A Framework of Global e-Learning for the Advanced Generations

Md. Rahimullah Miah [1]

[1] Department of Business Administration, Leading University, Sylhet, Bangladesh

ABSTRACT

This paper explores a predicted framework for global e-Learning that emphasizes the transformative interaction among the effective individuals around the regional, national and global networking indicating advancement on pedagogical models, instructional strategies, and learning technologies in the context on upcoming generations. We have to develop the framework on global enhanced teaching and effective e-Learning to fulfill the required method, implementing design and appraising the feedback with educational technology according to topological network for disseminating of global education technology. Despite decades of development, electronic teachers still need practical examples of how to use electronic educational technology within a pedagogically effective way including electronic curricula, language tools and electronic facilitators. We present a theoretical framework for our representation method, taking into account previous models and characteristics of an effective e-Learning. In addition, we illustrate the course that we have to develop and implement among the participants in this expected model. We follow this with an evaluation of achievement, both in the course implementation and the amplitude framework. Finally, we focus advanced research trajectories of the model and recommendations for how to further develop the route.

Key Words: E-Learning, Transformative Interaction, Teaching Pedagogy, Education Technology
JEL Classification Code: L86; M00

1 INTRODUCTION

WE cannot think in a single moment without information systems either education, communication or paraphernalia ones now a day. Actually education is the great engine of personal development which involves in productivity and creativity [16] to the present and upcoming generations to follow the information systems. This electronic education is involved through teaching-learning with critical for promoting sustainable development and improving the capacity of the people to address environment and development issues with update technological arena. Most of the people in remote areas are derived of these technological arenas especially in e-Learning systems but mobile learning can be being available. The e-Learning systems are often dedicated to one or a few delivery methods. Morrison [7] in contrast says that "…the ultimate goal would be to develop systems with varied pedagogical methods where the student can choose between different methods according to the learning strategy best for him / her". Morrison claims that the expense of this goal makes it utopian. The special field of pedagogy contains of many pedagogical methods with electronic curricula and language tools. Future e-learning systems need to reflect this fact not only national but also global. Our concentration is therefore on pedagogical methods and how to implement them into e-learning systems with enthusiastically advanced generations. But deviation has been regarded as an important principle within teaching and learning for many years traditionally. These principles give the impression lost on the road to the online educational institution.

Many online teachers use a few delivery methods over and over again according to customized software and language tools' scalability. This is convenient for inexperienced online teachers and facilitators. Teachers and facilitators with classroom experience know that instruction needs to be varied to retain learners/students' motivation for learning. From time to time problem-based learning is the best delivery method, at other times collaborative learning, lectures or toolkit exercises are effective. The best delivery method depends on many variables and relevant parameters, including the language, age, culture or locality of the students, their background and motivation, the subject, the theme, the teacher and learning environment. At present, e-Learning is more than a new and emerging technology-based instructional delivery mechanism surrounding the world. We want to focus new paradigms for electronic teaching and learning framework for the update generations with more attractive and enthusiastic. The e-Learning creates new parameters, options, variables, constraints, and issues, making it basically different from face-to-face learning environments. An e-Learning facilitates us to think beyond the traditional student/learner and the traditional brick-and-mortar institutions with state-of-the-arts educational advancement. Advanced technology helps the evaluator to understand how and why e-learning programs are being explored for upcoming participants. Presently e-Learning still is being conducted for many reasons and often without a clear specification of its educational objectives including electronic curricula, pedagogical me-

thods and effective tools. Educational Institutions of higher education know they should be joining the e-Learning society, but for what purposes and for what gains? Is its purpose to make capital, save money, enhance learning, increase accessibility, improve instruction, or something else? Institutions are often lacking a clear rationale for why they are developing and providing e-learning. The relevant Institutions have demarcated their purposes for developing and providing e-learning, effective evaluation requires that they specify clearly their educational objectives for instituting the effort and that they make clear that stakeholders1 in their schools agree that their purposes and objectives are appropriate. If these fundamentals are not in place, the evaluator should help elicit them from the institution [10].

2 GLOBAL E-LEARNING FOCUSING AND RESEARCH TECHNOLOGY

Researchers can help stakeholder and relevant institutions make sensible decisions about the questions that result from e-Learning phenomena to create roadmap. Because a roadmap' is a widen look at the future of a chosen field of inquiry composed from the combined knowledge and thoughts of the brightest drivers of change in that field. Methodologies must be planned to study how technology enables or smooth the progress of teaching and learning activities in the context of e-Learning. It would be remiss to look only at the standard and then make comparisons across various delivery mechanisms. Technology is only a tool. The technology becomes a necessary but not sufficient circumstance. The focus of examination therefore becomes the interaction among several important levels of variables with the technology. The levels of variables include relevant institutional infrastructure, pedagogical or teacher processes, and student or learners learning processes. Researchers must get the most out of on and begin to share and understand the impact of the unique characteristics of the technological environment, such as anywhere/anytime/any pace access, interactivity, and accessibility to enormous amounts of resources that heretofore have not been possible in higher education. The e-Learning should not be simply a current incarnation of correspondence courses if its implementation is to utilize fully provided technology. In disparity, much of the early drill and practice applications limited exercises that were nothing more than textbook, course content and language delivered in a computer environment, so-called computer assisted coaching. Making tests adaptive capitalizes on the capacity of the technology. Similarly, e-Learning should be more than a replication of an old mechanism of instructional delivery in a new medium. It must make the most of on the new capabilities that are completed available by the network technology [10].

3 EFFECTIVE THE PEDAGOGICAL FRAMEWORK

Effective pedagogical framework enhances the online education if online tools, techniques and facilitators are

available accordingly. Online teachers and facilitators have typically assumed the delivery methods of established online teachers. They have also of course been reliant on and partial by the learning system used. "Many first-time users of VLEs (Virtual Learning Environments) seek to become accustomed the way that they work to the way that the software needs things to be done"[3]. E-learning courses for higher education typically are based on a VLE / Learning Management System. The Achilles' heel of these systems is that they give too much concentration to online supervision and too little attention to pedagogical concerns [3]. The LMS forces the teacher into using only a few delivery methods on advanced e-Learning. Teachers and facilitators are used to finding the best methods of teaching-learning their subjects, and online teachers/facilitators also should have the same opportunity. Most online teachers do, however, still need systems that help them discover the different pedagogical methods to use in a computer-based online learning environment. Systems based on pedagogy do exist, but they give attention to only one or a few delivery methods. Heinich et al., when talking about learning in classrooms, say "It would be exaggeratedly simplistic to believe that there is one technique that is superior to all others or that provided all learning needs equally well and fruitful" [6]. This is valid for e-learning as well. Heinich et al. and the author categorized instructional methods into the following sixteen categories [6]:

1. Presentation
2. Demonstration
3. Discussion
4. Drill-and-Practice
5. Tutorial
6. Cooperative Learning
7. Microteaching
8. Positive Betting
9. Chatting
10. Simulation
11. Discovery
12. Problem Solving
13. Feedback Sharing
14. Recapitulation and
15. Net Conferencing and negotiating
16. Identification

A number of people will squabble that several of these methods are available in e-learning systems; for example, a discussion forum is the implementation of the third category "Discussion". The weakness is, however, that most systems only give the functionality of a discussion forum, while the methodical knowledge and experience of how to use it in a learning state of affairs is lacking. The result is that experienced online teachers gather their capabilities in whole books e.g. about how to reasonable an online discussion. The expertise should instead be implemented into the system. Another weakness is often a lack of communication between online teachers and facilitators, up until now everybody makes the same mistakes, instead of implementing the explanations into the system and so learning from each other. There are rea-

sons why there are many delivery methods available in classroom learning situations at national and global level. We cite Anderson and Thalheimer: "Creating a greater number of repossession paths the information will strengthen the retrieval process and increase ultimate performance…"[2] and therefore multiple delivery methods are important in the method of future e-Learning systems. We argue that "the mislaid link" in e-Learning systems of today is pedagogical framework. But, the future framework tends to upcoming patterns which is linked each other's shown in the following figure 1. The pedagogical framework in teaching and e-Learning systems implies regional, national and global in the presence of media on the priority of designing, programming, simulation, microteaching, recapitulation and negotiating among teacher-student and administrative body of existing institutions.
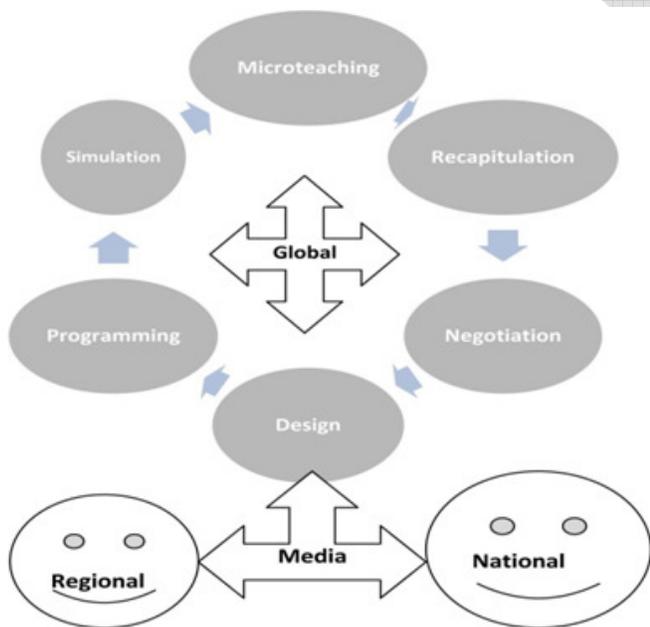

Figure 1: Pedagogical Framework in teaching and e-learning systems in advanced technology

Information technology has compensation that paper cannot match. There exist "methodical guidelines or instructions" on paper available for teachers and facilitators in different subjects, but integrating methods into information technology makes it possible to obtain interactive process, where the system adapts to the choices made by the client.

4 SCIENTIFIC FRAMEWORK OF E-LEARNING SYSTEMS

A scientific e-learning system should consist of more than we can distinguish in the technology solutions we find today. Different functionality such as student/learners and course direction, content conception etc. is already implemented and in use e.g. LMS, Content Creation Tools and Content management tools. Paulsen

defines content creation tools as tools that are used to build up learning material, for instance plain text, slides, graphics, pictures, images, computer graphics, simulations, assessments, audio and video. Examples of content creation tools are MS Word / PowerPoint / FrontPage, Macromedia Dream Weaver / Monitoring Director [12]. He also defines authoring tools as "a software application, used by non-programmers that exploit a metaphor (book, or flowchart) to create online courses" [12]. The functionalities mentioned above all need to be intertwined in a joint e-learning system. Scientific framework tends to three components according to requirements objectives, viz. education, technology and pedagogy with the formatting of channel of communications, systems for contents building, administration and implementing methods which is indicated in the figure 2. This figure follows the framework of e-Learning process consisting of several steps accordingly.

Insert Figure 2 here

5 ADVANCED METHOD PATTERNS AS AN EFFECTIVE FRAMEWORK TOOL

Advanced Method patterns can be examples of building blocks to make sure such suppleness in e-learning systems. Frizell and Hübscher [5] claim that method patterns can be used to effectively support novice specialist of web-based courses [5]. We believe method prototypes could work as one kind of e-Learning method tools. Technological method patterns are useful tools that create it easy to contribute to the e-learning expertise academic from past mistakes since method patterns are archetypes on well-used solutions. This method patterns will build expertise of experienced online teachers into the system, and help apprentice online teachers and facilitators learn how to work online. Alexander's definition of a method pattern is that it "describes a problem which occurs over and over again in our environment, and then describes the core of the solution to that problem in such a way that you can use this solution a million times over, without ever doing it the same way twice" [1]. The patterns are systematically described using a pattern language. In this paper we are discussing the pedagogical method patterns and believe it is useful to categorize the pedagogical patterns according to categories of pedagogical delivery methods which are followed according to the figure 3 showing as below. In the figure 3 showed systemizing pedagogical patterns according to global network methods segmented through global, national, regional and sub-regional portions including universities, schools, colleges, university grant commission and education board were controlling the successive legislative power implementing pedagogical patterns demonstrate with discussion and feedback meeting sharing through problem solving and vice-versa.

Insert Figure 3 here

The prologue of pedagogical method patterns will lead to a methodical approach to e-learning method, where the educators and researchers do the work of collecting the method patterns and the software engineers and analyst's method the technological solutions. For software specialist without a pedagogical milieu the pedagogical method patterns will be useful and it will provide a common and effective language for technologists and educators. This scientific method patterns are a collection of veteran pedagogical methods. Some patterns will work in several categories, e.g. a pattern of electronic moderation will be useful in the categories of discussion, collaborative learning and problem solving.

6 AUGMENTED PEDAGOGICAL METHOD PATTERNS AS WIZARDS AND FEEDBACK

The augmented pedagogical method patterns can be put into practice as interactive wizards, and method patterns will make it possible to develop learning systems where it is possible to adjust functionality in a program according to the learners and vice-verse's needs in the explicit learning situations. Gilly Salmon [13] has written a book about electronic moderation, to help greenhorn online teachers and facilitators to make discussion groups be effective in online learning situations (Salmon 2000). Instead of reading whole books like Salmon's "electronic moderation", the wizards can be helpful when you need them accordingly. The wizards are short versions of more experienced teachers' familiarities.

Our work is based on the following procedure:

Delivery method

⇩

Pedagogical Method pattern

⇩

Wizard

⇩

Feedback
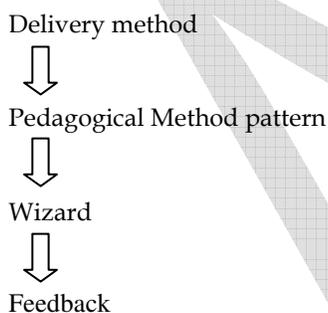
The teacher or facilitator uses his experience and proficiency from pedagogy to create a pedagogical method pattern, using a pattern language globally where he needs to state a name and a category. He/she also does a scrutiny where he/she utters why it is important to solve the problem and what makes this problem a snag. He/she then illustrates known solutions: e.g. organizational moderating activities, social moderating activities, intellectual moderating activities [13, 15]. The required pattern languages also require research questions, context, conditions, discussion, references and related patterns. The software method can use this pattern as a preliminary point in the method process to create a wizard. In this way the expertise and experience of the teacher and facilitator regarding methods is implemented into

the system. Skills improvement is dependent of individuals, which make reuse difficult. The wizards described above will assure the reuse of experience and competence, also with respect to delivery methods [14]. The editor with built-in wizards based on pedagogical patterns will help teachers by giving them access to tried-and-tested rescue methods; novice online teachers will get to see the opportunities for online delivery methods. Students and learners will gain access to learning. Environment where variation is implemented, making it possible for them to choose learning strategies. The learning environment will also make the students/learners more aware how they learn best and how their learning preferences change over time. For software developers the pedagogical method patterns are useful because there are few methods and tools supporting e-learning method today, especially for developing systems based on a variety of pedagogical methods which can be shown in the figure 4 according to regional, national and global education technology with synchronizing network systems. The global education technology segmented by different categorized, viz. national level tends to (i) Divisional education technology, (ii) District Education Technology, and (iii) Sub-district Education Technology. On the other hand, at International level- (i) Asian Education technology, (ii) European Education Technology, (iii) African Education Technology, (iv) Australian Education Technology, (v) North American Education Technology, (vi) South American Education Technology which are shown in the figure 4. These national and international education technologies are linked each other for e-Learning delivery for advanced generations on the available network topology with exchanging data synchronizations from national e-Learning server.

Insert Figure 4 here

7 CONCLUSION

In concluding, new advancement in the learning sciences and technologies provide opportunities to create well methods, learner-centered, engaging, interactive, professional, well-organized, easily accessible, flexible, and meaningful distributed and facilitated e-learning environments [17] in remote areas of existing developing countries of global networks to multiply the light of education to the present and upcoming generations through network topology or relevant options. The time has definitely come to concentrate on pedagogical methods while model effective e-learning systems for improved teaching to ensure variation for students as well as learners. The content should be made available to students/learners in all delivery channels through best practices and the students/learners can choose the combination of channels best suited for their penchants. Morrison [9] argues "channel selection should be the business of instructional methods". We therefore need learning systems that leave online teachers and facilitators with the work they know

best: teaching. Not supervision and not technology at once. We believe pedagogical method patterns and wizards are the right moving towards to implement pedagogical methods into e-learning systems not only regional and national but also global. We will continue our work implementing delivery methods by using pedagogical technique patterns and the concept of wizards, coming up with an archetype in the near future interlinked with national and global education technology for the advanced generations for uplift sustainable growth and development. We also recommend for network security, government support and available technology and global co-managed partnership on e-Learning for advanced generations.

References

[1] Alexander, C. et al., (1977). A pattern language: towns, buildings, construction. New York: Oxford University Press. ISBN 0195019199.

[2] Anderson, C. and Dr. Thalheimer, T., (2003). Better than Blended: Seven Strategies That Work. IDC #29681, Volume 1, Tab: Vendors.

[3] Britain, S. and Liber, O. (2004). A Framework for the Pedagogical Evaluation of eLearning Environments. http://www.cetis.ac.uk/members/pedagogy/files/4thMeet_framework/VLEfullReport

[4] Carstensen, P.H., Schmidt, K.., (2002). Computer supported cooperative work: New challenges to systems method. in: "Handbook of Human Factors", K. Itoh (ed.).

[5] Frizell, S. S. and Hubscher, R., (2002). Aligning Theory and Web-based Instructional Method Practice with Method Patterns. E-Learn 2002, http://www.auburn.edu/~frizess/frizell-elearn.pdf

[6] Heinich, R., Molenda, M., Russel, J.D., Smaldino, S.E., 2002. Instructional Media and Technologies for learning, 7th edition. Merrill Prentice Hall, ISBN 0-13-030536-7.

[7] Helmer, J. (ed) a., (2003). Epic Show Report: Strategy & Practice in Blended Learning London. http://www.epic.co.uk/news_features/latest_features/Blendedlearning0903_show_report.htm#morrison

[8] Helmer, J. (ed.) b (2003). Epic Think Tank: Blended Learning Method. Web: http://www.epic.co.uk/content/resources/epic_think_tanks/blended_think_tank.htm

[9] Groupsystems.com (2004). www.groupsystems.com http://www.groupsystems.com/products/cognito.htm

[10] Mandinach, Ellen, B. (2005). The Development of Effective Evaluation Methods for E-Learning: A Concept Paper and Action Plan. Teachers College, Columbia University. Teachers College Record Volume 107, Number 8, August 2005, pp. 1814–1835. URL: http://www.csupomona.edu/~dolce/pdf/mandinach.pdf.

[11] and Action Plan. Teachers College Record. EDC Center for Children and Technology, Columbia University. Volume 107, Number 8, August 2005, pp. 1814–1835.

[12] Paulsen, M. F. (2002). Online Education Systems: Discussion and Definition of Terms. Web: http://www.nettskolen.com/forskning/Definition%20of%20Terms.pdf

[13] Salmon, G. (2000). E-moderation – The Key to Teaching and Learning Online. Kogan Page, 0-7494-3110-5.

[14] Torgersen, G. (1998). Læring med IT. Opplysningsfilm, ISBN 82-994777-0-0.

[15] Vesseur, A. (2004). DP Moderation of an asynchronous online group. E-LEN project internal webpages

[16] TBO-The Bangladesh Observer. (2006). Democracy and Human Rights: Quality Teacher for Quality Education. [Long Walk to Freedom: Ed -Nelson Mandela.], Dhaka, Monday, August21, 2006. p.4.

[17] Khan, B.H., (2004). The People–Process–Product Continuum in E-Learning: The E-Learning P3 Model. Educational Technology, Vol. 44, No. 5, pp. 33-40.
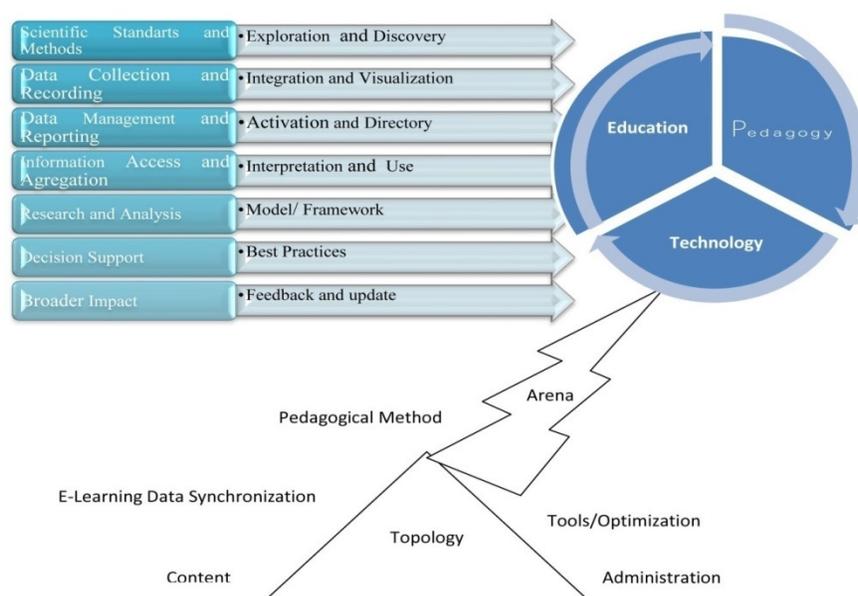
FIGURE 2

Figure: Framework of E-learning Systems proposed for implementing at global level.
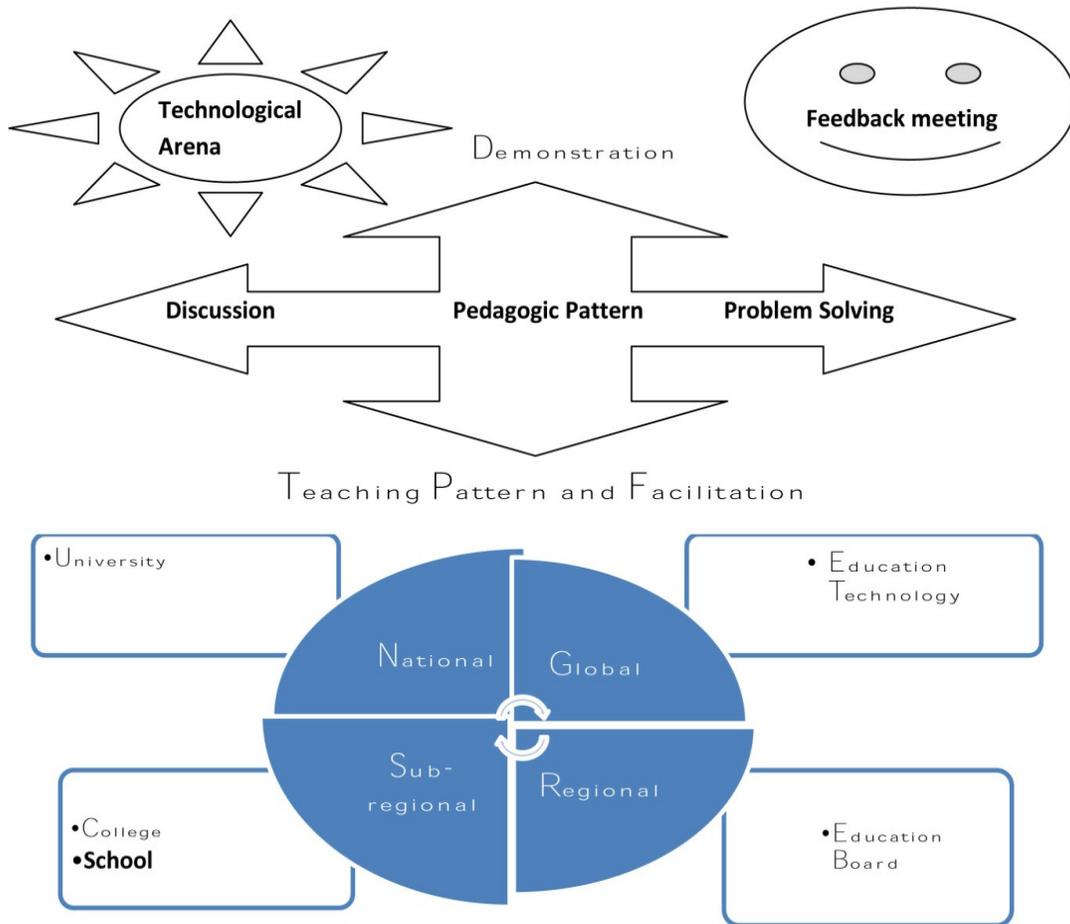
FIGURE 3

Figure: Systematizing pedagogical patterns according to Global networking methods
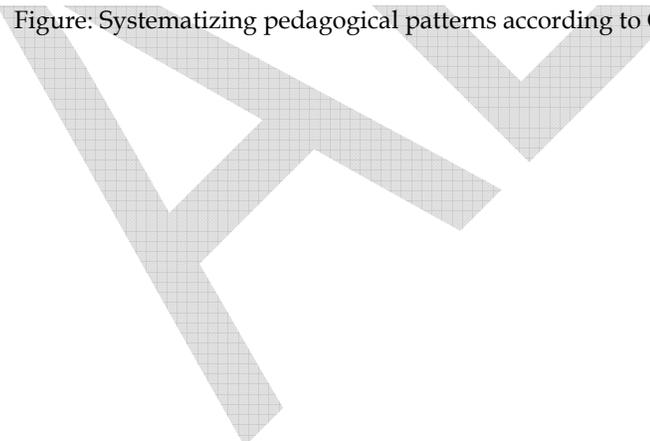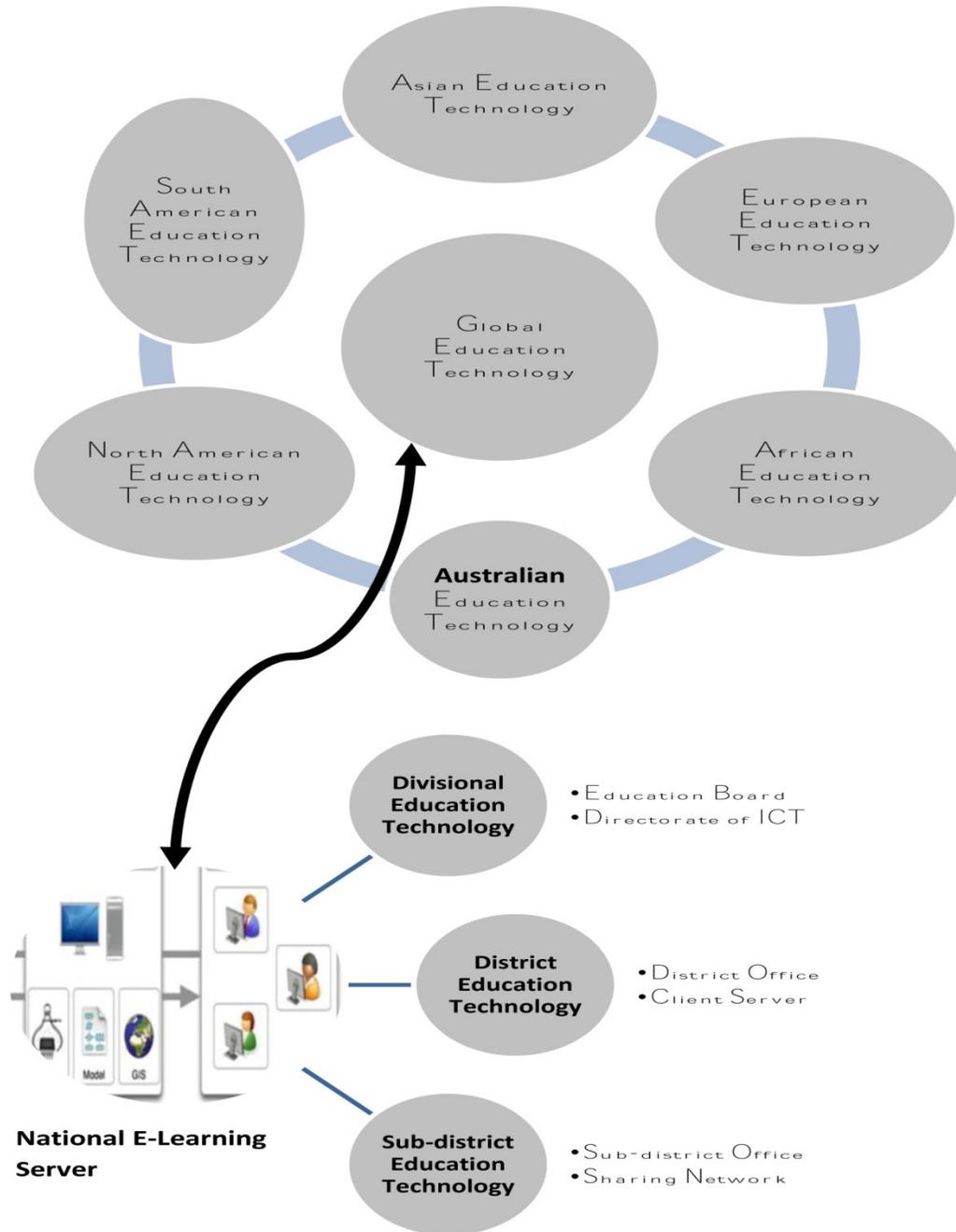
FIGURE 4

Figure 4: e-Learning Framework Distributed between National and Global Education technology