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RESEARCH ARTICLE

LEARNER PERCEPTION OF DESIGN OF PRINT INSTRUCTIONAL MEDIUM AND PARTICIPATION IN DISTANCE LEARNING: A CASE OF BACHELOR OF EDUCATION PROGRAMME OF UNIVERSITY OF NAIROBI, KENYA

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ABSTRACT

The purpose of this research was to determine how print instructional design influences learner participation in distance education programme. Five areas that constitute design were studied. These included: clarity of instructions, interactivity of content, presence of icons, presence of self-assessment exercises and presence statement of objectives. The target population was 554 students in their final year of study in the Bachelor of Education programme by distance learning of University of Nairobi.. Data collected were analyzed using frequencies, percentages and correlation coefficient. Results show that design of print instructional medium has significant influence on learner participation in distance learning since 145(83%) perceived design to be very important for their participation. On clarity of design of print instructional medium, 138(79%) found it useful for participation. With regard to interactivity of language, 132(75.9%) felt the design interactive was beneficial in their participation. A total of 129 (74%) did not find presence of icons useful to their participation in the programme. Respondents perceived self- assessment exercises to be essential since 166((95%) found them necessary while making reference to print instructional medium. Presence of objectives in the print instructional medium was perceived by the respondents to be the most influential in their participation in the programme. Learners perceived the design of study units to have had an influence on participation in distance learning since correlation results reflected $F = 10.495.P < 0.05$ at 0.002 which was below 0.5 set level of significance. It was concluded therefore that course designers should revisit the use of icons in the study units to improve on them so that they can assist the learners while studying using print medium. They should also include student study guide to enable the learners to recognize how much time they should take reading particular topics.

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INTRODUCTION

The design of print instructional medium is an important aspect in course development process in a distance learning programme. Design refers to the systematic and reflective process of translating principles of learning into plans for instructional materials, activities, information resources and evaluation (Darticial and Tillman, 2005). Over the years, distance learning providers have realized thatlearning materials used in distance learning and elearning should be presented in such a way that they meet specific needs of the learner. This is because learners are often physically separated from the instructor and may not have the privilege of immediate consultation with the instructor should a need arose. Print medium remains the most common pedagogical tool in open and distance learning mode. It is also a precursor to the development of any elearning or online materials. Distance Education Council (DEC) of New Delhi, India, states that distance learning study units differ from text books or articles in journals. The instructional materials should therefore be self-explanatory, self-evaluating and enhance self-learning. According to DEC, the concepts should eliminate the teacher propelled learning and enthrone the learner friendly regime (Indira Gandhi National Open University (IGNOU)), (1989). Designers should have distance learners in mind as they embark on design of print instructional medium. Pre-instructional planning stage should incorporate principles such as stimulus variation, feedback, reinforcement and learner's participation. In designing instructional medium, the multi-stage theory of human learning provides a rich array of possibilities. It is suggested that an effective instruction must

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involve some stimuli to the learner in order to learn. Gagne and Briggs cited in Johnstone (1989) identified nine different activities which they refer to as events of instruction. The first event is gaining the attention of the learner. This is done by presenting stimulus to appeal to the learner's interest or curiosity. This may be done through questions, a challenge, a demonstration or a sharp change in the visual scene. The second event is informing the learner of the objectives of the study. The learner should be in a position to know when the objective of the lesson has been achieved. The third event is to stimulate recall. The learner should be in a position to apply previously learnt content to the new concept being introduced. The fourth event involves presenting the new stimulus to be learnt. In step five, the learner should be provided with the learning guidance that is, being directed by prompts, hints or questions towards objectives. The sixth event is eliciting performance. Having arrived at the objective, the learner must be challenged to show that he or she can do the task by use of example or a problem. The seventh event is providing feedback. This is done by making the learner aware of his or her performance. The eighth event involves assessment of performance. The instructor ensures that the learner has accomplished the objective. Finally, the ninth event is enhancing retention and transfer. This calls for practice especially with varied tasks requiring the same skill that have been the objective of the lesson. Since in distance learning learner independence is crucial, the design of instructional medium ought to be interactive. Interactivity ensures that there is active learning as the learner is engaged with the activities presented in the content.

Gbenoba (2012) posits that increased need for contact hours is a testimony that learners need a dose of interactivity in the instructional units. The print medium used for instruction should be designed in such as way that there is proper interactivity if they are to act the "teacher" to the distance learners. From the onset, there should be collaboration between an instructional designer and the subject specialist. The subject specialist should be regarded as the expert in the subject matter and his or her views should be respected and encouraged. The instructional designers should act as "surrogate learners" and ask the kind of questions a distance learner is likely to ask when using the instruction medium, Dhanaraja (1996). Instructional materials should be designed in such a way that they encourage active learning in the absence of the teacher. Issues raised by Gbenoba (2012) needed further investigation in the context of University of Nairobi to ascertain whether the design of print instructional medium used in delivery of distance learning have a role in learner participation in distance learning. The objective of the study therefore was to establish the influence of print instructional design on learner participation in distance learning programme at the University of Nairobi. The university uses print instructional medium commonly referred to as study units. These are issued to the learners at the beginning of a semester for home study. Study units are standardized self-contained course segments that constitute an educational experience or training (Gasper, 2013). The learners are expected to learn 85% of total course objectives on their own (Bowa, 2008; Hamweet, 2012). The design is expected to have interactive language and to flow from simple to complex concepts. It should have clearly stated objectives so that the learner becomes aware of exactly what is expected of him or her in a given subject area. Icons should be used in such a way that they assist the learner to grasp easily the concepts presented in the study materials. A study by Bowa (2008) indicated that academic performance of the learners depended on the actual learning that took place as a result of studying the course books. Further a study by Rugendo (2014) found that lack of proper guidance on reading skills led to poor performance among students since students were not prepared to study in diverse environments. There has been in Kenya a tremendous growth in the number of institutions offering distance learning in the recent past in Kenya. Most of such higher institutions of learning use print medium as part of the delivery mode of the content. This study sought to establish the influence of print instructional design on learner participation in distance learning at the University of Nairobi. The university is one of the oldest institution of higher learning in Kenya and the first to initiate distance learning programmes in the country. It is important to establish how the learners who are the stakeholders perceive the design of main delivery mode and whether it has an influence in their participation in distance learning.

MATERIALS AND METHODS

Mixed method was used in the study that included both qualitative and quantitative modes of data collection. Descriptive statistics (frequencies) was used to describe learner perception of various aspects of design variables while inferential statistics (Pearsons correlation coefficient) was used to establish the relationship between learner perception of design ie independent variable and learner participation in distance learning ie dependent variable. The target population was 554 final year (2015) students in Bachelor of Education programme by distance learning of the University of Nairobi. These students were purposively sampled since they have stayed long in the programme and had used most of the study units. The study focused on course on Planning, Administration and Curriculum (PAC) study units used in the delivery of distance learning at the University of Nairobi. PAC study units were core units in the programme and all students were expected to study them ie were core units. The study also targeted 26 part time and full time lecturers who taught educational planning, administration and curriculum development in the department of Educational Sudies. Lecturers' perception of study units was triangulated with that of the learners in order to establish a balanced view in the subject matter. The total population was 554. Sample size formula provided by Cooper and Emory (1995) was used to obtain sample size of 255 respondents. Research instruments for the study included questionnaires, interview guide and content analysis guide. Questionnaires were administered to Bachelor of Education (Arts) students while interview guide was used on full time and part time tutors. Data was analyzed using both descriptive and inferential statistics. A five point likert scale items were converted to numerical codes and frequencies. This was followed by data consolidation which involved combining qualitative and quantitative data to create data sets.

RESULTS AND DATA ANALYSIS

Respondents were asked to indicate in a Likert scale the extent to which they agree with the statement that print instructional medium is designed in such a way that it enables them to participate in distance learning. The results are as presented on Table 1.

Table 1. Design of print instructional medium and learner participation in distance learning

Design of study units (Response)	frequency	Learner participation %
Strongly Agree	75	76-100
Agree	70	51-75
Disagree	22	26-50
Strongly Disagree	7	0-25
Total	174	100

Table 2. Learner perception of clarity of instructions in print media and participation in distance learning

Learner perception of clarity of instructions in study units on a Likert scale	Learner participation in distance learning				
	0-25	26-50	51-75	76-100	Frequency
Strongly disagree	0	9	5	0	14
Disagree	0	3	0	0	3
Undecided	0	3	10	3	16
Agree	0	33	45	14	92
Strongly Agree	6	0	30	10	46
Frequency	6	48	50	27	171

Table 3. Interactivity in print instructional medium and learner participation in distance learning

Learner perception of interactivity of content In study units on a Likert scale	Learner participation in distance learning				
	0-25	26-50	51-75	76-100	Frequency
Strongly Agree	2	5	0	5	12
Disagree	0	4	4	8	16
Undecided	1	0	6	6	13
Agree	0	33	35	20	88
Strongly Agree	2	8	25	5	44
Frequency	5	50	70	44	169

Table 4. Learner perception of presence of icons and learner participation in distance learning

Learner perception of presence of icons in study units	Learner participation in distance learning				
	0-25	26-50	51-75	76-100	Frequency
Strongly Agree	2	5	0	5	12
Disagree	0	4	4	8	16
Undecided	1	0	6	6	13
Agree	0	33	35	20	88
Strongly Agree	2	8	25	5	44
Frequency	5	50	70	44	169

Table 5. Learner perception of self assessment exercises and participation in distance learning

Learner perception of self assessment exercises	Learner participation in distance learning				
	0-25	26-50	51-75	76-100	Frequency
Strongly Agree	0	0	0	0	0
Disagree	0	0	0	0	0
Undecided	3	5	0	0	8
Agree	8	17	89	10	124
Strongly Agree	4	5	28	5	42
Frequency	15	27	117	15	174

Table 6. Learner perception of objectives in print instructional medium

Learner perception of self assessment exercises	Learner participation in distance learning				
	0-25	26-50	51-75	76-100	Frequency
Strongly Agree	0	0	6	3	9
Disagree	0	0	0	0	0
Undecided	0	0	3	0	3
Agree	4	10	75	4	93
Strongly Agree	2	15	18	34	69
Frequency	6	25	112	41	174

Table 7. Correlation of design of study units and learner participation in distance learning

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.709	.383		4.463	.000
	On a scale of 0-100 indicate the extent to which study units enables you to participate in Distance learning	.148	.046	.266	3.240	.002

a.Dependent Variable: On a scale of 0-100 indicate the extent to which study units enables you to participate in Distance learning

Majority of the respondents 145(83%) out of possible 174 perceived design of study units to be suitable for their participation in distance learning. This means that design of the study units was an important aspect in learner participation in distance learning.

Clarity of Instructions in print medium

Respondent were asked to indicate the extent to which they agreed that the study units were written in a clear manner and the extent to which study units assist them while preparing for assessments. Responses were as indicated on Table 2. It was concluded that, majority of the respondents agreed that study units are written in a clear manner that enabled them to prepare for examinations since they fell of 51-100 category with 138(79%) agreeing that clarity of study units enables them to participate in examinations.

Interactivity in the design of print instructional medium

Respondents were asked about their perception on interactivity of language used in the study units and the extent to which they agree that language used enables them to do assignments, prepare for continuous assessment tests and examinations. The responses obtained were as indicated on Table 3. Majority of the respondents agreed that the language used in the study units is interactive to enable the respondents to participate in distance learning since those who make reference to study units for assignment fell between 51 to 100 and had the highest frequency of 132 (75.9%) out of possible 174.

Presence of icons in the study units and learner participation in distance learning

An assessment was done between icons in study units and learner participation in distance learning (Dependent variable). The results obtained are as indicated on Table 4. It can thus be concluded that majority of the respondents were of the opinion that the icons in the study units do not assist them in understanding the text better as majority 129(74%) of the respondents responded to between disagree and strongly disagree

Self assessment exercises and learner participation in distance learning

Respondents were requested to indicate the extent to which they agree with the statement that self assessment exercises in the study units assist them to prepare for continuous assessments and examinations. Responses are as indicated in Table 5. It can thus be observed that majority of the respondents were of the opinion that there were self-assessments exercises in the study units that enabled them to revise for continuous assessments tests and examination. A large number of respondents agreed and strongly agreed in the frequency of 166(95%) with the majority agreeing that they refer to the study units for the purposes of handling assessments.

Perception of Statement of objectives in the print media and learner participation in distance learning

Respondents were asked to indicate the extent to which they agree with the statement that objectives in the study units are clearly stated and enable them to prepare for assessments. The results obtained are recorded on Table 6. It was thus concluded that majority of the respondents were of the opinion that statement of objectives in the study units are clear and enabled them to prepare for continuous assessment tests and examination. A number of respondents fell in the category of agreed and strongly agreed 172(99%).

Lecturers' perception of design of study units

Lecturers interviewed perceive print instructional medium used at the University of Nairobi to be well designed and meets international standards of a typical distance learning material. They acknowledge the inclusion of objectives and self assessment exercises to be of help to learners. All of them however were of the opinion that the design should include time frame to direct learners on approximate time to take while reading a given segment in the content of study units. From the analysis a correlation Coefficient of 0.002 was obtained meaning that there was a weak but positive relationship between design of study units and learner participation in distance learning.

DISCUSSION OF FINDINGS

It was noted in this study that that distance education material developers not only have to convey information to the students, but they also have to structure and control the process by which information is presented and assimilated by the students also Imran *et al.* (2008). The respondents agreed that instructionnal objectives, self assessment exercises and interactive language used in the study units was appropriate to their study. However, majority did not agree that icons in the study units are of help. Icons are like sign posts in distance learning materials. This is because instructional design is meant to translate principles of learning and instruction into plans for instructional materials, activities, information resources and evaluation (Dartrician and Tillman, 2005). Icons direct the learner to specific activity or task at hand. This means therefore that they are an integral part of design in distance learning instructional material. As pointed out by Gbenoba (2012), distance learning instructional materials are not textbooks and should not be written as such. They should be designed in such a way that there are in two way communication form between the learner and the teacher. Lack of interactivity in most distance learning may cause the learners to demand increased time for face to face interaction (Gbenoba, 2012). In this study, however, learners found the

two way communication in the design of the study units very helpful. It is possible that course designers at the University of Nairobi had the necessary expertise and training.

Conclusion

Learners found that the study units design was useful an indication that course designers had the necessary expertise and were well versed in their areas of specialization. Besides, the design of study units enabled learners to read through the content effectively before they participated in their assignments, prepared for continuous assessment tests and examinations. There is need to improve on the icons used in the design since icons are an important component of print instructional design and acts as sign posts to the learners in the course of the study. If the design did not direct the learners on how long to take while studying a given topic or lecture series the learners not complete a given study unit within the time allowed for each semester.

Recommendations

The design of the study units should be improved to include suggestions on how long a learner should take while studying a given topic. Icons should also be made meaningful to act as guide to learners as they study the content and to serve the purpose for which they are intended to serve.

REFERENCES

Bowa, O. 2008. Relationship between Learner characteristics and academic performance in distance learning. Unpublished PhD thesis

Cagne 1992. Nine events of instruction. Northern Illinois. Faculty development and instructional design centre

Cooper, D.R. and Emory C. W. 1995. Research Methods Chicago: The McGraw-Hill Company

Danaraja, G. 1996. Designing and writing learning materials for distance Education. A handbook for authors and instructional designers. Commonwealth of Learning Training Manual.

Dartician L.S and Tillman J.R 2005. Instructional Design. University of Oklahoma. John Wiley and Sons Inc. New York.

Gasper, R. 2013. *Trends in Distance Education* http.www. distancelearning.com/trends-in-distance-learning. Retrieved 10/12/2013.

Gbenoba, F. 2012. A quest for increased Interactivity in the print instructional resources of open and distance Learning. (ODL) instructions in Africa: Writing the study units of National Open University of Nigeria (NOUN) print course materials. *Journal of the Open University of Tanzania*, Vol. 13, 2012.

Hamwette, W. 2012. Quality Assurance in Modules at the Institute of Distance Education, of the University of Zambia. *Journal of Open University of Tanzania,* Vol.13 2012.

Imran Y., Nadiien A., Muhammad S. 2008. Perceptions of course coordinators and course writers on developing Distance learning materials. *Turkish Online Journal of Distance Education*, vol. 9 article 6.

Indira Gandhi National Open University (IGNOU) handbook 1989

Rugendo, C.J. 2014. Influence of study habits and demographic variables on academic performance: The case of Bacholar of Education (ARTS) students, University of Nairobi. Upublished PhD thesis.

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