National Curriculum Adaptation Model for Multi-grade Classrooms

Moharram Aghazadeh (PhD)
Center for Educational Planning and Development (CEPD)
aghazadeh.moharram@gmail.com

Abstract

Multi-age and multi-grade teaching classrooms (MGTCs) have a long history in the educational systems of the Asia-pacific countries. Often, this type of pedagogic event can be seen in the rural and remote areas of the countries, generally. The people who have taught in those classrooms have found the most difficulties in the classroom and teaching-learning management. At the same time, the time and voluminous content of the textbooks puts most of MGTCs teachers into trouble. These difficulties may result to school leaving and more drop out. However, for me the main problem of MGTCs is their curriculums. Almost Asia-Pacific educational systems implement mono-grade curricula in the MGTCs. While, MGTCs require different types of curricula because of different nature of the classrooms. Accordingly there is a need for special curriculum to set an effective teaching-learning condition. But developing a new curriculum for the sake of MGTCs may exceed expenditures and take more time from the curriculum makers of the educational systems. For the purpose of solving the above mentioned problems/difficulties and promoting the quality of teaching-learning in the MGTCs, we have found adapting the national curriculum for MGTCs as a short cut.

Therefore in this paper, we will try to introduce the solution in the framework of a conceptual model to adapting national curriculum for

MGTCs. The model has 10 components that they will be elaborated in this paper. The designed model has been validated by 100 curriculum and instruction experts (PhD level faculty members). As we will discuss in the full paper, the introduced model sees the curriculum as an integrated phenomenon and as a participative result of all those interested to the curriculum and its stakeholders.

Key words: National Curriculum, curriculum Adaptation, Model, Multi-grade Classrooms

Multi-grade classrooms are known by different names in varied countries; some of them are following: composite, combined, double classes, mixed (Veenman, 1995, cited in Moen, 1995). These classrooms with each name are the classrooms which 2 or more grades led by one teacher (Russel, 1998).

All the countries, from less-developed to developed, have these types of classrooms. As the surveys (APEID, 2003) show 40% of Australian northern borders, 20% of Frances, 35% of Sweden, and 30% of Wales classrooms are multigrade. Since a long time ago, these classrooms there were in Iranian education system. According to statistics of 2004-5 academic years, there are 47 thousand multi-grade classrooms in which 1 million students going to study (Iranian EFA National Act, 2004).

The existence of the classrooms can be considered from two main aspects: philosophical/attitudinal and administrative (Aghazadeh and Fazli, 2005). Those who justify the existence of these classrooms from attitudinal aspect believe that students of these classes have cognitive and social superiority to mono-grade students. In addition, students of these classrooms are more competent in communication skills in comparison with mono-grade students. In contrast with multi-grade classrooms students, mono-grade students' anti-social behaviors are high and their mental health are low (Nyler, 2000; Maccoby, 1984; Manitoba, 2003; McClellan and Kinsey, 1996).

Some believe that multi-grade classrooms are arising due to a few factors such as: socio-economical status, geographical situation, remoteness and arduousness (Katz, Evangelou and Hartman, 1990; Barry, 2001; Brunswic and Valerin, 2000). Samadian (2002) notes that in rural and suburban when the number of students is under-standard in each grade, multi-grade classrooms are arising.

However, in each country existence of multigrade classrooms can be justified at least from two aforementioned aspects. In Iranian education system the main factor is lack of students' number in each grade to hold mono-grade classroom. In some cases, the reason to arise these classrooms is lack of teachers, remoteness, and geographical conditions (Samadian, 2002). Recently, less-developed and developing countries, also Iran consider other reasons to hold multi-grade classrooms, such as following:

- Overcoming to lack of teacher shortage, particularly in rural and remote areas;
- Being cost-effectiveness of multi-grade classrooms and increasing access rate to basic education; and
- Providing conditions for realizing Millennium Development (MDG) and Education For All (EFA) goals (Juvane, 2005, P. 50; Iranian EFA National Act, 2003).

Whatever, the important case is that these classrooms are facing many challenges, such as policy making, attitudinal changes, curricula, teaching and learning material (Juvane, 2005, pp.9-11). The four proposed challenges for multi-grade classrooms in the literature are true about Iranian multi-grade classrooms. This research has targeted one of aforesaid challenges and is going to develop a model to adapt national curriculum to multi-grade classrooms.

Problem Statement

Out of 7,513,015 primary level students, 3,131,151 students are schooling in the rurals and remote areas. One million primary level students are also schooling in the in the villages (Iranian EFA National Act, 2004). The rural multi-grade classrooms' curricula are the same as urban mono-grade classrooms. In fact, the mono-grade curriculums centrally prescribed into multigrade classroom students. While, the multi-grade classrooms are from mono-grade classrooms by nature.

In other hand, because of the increasing rate of migration from rurals to urban areas, the number students in village schools are decreasing. Consequently, this phenomenon adds to the number of existing multi-grade classrooms. Unfortunately, it couldn't be find any action in policy and action level for the case of multi-grade classrooms.

Although, the multi-grade classrooms are seen as a structural malfunction of education in Iran, the education experts in world level are evaluating them as a new pedagogical opportunity (McClellan and Kinsey, 2001; Goodlad and Anderson, 1987; Katz et al, 1990; Marshak, 1994).

As it has suggested in the book of "Independent Together" (2003), "not only the multi-grade classrooms are not the challenges that should be deleted, but also they are the sources which can promote levels of learning" (PP. 1-6).

According to positive role of multi-grade classrooms in increasing the levels of learning (Manitoba, 2003; Kinsey, 1998; Macoby, 1992) and the role of curriculum as a plan for learning (Taba, 1962) it is obligatory to provide a proper curriculum development or curriculum adaptation model for these classrooms. However, the existing curriculum development model(s) have not relevancy and potency to provide efficient curriculums for the multi-grade classrooms. So the main question is that "which curriculum adaptation model is relevant for providing multi-grade classroom's curriculum, and how much the model is valid"?

Objective

The main objective of this study is "designing and validating national curriculum adaptation model to provide multigrade classroom's curriculum".

Necessity of the research

Multi-grade classrooms can be considered from two viewpoints: positivistic and pessimistic (Blum, 1979; Blum, Kragelund and Pottenger, 1981; Edmonds, 1979). In the Iranian education system, one can not find any proper action even for removing of these classrooms as a challenge or strengthening of the classrooms as a new pedagogy. The important point is that after long period these classrooms have any form of adapted curriculum on the basis of regional situations.

This research was done according the following facts and realities:

- The number of these classrooms are very high (1 million) and couldn't be ignored statistically;
- Learning, mental health and social skills are promoted and facilitated in these classrooms;

- Up to this time there isn't a distinguished curriculum development or curriculum adaptation model for multi-grade classrooms in Iran and abroad (Katz et al, 1990; Vincent, 1999).

Operational Definition

Curriculum development model. In this research curriculum develoment model refers to a systematic orientation for curriculum development with the following components:

- *Analysis*
- *Design*
- *Development*
- *Implementation*
- *Evaluation (TEC, 2004)*

Validating. refers to assessing of designed curriculum adaptation model to curriculum development for the muli-grade classrooms.
Multi-grade classroom. includes two or more grades in a single room with a teacher who facilitate all the grades.

Methodology

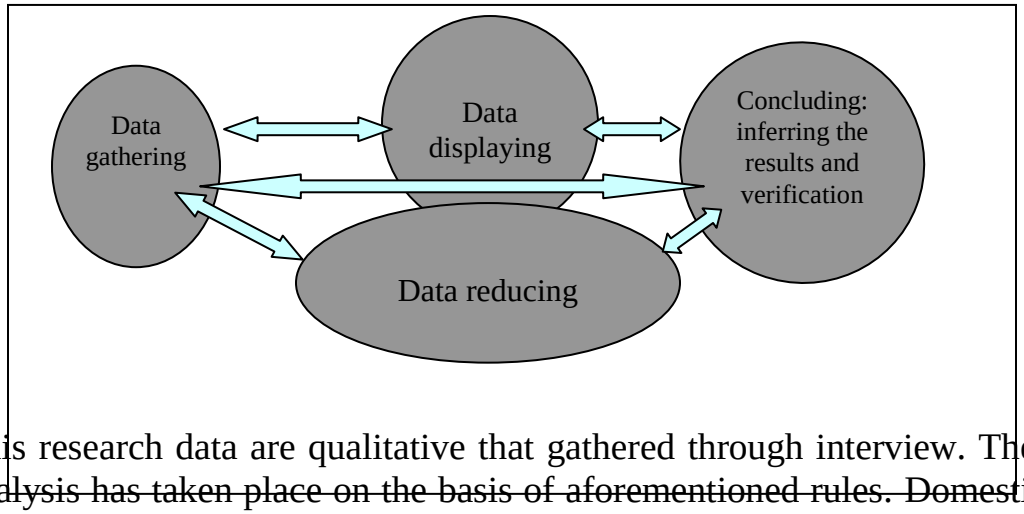
Sampling Method. The convenience sampling method was used to select samples from domestic and abroad education experts. The reason for using the method was conveniency of the target population and their homogeneity. When the target population members have homogeneity the expected results from the sample will not differ from random sampled population (Ross, 2005). The designed model was validated by whole population, because the model introduced to 15 expert curricularists. The time of curriculum experts was fully competent in the case and from well-known universities in country level. So it wasn't possible to use random or non-random sampling method to select a sample.

Interviewees. The target group for interview was 15 curriculaist from well-known sate university faculties and 90 domestic and out the country experts on education. The selected education experts were immediate supervisors and mentors for multi-grade and primary education sections and they were responsible for teacher recruiting and content selection.

Instrument. The semi-structured interview and documentary analysis methods was used to provide needed data.

Findings. In this section results of the study and validated curriculum adaptation model for multi-grade classrooms will be introduced.

Data analysis method. In qualitative research, data are reducing by nature (Frechtling and Sharp, 1997). The data reducing process in qualitative research refers to the trend of selecting, focusing, simplifying, abstracting, and converting the data. After reducing the data on the basis of a data reducing process, results are introducing through texts, graphs, charts or tables (Miles and Huberman, 1984). Another critical step to analyzing qualitative research data is inferring the results and verification of them. Inferring the results and verifying of them refer to reanalysis and mean finding and reviewing of the process of inferring the meaning (Coffery and Atkinson, 1996). The aforementioned ideas are showing in the following figure (Miles and Huberman, 1984).



This research data are qualitative that gathered through interview. The data analysis has taken place on the basis of aforementioned rules. Domestic and out of the country education experts was interviewed to gather data on existing challenges of curriculum implementation in multi-grade classrooms and curricularists interviewed to validate designed curriculum adaptation model to provide curriculum for the mentioned classrooms. Both of the two type data after gathering reduced for the purpose of inferring meaning and verification. In the process data reduction, 60% concurred items was kept, and accepted as reliable items for model building and validation of the proposed model.

Designing the Model

For purpose of designing the curriculum adaptation model, the following trends were considered as main action points:

- Studying the related documents for the sake of informing on the actions and context,
- Interviewing with experts for gaining facts on needs and realities of curriculum implementation in the multi-grade classrooms,
- Designing the first draft of national curriculum adaptation model,
- Validating of designed model on the basis of competent university masters viewpoints.

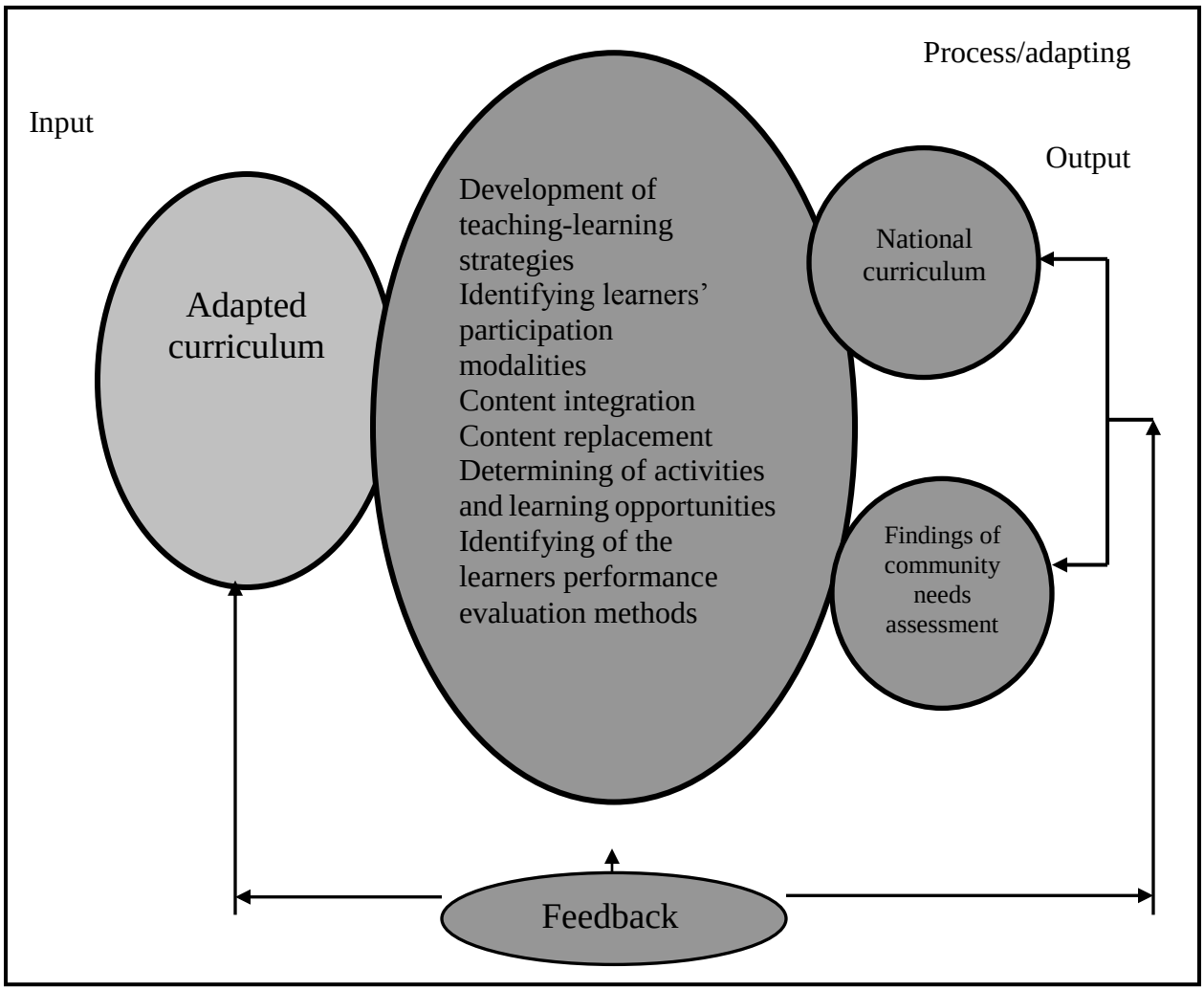
Results of the study

To provide answer of the question from validity of the designed model, the model introduced to 15 university faculty members. It was strived in interviews with the curricularists to explain the current situation of multi-grade classrooms' curriculum in Iran and other regional countries. The semi-structured interview has made a vast reflection opportunity for interviewees to review and criticize the designed model from various aspects. The

following model is validated form of the first draft of target model. The first draft model has had following steps:

- Analyzing of situation of the community;
- Stating of Purposes;
- Providing the curriculum content;
- Identifying the teaching-learning strategies;
- Determining of the measurement and assessment methods;
- Organizing and integrating;
- Adapting and implementing of curriculum;
- Evaluating of the curriculum.

However, the following figure is resulted from the critics of curricularists and is validated form of curriculum adaptation model for multi-grade classrooms.



Elaboration of the curriculum adaptation model

The multi-garde classrooms are mixed and a single teacher has to lead and manage all the grades at same time. Teaching in multi-grade classrooms inevitably is taken place in one room schools. There also another difficulties in managing muli-grade classrooms such as task and time management, and discipline making. These facts make it obligatory to use different forms of curriculum in the multi-grade classrooms.

Elaboration of the curriculum adaptation model for the multi-grade classrooms will give a clear cut view. In the following sections the designed model's components will be described. The components of curriculum adaptation model are following: national curriculum and results of needs assessment as **input**; teaching-learning strategies, modalities for leaners participation, content integration, content replacement, identifying activities and learning opportunities, and determination of learners performance evaluation as **process**; adapted curriculum as **output**; and self-evaluation on the basis of adapted curriculum as **feedback**.

Input. includes two main elements-national curriculum and results of community based needs assessment.

National curriculum. is designed on the basis of Education System Dominant philosophy and the national expectations. This curriculum just takes a general picture from students and their needs. In other word, the curriculum includes national standards.

Community-based needs assessment results. considers the site needs and the conditions of multi-grade classrooms. These considerations are necessary to providing effective curriculum in the regional level. In other word, the results of needs assessment provide the needed information to developing of effective curriculum for multi-grade classrooms. The needs assessment results are referred as inputs for curriculum adaptation process.

Process/Adaptation. In the framework of adaptation, multi-grade classrooms curriculum are developed on the basis of inputs and the results of needs assessment. In this regard, considering of following items in developing of more relevant curriculum the classrooms are most suitable:

- ***Development of teaching-learning strategies.*** **In the case of curriculum development for multigrade classrooms, teaching-learning strategies refer to teacher's methodologies for the course delivery and students strategies for learning. The teaching-learning strategies are developed based on characteristics of teacher, learner and the nature of curriculum. Furthermore, the family, cultural, economical, and social backgrounds of**

learner should be considered in determining of teaching-learning strategies.

- ***Identifying learners' participation modalities.*** **Multi-grade classrooms just led by one teacher and s/he has taught two or more grades solely. The fact is that a single teacher can not undertake all the teaching activities by him/herself. Necessarily, the teacher has taken two or more assistants from the class to do some activities such as: peer teaching, discipline management, learning performance monitoring, and evaluation and so on. The older students even can run ahead the class as the teacher. In physical education, social studies, sciences classes, for example, 5th grade students can teach the lower grade students.**

- ***Content integration.*** **Up to this time, mono-grades curriculums, especially the contents of the aforesaid classrooms are delivered in the mutli-grade classrooms and the teacher for overcoming to the difficulties of the content delivery inevitably has deleted some courses such as arts, physical education and composition from his/her programme.**
  However, there are some curriculum contents that have common goals and objectives. These are the signs that make opportunity to integrate the contents of curriculums and to reduce the content load for the multi-grade classrooms. In fact, this is a way to avoiding from deleting or ignoring some courses from the classrooms programme.
- ***Content replacement.*** **Some curriculum contents aren't relevant to the students' life facts such as geographical location and their culture. So students with full of interest and effort aren't able gain a meaning full learning. While it is possible to replace some prescribed contents with regional and local cultures contents, but in line with national curriculum goals and objectives. Utilizing this strategy makes the multi-grade classrooms more adaptable.**
- ***Determining of activities and learning opportunities.*** **Learning opportunities and activities are suitable context for curriculum delivery and constructionism for learning. A suitable context or environment for learning can motivate students for learning makes them the most attentive. In addition, learning opportunities and activities can raise student survival rate in the school life cycle.**
- ***Identifying of the learners performance.*** **Although, the evaluation in schools or in the classrooms is dependent to the curriculum, but it can be taken place in different forms and methods. Evaluation in the mono-grade classrooms is taken in the classroom. But in the context of multi-grade classrooms, evaluation can be more authentic and realistic, because the teacher can evaluate his/her students' performances in real world. In the multi-grade classrooms, evaluation can be most participative and older students can help the teacher in evaluation.**

Output. includes the adapted curriculum which has more relevancy to the local community specialities and students characteristics. In other word, the

adapted curriculum has dual feature: loyal to the national curriculum and relevant to the local community facts and the realities of the multi-grade classrooms.

Feedback. In the designed curriculum adaptation model, feedback refers to the teacher's self evaluation from the adaptedness of the curriculum. Through a self-evaluation, teacher can find the weakness, strengths, and threats of the curriculum which adapted by him/herself. The self-evaluation information will be used by the teacher for some important reviews in the adapted curriculum.

Principles for the designed model

The curriculum adaptation model for the multi-grade classrooms is on the basis of the following principles:

- School leads the process of curriculum development;
- Local communities and students' needs are as the infrastructure of the curriculum;
- National curriculum adaptation on the basis of local communities and students' needs;
- Participation of community members and other stakeholders in the process of curriculum development;
- Integratedness of the curriculum;
- Flexibility of the proposed model against the new emerging needs;
- Sensitivity of the proposed model to the issues and specialities of the multi-grade classrooms;
- Responsiveness and accountability of the model against the needs and demands of local community;
- Authenticity.

Outcomes of the designed model

It was supposed that using the proposed model will:

- be satisfying for the local community members and other stakeholders;
- be satisfying for the interest groups;
- be motivating for parents;
- be increasing in school enrollment and collaboration with school from parents and local community side;
- be promoting in school achievement level;

- be enhancing in quality of education;
- be increasing in survival rate of students in the life cycle of schooling.

Curriculum adaptation model vs. other models

Curriculum development models are rising in response to a critical need or an essential question. The proposed model to developing curriculum for the multi-grade classrooms follows the same rule. The model comes from existing needs of the multi-grade classrooms for an effective curriculum. In the multi-grade classrooms at least two or more grades are taught by a single teacher. In other hand, multi-garde classrooms' students are also multi-aged and the evidences show that even students of a grade are at same ages. If in the mono-grade classrooms one subject is taught by a teacher, in the multigrade classrooms different subjects are taught at the same time. These facts make a difference between the multi-grade and mono-grade classrooms' curriculum development models. The following are the main distinctive points of the proposed curriculum adaptation model for multi-grade classrooms:

- the data of the proposed model for curriculum adaptation for the multi-grade classrooms comes from local community's realities;
- the curriculum stakeholders directly are participated the process of curriculum development;
- learners are active in the process of curriculum delivery;
- according to the pre-assumptions of the proposed model, the teachers not only accepted as curriculum implementation agent and facilitator, but also are users-developers;
- peer teaching is one of main activities in the teaching-learning process;
- students performance and achievements are site-based;
- the proposed model for curriculum adaptation is on the basis of local communities facts and national curriculum standards.

Conclusion

The curriculum models plays as guidelines for curriculum makers in the process of curriculum development for the vast majority of target learners. Curriculum development models in the structure of different education systems are operationalized in different levels. Curriculum developments on

the basis of the models in different levels imply their effectiveness and limits.
In the education system of I. R. Iran, the curriculum development is taken place centrally. As some of curriculum writers (Bary, 1996; Blum, kragelund and Pottenger, 1981; Jully, 2005) suggest many facts and realities of the local communities and learners are ignored in the process of centralized curriculum development. Inevitably, to avoiding from these deficiencies and considering multi-grade classrooms' nature, the national curriculum adaptation model has designed and validated to integrate the prescribed national curriculum into realities of local communities and leaners needs.
For purpose of the research, in addition to document analysis, 90 domestic and abroad education experts have been interviewed. Also the designed model has validated by 10 full competent university faculties.

Suggestions for future researchers

Although the designed national curriculum adaptation model has developed on the basis of multi-grade classrooms nature and local communities' needs and demands, but it is suggested that:

- the model validated experimentally.
- the model assessed through a field research, because it is designed just on the basis qualitative data.
- there are needs for considering different forms of national curriculum adaptation for multi-garde classrooms.
- there is need for comparative study of the educational outcomes of the new curriculum on the basis of the proposed model for multi-grade classrooms and the current curriculum.
- there is need for feasibility study for using the proposed model.

Suggestion for use

- For the application of the proposed model there is need for considering following actions:

    - Administrating informing seminars for managers, senior education experts, especially for senior specialists in primary education curriculum development departments.
    - Holding workshops for education experts and curriculum makers.

- Introducing the proposed model for and training the multi-grade classrooms teachers.
- Providing detailed curriculum development guide on the basis of the proposed model for national curriculum adaptation.

References

Aqazadeh, M. and Fazli, R. (2005). A guide for teaching in the multi-grade classrooms, Tehran: Aeej Publication, Inc.

APEID (2003). Indicators of the performance of educational systems. APEID Occasional Papers.

Bary,M.(1996). Decentralization of education, World Bank.

Berman, P. (1981) Educational change: An implementation paradigm. In: Lehming R, kane, M. (eds.) (1981). Improving Schools: Using What We Know. Sage, Beverly Hills, California, pp. 253-86.

Blum, A. (1979). Curriculum adaptation in science education: Why and how? Sci. Educ. 63: 693-704.

Blum, A., kragelund, Z., and Pottenger, F. (1981). Development and evaluation of a curriculum adaptation scheme. Sci. Educ. 65: 521-36.

Burnswic, C. and Valerin, D. (2000). Multi-grade classrooms in Asia and Pacific. Bangkok: UNESCO.

Coffery, A. and Atkinson, P. (1996). Making sense of qualification data: Complementary Research Strategies. Thousand Oaks, CA: Sage.

Edmonds, R. (1979). Effective schools for the urban poor. Educational Leadership 37: 15-18.

Goodlad, J. (1977). The scope of the curriculum field. In: Goodlad J. I. et al. (1979). Curriculum inquiry: the study of curriculum practice. McGraw-Hill, New York, pp.17-41.

Goodlad, J., and Anderson, C. (1987). Curriculum inquiry: The study of curriculum practice. New York: McGraw-Hill.

Frechtling, J. and Sharp, L. (1997). User-friendly handbook for mixed evaluation(edited), Directorate for education Human Resources.

Juvane, P. (2005). Education systems in new era, Paris: UNESCO.

Katz, L. G., Evangelou, D., & Hartman, J. A. (1990). The case for mixed-age grouping in early education. Washington, D.C.: National Association for the Education of Young Children.

Katz, L., Evangelou, D., and Hartman, J.A. (1990). The case for mixed-age grouping in early education. Washington, DC: NAEYC.

Maccoby, E. (1984). Middle childhood in the context of family. In W.A. Collins (ED), Development during middle childhood: In years from six to twelve (pp. 184-239). Washington DC: National Academy Press.

Manitoba (2003). Independent together, Supporting the Multicultural Learning Community, Winnipeg: Manitoba Education and Youth.

Marshak, D. (1994). From teachers' perspectives: The social and psychological benefits of multi-age elementary classrooms. Paper presented at the annual conference "Emerging Images of Learning: World Perspectives for the New Millennium", Chicago, IL.

McClellan, D., and Kinsey, S. (1996). Mixed-age grouping helps children develop social skills and a sense of belonging. The MAGnet Newsletter on Mixed-age Grouping in Preschool and Elementary Setting, 5(1)1-3.Retrived May 8 2005 from: www.ericeece.org/pubs/mag/mag05.html#a.

Miles, M. B. and Huberman, A. M. (1984). Qualitative data analysis, 16. Newbury Park, CA: Sage.

Miles, M. B. and Huberman, A. M. (1984). Qualitative data analysis, 16. Newbury Park, CA: Sage.

Ministry of I. R. Iran (2004). National EFA Act, Tehran: Monadi-e-Tarbiat Publication.

Moen, B.R. (1995). Multi-grade education time for a change. Paper for ED. 702, Psychological Foundations of Education.

Naylor, C. (2000). Split – grade and multi-grade classes: A Review of the Research, BCTF Research Report.

Russel, V.J.; Kenneth, J. and Rowand, P.W. (1998). Effects of multi-grade classes in students progress in literacy and numeracy. Paper Presented at Annual Conference of the Association for Research in Education.

Taba, H. (1962). Curriculum development: Theory into practice, New York: Harcourt Brace.

TEC. (2004). Systematic approach to training, Virginia: United States Marine Corps.

Veenman, S.(1995). Cognitive and non-cognitive effects of multi-grade and multi-age classes, Review of Educational Research, 64 (4).

Vincent, S. (1999). The multi-grade classroom: A resource handbook for small rural schools, Oregon: Northwest regional Educational laboratory.