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Evaluating Disaster Preparedness among University Learners: A Study of Ekiti State University, Ado- Ekiti, Nigeria

Ogunleye O.I., Olusola J.A.

***Abstract*— The research was carried out using purposeful and convectional sampling methods through self-administered questionnaire. The data were collected from 200 students from nine different faculties to evaluate their disaster preparedness. A total of 187 valid questionnaires were obtained from the respondents and analyzed. Consequently, it was established that disaster education, response and preparedness mechanisms in the studied area are very poor. Hence, a systemic disaster preparedness course on prevention and rescue drills is needed by the institution and by extension other universities. Moreover, in order to create a safe environment, there should be improvement in disaster education system in the universities. Disaster skills should be performed on a semester basis as a refresher and to enhance disaster preparedness. Adequate disaster preparedness equipment such as fire extinguisher, smoke detector etc should be provided by the management of the universities as well as creation of adequateevacuation routes, emergency exits and disaster supply kits.**

***Index Terms*— Disasters, preparedness, mitigation, natural, artificial, learners.**

I. INTRODUCTION

A disaster is a serious disruption of the functioning of a society, causing or threatening to cause, widespread human, material, or environmental losses which exceed the ability of the affected community to cope with using only its own resources[1].School safety and educational continuity require a dynamic, continuous process initiated by management which involves students, staff, stakeholders and the local community. It is necessary to assess the level of awareness of learners in schools about hazards and disasters as well as evaluating whether such things are taught in schools. And whether learners are aware of the safety plans and are well prepared for any outbreak of disasters [2]. Disasters especially natural ones cannot be predicted accurately when it occurs and are beyond the control of human beings. When disasters occur, it leads to the destruction of human life, loss of property, affect structure, agriculture and environment[3].

Disaster preparedness is the systematic process of using administrative measures, organizations, and operational skills to implement strategies, policies, and improved coping capacities in order to lessen the adverse impacts of hazards and to minimize the opportunity for development of emergencies (disasters)[4].

Disaster preparedness is a process that happens before a disaster happens. There are two key elements to disaster preparedness. The first is about reducing risk through removing or mitigating the hazards and people's vulnerability that cause disasters [5].

Most of the natural disasters which affect people in Africa are caused by the weather, drought and floods but fewer disasters are caused by earthquakes and volcanoes, stated by[6].

Nigeria is a country not prone to spectacular destructive and media intensive disasters such as volcanic eruptions, massive earthquakes and tsunami but has rather been dominated by localized incidents of fires, seasonal flooding in vulnerable communities, drought and desertification, storms, gully erosion human made disasters such as oil spills, mining accidents, building collapse, bombing, terrorists and herdsman attack etc.

According to [7], children are particularly vulnerable to disasters, and schools are often not able to keep them safe. More than 50 per cent of those affected by disasters worldwide are children. Natural disasters are one of the key factors inhibiting school attendance of approximately 57 million school children. In particular, those who are displaced from their homes often find it difficult to get back to school in a timely way. Therefore children need to be protected before disaster strikes. Protecting children during natural hazards requires two distinct yet inseparable priorities for action: disaster risk education and school safety[6].

For disaster preparedness to be achieved in schools there must be integration of disaster risk education in school curricula in countries vulnerable to natural hazards and the safe construction and renovation of school buildings to withstand natural hazards[8]. It requires National Disaster Management Centre (NDMC) to promote disaster management capacity building, training and education throughout the country, including schools, according to [6].

However, Ekiti State University Ado Ekiti (EKSU) was established as ObafemiAwolowo University, Ado-Ekiti on 30 March 1982. It is a non-profit public higher education institution located in the suburban setting of the small city of Ado-Ekiti. Owing to the geographical location and the misuseof nature, Ekiti State University faces lots of disasters such as floods, fires, building collapse, storms, erosion and the like.To prevent the huge destructions and to become a disaster resistant community, management can play a pivotal role too. The research was done to determine the learners 'preparedness for disasters and to give recommendations for

Ogunleye Oluwayemisi Ireti, Department of Geography and Planning Science,Ekiti StateUniversity, Ado- Ekiti, Nigeria
Olusola Johnson Adedeji, Department of Geography and Planning Science, Ekiti State University, Ado-Ekiti, Nigeria.

effective disaster preparedness based on the research findings.

II. AIM AND OBJECTIVES

This study aims at evaluating disaster preparedness among students in Ekiti State University, Ado- Ekiti.

This aim will be achieved through the followings objectives:

- To identify the types of disasters facing the students of Ekiti State University
- To assess whether learners of Ekiti State University (EKSU) have been taught disaster preparedness.
- To establish whether learners have knowledge of disaster education.
- To determine the level of preparedness of learners from the aspect of the effectiveness of school management and to develop some recommendations.

III. RESEARCH METHODOLOGY

A. Sampling and data collection

This study used data from primary sources gathered from participants through questionnaires. The small portion of EKSU students was selected. Purposeful and convenience sampling methods of participants were used to select questionnaire respondents.

Questionnaire

The survey questionnaire was designed by the researchers in order to establish the level of participant's knowledge of disasters, preparedness and awareness of disaster and measure the status of disaster preparedness. The data collection method carried out through questionnaires from the learners of different faculties, namely, Social sciences, Sciences, Art, Engineering, College of Medicine, Education, Agricultural science, Law and Management Sciences which consisted different types of questions; namely, open-ended questions and closed questions. The questionnaires included 3 parts, involving demographic variables; included gender, age, educational level, and educational backgrounds. The second part assessed the general disaster education; including two questions concerning whether the institution can be affected by the disaster one day and types of disaster prevalent in the community where the institution was situated. The last part measured the level of learner preparedness which sought to know whether they have been taught about disaster preparedness in the classroom, whether they know what to do during an emergency and disaster preparedness equipment they have in place in case of an emergency.

B. Data Analysis

A convenience and purposeful sampling of participants was used to select questionnaire respondents. Purposeful sampling is a technique widely used in qualitative research for the identification and selection of information-rich cases for the most effective use of limited resources. Lawrence et al(2016)[9]. 200 questionnaires were given to respondents, covered all the nine faculties while 187 were recovered back (87%).

The questionnaires for learners consisted of multiple choice and YES, NO or Uncertain and required the participants indicate the appropriate answer or their response by making use of "X" in the box provided, and to motivate their answers in the space provided.

Data presentation and interpretation of the findingswas based on the objectives of the study which are to identify the types of disasters facing the students of Ekiti State University, (EKSU) and assess whether learners of EKSU have been taught disaster preparedness, establish whether learners have knowledge of disaster education and determine the level of preparedness of learners from the aspect of the effectiveness of school management and to develop some recommendations.

The researcher used Percentage to analyze the quantitative data, particularly distribution tables were used to summarize and present data that was then internalized and described. Percentages obtained were presented in tables and figures which were then internalized and then described.

Furthermore, perceptions and motivation that sounded similar were grouped together and a percentage was allocated to each category of opinions or perception.

IV. DEMOGRAPHICS PROFILE OF THE RESPONDENTS

A comparison of the findings from questionnaires completed from all the nine faculties to check whether they agree or differ. A total of 200 questionnaires were administered and 187 questionnaires were returned, resulting in a response rate of 96%. This part displayed the participants' profiles which consist of gender, faculties, and periods of months or years they have spent in school rank and age group. This information is essential as it will help to determine any variable that might affect the results.

Learners" gender ratio was included in order to gain a perspective on disaster preparedness of learners from males and females who participated in the study. The results show that the majority was females who contributed 52% and males contributed only 48%. Everyone participated in the study by completing questionnaires. The sample mainly consisted of undergraduate students as shown from the age brackets in table 1 below (96%) from nine faculties. The majority of participants majored in Social Science and Science (64%) mainly due to the largest population of the student of those faculties and due to the interest to accept the questionnaires from the researchers. The results also indicated that the majority of the learners, constituting 54.4%, had been at school for one to three years, followed by 22% of learners who had spent between 4-5years, while 17.6% indicated that they had been in the school for only one to eleven months and with only6% who had spent six years and above. Learners who had spent between 1 to 5 years in the school responded the most. This shows that their responses could be reliable since they have spent many years in school to have garnered adequate information about the subject matter.The demographic information is presented in Table 1.

Table 1. Demographic information of the respondents

Variables	No	%
Gender		
Male	89	47.6
Female	98	52.4
Faculty		
Art	12	64
Agriculture	17	9.1
Education	25	13.4
Engineering	14	7.5
Law	23	12.3
Management	22	11.8
College of Medicine	10	53
Science	27	14.4
Social Science	37	19.8
Period in School		
1-11Months	33	17.6
1-3Years	102	54.4
4-5Years	41	22
6andAbove	11	6
Age Group		
15-20	46	24.6
20-25	120	64.1
25-30	14	7.5
30-35	5	29
35andabove.	–	–

V. RESULTS AND DISCUSSIONS

GENERAL DISASTER EDUCATION QUESTIONS

This part discussed learners' general disaster education knowledge. The results are presented as follows: Majority of the learners constituting 95.7% responded to have learnt about disasters either through school, 59.3% or home, 19.8% or hospital, 8.5% or television/radio (19.8%) and through internet/newspaper, 1.5% with only 4.3% of the respondents who indicated that they have not learn about disasters.

Besides, 72.7% of the learners opined that their school could be affected by disasters at a later day,which could include terrorists/ herdsmen attack, fire outbreak, flooding, building collapse. The learners gave reasons that human activities play a major role in the frequency of disaster there by leading to loss of life and properties damage. Some learners mentioned activities likedumping refuse inside gutters andcutting down of trees, destruction of natural wet lands and emission of fossil fuel as a result of urban development. This agrees with [10], who pointed out that disasters are becoming more severe, frequent and clearly associated with developmental problem in such that developing countries might find themselves in a "global warming trap", in which increasing ratios of development funding will be devoted to coping for the damages of natural disasters instead of fostering development. In the same vein, findings were proved by [11], that disasters have affected university and college campuses with disturbing frequency, sometimes causing death and injury, imposing monetary losses and disruption of the institution's teaching, research, and public service and damaging to buildings and infrastructure with only 27% of learnerrespondents who showed contrary views. The disasters identified here with the higher percentage are man – made (Herdsmen/ Terrorist attack, fire, building collapse) while those with lower percentage are natural disaster(Floods and storms) as shown in table 2 and figure 1 respectively. This showed that the community is not likely to be faced with any natural disaster but man-made disaster due to human activities such as herdsmen attack, fire disasters etc.According to [8] who maintain that disasters can be either human-made or natural occurrences; eitherway they have a devastating effect on human lives and their means of existence.

Table 2 General disaster education knowledge

Variables	**No**	**%**
Responses of whether learners have learned about disaster		
Yes	179	95.7
No	8	4.3
Places where learners learnt about disaster		
Home	37	19.6
School	111	59.3
Hospital	16	8.5
Television/Radio	37	19.8
Internet/Newspaper	3	1.5
Future disaster affects EKSU		
Yes	136	72.7
No	51	27.3
Types of disaster that can affect EKSU		
Flood	46	24.6
Buildingcollapse	44	23.5
Fire	53	28.3
Storms	14	7.5
Herdsmen/Terrorist attack	7	36
None	–	–

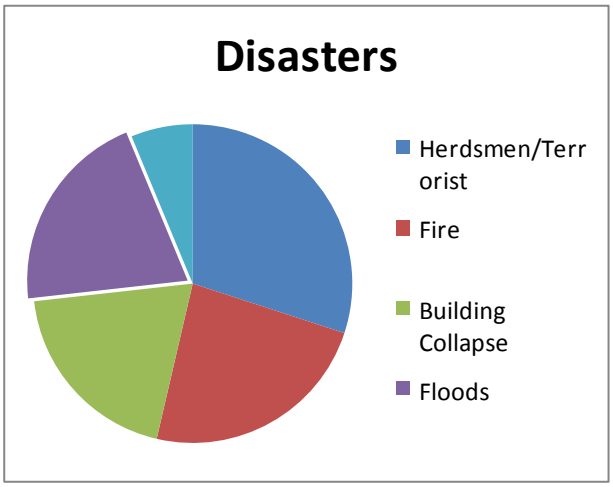

Figure 1: Disasters envisaged by the respondents in EKSU.

VI. LEVELS OF STUDENTS' DISASTER PREPAREDNESS

Table 3 provides perspectives regarding the level of disaster preparedness of students. Majority, 57.2% of students showed that they had never been taught in any field about disaster preparedness in classrooms.This is due to the fact that provisions were not made in the school curriculum where this will be taught while 42.8% of learners indicated that they had been taught about disaster preparedness at different stages of their education in classrooms. Most of those that have been taughtwere taught in the university. This implies that there is little awareness of disaster preparedness in primary, secondaryand tertiary schools whereas this is a place where information on disaster should be promoted. According to [12], he revealed that children ought to be protected and simultaneously, their knowledge on disasters needs to be increased. School is a very reliable institution and an effective platform in transferring information, knowledge and skills to the surrounding communities. Therefore, the activities of disaster education in school are an effective, dynamic and sustainable strategy in spreading out disaster education. The systemic, measurable and feasible efforts to increase the capacity of school community will effectively reduce disaster risks in schools.

Also, the result presented shows that 67% of students indicated that they know what to do during any emergency at school while 33% had no knowledge of what to do. The research demonstrated that many, 33% of the students are still ignorant of what to do in case of emergencies due to lack of education or training on the concept but concluded to contact appropriate quarters/ agencies in case of emergencies. Many of these students may not have had the desired of disaster preparedness when entering society after graduation. This is in agreement with the finding of [13], whoidentified that the level of school Preparedness was lower compared to that of communities and government apparatus.Also, [14],who said it is difficult for schools and individual teachers to make the topic of disaster preparedness a priority in classroom activities. Also agrees with [15], whose finding was that schools level of disaster preparedness in Kenya is still wanting despite the existence of Government policy. No matter how much effort had been put into creating the perfect disaster plan, it would largely be ineffective if the staff and students were not aware of it[15].

Moreover, 80% of the respondents indicated that they did not rehearse disaster drills at school which is supposed to be a co – curricular activity and psychomotor aspect of development but 20% of the learners indicated that emergency drills ranging from first aid drills, rescue drills, and evacuation drills were performed in their schools. According to [6], co-curricular activities which included basic disaster awareness and disaster risk reduction such as mock drills, first aid training, training fire safety and other appropriate response skills, for example light search and rescue, swimming, evacuation and emergency shelter creation need to be motivated and encouraged in schools so as to enhance safety.

As many as 80.2% of students indicated that disaster drills at school is necessary because the school should be a place where all forms of knowledge including social knowledge should be impacted. In case a student or any other person is caught up in an emergency situation that could claim lives, knowledge of disaster drills such as how to escape or find safety exit in case they find themselves in the middle full-blown riot, how to apply first aid to an injured person and using a sand pot or fire extinguishers, and the appropriate posture when engulfed in smokeduring fire disaster while only19.8% of learners indicated that emergency drills are not necessary at school. Also from the table 3, a large percentage of the respondents confirmed that there were no provision of courses on safety assessment,that there was no lecture on danger of fire, with few responding otherwise. Majority of the respondents (65.2%) indicated that they had fire extinguishers in their school without any knowledge of the usage and functionality, 40% of the students indicated they had first aid boxes, 16.6% indicated fire alarm, also 11.2% of the respondents showed that they have sand pot and the remaining 2.1% of the students indicated they had smoke detector in their school. With these responses, the safety gadgets are inadequate, level of awareness of students in schools is also poor.Drills offer the opportunity to identify training needs, establish new reflexes and teach through action and repetition. According to [7], fire is one of the most frequent hazards in schools, and as such, all schools should have regular fire alarms, fire drills and exercises can be coupled with teaching students how to use fire extinguishers and other ways to deal with small fires. Students, faculty and administrators can prepare themselves for emergencies at school in a number of ways, from conducting regular, emergency-specific drills to making sure the building's infrastructure is up to standard. When emergencies do happen, schools need to know how to respond appropriately and recover as quickly and effectively as possible.

This study agrees with [16]who assessed the knowledge of disaster risk reduction among school students in Nepal. It reported that, more or less an equal number of older and younger groups of students were found to have been using FM radio and television to obtain the disaster information. However, the younger students are more interested to have disaster information from newspaper than the older students.

Table 3 Levels of students' Disaster Preparedness

Variables	No	%
Disaster preparedness in the classroom		
Yes	80	42.8
No	107	57.2
Level where it has been taught		
Elementary	14	17.5
Secondary	28	15
Higherinstitution	8.5	47.5
Learning Areas		
None	72	38.5
Social science	42	22.5

Science	37	19.8
Medical Sciences	14	7.5
Education	13	6.9
Art	9	4.8
What to do during disaster		
Yes	126	67
No	61	33
Disaster preparedness should be taught in other schools		
Yes	173	92.5
No	14	7.5
Whether learners perform disaster drills at schools		
Yes	37	20
No	150	80
Types of drills rehearsed by learners at school		
Evacuation drills	7	4
First aid	19	10
Rescue drill	11	6
None	50	80
Necessity of disaster drills at school		
Yes	150	80
No	37	20
Courses on safety assessment		
Yes	47	25
No	140	75
Any lecture on danger of fire		
Yes	65	35
No	122	65
Availability of disaster equipments in the school		
First aid box	75	40
Fire extinq1uisher	122	65.2
Fire alarm	31	61.6
Sand pot	21	11.2
Smoke detector	4	2.1
None	23	12.3

VII. RECOMMENDATIONS

- It is very important for everyone to be aware of their risk and to know what steps need to be taken to reduce it. Identifying risk and reducing it is not the work of the government or emergency response agencies alone. The school, teachers, students, parents, local residents and leaders – all need to be fully aware and active for this purpose.
- The finding of the study is that our community- Ekiti State University, Ado Ekiti is prone to disasters such as floods, fires, droughts, epidemics, storms, accidents (transport and industrial), terrorist /herdsman attacks. These disasters often result in loss of life and properties. The implication of this finding is that there should be disaster preparedness education in our tertiary institutions especially at undergraduate level. This should focus on the hazards and disasters that are prevalent in our locality/country and that learners should be given more attention as they are the most affected when disasters occur. I think this should have implications for curriculum and learning programme development.
- There is a need to increase the awareness of educators of the importance of teaching about hazards and disasters, especially those who are not teaching it and those who teach it should focus specifically on hazards and disasters that are prevalent in their community.
- Community colleges as well as other colleges and universities should be encouraged to include disaster management training in their curricula. Materials on mitigation and preparedness should be made part of geo-science, meteorology, forestry, health, engineering, architecture, education, planning, public administration, and business school programs.
- Good drills are a learning process. School drills should be tailored towards expected hazards which must begin with advance preparation by staff, providing an opportunity to train students in groups.
- There should be provision of adequate and functional disaster prevention kits and apparatus in schools such as fire extinguishers, fire blankets, fire alarms, sand pot, water points, hoses and life jackets.
- Curriculum planners should include co-curricular activities which include basic disaster awareness and disaster risk reduction such as mock drills, first aid training, training fire safety and other appropriate response skills like light search and rescue, swimming, evacuation and emergency shelter creation in the planning of the curriculum for schools so as to enhance safety.

REFERENCES

[1] Olurunfemi, F.B. & Raheem U. A.,(2002). Sustainable Disaster Risk Reduction in Nigeria: LessonsforDevelopingCountries.*African Research Review* Vol. 2 (2) 2008 pp. 187-217

[2] FatmaOzmen. (2006). The level of preparedness of the schools for disasters from the aspect of the school principals. *An International Journal of Disaster Prevention and Management*. Vol. 15 (3), pp. 383-395,

[3] Herlander Mata-Lima, AndreilcyAlvino-Borba, Adilson P., Abel Mata-Lima, José A. A. (2013). Impacts of natural disasters on environmental and socio-economic systems: what makes the difference? *Journals of environment and society*.vol.16(3).Pp.45-64

[4] ElisavetaStikova. (2016). Disaster Preparedness. *Article on Global Public Health Curriculum; 2nd Edition.* Dol. 10, 4119. P 13.

[5] Claire O'Meara (2010). A text book on Disaster Preparedness Planning Guide. Y Care. International relief and development agency in the UK and Ireland13.

[6] HellenMamosegareMamogale(2011).Assessing disaster preparedness of learners and educators in Soshanguve North schools. Unpublished Project.P12-13

[7] UNESCO.(2014). A Teacher's Guide to Disaster Risk Reduction. Stay safe and be prepared. Published by the United Nations Educational, Scientific and Cultural Organization. ISBN 978-92-3-100044-7. Designed & printed by UNESCO. P 8.

[8] Takalani S. R., Lukas D. B., & William F. 2012. Disaster Risk Reduction through school learners' awareness and preparedness. *Journal of Disaster Risk Studies*,VOL. 4 (1).

[9] Lawrence A. P., Sarah M. H., Carla A. G., Jennifer P. W., Naihua D., P. & Kimberly H. (2016). Purposeful sampling for qualitative data collection and analysis in mixed method implementation research.*Journal of Administration and Policy in Mental Health and Mental Health Services Research*Volume 42, Issue 5, pp 533–544

[10] Aurélien R *(2015).* The Effects of Major Natural Disasters on Developing and Underdeveloped Countries: A look At The Savings Rate. *Journal of Research in Business and Economics*sp62-79

[11] Ahmad J., Hajdar M. &Jamaludin I. (2015). Disaster Preparedness in Universities. International *Journal of Computer Trends and Technology* (IJCTT). Vol 19 (1). P1-4.
[12] Ninil R. Miftahul J. &Perkumpulan L. (2011). A Framework of School based Disaster Preparedness. Published by Consortium for Disaster Education. P 7
[13] Sujarwon,Noorhamdani&MukhamadFathoni (2018). Disaster Risk Reduction in Schools: The Relationship of Knowledge and Attitudes Towards Preparedness from Elementary School Students in School-Based Disaster Preparedness in the Mentawai Islands, Indonesia. *Cambridge Journals*. Vol33 Issue 6, pp 581-586
[14] Victoria A. J., (2011). Disaster Preparedness Education in Schools: Recommendations for New Zealand and the United States. Published by Fulbright New Zealand, August 2011. ISBN 978-1-877502-26-2 (print). P 7.
[15] Aftin K. D. & John A. O. (2016). Level of Disaster Preparedness and Policy Implementation in Public Secondary Schools in Rhamu Town, Madera County, Kenya. IOSR *Journal of Research & Method in Education*. Volume 6, Issue Ver 1, pp 06-11
[16] Gangalal T., Ryuichi Y., Ranjan K. D. & Netra P. B.,,(2014).. Knowledge of disaster risk reduction among school students in Nepal. *Journal on Geomatics, Natural Hazards and Risk*. Vol. 5(3) 190–207.