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## Research on situation of environmental education for primary students in rural areas of Hau Giang province

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### ABSTRACT

The research was carried out from May 2016 to June 2017 to study the situation of education activities on environment in primary schools. The research focuses on education managers, teachers and students' parents. Results showed that most of teachers and students' parents agree that environmental education activities for primary students have positive impacts on raising students' awareness on environment and environmental protection. Besides, these activities receive huge support from schools' directorate including providing related teaching materials, budget and delegating teachers to join these activities. However, one of the major issues is that there is not enough budget invested in the two most popular activities which are adding environmental topics in science subjects and organizing extra-curricular activities. To enhance the activities' quality, based on the results, some suggestions were proposed such as enhancing the engagement of education government bodies, investing more budget for the activities.

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## 1 INTRODUCTION

Environmental education activities will help raise public awareness on the diversity and complexity of the nature environment as well as show how human daily activities affect the environment, then learners will know how to act more environmental friendly. Thus, the purposes of these training activities are to provide the community skills and knowledge to more effectively protect the environment. According to Le Van Khoa *et al.* (2009), the most effective way to do environmental education is to provide the training in certain organizations or areas and guide them towards environmental protection activities.

Environmental education activities were defined in Environment Protection Law (National Assembly of Vietnam, 1993, 2005, 2014) and Decision No 1363/QĐ-TTg (Government of Vietnam, 2001) to approve the project "Adding environmental topics into the national education system". In compliance with the direction from the Vietnamese Communist Party and Government, in 2005, Vietnamese Ministry of Education and Training issued Directive No 02/2005/CT-BGD&ĐT "Enhancing environmental education activities". According to the Directive, the main focus of primary and secondary education is to equip students with adequate knowledge and skills about environment and environmental protection through subjects and

curricular-extra activities. Therefore, with Decision No 1363/QĐ-TTg in 2001 by Vietnamese Prime Minister, it has been 16 years since the whole education system officially focused on environmental education. However, in fact, environmental education has been taught all over the country for a long time with different activities. Two of the most popular activities are adding in environmental topics to subjects and organizing extra-curricular activities.

In Hau Giang province, a rural province in remote areas of the Mekong Delta, 100% of communes have their own primary schools with the number of 253 schools, 69,375 students and 3,664 teachers (General Statistic Office, 2016). Hau Giang province locates in the lower of Hau river and stretches in a wide area with interlaced rivers; therefore, most of the primary schools are separated in remote rural areas. This has both advantages and disadvantages for education and training in general and environmental training in particular.

With the facts mentioned above, the research was conducted to understand issues such as opinions of teachers and parents about the necessity and importance of environmental education, the necessity and importance of environmental education, age factor in environment education and budget for environmental education activities. Then based on research results, solutions were proposed in order to enhance the effectiveness of environmental education for primary students in rural areas of Hau Giang province.

## 2 RESEARCH METHOD

### 2.1 Data collection method

Secondary data were collected from books, textbooks, journals of science, and references from related research papers.

Primary data were collected from structured questionnaires, interviews of 50 environment teachers and directorates of primary schools in research areas.

Besides, in the research, interviews with 30 parents were conducted for their opinions on these environmental training activities in primary schools. A band score (from 0 to 10) was used to identify the importance of factors in each aspect.

Primary schools selected for this study are based on two criteria were: location – schools are in the research areas and schools which organize environmental education (with two methods mentioned in the research). Then the schools to participate in the research were chosen randomly

from the list provided by the Districts' Department of Education and Training (the three Districts in the researched areas) Random selection method was used to select parents to join the research. The only criterion was their children must be students of schools in researched areas. It was a priority that they are parents of children at different grades ranging from grade 1 to 5.

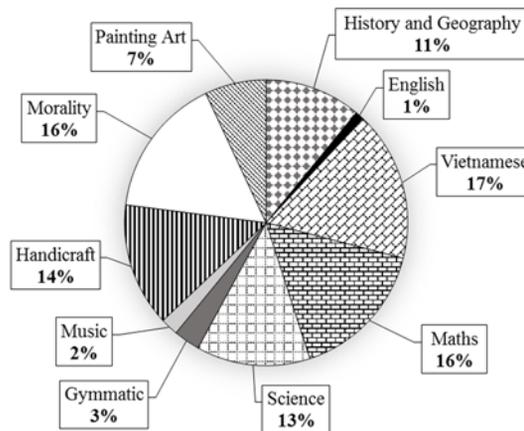
### 2.2 Data analysis method

The data were analyzed by Excel and SPSS software. Also, descriptive statistics was used to have an overview about the situation of the contents, opinions from teachers, schools' directorates, and parents of the environmental training activities.

## 3 RESULTS AND DISCUSSION

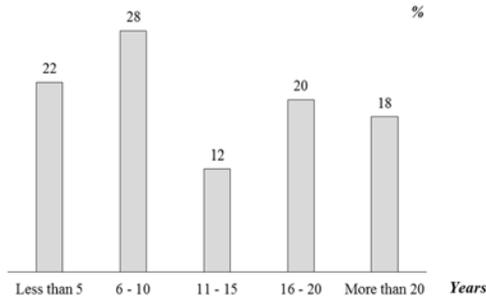
### 3.1 Research sample features

Joining the research were 50 teachers from 10 primary schools in rural areas of three districts in Hau Giang province with diverse background and majors (Fig. 1). This helps ensure the objectiveness and accuracy of the reasearch.



**Fig. 1: Teachers with different subjects by ratio**

For teachers joined the research, their positions and titles are different. This factor helps ensure the diversity and generalization then make the research results more reliable and applicable in reality. In the research, among 50 teachers, 36% of them are non-management teachers, 26% of them are heads of grade team, 22% hold positions in school's directorate while 12% are supervisors of Children's organization, and 4% of teachers are presidents of school's labor union. Apart from teachers' academic background, their years of teaching environmental topics also have certain impacts on the accuracy of the research. Results are shown in Fig. 2.



**Fig. 2: The number of years of teaching environment education**

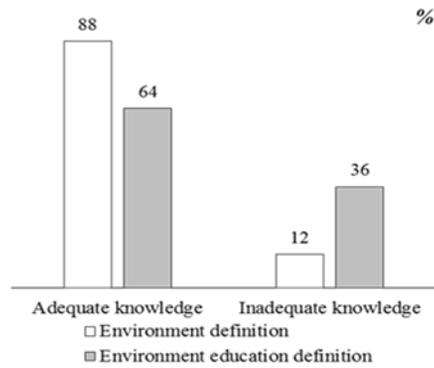
The diversification in the years of teaching environmental topics of teachers is one of the factors that contribute to the objectiveness and accuracy of the research. The reason is that only during years of teaching and managing environmental training activities, teachers can understand about the difficulties and limitations of these activities. Then, their situation analysis and opinions as well as proposed solutions will be more precise and applicable in reality. In the research, teachers were grouped in to five different groups based on the factor of years of teaching environmental training activities. In which, group of teachers who have from 6 to 10 years experience made up the biggest part (Fig. 2)

**3.2 Knowledge of primary teachers on environmental education**

In the research, different definitions of environment and environmental education were given out in order to identify teachers’ understanding about these terms while participating in the research. The survey was in the form of multiple choice questions with 4 options each question. In which, there were 4 different definitions of environment and environmental education for teachers to choose from. The definitions are not quite different and among options for teachers to choose and there is no option that is opposite to others. Based on teachers’ answers, teachers’ understanding about these terms and the researched issues can be identified. Results are shown in Fig. 3.

According to Fig. 3, the ratio of teachers who have accurate understanding about these terms is much higher than other groups. In the research, the discussion method was also used. The results show that despite having accurate understanding, most of the teachers still face difficulties in organizing the activities and in finding ways to teach environmental topics effectively. One of teachers’ feedbacks is that because there is no specific content and also lack of a method for appraisal, they have no

motivations in organizing these environmental education activities.

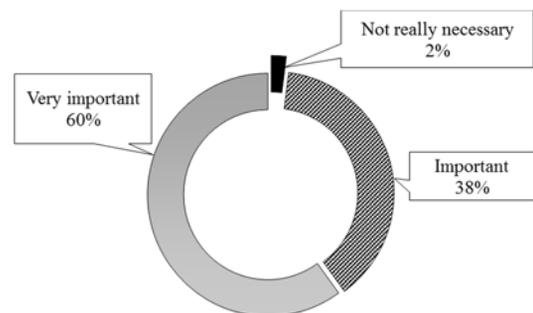


**Fig. 3: Teachers’ knowledge about environment and environmental education**

**3.3 Opinions of teachers and parents about the necessity and importance of environmental education**

*3.3.1 Opinions of teachers about the importance of environmental education*

According to Vo Trung Minh (2015), in order to analyze the need of adding environmental topics in Science subjects, there are four options including very necessary, necessary, not important (this means there’s no difference between with or without the activities), and not necessary. Therefore, in the research, the authors also offered four options to analyze the importance of environmental education activities, which are (1) not necessary, (2) not really necessary, (3) important and (4) very important. About this aspect, teachers were explained clearly about the difference between *not necessary* (environmental education for primary schools is not effective and should not be carried out) and *not really necessary* (teachers who chose this option are not quite sure about the necessity and effectiveness of the environmental education activities)



**Fig. 4: Different levels of the importance of the environmental education**

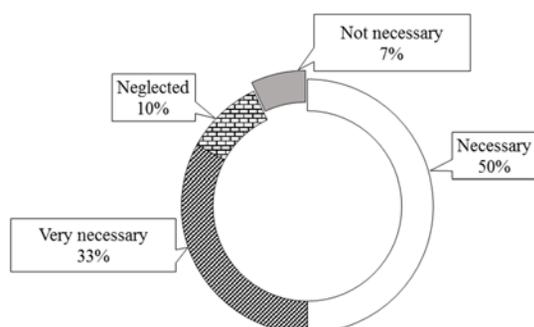
These activities should be executed, but they still question about the effectiveness. About the options

important and very important, the teachers express their opinions about the necessity of environmental education activities at primary schools. Very important option requires teachers to find different methods to improve the effectiveness of these activities.

According to Fig. 4, the number of teachers who agreed that environmental education for primary students is very important made up the highest part. None of them think that environmental education is not necessary. The result also shows that, according to the teachers, the knowledge taught during environmental training activities for primary students is essential as it helps raise students' awareness on the importance of environmental protection, and environment can be protected in daily activities.

### 3.3.2 Opinions of parents about the importance of environmental education

Thirty students' parents were chosen randomly to participate in the surveys on the importance of environmental education for primary students. There are four options including (1) not necessary, (2) neglected, (3) necessary, (4) very necessary. Option "not necessary" is chosen when parents suppose that it is not necessary to do environmental education for primary schools as the activities produce no effectiveness, whereas "neglected" chosen by parents who are not sure about the effectiveness or even have no idea about the education, then it is not a big different between these activities to be organized or not. The common thing between "necessary" and "very necessary" is that the parents who choose these options agree that the environmental education activities should be organized at schools, and for parents who are willing to take part in these environmental education activities, "very necessary" option is chosen.



**Fig. 5: Opinions of parents about the importance of environmental education**

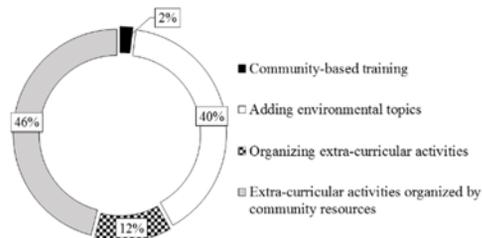
Among parents who join the research, most of them live in the remote rural areas, and work in the agricultural field. As the result, their awareness on envi-

ronmental education for their children remains limited. During discussions, parents also suggest that the schools are responsible for the contents and how to organize these activities while they have no role and have no idea about this. In the research, the researchers also study about the probability of parents to change their bad habits that have negative impacts on the environment. In this aspect, it was found out that there are gaps between the knowledge that students learn at schools and the practice in their families' daily life. Following are some difference between theory and practice. Firstly, about waste management students are taught to throw wastes in the right place, whereas their parents still keep their old habits of throwing family wastes to nearby rivers. Secondly, about animal protection, at schools, teachers keep telling students that dogs are people's friends, they help us to look for the house; however, there are many families in rural areas still think dogs as a type of food. Even in many worse cases, they kill dogs and cook dog's meat at home in front of their children. Obviously, family plays an important part in the failure or success of education for children. Based on the mentioned aspects, the researchers also study the probability of parents to change bad habits in order to match with the environmental education activities that their children join. The researchers also study about the probability of parents to change their habits to match with the contents taught during environmental education activities for students. The results show that 33% of them are much likely to change and 43% of them will be definitely to change. These ratios are much higher as compared to 17% of parents who chose "not really" and 7% chose "no" option to the same question.

### 3.4 Opinions of teachers and parents about the necessity and importance of environmental education

According to Le Van Khoa *et al.* (2009), for environmental education activities, these following methods have been applied in order to draw students' attention to the activities: (1) Observation, survey, field trip; (2) Learning via real experiment; (3) Teaching based on actual experience; (4) outdoor activities cum soft skills training; and (5) Teaching via good examples one. Based on the results of the interviews with officers of Education and Training Department in the research areas about the experience in organizing environmental education activities for primary students, four methods applied in environmental education are studied, analyzed in the research are (1) adding environmental topics; (2) organizing extra-curricular activities; (3) extra-curricular activities organized by community

resources; (4) community-based training. Overall, these methods are divided into two groups consisting of activities, in which, schools are responsible to organize (adding environmental topics, organizing extra-curricular activities) and activities that have the participants of the communities at different levels (co-hosting – organizing extra-curricular activities, taking the main responsibility – community-based training). In the research, the two new methods introduced to teachers have engagement from communities, of which the method of “Extra-curricular activities organized by community resources” with support from the communities means that universities, colleges in the areas join hands with primary schools to organize these environmental education activities. This means that students from universities, colleges in the areas together with primary schools use resources from their organizations such as human resource, finance, equipment, teaching documents to organize extra-curricular activities to teach about environmental protection. About community-based training, these activities will be organized by local people, and they include propaganda programs via public communication tools (the commune out-door speakers), mass media (local television channels), public events that can be organized at different venues such as local’s Cultural House, Sport center, People Committee’s hall.



**Fig. 6: Effective methods of environmental education**

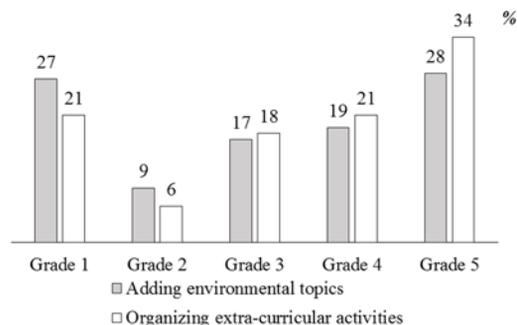
After being introduced most popular methods applied as well as new methods that are mentioned in the research, teachers have adequate knowledge about all the methods then 46% among them choose “Extra-curricular activities organized by community resources” as the most effective one.

In addition, 40% of teachers think that “Adding environmental topics” is an effective way to do environmental education. According to Vo Trung Minh (2014), environmental education based on the reality of teaching science subjects for grades 4, 5 students has shown good and specific impacts on enriching knowledge, changing attitudes, and also the more frequent activities towards environmental protection by students. These activities can be applied

nationwide and cannot be affected by students’ personal related factors. The principle of this method is that there will not be much change in the core contents of the subject so that it will not become an environment subject. Therefore, when choosing this method, there should be selected contents to engage students in more the activities as well as give them chances to gain experience via reaching to the environment. The two other methods, which are extra-curricular activities organized by community resources and community-based training, are least chosen by teachers (accounted for 12% and 2% respectively).

**3.5 Age factor in environment education**

According to Le Van Khoa *et al.* (2009), environmental education is suitable for all grades in the national education system. However, as doing research on the current situation of environmental education in primary schools in rural areas of Hau Giang province, the research targets at finding out more about the most suitable age to learn about environmental topics. How do ages of students affect the effectiveness of the two most applied methods in environmental education? Results are shown in Fig. 7.



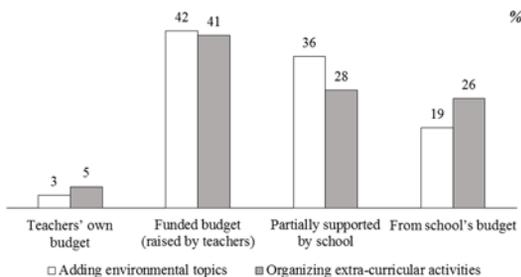
**Fig. 7: The relation between age and the effectiveness of environmental education activities**

The results show that by their own experience through years of teaching, teachers suggest that grade 5 students are most suitable for environmental education by organizing after class activities and adding in environmental topics to subjects, accounted for 34% and 28% respectively. At this age, students can acquire the knowledge about environment and environmental protection; therefore, this is the best age for these activities. Also, according to teachers, it is effective to organize environmental education for grade 1 students, who change from kindergarten to primary schools. Although it is not easy at this age, teachers can help students develop five groups of important skills including self-aware skills, communication and behavior skills, making decision and problem - solving skills, teamwork and

sharing skills, self-service and time management skills. Therefore, while helping students build up these skills, teachers can add to the knowledge about the surrounding environment, body care, environmental protection, and food hygiene. For these reasons, 27% of teachers suggest that the method of adding to environmental education content to subjects is suitable to grade 1 students. Twenty-one percent of teachers think that organizing after class activities is suitable to grade 1 students, so as for grade 4 ones. Also, according to teachers, it is least effective to teach environmental education for grade 2 students. Because grade 2 is the crunch year for students to learn new knowledge and skills such as speaking and reading (*quick, correct and fluent speaking and reading*), hand writing (*hand writing practice*), mathematics (*numbers, geometry, mathematical problem-solving, addition, subtraction and measurements*) ect. Therefore, there is not enough time for environmental education activities.

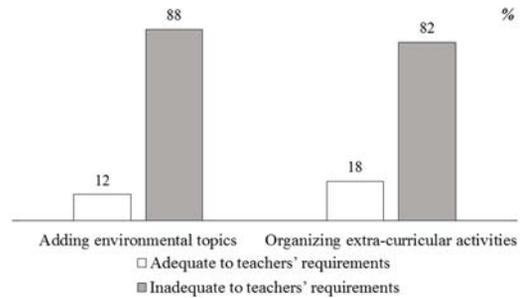
**3.6 Budget for environmental education activities**

As mentioned earlier, the two most used methods are adding in environmental topics to subjects and organizing after-class activities. For both methods, budget divided to organize the training is also important to the effectiveness of the training. For the method of adding in environmental topics, budget is needed for teaching tools such as models, illustration pictures and so on. After-class activities, namely labor day, small music shows, competition, field trip and so on require a specific amount of budget as well. There is an issue here: where does the budget for these activities come from? In order to understand the difficulty caused by limited budget, two options were given to teachers about the budget for environmental education: (1) adequate to teachers' requirements, (2) inadequate to teachers' requirements.



**Fig. 8: Budget sources for environmental education activities**

According to the results shown in Fig. 8, for both methods, budget funded by other sources raised by teachers makes up the big parts, which are 41% for after class activities and 42% for added in contents method. Overall, schools do invest money in activities for environmental education both partially and totally. However, the ratio of schools that invest the whole costs for these training remains low, accounted for 19% of the method of adding in environmental topics and 26% of organizing after-class activity method. Besides, in order to improve the effectiveness of these training, teachers still have to spend their own money on buying tools for study.



**Fig. 9: The adequateness of budget for environmental education**

Fig. 9 shows that funded budgets for environmental education activities studied within the scope of the research are limited, failing to meet the needs for these education activities (accounted for 88% for added in contents method and 82% for after-class activities method). Only a small number of teachers think that the current funded budgets are enough for these training (accounted for 12% for added in contents method and 18% for after class activities method)

**3.7 Solutions to enhance the effectiveness of environmental education for primary students**

The solutions were also proposed from the parents' opinions in order to enhance the effectiveness of environmental education in general in primary school in the researched areas. From their experience gained in years of teaching, teachers understand about the advantages and disadvantages then give their opinions for each proposed solution in the research. The solutions proposed after interviews with experts and officers of Education and Training Department. Then, teachers will give score from 0 to 10 for each solution. Higher scores are given to the more effective the solutions.

**Table 1: Solutions to enhance the effectiveness of environmental education for primary students in rural areas of Hau Giang province**

No.	Solutions	Average score
1	Enhance the role of education management bodies	9.0
2	Standardise and diversify the contents and curriculum	8.5
3	Enhance teachers' capability	8.3
4	Engage families and the whole society more on the activities	8.0
5	Equip with teaching tools, materials	7.2

According to Table 1, in order to enhance the effectiveness of environmental education for primary students in rural areas of Hau Giang province, a combination of five solutions should be carried out.

First, the most important factor is the role of education management bodies. In general, education is a long-term activity requiring much effort from both school heads and teachers. Especially, the school's directorate should be aware of their responsibilities in environmental protection, as well as the need to educate students, to organize interesting activities for students, to enjoy and, at the same time, learn new knowledge about environmental protection. Then, actions that Education and Training Departments and schools' directorate should do include (1) focus more on propaganda and communication programs to raise awareness of teachers and students on the Party and Government's policies and directions on activities for environmental protection, and actively join the campaign "Building a friendly school with good students", as well as keeping the schools clean and clear; (2) make environmental education activities becoming one of the priorities of the academic year; (3) complete the documents and materials for environmental education activities, publicly share these documents to more teachers and students; (4) work hand in hand with the Ho Chi Minh Communist Youth Union and Pioneers' Organization to organize interesting activities to enhance the effectiveness of extra activities for environmental education, improve the impacts of propaganda activities by "Young bamboo" team, widely use songs for environment education, encourage students to join competitions to raise awareness of environmental protection like drawing competition, essay writing competition, photo contest and so on; (5) organize more activities to help improve soft skills for students, build up good habits and skills related to the environment; (6) organize trainings for teachers about new knowledge and skills about environment so that teachers can know how to add to environmental topics in line with the real situation; (7) regularly check and supervise these environmental education activities as this is one of compulsory activities for teachers. Also, in case of poor performance in environmental education activities or neglect of

organizing these events, there should be timely solutions to prevent these from happening. Good examples need to be promoted publicly, so as initiatives, solutions for more effective environmental education.

Secondly, teaching contents and documents have to be standardized and diversified. As mentioned above, teaching and reference documents are important to teachers. With these documents, teachers can study by themselves to enrich their knowledge so that the effectiveness of these training activities for students can be improved.

Thirdly, capability of teachers has to be enhanced through trainings, experience sharings organized within the schools or jointly organized with other schools in the area. Besides, schools should create favourable conditions for teachers to do self-study to improve their capabilities.

Fourthly, family and the whole society to be engaged in these activities. This is one of the challenges to environmental education in the schools in researched rural areas. As mentioned earlier, in the rural areas of Hau Giang province, the majority of families work in agricultural field for their main income. However, due to the majority of land is acid sulphate soils then productivity is not high, as the result, income is low and unstable. Therefore, the contribution from families and society including manpower and budget to support schools organizing these activities is not adequate.

Fifthly, as for equipping more tools and providing more materials for environmental education activities, as mentioned, these tools and materials will help students learn quicker in longer time and also help develop their personality. For teaching and learning, tools and materials are indeed important in drawing more attention of students in studying or providing practice facts so that students can easily remember theory, enriching their knowledge, systemizing knowledge and so on. Students can also easily apply the knowledge in their daily life at their communities. Therefore, it is important to improve and standardise equipment and tools such as system of projector for screening, system of speakers, models, learning tools and playing ground.

#### 4 CONCLUSIONS

The majority of teachers agree that environmental training activities for primary students are needed and important. Also parents highly appreciate these environmental education activities for their children of schools.

Two most applied methods in primary schools are adding in environmental topics and organizing extra-curricular activities.

According to teachers, environmental education activities for grade 5 students are the most effective. Schools should fund some of the budget for these activities through organizing competitions like drawing competition, knowledge competition.

However, most of the teachers informed that budgets are limited, inadequate for effective education. Research results show that there should be a combination of solutions including enhancing the role of education management bodies, standardizing and diversifying the teaching contents, enhancing teachers' capability when teaching environmental topics at primary schools.

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