact that there is significant relationship between the skill/knowledge acquisition the use of mass media.

Research Question 5
The fifth research question of this study states that: "Is there any significant relationship between the use of instructional materials and students' ability to meet up with the challenges of industry?" Relevant data collected on this research question were subjected to both descriptive and inferential statistics. This research question is postulated to establish the relationship between the student's ability to meet with industry challenges and the use of mass media. The use of Pearson Product Correlation became necessary in this case. The results are presented below:

Table 10a: Descriptive analysis result of the industrial challenges and the use of mass media

Variables	N	Mean	Std. Deviation
industrial challenges	150	3.15	0.83
The use of mass media	150	2.7	0.93

The above table indicates that the mean and standard deviation of the industrial challenges are 3.15 and 0.93 respectively while that of the use of media stands at 2.7 and 0.93

respectively.

Table 10b: Correlation Result of the industrial challenges and the use of the mass media

Variables	N	df	rcal	rtab	∞	Decision
industrial challenges	150					Accept that there is significant influence of the use of the mass media on the industrial challenges.
The use of mass media	150	298	0.59	0.195	0.05	

The above table of the result of the correlation analysis of the relationship between the use of the mass media and industrial challenges indicates that the calculated r of 0.59 is greater than the r-critical at 0.05 level of significant of 0.195. The right decision here is to accept the fact that there is significant relationship between the industrial challenges and the use of mass media.

Discussion of the Findings
Research question one
The first research question of this study goes thus: Is the performance of students of Moshood Abiola Polytechnic, Abeokuta, related to the use of mass media in teaching? The result of the analysis of relevant data collected indicates that the calculated value of the correlation statistics is greater than the critical value at 0.05 level of significance. The implication of this type of result is that there is significant relationship between the use of the mass media and the general performance of the students in the school. This result testifies to the fact that teaching can only be effective if the mass media is applied which in turn brings about effective performance of the students in the school.

Research question two
The second question set to guide this study is that: Is the performance of students of Moshood Abiola Polytechnic, Abeokuta, related to the quality, quantity and availability of instructional media? At the end of the analysis of the data collected the result of the analysis which is expected to provide answer to the question shows that the quality and the quantity of the mass media available is not the main determinant of the performance of the students in the school. It shows that if materials are available in whatever quantity if not effectively utilized it will definitely not bring about any effect in the performance of the students.

Research question three
The third question of this study goes thus: is the performance of the lecturers of Moshood Abiola Polytechnic, Abeokuta, Ogun State enhanced by the availability of these instructional media? Relevant data gathered on this question were subjected to computer analysis and the result shows that the performances of lecturers are significantly influenced by the availability of the instructional materials which is the mass media. This result buttress the result of the first question which shows that mass media is significantly related to the performance of the students in the campus.

Research question four
Is the relationship between the skill and knowledge acquired by students of Moshood Abiola Polytechnic, Abeokuta and the use of instructional materials significant? This is the fourth

question set for this study. All data collected on the question were subjected to inferential analysis and the result of this analysis is that the type of skill and knowledge receive in this school is been affected by the use of the mass media in the school. It shows that the quality of the materials students is exposed to determines the type of skill such students will poses.

Research question five
The last research question of this study tends to establish if there is any significant relationship between the use of instructional materials and students' ability to meet up with the challenges of industry? The result indicates that the exposure of students to the mass media will help them to excel in communication industries in future. This is so because the calculated value of our "r" is greater than the critical value at 0.05 level of significant.

Summary of the Findings
At the end of this study the following findings were gathered:
1. The use of mass media in Moshood Abiola Polytechnic, Abeokuta, influences the performance of students of this school and other school of such.
2. The quality, quantity and availability of mass media in the school may not significantly affect the performance of the students.
3. The performance of the lecturers in the school is significantly influenced by the use of the mass media in the school.
4. The quality of skill and knowledge received in the school is being determined by the type of mass media that they are exposed.
5. The future performance of student in communication industries are determined by the quality and quantity of experiences the students have with the mass media

SUMMARY, CONCLUSION AND RECOMMENDATIONS
Summary
Instructional media usage in higher institutions has over the course of time increased to a high level and the effects this has had on knowledge and skills acquisition by students of such institution has been demonstrated and highlighted in this study using Moshood Abiola Polytechnic as a case study. Proper provision of adequate and functioning instructional media, good and regular maintenance of such media and unlimited access by students to these materials will go a long way in positively enhancing and improving the level of skills and knowledge impacted and acquired by student of these institutions in addition to improving their academics performances and grades. All these will serve as an equipping and preparatory tool for the students after graduating from school and during the periods in which they put their acquired skills and knowledge to practical application in their different work.

Conclusion
This study has shed light on the impact of instructional media on knowledge acquisition in technical education. The following can be concluded from the study:
a. The use of media has positively improved the student's academic performances and grades.
b. The inadequacy of media has limited the level of required skills and knowledge acquisition by students
c. Competent lecturers are available to give adequate instructions to students while making improvisations when media are inadequate or non-existing.
d. The use of instructional media has boosted the confidence level of student.
These conclusions can be extrapolated to other polytechnics since the state of equipment in these institutions is the same. This buttresses the fact that there is absence of relevant

equipment in most polytechnics due to poor funding.

Recommendation
Based on the findings of this study, it is therefore recommended that:
1. This study should be continued and expanded to all the Departments in the Institution.
2. Students should be given unlimited and individual access to all the available and functioning instructional media within the institution.
3. Provision of internet access through internet hotspots, wireless and wired band access, and other internet portal access in every Department, social centers and public centers within the institution premises.
4. Replication of this study in other Polytechnics and Monotechnics around the country
5. Provision of adequate funding and allocations to all the different Monotechnics and Polytechnics around the country.

References

Agun, I., & Imogie, I. (1998). Fundamental of educational technology associated book makers (Nig.) Ltd. pg 1-18.

Carmen, L. (1997). Media and cultural studies in Australia. Journal of Adolescent and Adult Literacy, 42(8), 622-626.

Concise Oxford English Dictionary 10th Edition (1999, revised 2001). Edited by Judy Pearsall.

Encarta Encyclopedia (2009). Microsoft Encarta Online Encyclopedia.

Fadamiro, J. (1999.) The use of instuctional media in teaching and learning of environmetal sciences in the University of Technology. Proceedings of the 21st Convention of the Nigeria Association for Education Media and Technology, 30th Aug. -3rd Sept.

NBTE (1989). National Board for Technical Education: Course Curriculum for ND and HND Programmes in Food Technology.

Ogunmilade, C. A. (1984). Media in Education, University of Ife Press, Ile Ife Nig. Pg 26-32.

Thompson, J. B. (2004) Mass Communication and Modern Culture in the Media studies. Edited by O'sullivan T and Jewkes, Y. Arnold Publishers, London, Pg 28.

Yusuff, M. O. (1999) Instructional media: assessment of the availability utilization productivity   technical college teachers. Proceedings of the 21st Convention of the Nigeria Association   for Educational media and Technology, 30th Aug.-3rd Sept.