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## Bringing e-books into the Classroom: Are We Ready?

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### ABSTRACT

The implementation of e-books is normalcy as it not only sustains the environment but brings new paradigm to the learning style. This paper aims to gauge the use of e-books in primary schools in the state of Terengganu, Malaysia. A series of survey was conducted among 73 teachers from 14 schools, 101 primary five pupils from 30 schools and 36 parents from 6 districts. The findings revealed that teachers, pupils and parents showed positive feedback, perception and reception towards the use of e-books as text books. A framework and strategies when using e-books as textbooks in the classroom are recommended which enable the use of e-books evocative among pupils and teachers.

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## INTRODUCTION

The usage of e-books in education is not new in today's world. It has been used since the early 1990's when the advanced in IT began to allow practical and cost-effective production, storage and dispersion of electronic texts. School institutions all over the world have progressively adopted e-books as online education, and later making electronic gadgets embedded in most of the classroom activities. In response to these variations in enrolment needs: educators, institutions and organizations have been working on tactical plans to implement e-books education to maximize the teaching and learning process in classrooms.

In accordance to that, there are mixed perceptions towards the usage of e-books. It was introduced in several schools in Malaysia due to the positive feedbacks received from educators in US and those who have experienced in implementing e-books in the classroom. (Sun, J., Flores, J. and Tanguma, J., 2012) College students who have been using e-books as their textbooks agreed that e-books facilitates them in becoming more engaged and enhances their learning experience. This positive outcome created a whole new perspective towards the gadget by parents who sent their children to school. Nevertheless, researches on parents' perceptions towards e-books are severely lacking.

Despite all these, misconceptions and beliefs associated with the difficulty of using e-books in the classroom, still exist by reasons of limitations of power and storage, insufficient supply, lack of training by teachers, and less pleasure in reading. Comparatively, these misunderstandings grow as higher education has started to consider a bunch of e-learning technologies such as simulations, podcasting and wikis seem to come out every week.

This kind of technology challenges instructors and administrators at a time of continued budget retrenchments and rethinking. (Malaysian Development Plan, September 2012) The Ministry of Higher Education in Malaysia is examining its impacts in education which requires improvements in existing measurement set such as the Smart School Qualification Standard (SQSS), consistent with the existing international standards. (R. Detweiler, 2004) Effectively, the question occurs as to where e-book learning is going. Driving online education demands an awareness of the present state and the future path of online learning and teaching.

### 2. Literature Review:

E-books as a form of online education is starting to become a crucial long-term approach for many post-secondary institutions. Because of the fast development of online education and its significance for post-secondary institutions, it is essential that institutions of higher education provide high quality e-books. Several research reports have covered successful pedagogical techniques for e-books resources. Partlow and Gibbs, for

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instance, discovered from a Delphi research of professionals in instructional technology and constructivism that online programs developed from constructivist principles should be appropriate, interactive, project-based, and collaborative, while providing students with many options or control over their learning (K. M. Partlow and W. J. Gibbs, 2003).

Furthermore, Keeton examined effective online e-books instructional practices based on a structure of effective teaching practices in face-to-face instruction in higher education. In this study, Keeton interviewed faculty in postsecondary institutions, who ranked the effectiveness of online instructional methods (M. T. Keeton, 2004). These instructors gave higher rankings to online instructional techniques that create an environment that supports and promotes inquiry, broaden the learner's experience of the subject matter, and elicit active and significant expression by learners on their growing experience base. (C.J. Bonk, 2001) In one more study of pedagogical practices, Bonk found out that only 23-45 percent of online instructors surveyed actually used online activities related to crucial and innovative thinking, hands on performances, interactive labs, data evaluation, and scientific simulations, although 40 per cent of the participants mentioned those activities were highly vital in online learning environments. (K.-J. Kim, C. J. Bonk, and T. Zeng, 2005) In effect, a substantial gap divided preferred and real online instructional practices. Technology has played and continued to play a huge role in the improvement and growth of online education. Accordingly, several universities have reported an increase in the use of online resources. In the past decade, numerous initiatives had sought to incorporate growing internet technologies into the teaching and learning approach in higher education.

Several researches also reported cases related to the use of websites to enhance student's effort and representation. Some experts additionally have publicized the plausibility of using wikis for online student collaboration and podcasting is starting to garner interest from educators for its instructional use (S. Sloan, 2005). Although some discussions in the literature relate to efficient practices in the use of emerging technologies for online education, scientific facts to support or oppose the effectiveness of such technologies, or, probably more essentially, guidance on how to use such resources successfully based on scientific evidence, is still lacking.

This paper will discuss the usage of e-books in the classroom from the eyes of teachers, students and parents based on its existence in the state of Terengganu, Malaysia.

It is hoped that the paper will achieve the following research questions:

- How are the e-books being used in the classroom?
- What are the students' perceptions and receptions of using e-books as the textbooks?
- What are the general perceptions of teachers on the use of e-books?
- What are the parents' feedback on the use of e-books in the classroom?

By examining these research questions, the following two quantum of studies are further enhanced for developing an effective future use of e-books in the classroom :-

(i) Determining the strategies for the implementation of e-books in the classrooms

(ii) Identifying a framework as a guideline for teachers and administrators in using e-books in the classroom.

### **3. Methodology:**

In this study, a survey was conducted in three stages involving teachers, parents and students in the state of Terengganu, Malaysia

The first stage involved the primary school teachers who teach various subjects to year- five and –six pupils. There were 62 females and 10 males with the total of 72 participants randomly chosen by the school administration. The majority of the participants which is equivalent to 72% possessed more than 10 years of teaching experience while 18% had a range of 5 to 10 years teaching experience while the remaining less than 5 years. The questionnaire consisted of 25 questions which particularly addressed the usage of, emotions, lifespan and assistance towards using e-books in the classroom. The rate of response was 100% due to the stringent organisation and management of data collection conducted at the primary schools. Each teacher was given a questionnaire under the presence of researchers for every session held.

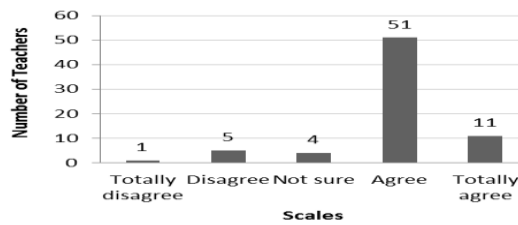
The second stage of the survey was conducted involving 30 primary schools. The population included primary 5 and 6 students and the research sample was considered convenient. The students from the schools were randomly chosen by their teachers to answer the questionnaire which consisted of 21 questions. The content of the questions was similar to that distributed to the teachers. A total of 101 forms were distributed and the rate of response was also 100%. Out of 101 participants, 45 were males while 56 were females. 89.1% were 11 years old while the rest; 10.89% were 12 years of age.

The third stage involved 36 parents from all the six districts in Terengganu. They were met randomly with the help from the schools. These parents were required to respond to a set of survey questionnaire which sought their responses and reception towards the use of e-books by their children.

## RESULT AND DISCUSSION

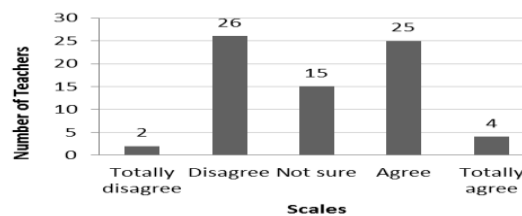
### A. What did teachers say?

The data were analysed using SPSS quantitatively and in some cases in percentile. The results are presented in the graphs below. For every graph, there are five scales at horizontal axis namely i.e. Totally disagree, Disagree, Not sure, Agree and Totally agree.



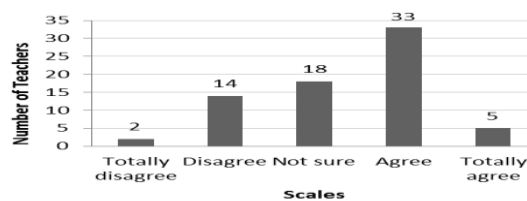
**Fig. 1:** e-books assist learning process

Most the teachers or 62 of them agreed that e-books helped the learning progress while only 6 did not agree with such statement. Four were not sure about it.



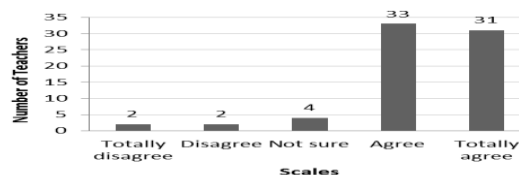
**Fig. 2:** e-books are fully used by students in class.

According to the results, the usage of the e-books was moderate. Only 29 agreed that e-books were fully utilized in the classroom while 28 did not agree about it. 15 of the teachers were not sure about it. To this group of teachers e-books had some limitations. There were cases where students used e-books for other purposes. Playing games was the most common misuse of e-books amongst the students.



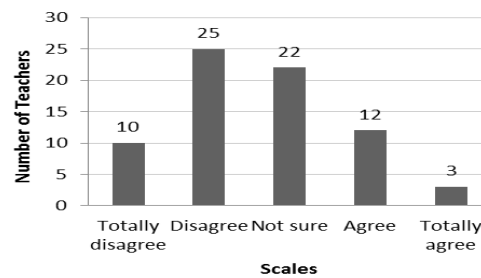
**Fig. 3:** e-books improve the students' academic performance

Thirty eight teachers agreed that e-books had helped improve the students' academic performance. Again, it shows the use of e-books helped students to do better. Somehow, 16 of the teachers did not agree that e-books helped improve the students' performances while 18 of them had no ideas pertaining the issue.



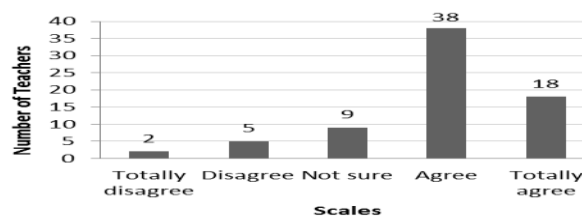
**Fig. 4:** e-books can be misused by students

A strong opinion from 64 teachers admitted that e-books could be wrongly used by the students while four students denied it. Another 4 were not sure about it.



**Fig. 5:** e-books are a waste and it should be channeled to other means of purposes.

Thirty five teachers did not believe that e-books were a waste so the money government owns should be used for other purposes. Only 15 agreed the then books were a waste and another 22 were not sure about it. From the meeting, most teachers agreed that e-books were beneficial and the government was doing the right thing allocating some amount of money for the education.



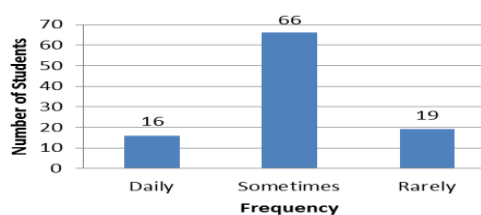
**Fig. 6:** The use of e-books should be continued in future.

A majority of or 56 of the teachers agreed that e-books should be continuously used for the next few years. However, 7 did not agree about this and 9 were not sure whether it should be used continuously in future. The price of the e-books is expected to be reduced and more e-books might be produced in a mass scale. It may contribute to the use of e-books amongst more students in future.

### **B. What did students say?:**

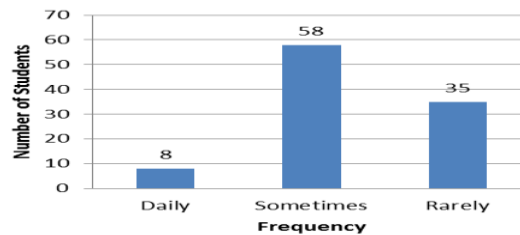
The penetration of e-books in the classroom is still in its infantile stage. Pupils within the age group of these respondents are born during the information technology surge and already in the full swing. It would not have taken them much effort to use the e-books. However, the results obtained could be interpreted as otherwise.

#### **1) Perception:**



**Fig. 7:** How often students use e-books?

Only 16 students agreed that the e-books are used on a daily basis. The result does show an upturned finding from what is expected where the majority (65) uses the e-books sometimes while 19 of them rarely utilize them. These results therefore indicate that the Malaysian students are still in the early stage of getting used to using the e-books.



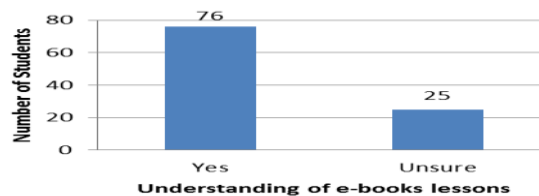
**Fig. 8:** How often their teachers use e-books?

Eight students agreed that the e-books are used daily by their teachers. A majority of 58 students said teachers use the e-books sometimes while 35 students claimed their teachers use the e-books rarely. Two reasons could have attributed to this result. One is the slow start-up time and two, when the e-books hang. When this happens, students may find it difficult to follow lessons being taught in the classroom. Here, not only is it the duty of teachers but also the administrative staff to create avenues which would encourage students to use the e-books by overcoming the limitations faced. Considerations such as IT facilities management and teachers equipped with IT should be the backbone of this migration from paper to screen .



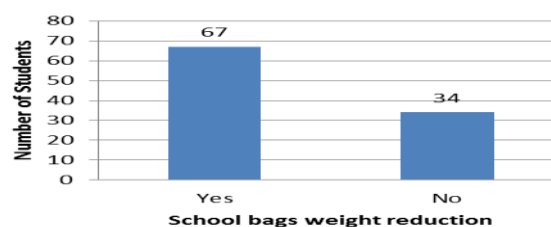
**Fig. 9:** Where e-books could be used?

When asked of their opinions on where the e-books could be used, 80 said that it can be used anywhere. Somehow, half of this figure preferred to use the books at home. This is true because through the open session both teachers and students agreed the limited power of plugs is a main constraint to access e-books in the classroom.



**Fig. 10:** Are students able to follow the lessons taught in the classroom using e-books?

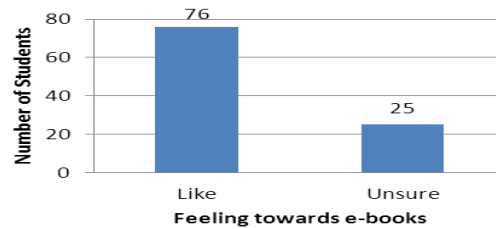
A very strong datum; 76 of the students claimed they were able to follow the lessons taught in the classroom using the e-books. The rest, 25 of the students were unsure that the e-books help them to understand the lesson. To go further, this group is not exposed to the use of internet or IT.



**Fig. 11:** Do e-books lighten the weight of school bags?

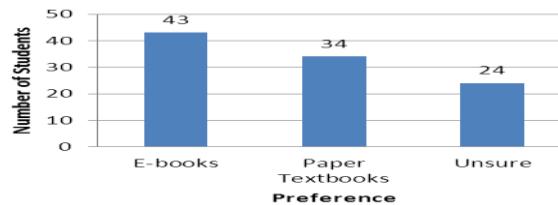
Through the 67 responses from those who agreed that the e-books lighten the weight of their school bag, the Terengganu State Government has been successful to a certain extent in their mission to lighten the schoolbags of school children.

## 2) Reception:



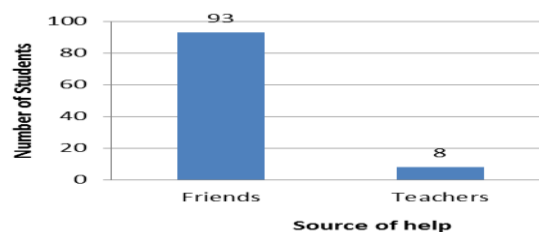
**Fig. 12:** Students like to use e-books.

An encouraging 75 of the students liked using the e-books. Meanwhile the rest was unsure how they felt about using the e-books. This could be indicative that although the e-book may help pupils to keep track of what is taught in class, they may not necessarily understand. In this respect, teachers and curriculum designers would need to consolidate materials which would fully utilize the technology available to enhance the teaching and learning experience in the classroom.



**Fig. 13:** Preference between paper textbooks and e-books.

In Fig. 13, they were asked about preference between textbook and ebook. Here, 43 students prefer using the e-books and 34 students prefer using paper textbooks.

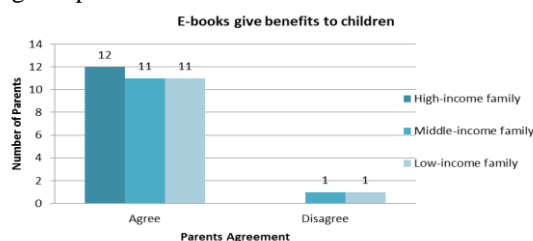


**Fig. 14:** Source of help in using e-books

Between teachers and friends, friends - 93 are asked for help if students do not know how to use the e-books, while 8 students ask for their teachers' help.

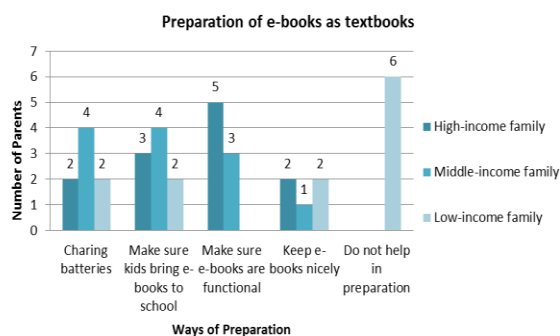
## C. What did parents say?:

This section describes findings on parental views towards the use of e-books as textbooks by their children.



**Fig. 15:** Parental agreement to e-books being beneficial

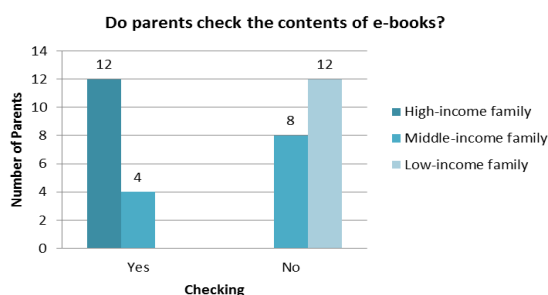
34 parents agreed e-books gave benefits to their children. Only 2 disagreed because their children used e-books to play games, and then damaged it without any maintenance.



**Fig. 16:** Preparation of e-books as textbooks by parents

Eight parents said they would help their children to prepare the e-books as text books especially when it involved battery charging at home. Nine made sure that their children take the e-books to school whilst 8 ensured that the gadgets were functional. 5 more kept the gadgets nicely. However, 6 parents did not help in the preparation of the e-books for their children at home.

All the 12 high-income parents and 4 middle-income parents did check the contents of the e-books and commented that e-books required improvement to replace its functions as text books. None of the low income parents knew the contents of the e-books.



**Fig. 17:** Parental control upon the contents of e-books

#### **D. Strategies of using e-books:**

Based on the findings on the advantages and limitations of using e-books as textbooks, the following guidelines may provide teachers, school administrators or parents some fundamental concepts upon implementing this portable electronic device as a textbook material:-

1) The use of e-books in the classroom involved three parties: teachers, school administrators, and technology specialists. Is there any synergy among them to give the content presentations of the syllabi with the e-book users?

2) Technology is the most imperative prerequisite in introducing e-books in class. Thus, it is highly necessary to install specific software and hardware as a fundamental action in equipping the schools with the technology of e-books. This will surely ensure the effectiveness of e-books implementation as learning materials. So, are these technologies readily available? Do teachers and parents have adequate knowledge and skills about e-books?

3) How do schools provide instructions and manuals to students who are not competent in IT, are ESL students, or are with special needs? How can e-books support teachers and parents in helping these groups of students?

4) Parents must be familiar with e-books application once it replaces the traditional textbooks. How can they help their children to learn using e-books both at school and at home, if they themselves do not possess the skills to use one?

5) e-books may not have a long shelf life if not regularly and properly maintained. Is the maintenance of e-books properly planned and implemented? If there is, who is responsible for it? Will the service be readily available.

### ***E. Framework for using e-bookd as textbooks:***

This research has shown us that e-books, with its numerous benefits, provide teachers with a teaching tool for effective teaching and learning process. Nevertheless, this paper also acknowledges that e-books can never replace the genuine fundamental function of teachers no matter how advanced the technology has become. How effective the child's education also depends on the types of feedback, direction and encouragement that can only be provided by human teachers who possess emotional quotients as well as the passion and enthusiasm that technology lacks. Yet, the use of e-books as text books is definitely best suited in today's modern learning environment.

The education system has entered a new paradigm to keep abreast with the emerging green environment trend. This paper outlines a framework on how e-books can support students in the learning process. The framework is adopted from a framework of using technology within K-6 Programme ( J. W. Cunningham, 2001). It is then used in this paper to suit the context of e-books as textbooks. The framework consists of five general capabilities.

(1) Offering various presentations of information and activities.

The extensive functions of e-books include any type of auditory or visual materials. Besides, e-books can link and combine different types of representations that could reinforce teaching and learning. They can also provide enormous flexibility.

(2) Facilitating the evaluations of students' work

The capability of presenting information and activities in various formats also means that e-Books can accept a variety of inputs from students, ranging from mouse clicks to written text as well as to spoken words. It also consists of programmes that permit students to check and mark their works, thus indirectly nurturing them to become independent learners in the near future. Since good e-books is highly capable of recording and organizing information, this function can be used to inform teachers' instructional decisions and to make documenting students' progress much more efficient.

(3) Automating some feedbacks for students

Since e-books ease evaluation, they should also be interactive as well as able to portray user-friendly interface to ensure effective instruction. When tasks require simple inputs, e-books can be programmed to immediately evaluate each response and provide appropriate feedback with the addition of thorough explanation and description on particular answer. Most importantly, e-books can be programmed to adjust the tasks presented based on feedbacks from previous performances.

(4) Providing scaffolds for learning process

Besides interactive instructions, it is vital for e-books to provide flexible supports for students' learning process especially in building vocabulary. Some features can increase a student's comprehension of and attention to a given work. Some e-books programs have interactive dictionaries, providing just-in-time learning, that allow users to select any word within the e-books and get a definition instantly, or request an instant translation to another language. This too serves as an attraction for a new modern definition of learning compared to the mundane traditional chalk and talk method by teachers in the past.

(5) Ensuring sustainable resources of knowledge

Providing scaffolds for the learning process should also be supported by fostering sustained development of knowledge and learnt society. e-books can contribute to this continuous effort through maximizing the availability of knowledge while reducing the numbers of trees cut down to produce printed books (Conserve a Tree, 2011) reports that every year about 200,000 tons of paper are produced from 4 million trees for the publication of textbooks. This accounts for approximately 20 per cent of the total paper used in the book publishing sector.

According to the latest figures from the Ministry of Education, Malaysia, the current number of enrolment in Malaysian public schools is approximately 5.2 million (Ministry of Education, Malaysia- The Handbook, 2011). This number accounts for 2.9 million primary school students and 2.3 million secondary school students. Each primary school student generally has about 10 textbooks per year and each textbook has about 50 to 80 pages. The shift to using e-books as textbooks would not only reduce the usage of approximately 1 billion sheets of paper which translates into 120000 trees being saved every year but also ensure sustainable resources of knowledge (Green Press Initiative, 2011).

### ***Recommendations:***

From this investigation, it may seem that these schools would need more time to fully explore and take full advantage of using e-books in the classroom. As mentioned earlier, in classroom administration, the e-books ease class management and monitoring individual pupils' activities and performance.

Students' development can be closely and conveniently monitored, documented, categorized and accessed ( Mutalib, A.A., Alwi A., and Salam, S.N.S., 2011). It is suggested that an IT support staff is required in each school to monitor all the e-books and to ensure the e-books function optimally. Similar to our desktop or laptop



which requires periodical servicing, these e-books need an in-house technician since the users are new, young and large in number.

This investigation provided the general perceived opinion on the usage of the e-books in a primary school. Students will utilize the e-books if their teachers and the school provide the right environment. Further research is suggested to determine on the perception of school administrators and ministry the use of e-books in the classroom.

The emergence of e-books as textbooks among the school children requires all parties (i.e. teachers, technologist, parents and even policy makers) to think how to adapt themselves in using e-books. While e-books will not replace print books in the near future, it will definitely be used to complement print books. In classrooms, teachers and students will start to value the convenience and accessibility of e-books.

Technologists can expand e-books usage among a large number of school children through creating awareness of e-books usability. Parents will be exposed to the latest development in education technology. Indeed, the introduction of e-books in education could be a jump-start in promoting highly literate society. The suggested framework above may also need to suit a country's policy. The development and publishing process of text books into e-books may be different from one country to another. In Malaysia, this process is subject to the control of the Ministry of Education which has full copyright of the publication.

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