DISASTER MANAGEMENT CURRICULUM AT HIGHER SECONDARY SCHOOL LEVEL IN SINDH PROVINCE

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ABSTRACT
Findings reveal the province of Sindh is facing vulnerabilities to natural disasters. This study aimed to review the natural calamities recently in Sindh and evaluate the curriculum at Higher Secondary Schools (HSC) regarding disaster management. This study comprises the closed-ended questionnaire technique and the nature of this study is exploratory. The hypothesis of this study is null: no losses happened by the natural calamities, no content in the curriculum and no knowledge regarding the disasters in the students. There is no need for experience and knowledge in the context of Disaster Management (DM) curriculum for higher secondary school administration. Findings identified there is need of curriculum regarding the disaster management and curiosity of students for acquisition of knowledge. For the sharing of knowledge, the common method is implied in association with disaster management and there is not part of the content in all subjects. There is no particular training for the heads and teachers of higher secondary schools and for the curriculum implementation, the difficulty is faced. This study identified resources for the implementation of curriculum and the content regarding the phases of disasters are not covered. The present study recommended that the curriculum must be flexible and implemented in light of local situations. There should be a plan for the development of curriculum,

and training for the particular learning. The design and evaluation of the curriculum must be with the involvement of school administration, pupils and teachers' sand in the light of available resources and time.

KEYWORDS
Disaster management, Curriculum, Goals, Implementation

INTRODUCTION

Disasters are divided into two types, natural and man-made disasters. The types of natural calamities consist which are most associated with this region are drought, flood, torrential rains and earthquake. The frequent happening the various types of disasters in this region, formal disaster management education is essential. On account of various types of natural calamities such as torrential rains, drought and flood, the Sindh Province is facing heavy loss. The fundamental aspects of disaster management are planning and handling the situation in the right and perfect way. The essential phases of such type of management are pre-, post and meanwhile the disaster. The improper planning and lack of education may be the great cause of heavy loss. As the curriculum, students and other citizens can benefit from it and in the learning process, schools are the center of society. The content in the curriculum may be important for tackling the risky conditions during natural calamities. Disaster risk reduction is a key part of disaster management.

LITERATURE REVIEW

ROMAN and RAYA (2017) Show that in daily life, formal learning has an important role in development in context with the readiness of tackling. This is good practice for lessening the disaster and playing the role in context with human assets. As Marla (2008) Pointed out the probable losses regarding the disasters may be associated with human causalities, educational, affected schools cause the sabotage of the educational process and the children can abstain from education, there are economic risks associated with infrastructure repair and rehabilitation. The disaster can be the reason for psychological diseases. According to QCA (n.d) The cross-curriculum elements have an important part in supporting the schools to design the curriculum to assist the objectives of children. According to QCA (n.d), Features of cross-curriculum may be designed through the all subjects interrelated as appropriateness in the discipline. Such may be accomplished for the internal involvement in various areas in association with the beliefs and lives of students. TUSWADI (2014) identified the importance of the training of educationists in the course of servicing through the strategy of an integrated method of educating regarding disaster resilient. Avianto, Deanne, Kevin, Katharine &Briony (2017) found the facilities in connection with the education for DRR will assist the acquisition of knowledge. Fathia & Rasmia (2016) Recommended the need for knowledge in connection with disaster management and emergency assistance to

flourish awareness and the progress about protection of children in school. Elvis (2016) Found that the knowledge imparted among the students in context with the risks, the fundamentals of such are interconnected with the bad practices in the community. Avianto et al. (2017) Revealed the significant number of educationists described the training will thrive to impart the knowledge in connection with DRR in the school. As Ontario (2016) Stated the availability of resources and the thriving of students regarding learning can be proof of 21st-century competencies. Acquisition of knowledge within the community level may be fruitful to the learner and the facilitator. SABER (2016) Found the previous work regarding the absence of essential aspects and pausing of participation of school influence the negative progress of students. As Ontario (2016) Pointed out the sufficient budget allocated for evaluation of learning success in the USA.

All students must take fundamental initiatives for survival at the individual level and for the whole community. All the students Can play crucial role for the self and surroundings at large. The knowledge among the students can be the cause of the awareness of the entire family. The students may be part of conveying knowledge to all families. It can be fruitful at the community level at large which can make a positive difference. In this regard for the avoidance the losses at society level the Curricular and co curricular activities should be organized. Due to the diversified conditions and geographical locations, there is a difference in the needs and objectives that cannot be achieved in the disaster situation by the uniform curriculum. There is a crucial need for reviewing the curriculum in the light of current conditions and evaluating of standard of content of curriculum according to the quality at the global level. The revision of curriculum can be at a higher level or through the delegation of powers at the school level in the light of current needs in connection with disaster management that may be fruitful. This study is designed for the assessment of the potential of educational management regarding the implementation of the curriculum in the context of disaster management and giving suggestions.

RESEARCH OBJECTIVES

1. To Evaluate existing Higher Secondary School Curriculum in connection with Disaster Management topics.
2. To assess students' knowledge relevant to Disasters and how to manage them.

RESEARCH HYPOTHESES

1. There is no subject matter in Higher Secondary School Curriculum in connection with Disaster Management topics.
2. There is no knowledge among the students in connection with the Disasters and how to manage them.

RESEARCH METHODOLOGY

The objective of this study is to evaluate the contemporary curriculum in context with disaster management. This study is conducted by carrying out by closed-ended questionnaire consisting of 08 items and the questions comprised on a 5 Likert scale and it is exploratory. The data was analysed by the Chi square statistical test for goodness of fit to find the relation among the categorical variables and testing the null hypothesis. The percentile and frequency of every response were defined. The results of analysis were interpreted in the light of calculated value is more than tabulated value so null hypothesis is rejected. The validity of tool was found by the pilot testing and the reliability of this is for the teachers .985 and for the Head of Institute is .928. this study focuses on the vulnerable areas of various Sindh categorized as coastal, arid zone and flood-prone. The population of this study consists of HSC-level institutes (schools and colleges) of affected districts of entire Sindh Province. The data was by random sampling comprised on the heads of institutes and teachers of the districts Sukkur, Badin, Kashmore, Jamshoro and Dadu. District-wise population and sample size are in Table 3.4(A) and 3.4(B).

Table 1:*H.S.C (School)*

District	Schools						Teachers				HOI			
	Boys		Girls		Mixed		M		F		M		F	
	P	S	P	S	P	S	P	S	P	S	S	P	S	
Badn	7	7	3	3	-	-	232	145	113	88	7	7	3	3
Jams	1	1	4	4	3	3	216	139	130	98	4	4	4	4
Dadu	4	4	3	3	8	8	251	152	82	68	12	12	3	3
Khp	4	4	2	2	15	15	577	231	109	85	19	19	2	2
Suk	4	4	5	5	3	3	210	136	178	122	7	7	5	5
Kash	2	2	2	2	8	8	409	199	81	67	10	10	2	2
Total	22	22	19	19	37	37	1895	1002	693	528	59	59	19	19

Table 2:*H.S.C (College)*

District	Colleges				Teachers				HOI			
	Boys		Girls		M		F		M		F	
	P	S	P	S	P	S	P	S	P	S	P	S
Badn	2	2	2	2	65	56	48	43	2	2	2	2
Jams	2	2	2	2	61	52	32	30	2	2	2	2
Dadu	4	4	2	2	113	88	35	33	4	4	2	2
Khp	9	9	5	5	277	162	136	101	9	9	5	5
Suk	7	7	2	2	230	144	95	77	7	7	2	2
Kash	1	1	-	-	15	15	3	3	1	1	-	-

Total	25	13	13	13	761	752	349	287	25	25	13	13

DATA ANALYSIS AND RESULTS

Evaluate the existing Higher Secondary School Curriculum in terms of disaster management topics.

Table 3: ***Subject matter in terms of DM fit for target students' needs.***

SA	A	U	D	SD	Total	X^2
Teachers						
417	309	92	802	949	2569	976.424
16.2%	12%	3.6%	31.2%	36.9%		
H.O.I						
15	9	12	35	45	116	43.483
12.9%	7.8%	10.3%	30.2%	38.8%		

In this table of Teachers at the HSC level, the $\chi 2$ is 976.424, more than the critical value of 9.488 at a level of significant 0.05 and it is positioned on the rejection side. Therefore, the null hypothesis is rejected whereas the higher response regarding the item is 68.1%. This identifies that the respondents have no satisfaction with the subject matter.

HOI at the HSC level, the $\chi 2$ is 43.483 which is more than the critical value of 9.488 at a level of significant 0.05 and it is positioned on the rejection side. Therefore, the null hypothesis is rejected whereas the higher response regarding the item is 69%. This identifies that the respondents have no satisfaction with the subject matter. The previous study by Susan (2010) and Philip (2016) advocated on the same matter.

Table 4: ***The subject matter in terms of Disaster Management in the curriculum is reliable and valid according to social conditions.***

SA	A	U	D	SD	Total	X^2
Teachers						
374	324	90	813	968	2569	1033.462
14.6%	12.6%	3.5%	31.6%	37.7%		
H.O.I						
16	8	11	32	49	116	50.638
13.8%	6.9%	9.5%	27.6%	42.2%		

In this table of Teachers at the HSC level, the 2 is 1033.462 which is more than the critical value of 9.488 at a level of significant 0.05 and that is positioned on the rejection side. Therefore, the null hypothesis is rejected whereas the higher response in terms of the item is 69.3%. This identifies that the respondents have no satisfaction regarding subject matter regarding reliability and validity in connection with disaster

management.

HOI at the HSC level, the 2 is 50.638 which is more than the critical value of 9.488 at a level of significant 0.05 and that is positioned on the rejection side. Therefore, the null hypothesis is rejected whereas the higher responses in terms of the item is 69.8%. This identifies that the respondents have no satisfaction with the above theme. The previous study by naeyc&naecs/sde (2009) advocated on the same matter.

Table 5: ***Satisfaction of subject matter in terms of DM of curriculum***

SA	A	U	D	SD	Total	X^2
Teachers						
460	349	94	765	901	2569	816.097
17.9%	13.6%	3.7%	29.8%	35.1%		
H.O.I						
12	7	3	41	53	116	86.241
10.3%	6%	2.6%	35.3%	45.7%		

In this table of Teachers at the HSC level, the 2 is 816.097 which is more than the critical value of 9.488 at a level of significant 0.05 and that is positioned on the rejection side. Therefore, the null hypothesis is rejected whereas the higher responses in terms of the item is 64.9%. This identifies that the respondents have no satisfaction with the with the above theme.

HOI at the HSC level, the 2 is 86.241 which is more than the critical value of 9.488 at a level of significant 0.05 and that is positioned on the rejection side. Therefore, the null hypothesis is rejected whereas the higher response in terms of the item is 81%. This identifies that the respondents have no satisfaction with the above theme.

Table 6: ***Subject matter in terms of Disaster Management suitable and enough according to goals.***

SA	A	U	D	SD	Total	X^2
Teachers						
454	354	102	758	901	2569	794.568
17.7%	13.8%	4%	29.5%	35.1%		
H.O.I						
13	9	11	37	46	116	50.207
11.2%	7.8%	9.5%	31.9%	39.7%		

In this table of Teachers at HSC level, the 2 is 794.568 which is more than the critical value 9.488 at a level of significant 0.05 and that is positioned on the rejection side. Therefore, the null hypothesis is rejected whereas the higher responses in terms of the item is 64.6%. This identifies that the respondents have no satisfaction with the above theme.

HOI at the HSC level, the 2 is 50.207 which is more than the critical value of 9.488 at a level of significant 0.05 and that is positioned on the rejection side. Therefore, the null hypothesis is rejected whereas the higher response in terms of the item is 71.6%. This identifies that the respondents have no satisfaction with the above theme. The previous study by Tommy and Teressa (2015) advocated on the same matter.

Table 7: ***Availability of resources for a variety of teaching and learning styles in terms of Disaster Management***.

SA	A	U	D	SD	Total	X^2
Teachers						
458	333	107	798	873	2569	800.083
17.8%	13%	4.2%	31.1%	34%		
H.O.I						
19	10	2	37	48	116	62.362
16.4%	8.6%	1.7%	31.9%	41.4%		

In this table of Teachers at the HSC level, the 2 is 1057.456 which is more than the critical value of 9.488 at a level of significant 0.05 and that is positioned on the rejection side. Therefore, the null hypothesis is rejected whereas the higher responses in terms of the item is 65.1%. This identifies that the respondents have no satisfaction with the above theme.

HOI at the HSC level, the 2 is 62.362 which is more than the critical value of 9.488 at a level of significant 0.05 and that is positioned on the rejection side. Therefore, the null hypothesis is rejected whereas the higher responses in terms of the item is 73.3%. This identifies that the respondents have no satisfaction with the above theme. The previous study by UNICEF (2000) advocated on the same matter.

Table 8: ***Got any specific training for DME from experts in the field.***

SA	A	U	D	SD	Total	X^2
Teachers						
406	315	111	804	933	2569	921.243
15.8%	12.3%	4.3%	31.3%	36.3%		
H.O.I						
14	11	20	31	40	116	25.293
12.1%	9.5%	17.2%	26.7%	34.5%		

In this table of Teachers at the HSC level, the 2 is 921.243 which is more than the critical value of 9.488 at a level of significant 0.05 and that is positioned on the rejection side. Therefore, the null hypothesis is rejected whereas the higher response in terms of the item is 67.6%. This identifies that the respondents have not received any training.

HOI at the HSC level, the 2 is 25.293 which is more than the critical value 9.488 at a level of significant 0.05 and that is positioned on the rejection side. Therefore, the null hypothesis is rejected whereas the higher responses in terms of the item is 61.2%. This identifies that the respondents have not received any training. The previous study by Avianto et al. (2017) advocated on the same matter.

Table 9: ***All Subjects cover the DM matter.***

SA	A	U	D	SD	Total	X^2
Teachers						
412	285	104	855	913	2569	985.650
16%	11.1%	4%	33.3%	35.5%		
H.O.I						
23	12	30	36	15	116	17.362
19.8%	10.3%	25.9%	31%	12.9%		

In this table of Teachers at the HSC level, the 2 is 985.650 which is more than the critical value of 9.488 at a level of significant 0.05 and that is positioned on the rejection side. Therefore, the null hypothesis is rejected whereas the higher responses in terms of the item is 68.8%. This identifies that the respondents have no satisfaction with the above theme. HOI at the HSC level, the 2 is 17.362 which is more than the critical value of 9.488 at a level of significant 0.05 and that is positioned on the rejection side. Therefore, the null hypothesis is rejected whereas the higher responses in terms of the item is 43%. T This identifies that the respondents have no satisfaction with the above theme.

Table 10: ***Efforts are taken for DME education on a priority basis.***

SA	A	U	D	SD	Total	X^2
Teachers						
361	576	180	658	794	2569	463.108
14.1%	22.4%	7%	25.6%	30.9%		
H.O.I						
16	10	11	29	50	116	48.569
13.8%	8.6%	9.5%	25%	43.1%		

In this table of Teachers at the HSC level, the 2 is 463.108 which is more than the critical value of 9.488 at a level of significant 0.05 and that is positioned on the rejection side. Therefore, the null hypothesis is rejected whereas the higher responses in terms of the item is 56.5%. This identifies that the respondents have no satisfaction with the above theme. HOI at the HSC level, the 2 is 48.569 which is more than the critical value of 9.488 at a level of significant 0.05 and that is positioned on the rejection side. Therefore, the null hypothesis is rejected whereas the higher responses in terms of the item is 68.1%. This identifies that the respondents have no satisfaction with the above theme.

The findings revealed that the disaster management curriculum is needed and the objectives do not achieve through the contemporary subject matter in textbooks and also in the curriculum. It may not be depended on the content in the textbooks and in the curriculum both at the provincial and local level according to the disaster conditions. Findings further show that neither the budget nor the specific resources for the curriculum implementation. According to the findings, the teaching methodologies are not flexible for the delivery knowledge regarding the achievements of targets. It is found that the subject matter in connection with phases of disaster management is not satisfactory. It is revealed that the subject matter is not covered in all subjects in the context of disaster management. It is found from the results that no strategies are specified for skills enhancement both in the textbooks and the existing curriculum.

DISCUSSION

The Sindh Province is vulnerable according to various types of natural disasters such as floods and heavy rain, cyclones, droughts and earthquake. The objective of this study was to evaluate the losses due to natural disasters, HSC level curriculum in connection with the disaster management content, assesses the school administration and students' knowledge and according to the risks of disasters the need for curriculum. This study is based on the quantitative method consisting of the closed-ended questionnaire at the HSC level for all subjects. The pilot study was carried out and the Cronbach's Alpha for reliability and validity. The data was analysed through the SPSS and there has been used chi square statistical test. The findings show that there is a need for a curriculum in the context of disaster management and it cannot rely on the existing content of the contemporary curriculum, no financial and material resources are available for the implementation of existing curriculum for such type of education, conventional methods are used for the delivery of knowledge, the subject matter in textbooks and curriculum is not suitable according to the class and age-wise and it does not cover in all subjects and can be all subjects can be beneficial. The difficulty was faced for the curriculum implementation and in this context no any training given to the school heads and teachers.

RECOMMENDATIONS

Formulate the dimensions for the class and age in connection with the disaster management. There must be integration of the themes in the whole curriculum for disaster management, and develop a supportive and applicable environment regarding disaster management learning. Organizing the activities by the experts of disaster management in the class or outside of the class every year as per the nature of the topic and by the appropriate teaching method and formulating the particular plan for the development of curriculum and implementation according to the problems faced during disasters with the involvement of parents, teachers and students and people

from the society. There must be flexibility within the curriculum for the process of learning smoothly in such types of education as the availability of resources and budget. There should be avoided in the curriculum from the repeating of the same content at various level and it must be applicable. The evaluation of curriculum must be carried out according to the pedagogical aspect, budget, available resources and time.

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