International Journal of Humanities and Social Science Research
ISSN: 2455-2070; Impact Factor: RJIF 5.22
www.socialresearchjournals.com
Volume 2; Issue 9; September 2016; Page No. 28-33

Effectiveness of nature-walk to enhance environmental ethics through experiential learning and 3-D (Delight, Discuss, and Discover)

[1] Sivakamasundari R, [2] Dr. Devaki N

[1] Ph.D Scholar, Dept. of Education, Gandhigram Rural Institute - Deemed University, Gandhigram, Dindigul district, Tamil Nadu, India
[2] Assistant Professor in Education, Gandhigram Rural Institute - Deemed University, Gandhigram, Dindigul district, Tamil Nadu, India

Abstract
Every child is unique, intelligent and has the right to get education. It has been enshrined in the constitution. Apart from providing school education, wherever the child lives, it is mandatory to ensure the appropriate school ethos. That is why, the school as well as the class room should be an inviting place with safe supportive environs to learn everything through experience and creative space for the holistic development of all children in the school. NCF-2005 – rightly pointed out that children are very eager to know about themselves and their surroundings. If the learning environ helps to observe and study their surroundings, the part of it with which they come into contact would make them to interpret their surroundings, as full of fascinating, interesting challenges, question –provoking and answer- providing discovery-learning, opportunities to gain rich learning experiences. This enriches the learner to attain the desired learning outcome to equip with skills, to deal the whole universe with full enthusiasm. Gradually it makes them to value and care for their environs, in which they live, by which they would acquire the attitudes, for being responsible citizens, in sense with environmental ethics. It is concerned with the issue of responsible personal conduct with respect to natural landscapes, resources, species and non-human organisms, which is the hidden moral philosophy of environmental ethics.

Keywords: 7E-Engage, Enquiry, Explore, Experience, Express, Enjoy Empower, 3D-Delight discuss and discover

Introduction
The ultimate aim of education through schooling is the process, by which every nation hopes to prepare healthy and happy citizens, which is the foundation of any nation‘s building. Hence structuring the curricula is a complex exercise, which will have an impact on the future of the nation and its citizens. Every child is unique, intelligent and has the right to get education. It has been enshrined in the constitution. Apart from providing school education, wherever the child lives, it is mandatory to ensure the appropriate school ethos. That is why, the school as well as the class room should be an inviting place with safe supportive environs, to learn everything through experiences and creative space for the holistic development of all children in the school. Apart from that learner-centric pedagogy, it is essential to unleash every learner as well as to realize above new vision. We should remember, (both parent and teacher) if the child is being respected, for its uniqueness, instantly the self-esteem of the child could be enhanced.

Scope of-7E, and it’s, role, to enhance experiential learning,through-3D
To attain the above vision every school should provide creative space to engage and a supportive environ for every child to experience individually and in small group with a sense of enquiry and exploration. It should be irrespective of its socio-economic level and the quantum of its achievement. In short the school should provide an atmosphere or ambience where the creativity of every child is monitored and given scope and space for expression to enjoy and expand.

Nature walk and School environment
Each school’s environment is unique. It is full of information and illustrations and interesting features. Hence the school environment is suited and appropriate to the daily experiences of the children in their own familiar world. The learning science and especially doing environmental science in the neighbor-hood, initially as Nature-walk, is more suited and to be encouraged. It depends upon the effort and planning of the co-learner, the mentor-teacher, to delve into the unknown parts of the well-known place. Since as a human everybody has the tendency, to taking familiar things, for granted. It is the chief role of the teacher and the effort of him that is needed to make the children to ask appropriate questions, which are never obvious in an everyday’s environment. Definitely, for such appropriate questions answers would be hidden with -in the environment and could be uncovered by the pertinent scientific-outlook, and endeavor. This kind of discovery-learning would make them to delight discuss and discover *(3-D)*. For such kind of learning it is the teacher’s task to stimulate and formulate the facts of the text book as questions or problematic situations of living environ for the children to do short-term project as home-work and long-term project as expansion of child’s knowledge, through experiential learning.
Nature-Walk and environmental ethics; It is rightly pointed out in NCF-2005, that children are very eager to know about themselves and their surroundings. If the learning environ helps to observe and study their surroundings, the part of it with which they come into contact would make them to interpret their surroundings, as it is full of fascinating,

interesting challenges, question–provoking and answer-providing, discovery-learning, opportunities to gain rich learning experiences. This enriches the learner to attain the desired learning - outcome to equip with skills, to deal the whole universe with full enthusiasm. Gradually it makes them to value and care for their environs, in which they live, and makes them to acquire the attitudes, for being responsible citizens.

Nature-Walk and scientific study

Nearly 40 years of scientific study shows that the experience of nature improves human health and wellbeing in many ways. Everybody could have a feel and there is a joy in walking into a place that is peppered with green elements, while it has been proven scientifically that green is the color that is most soothing to the human eye and to create an overall atmosphere that reduces stress and elevates one mood, with Environmental Ethics and awareness among people about protection of environment. Hence it is believed that humans are a part of society, as well as other living creatures such as plant and animals. It is to be preserved properly, as our ancestral property, to hand over it, to our next generation.

The experiences of two schools in Tamil Nadu which are providing eco-friendly education for autonomous learning are worth mentioning here.

1. KFI Foundation-run Pathashaala in Elimichampet village of Thirukalukundram Taluk, Kanchipuram district.
2. Puvidham School in Dharmapuri district.

KFI Foundation-run Pathashaala encourage to explore self-driven learning in his own way. It is an -unique school having the concept of autonomous learning. Unlike the main stream schools, which are just constrained to class room and academics, it gives opportunity for self-driven and self-regulated education. Here, buildings are eco- friendly, and do not harm the environment. Further this school also provides healthy and protein rich millet diet for the students. It is note-worthy to mention that millets crops are being raised in a three acre plot within the school premises by the students themselves, having a feeling that millet invokes a sense of giving respect to earth. The millets do not consume more water, and can sustain themselves on the monsoon rains.

Puvidham school in Dharmapuri district is the other school having an egalitarian outlook, giving due respect to earth, nature, and agriculture etc. This school was started in 2000 with just 7 children based on the philosophies of Rabindranath Tagore, Mahathma Gandhi and E.F. Schumachir. Now the school has grown up. Hostel accommodation has also been provided. Most of the Children are of migrant labourers and of nearby farmers. The school works together with local people to convert to organic method of agriculture through their children-the future farmers. Education plays a key role in this distinction. The total focus of learning is to create sensitivity to nature. Sensitivity makes creativity and scientific discovery. Further, here the aim of learning is to create an environment where the inherent sensitivity and intuition of the child is sharpened and encouraged, rather than demoralized and snuffed out. Here, the intention is to integrate life and learning and help children to synthesize knowledge through their observation and experiences made available in the school environment or the real life environment. The content of the school and learning are five basic elements. (Air, water, land, climate, and earth)

Strategies for experiential learning in Main stream -High schools

The chief aim of the study is to investigate strategies for the experiential learning in classroom and its environment. Primarily, as already mentioned, it could be initiated by nature walk and observation of every child's school environment and home followed by discussion in peers and in small groups and recording as concept map, or guided mind –map, or mind-map. At this juncture, it is to be observed whether the teachers have the knowledge and skill to see Environment as an integrated component in the subject content and the perception of the teachers to integrate the environmental education with the subjects like biology, chemistry, history, geography, geology, mathematics, civics and so on. Apart from that in most of the high schools, the curriculum and evaluation have subject-based approach though it is being implemented to evaluate children of standard from 1st to 9th through CCE. It is found that from tenth standard or even from ninth standard onwards, the prevailing coaching trend is extremely unhealthy. The subject-based approach tend to present knowledge as package, followed, by the rituals of exams to assess knowledge acquisition and marks as a way of judging competence, in the subject area. In addition to that, those areas which do not organize in text book and examined through marks become sidelined and are then described as extra or co-curricular instead of being integral part of curriculum. It is inferred that the focus of the learning–process is more about rote -learning rather than the holistic-development. Here learning has become fragmented, removed from life and has been made very abstract. Rarely a student can make connections between what he learns at school and what happens in real life (NCF-2005) as well as with global dimensions. Psychologically speaking, the brain would be monotonous, if it does work without any change in activity. As already pointed out lack of green scenery would disturb one's mood and elevate stress. That itself is a hindrance or block for child's memory and intelligence.

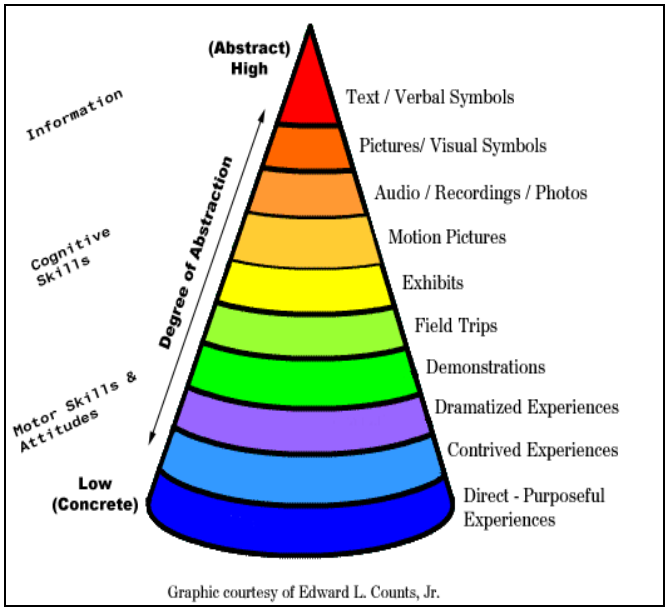

Fig 1: Steps to overcome the hindrance through DALE'S CONE-Core experiences for experiential learning modes of engagement in the class room

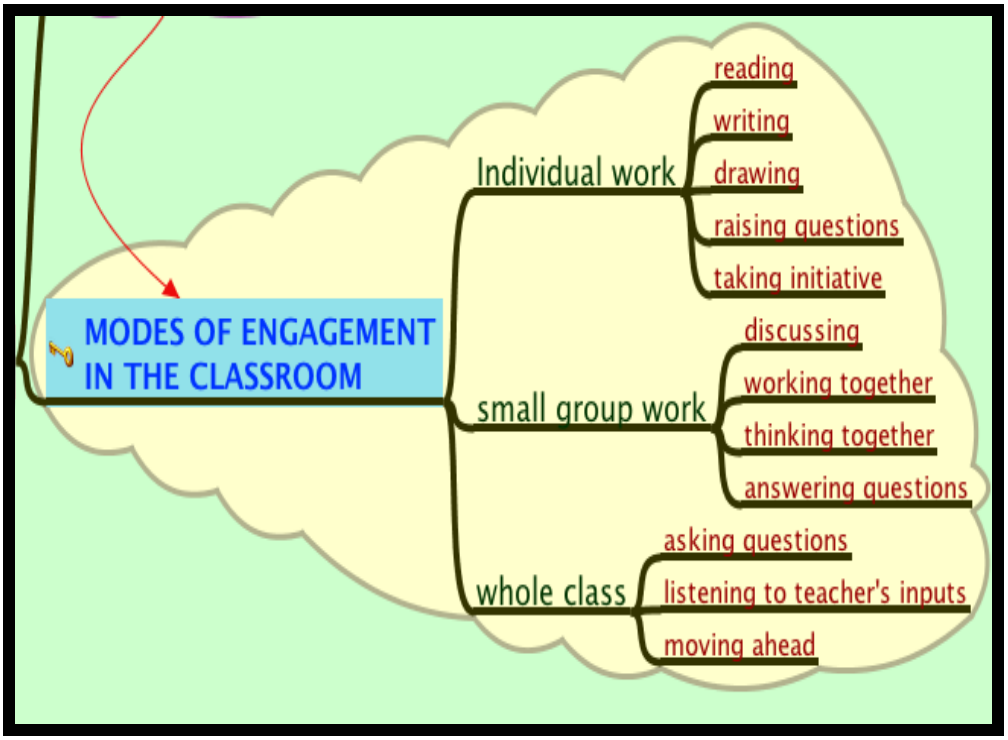

Fig 2: Modes of Engagement in the Classroom

Dale's cone of experience and the above mind -map vividly explain why and how to incorporate 7E in teaching learning process to become a globally competent teacher to act as mentors, to produce participatory life- long learners.

As each class room is a diversified one, with multiple intelligent students, teacher could catch the spirit of attention of every student, by proper planning and transacting with the suitable input in the learning process. Instantly Learning - experiences could be obtained, without any learning disability, along with desired learning- outcomes.

School and its environment

As the school is a part of the community what the pupils learn in school should be reflected in society. Every school has its own unique environment. But it has been found that environmental education is not taught as intended in the school. This motivates the investigator to do the research in the dynamic subject environmental education, to find out the effectiveness of environmental ethics through experience-based approach among student teacher- the B.Ed. students, (instead of giving in-service training and training to inducted teachers) to acquire the 21st century skills as mentioned in the new frame work of NCF-2009 of teacher education. It is the motive of the investigator to see how the experiential learning environs through nature walk, projects and field trips, increase the awareness about the issues and to reflect it later during their teaching practice. It is to be observed how through experience based approach, the environmental ethics can be enhanced.

Environmental Ethics to enhance teacher education

At the macro level environmental ministry, Pollution control boards, National Green Tribunal monitor the issues relating to environmental protection and conservation of forest. But it is difficult to enforce discipline at micro level unless otherwise people's mindset changes.

It is here environmental education plays a major role. The expanding knowledge of science and technology accompanied by fast growing environmental problems has necessitated the updating of educational curricula with issues pertaining to environment.

Steps to enhance environmental ethics; through participatory learning and experience based approach

- Creating model schools, having participatory or active learning as already mentioned.
- Modeling the master teacher who integrates academics with environmental education.
- Mastering the model teacher, who starts his day work, by Nature – walk with the children.
- Steps in nature walk-observation, grouping, concept-map, guided -map, mind -map.
- Project-based approach and field visits.

Need for creating model schools

Though the environment has become an integral part of K-12, curriculum, most books in science and social study include a side bar or chapter on environmental concerns. As per the National Science Teacher's Association's National Teachers' Registry, the number of teachers who identify themselves as environmental science teachers equals or exceeds the number of physics and chemistry teachers. Virtually, all these teachers are teaching out of their fields. Only a meager percentage of teachers are having college level coursework in environmental science. Hence, they are unable to integrate or transact the content with context. They are incapable of taking the content in an inter-disciplinary way. For example, he or she may be well equipped to teach the pollution and natural resources and energy in ecosystem but are less familiar with the chemistry involved information such as acid rain, water and air pollution. Likewise, a social teacher may be unable to take the bio geo chemical cycle that are key to understanding global warming.

Teacher education and its challenges

It is a great challenge for the teacher education institutions, administrators as well as for the teacher educator to prepare student teachers for teaching in a competitive and diverse atmosphere, having the objectives to provide rich learning environs to get rich learning experiences to construct their own knowledge and wisdom which are necessary attributes of a well-developed personality. Having reformed the duration of B.ED course to two years and internship to four months to observe all day to day activities of the school, it is mandatory to visit, inspect and shape those schools as model in all aspects of student teachers' internship

How to create model schools?

Right kind of experience only could equip the B.Ed trainees with the required skills and knowledge needed for the 21st century to become a mentor to produce life-long learners of future India, in all walks of life, as architects of the society and nation building. As already mentioned earlier in this article, schooling is the process, by which every nation hopes to prepare healthy and happy citizens, which is the foundation of any nation's building. That is why, the school as well as the class room should be an inviting place with safe supportive environs, to learn, everything through experiences and creative space for the holistic development of all children. In the school it should be well planned and structured as mentioned below in the mind –map.

Model school for observation

As an initial step the investigator, before field visits and doing projects visited one school, in Udumalapet Panchayat Union block. (Vidhya Nethra Higher secondary school in Komangalam village,) wherein Experiential Learning Methodology is being practiced at the primary level itself. It was also observed during the visit the unique environment of the school, and the district with the unique ecological tract which has climate variations of flora and fauna. The school environ too is full of fascinating, interesting aspects for challenges, question –provoking and answer- providing discovery-learning, opportunities to gain rich learning experiences, by having Nature walk. Natural scenery-peppered with mountains, plantain and coco nut-grooves, flower gardens, farms, paddy –fields as well as with a lot of Non-pollutant wind mills.

Learning-centric pedagogy (Upper Primary Level) and experintial learning

In continuation to the above mentioned student-friendly learning technique, orientation was given to 32 upper primary teachers of the school, after giving Pre test to the teachers with respect to their assumption about the child, learning, teaching, classroom, and education. The analysis of the performance of the pre- test is represented below as mind map. Hence for three days, having three years' experience as pedagogical coordinator in state SSA, orientation was given and posttest was also conducted. The analysis of the performance of the post-test was also mentioned below in the ELM-mind-map. By which the learning process steps were made to realize through constructivist approach. (Analysis, synthesis and evaluation).

Core principles of E.L.M.

Teacher is a mentor, learners are life - long learners - in academics as well as in life, learning to learn, learning to swim by swimming, begin from where the learner is and build on existing knowledge from known to unknown Class room trans-action before orientation -Status of upper primary class rooms.

Class room process

- Monotonous teaching method-mostly chalk and talk
- Passive receiptors are the learners
- Like an empty vessel –teacher is to pour information into it
- Learning-only by listening to lecture.
- Though each child is unique and has innate potentiality
- Potential of the child is under estimated –they can think, speak,
- Can act, write and do things on their own
- No space and scope for self-learning, peer learning, group learning and discussion etc
- Class room structure is so rigid

Activities of three days' work-shop

DAY -1 **(**13-6=2016 participatory learning through nature-walk experiences.

DAY -2 (14-6-2016) Subject -wise orientation and observation of model class for the trainees

DAY -3 (15-6-2016) subject –wise class was being taken and monitored.

Interpretation of the observation; Having Nature walk, Observation was drawn as mind map

Subject-wise, class was observed and interviewed. Discussion with five subject teachers, principal and correspondent was carried out separately, followed by feed- back session. In all classes steps already mentioned was followed, supervised carefully. The participation of each and every student in any one of the steps of learning processes is also ensured.

Remedial measure to develop reading skill

The students with the reading disability to identify the letters, words, and to read sentences were identified and grouped. Through Dale's model, for slow bloomers, strategies were adopted to develop reading skill, apart from teacher's innovative strategies which are being evolved by the teachers, through group discussion and brain-storming.

Nature-walk and reading skill

The children are so eager to know about themselves and their surroundings. Whatever they observe, or read will be registered and associated in brain. But the attention on one object is only momentary. (N.C.F.-2005). the neurons in brain, which longs for new information, basically functions through Association. Billions of neurons, through circuits, formed due to association, in different parts of the brain are complex. As the child grows, the association forms will become the basic processes of life-feeding, language walking etc. After that in later growing stage, the associations include abstraction, complex problem solving skill etc., which is the hidden secret of Nature walk. Apart from getting environmental ethics, articulation of reading and writing skills will also be enhanced. In turn it is the prime core activity for communication skill to equip with 7E-engage,enquire,enjoy, experience, explore express and empower in which 3d-delight,discuss and discover are also hidden.

Learning Outcomes

- Learning with understanding-highly motivated confidant children
- Student skills developed
- No shy, no fear of exam, no rote learning
- No need for drilling and exam oriented coaching
- Since retention is high as they are engaged and experienced with content many times
- Totally engaged
- Not easily distracted
- High achievement level
- Acquire the attitudes, for being responsible citizens, in sense with environmental ethics.

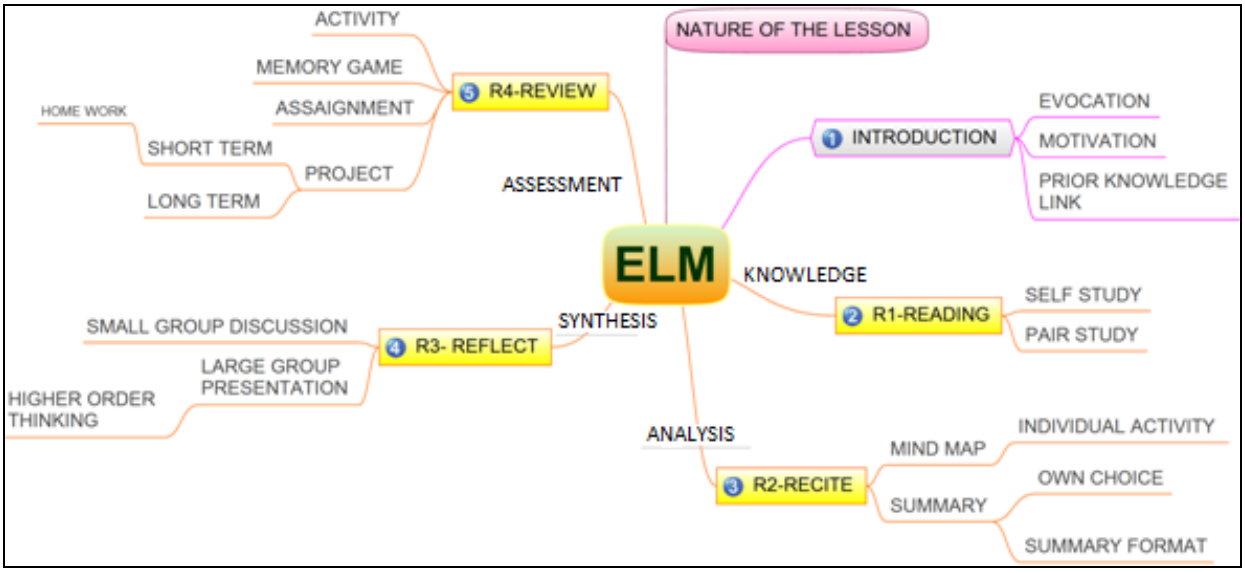

Fig 2: ELM-experience learning methodology and constructivism

Conclusion

As mentioned in the National Council of Teacher Education (NCTE) followed by the National Curriculum Framework of Teacher Education, in -2009I (which is an amalgamation of NCF-2009 and RTE-2009), the schooling with the experiential learning supportive environs could absolutely meet the important dimensions of the new approach to teacher education. But it is the prime responsibility of any teacher as a mentor to create safe and proper environs to face the experiences with engagement and enquiry through the initial step Nature walk, adjacent to school environ. It should be realized by each and every teacher that the experiences can be felt but cannot be taught. To attain the above vision every school should provide creative space to engage and supportive environs for every child to experience individually and in small group, with a sense of enquiry and exploration. It should be irrespective of child's socio-economic level and the quantum of its achievement. In short the school should provide an atmosphere or ambience where the creativity of every child is monitored and given scope and space for expression to enjoy, empower and expand, along with a sense to value and care for their environs, in which they live. This sort of vision would make the children to acquire the attitudes, for being responsible citizens with environmental ethics, which is concerned with the issue of responsible personal conduct with respect to natural landscapes, resources, species and all other living organisms. That is the moral philosophy of environmental education.

References

1. Anderson GJ. Effects of classroom social climate on individual learning. American educational research journal. 1970, 135-152.
2. Begum Jahitha A. The Effect of Play way cum Activity Method in Teaching the concept of Pie among the VIII Grade students Journal of Educational Research and Extension. 2007; 44(4):2007.
3. Begum Jahitha A, Indira. How to become an Effective Teacher (Review), Bharateeya Shikshan, 2008, XVIII-7.
4. Dale E. The cone of experience. Classic writings on instructional technology, 1996, 1-169.
5. Ely DP, Plomp T. Classic writings on instructional technology Libraries Unlimited, 1996, 1.
6. Devaki N. Psychopedagogy. Madurai Shanlax Publication, 2015.
7. Deivam M. Response to Challenges in Education. Germany: Lambert Academic Publishing, 2015.
8. Doyle R, Krasny M. Participatory rural appraisal as an approach to environmental education in urban community gardens. Environmental Education Research. 2003; 9(1):91-115.
9. Gray A. Contructivist teaching and learning. SSTA Research Centre Report, 1997, 97-07.
10. Janiak A, Rudek R. Experience-based approach to scheduling problems with the learning effect. IEEE Transactions on Systems, Man, and Cybernetics-Part A: Systems and Humans 2009; 39(2):344-357.
11. Jain PS, Dholakia RH. Feasibility of implementation of right to education Act. Economic and Political weekly, 2009, 38-43.
12. Masters K. Edgar Dale's Pyramid of Learning in medical education: A literature review. Medical teacher. 2013; 35(11):e1584-e1593.
13. National curriculum Frame Work-NCERT Report, 2005.
14. National curriculum Frame Work-NCERT Report, 2009.

15. Roth EJ, Barreto P, Sherritt L, Palfrey JS, Risko W, Knight JR. A new, experiential curriculum in child advocacy for pediatric residents. Ambulatory Pediatrics. 2004; 4(5):418-423.
16. Rose D. Democratising the classroom: literacy pedagogy for the new generation. Journal of Education. 2005; 37(1):131-168.
17. Squire K. Video Games and Learning: Teaching and Participatory Culture in the Digital Age. Technology, Education--Connections (the TEC Series). Teachers College Press. 1234 Amsterdam Avenue, New York, NY, 2011, 10027.