RESEARCH ARTICLE

THE ROLE OF A LOCAL HISTORY SCHOOLS NETWORK IN COLLABORATIVE ACTION RESEARCH

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Manuscript Info

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Abstract

The study investigates the impact of a Schools Network in facilitating effective implementation, formative evaluation and collaborative mutual learning. The Greek Schools Network (C Gymnasium Grade: average students' age 15 years) implemented a common programme on Local History and Architectural Heritage of rural areas within a collaborative action research framework. The research has shown the decisive contribution of the School Network's collaboration in creating an appropriate context for self-evaluation and mutual learning, in supporting the implementation of the innovative programme in the traditional Greek schools, in introducing the teachers into the research methodology and in approaching more holistic the implementation and evaluation of the programme.

INTRODUCTION

During the last decades Greek teachers have been constantly asked to introduce new teaching methods and to implement innovative programmes in their everyday practise. Nevertheless though they are usually accompanied by relevant teaching packages, the in-service training and supportive advice needed for their professional development is insufficiently provided. There is a lack of enough seminars that combine the theory with good practices. Action research, that is a research strategy that includes self evaluation and teachers-researcher collaboration, has been developed as a promising answer to this problem.

This project investigates how the teacher can become a researcher by learning how to consistently evaluate his everyday practise and constantly improve his teaching methods taking into account the students' outcomes. Furthermore it examines the potential of teacher collaboration, experience exchange and mutual learning within a Schools Network that implements the same programme. Open classes and teachers' teamwork are rare practise in the Greek schools.

The uniqueness of the study lies in that it investigates the potential of action research within a Schools Network based on the implementation of a Local History Programme for a whole school year.

GOALS

The current project investigates the impact of a Schools Network, specifically of one that implements a common programme within a collaborative action-research framework, in facilitating effective implementation, formative evaluation and collaborative mutual learning.

2. RESEARCH METHODOLOGY

a.   Research issues

The research presented here is part of a broader one concerning a case study that aimed at the design, implementation and evaluation of an innovative programme within a Local History Schools Network using the

collaborative action research strategy. The research project was implemented two continuous years (pilot and final implementation), 2011-2013 in Greece. Though the goals of the programme were reached, the research outcomes regarding the students' achievements and the evaluation of the programme will not be included in this study due to the length of the presentation. Here will be presented the part of the research that investigates the contribution of the Schools Network collaboration within an action research framework regarding the teachers' professional development.

b. Research questions
The research questions addressed in this article are:
Can collaborative action research within a Schools Network facilitate the implementation of innovative programmes?
How and to what extent can the teachers' collaboration in a Schools Network effectively contribute to their professional development in terms of:
- effective teaching,
- self evaluation,
- reflection on their underlying perceptions,
- team collaboration and mutual learning and
- meaningful teacher training in action?

c. Methodology approach

The Local History programme
The research was based on the design, implementation and evaluation of a Local History programme that was applied in a Schools Network of teachers and students aged 14-16 years, lasting one school year, two hours per week. The Local History programme and the educational material were designed taking into account research data from the international literature on the development of historical and critical thinking (Dickinson and Rogers 1984) and on responsible environmental and social behaviour (Hungerford *et al.* 1988). The didactic methodology was experience-based and included problem solving activities, games, role playing, simulation, and field studies. During the programme the students had to research their villages' local history through the study of the architectural heritage.

Action research
The design, implementation and evaluation of the programme were conceived as a single whole undertaken by all participants (Elliott, 1991). This unified concept of education and research is employed in collaborative action-research. This type of research was chosen, because it attempts a more holistic approach to educational phenomena, demands the collaboration of all participants (researcher, teachers and students) and the training of the teachers in action (Carr & Kemmis, 1986). Action research is conceived as a general research strategy that is both adaptable and eclectic. Equally no research method was used exclusively. Beyond the dichotomy between qualitative and quantitative methods (Kidder & Fine, 1987), a range of techniques were used that enabled us to look at what was going on and at each problem separately from a variety of angles and points of view. Since the research aimed at examining the potential of the application of collaborative action research for the design, implementation and evaluation of the programme, the evaluation was carried out throughout the programme and was formative. Gathered evidence led to changes and important feedback was gained for the improvement of the quality of the implementation. Evaluation that is interested in the outcomes can and should be formative (Cronbach, 1988). The determination of expected outcomes did not restrict the scope of the research, but was used as Ariadne's thread for the whole pedagogical process, though side or unexpected effects and outcomes were of equal importance. Processes need to be considered in the light of the quality of learning outcomes and vice versa (Elliott, 1991).

For this reason the task of evaluation was undertaken by all participants (teachers, students and researcher in collaboration) of the School Network, and evidence was gathered through qualitative and quantitative methods. This contributed to the study of the educational processes in their full complexity, to their interpretation and evaluation from every participant's point of view, to the deeper investigation of questions related to action research and to the effective collaboration of the Schools Network.

Triangulation was used in order to investigate the research questions in depth and to reach more reliable results by cross-checking evidence from different sources gathered with a variety of tools (Stenhouse, 1988).

d. The sample

The teachers

The Local History Schools Network consisted of teachers that implemented the programme with their students in different schools. In every participating school there was a Pedagogical Team of two or three teachers working together for the implementation of the programme. Most of them didn't have previous similar experience. The fact that they had different specialisations would facilitate the interdisciplinary approach of the Local History programme.

The schools

The schools chosen for the Local History Schools Network were situated in rural villages of the Achaia region in Greece and had similar characteristics regarding the infrastructure and the students' identity. These villages were chosen because, in contrast to the Greek cities, they have preserved the local architectural heritage, the typology of the old buildings is similar and they have similar socio-economic characteristics as respects the number of inhabitants, their educational level and jobs (agriculture, the similarity extending even to the kinds of produce cultivated).

The students

In order to study the impact of the programme on all students, and not only on those with particular interests or skills, whole school classes participated in the programme. Concretely the Schools Network consisted of three school classes of C Gymnasium Grade, because students aged 14-16 years can undertake a demanding interdisciplinary research. All students of C Gymnasium Grade from School A (24 students: 19 boys and 5 girls) and School B (21 students: 9 boys and 12 girls) participated in the programme. Out of school C only eight volunteer students participated, who had the previous year experienced the implementation of a programme on the history of their village.

d. Research instruments

Since illuminative evaluation concentrates on examining the innovation as an integral part of the learning millieu, there was a definite emphasis on participant observation, on interviewing participating instructors and students and on the diaries of each person involved. Participant observation was undertaken in the classroom or in the field by the researcher and the teachers. During every activity there were usually two teachers present: a coordinator and an observer. Diaries (students', teachers', researcher's) were written after each unit was completed, that enabled those involved to compare their experience of the situation (Kemmis & McTaggart, 1982). After the completion of each teaching unit, the researcher conducted group interviews with the teachers. These were semi-unstructured, since it is essential to learn both what questions were important to the teachers involved and their answers to questions considered important by the interviewer (Walker, 1988).

Additionally, the written material of the students was studied: drawings, maps, every student's "Village History book", written exercises, essays, recorded material from the classroom activities (like group debates, role-play games) and the results of the assessment games.

Since survey type questionnaires used late in a study can sustain or qualify earlier tentative findings (Parlett & Hamilton, 1988), the same long questionnaire (on knowledge, values, attitudes) was given to the students of the three experimental groups before and after the implementation of the programme and to a control group with similar characteristics (socioeconomic, cultural profile) that was not involved in the programme (C Gymnasium Grade of a nearby school). Personal semi-unstructured interviews of the experimental group students illuminated further the subjects of the questionnaire. The same long questionnaire was given to the teachers before the beginning of the programme.

The statistical analysis of the questionnaires' data did not aim at the generalisation of the results, but at the better understanding of the programme processes in the particular educational context. For the content analysis of the interviews and the diaries were created a system of categories based on the research questions and extensive tables of these categories, which included classified analysis' units.

4. RESEARCH PROCESS

a.   Action research process within the Schools Network

Such a comparative study within a Schools Network demands the existence of a common programme for all participating schools, as regards the goals, the structure and the methods, and the continuous collaboration among the teachers and the researcher-facilitator. At the same time, the structure of the implementation had to be flexible and open to alterations adapted to the needs of each particular school.

The following collaborative action-research process was applied:

The bibliographical study of the subject in combination with the teaching experience of the researcher led to the programme's design concerning the content and particular methodological proposals. Although the educational model determined the basic objectives and the content of the programme, its structure was not closed. Also the educational material was not given from the beginning. Meetings took place before the application of every unit, where the teachers and the researcher discussed the goals, the content and the methodology relative to the needs, the potential of their students and the limitations of the particular educational context. Every teaching unit was applied successively in the schools of the Network, so that the evaluation of the first school's experience could result in its improvement for the implementation in the others. This process was integrated through the final and summative evaluation of the whole implementation.

This implementation fits in Elliott's (1991:54) description of curriculum programmes: they may be viewed as sets of action hypotheses about how to mediate curriculum content to learners in an educationally worthwhile manner. Such hypotheses are continuously tested and reconstructed in the practice of teaching through action research.

Although the research process is embedded in Kemmis and Taggart (1982) and Elliott's (1991) model, side problems arose and were also enquired, whereas we addressed the problems of the limited skills of the students, the teachers' beliefs that guided their practices, the restrictions of the institutional settings etc. In retrospect this is closer to McNiff's model, where side problems may be explored, as and when they arise, without the researcher loosing sight of the main focus of the enquiry (McNiff, 1999).

b. Teachers' training in action

It should be underlined that teachers evaluate their work on a daily basis and change it in accordance with their assessments. In this programme they were asked to determine, investigate and support their impressions with evidence from their work and to explain the consistency of their thinking and practice to their colleagues in the Schools Network. The aim was that the teacher should:

- Recognise the needs and the potential of his students.
- Reflect on his choices and perceptions.
- Determine his objectives and be able to choose appropriate educational procedures and practices in order to accomplish them.
- Know the limitations and the potential of the didactic approaches he uses.
- Know and apply techniques to assess the outcomes.
- Be able to study critically and interpret the outcomes.
- Be able to apply the necessary changes in order to improve his educational task.

As subjectivity is unavoidable, it was necessary for the teacher to support his choices and statements with arguments based on evidence from the school reality.

c. Intersubjectivity

The School Network collaboration contributed to a more holistic approach and intersubjectivity of the programme's implementation. In order to ensure the reliability of the outcomes the following practices were used:

- Evidence gathered from different techniques and tools was cross-checked.
- The evidence supporting the opinions was always presented.
- The opinions and the views of all the participants for the same subject (attributing each to its holder) were taken into account and written down.
- The implementations in different schools were compared, so that the similarities supported the reliability of the data and the differences were interpreted.
- The statistically non-significant results were not ignored, because they are often of decisive importance for the interpretation of a phenomenon.

The essay that described the implementation was given to the teachers in order to judge the consistency of the description with the implementation, with the processes that led to certain choices and with their interpretations and evaluations. According to the literature, the reliability is judged from the fact that the final text can be submitted to the internal criticism of the participants and to the external criticism of the readers (Stenhouse, 1988).

5. RESEARCH RESULTS

5.1. Differentiated implementations

The educational material and the training of the teachers were common to all schools, the age and the socioeconomic identity of the students were similar. Still, there were observed significant differences in the implementations in diverse

school contexts. The results of the interviews showed that, beyond the goals of the programme, the teachers focused on the motivation and the active participation of the students, the difficulties they faced, the efficiency and the usefulness of the educational material, the accomplishment of the objectives during each activity and the practices that ensure a more student-centred approach. For these reasons the implementations were adapted to the needs of the students, to their number, and level and to the limitations of each school context, mainly the time available. The interviews showed that the differences of the implementations were due to two other reasons as well: to the different perceptions of the researcher and the teachers as to the importance of particular themes or activities and to the degree of importance each teacher attached to the accomplishment of particular objectives.

For instance one school gave weight to the understanding of the historic framework that created the particular architectural heritage, whereas another concentrated on motivating the students through pleasant activities rather than on accomplishing the learning objectives. Differences are reflected in the results of the questionnaires. For instance before the beginning of the programme, 95,5% of School A's students couldn't mention ways that would show how the older houses' construction addressed the problem of weather conditions, while after the programme 58,3% of the students could mention such ways. In School C, the 100% wrong answers at the beginning gave way to 100% right ones at the end, because the teacher focused more in the topic. In School B, there was not a statistically significant difference. This was attributed to the fact that this lesson was lost in the weekly time schedule and the teachers didn't insist in that topic.

5.2. Self evaluation

The participation of the teachers in the research was conceived as a way of developing an educational philosophy that would enable them to be independent, creative and effective in designing their work in the classroom. In order to reach this goal, the self-evaluation of everyone involved was essential. Due to the fact that evaluation and open classes are negatively loaded in Greece, it was important to determine the framework of participants' collaboration.

Before the implementation, we gave the teachers the same questionnaire that was given to the students. Its study proved that they were similarly unaware of the basics of how the Local Architectural Heritage reflects and can reveal past events. Nevertheless over time we tried to build a working relationship that would foster mutual learning. In the interviews they gradually admitted their unawareness, the discrepancies between their beliefs and practices, and they tried to learn from each other's experiences and from alternative trials.

A serious problem, which is additionally related to the lack of sufficient time, is that the teachers were more concentrated on what they offered their students than on the impact of the educational processes on them. Reflecting on his teaching a School B teacher claimed: *"If I had the chance to do the programme again, I would try from the beginning to ensure that I would have enough time to check the material and the work of the students, before proceeding to the next unit." (Group interview)*.

The students also judged their involvement in the programme through their diaries that were studied by the teachers, and through interviews that were held with them. The researcher evaluated her work and choices as well, since the pilot implementation highlighted the gap between the consistency with the guidelines of the literature, and their application in particular school settings.

In the interviews they claimed that the clarification of the following guidelines contributed to a climate of confidence and mutual respect during their collaboration:

- The aim is to experiment on alternative didactic approaches (experience-based) and not to criticise the teachers' work. It is the programme (structure, methodology, and educational material) that is evaluated and not they.
- The teachers are not subject to evaluation more than the researcher who designed the basic structure of the programme.
- The teachers and the researcher in collaboration are searching together and are learning from each other.
- The focus is in investigating alternative more effective methods and not in attributing individuals their failures and misconceptions.
- The collaboration is open to personal diversity at all levels.

A question that the teachers had towards the end of the programme, when they realised the successful accomplishment of its goals as assessed through the research instruments, was, whether the students could apply what they had learned in the research of another settlement's heritage and local history. The teachers took the initiative of organising a field study to Plaka, the historical centre of Athens, for all students of the Schools Network. There, the students, using a given questionnaire and without any previous guidance, investigated the architecture of the buildings. The study of the answers showed that the students could accomplish the research. This doesn't mean that they have developed the skills of an adult researcher. But there is a clear difference and improvement as measured against the beginning of the program, and against the check group that has to be attributed to the pedagogical approach of this programme. During the interviews the teachers attributed a significant importance to the selection and organisation of the

learning activities, to the teaching techniques employed, to the functional use of the educational material, and above all to the reflective and collaborative character of the implementation and evaluation.

5.3. Professional development

It is characteristic that in the beginning the teachers underlined their need for more detailed guidelines for the learning processes they were going to carry out, in order to avoid wrong choices. *"I shouldn't do the unit involving the description of the buildings in the classroom, but in characteristic buildings of the village. We would go together with the students to observe the house that each one had chosen to design and study.",* claimed a School A teacher during the implementation of the first units. The teachers, learning from their own and each other's experiences, gradually started to choose educational activities that were more effective, like field studies, small group work in the classroom etc. Understanding the importance of well-organised games for the motivation of the students and for learning, they themselves designed games with learning and assessment objectives. These as well as the educational material they developed were shared among the Schools Network. This improvement was also underlined by the students in their personal interviews at the end of the programme.

During their effort to implement the programme, the teachers were confronted with many barriers. In the interviews they defined them: the relative short time devoted to this student-centred programme, the lack of teachers' and students' experience in research and student-centred methodologies, and the large number of students involved.

Nevertheless the programmes' goals regarding the students' knowledge were at a high degree accomplished as attested by the results of the questionnaires. The significant contribution of the application of collaborative action research within the Schools Network is that it facilitates the interpretation of the results, and shows the impact of certain teaching methods: a precious feedback for the teachers to improve their work. For instance a statistically significant difference (5%) occurs in the questions that controlled whether the students had understood that the economic structure of the past society could influence the architecture of the houses and whether they could give some examples. In this question there was not even one right answer before the programme. The majority of School A's students had additionally clarified basic concepts of the agricultural society, like the economic sufficiency (13,6/66,7%) the single cultivation (0/41,7%) and the multicultivation (0/50%), a difference that occurs in a lower and not statistically significant percentage in School B. During the teachers' group interview this was attributed to the fact that School A's students had more time to work systematically on the creation of their own "Village History Books" in the classroom. They also widely used the "Students' Book", educational material and the teachers collaborated with each one of them clarifying the difficult terms and concepts.

During the implementation the teachers were trained and they indeed constructed assessment tools. They were encouraged to evaluate the impact of their work on the students through the study of every student's "Village History Book", through written questions, assessment games, observation etc. But they had difficulty in learning to construct a questionnaire, particularly for assessing attitudes, like a researcher. Although we believe that a well-trained teacher can definitely achieve this goal, the research objectives and the time needed for the programme didn't allow their extensive training in this field. In fact the roles of the teachers and of the researcher in this programme were complementary.

6. DISCUSSION

The teachers were gradually introduced to research methodology and especially to research thinking. They evaluated their work and improved their practices. Concretely:

6.1. They modified the programme according to the encountered needs

Different trends in the implementation of the Local History programme were obvious. In the literature they are usually related to the knowledge, the interests, the personal educational philosophy and the previous experience of the teachers (Smylie, 1991). This fact developed our understanding of each case by discovering the ways in which it was similar to and different from the other School Network cases. For once more it came out that learning milieus, despite their diversity, share many characteristics.

6.2. They evaluated their work in a more systematic way.

In action-research literature (Carr & Kemmis,1986, McNiff, 1999) research is conceived as an integral element of teaching. Elliott (1991:54) underlines that teaching is a form of research aimed at understanding how to translate educational values into concrete forms of practice. Furthermore one cannot separate the research process of testing hypotheses from the process of evaluating teaching. As the programme went on, through self-evaluation and exchange of experience between the teachers of the School Network, they could choose by themselves the most

effective practices, using criteria like the motivation, the better understanding and more active participation of the students.

The following two tasks are regarded as particularly important:

a. The teachers were trying to search for evidence in order to investigate or/and support their observations or impressions.
b. They also had to share the rational of their teaching process with their colleagues in the Network and prove the consistency between their practices and their underlying assumptions and intentions.

6.3. They improved their educational work.

Despite the difficulties, the experience-based educational processes and the expected learning outcomes of the programme were achieved. This was an ambitious aim for the traditional Greek school, because it demanded an interdisciplinary approach and research activities of non experienced students and teachers as well.

From an action-research perspective the improvement of teaching and the development of the teacher are integral dimensions of curriculum development (Elliott, 1991).

6.4. They judged their underlying perceptions

We regard as particularly important the fact that in the Network they confronted and investigated, through discussion and classroom feedback, the perceptions that shape their practices. For example, the perceptions that a conversation, a field trip or a slide show are a priori student-centred activities or that educational games a priori contribute to students' learning. By evaluating the impact of these activities on their students, they realised that student-centred learning presupposes certain organisational tasks, taking into account the particularities of each school setting and their students' skills. Learning from trials and errors, which they themselves evaluated as such, the teachers gradually organised better, that is to say, with increased awareness of their potential and limitations, the educational activities they chose. Teachers encounter parallel sets of problems, which are found to follow common lines and innovations face habitual difficulties and provoke familiar reactions (Cronbach, 1988).

6.5. They undertook many initiatives

Beyond the above, they set new goals to the programme and they systematically tried to accomplish them. For example the School C school teachers suggested the investigation of the aesthetic values of their students as regards the built environment and we all worked on that by designing questionnaires, educational material, games, work sheets and field activities. Ideas and educational material were exchanged within the Network.

6.6. They collaborated and organized common actions

As stated in the literature we had also to take into account that the schools' collaboration was not done in a neutral or uniform space of ideologies, values, mentalities, characters, but rather in one dominated by complex interpersonal relationships, where disagreements and conflicts are expected (Borich & Jemelka, 1981).

In order to achieve this goal it was essential to structure clearly the framework of self-evaluation and collaboration, a necessity underlined in the literature (Hargie *et al.*, 1996). In fact this facilitated reflection-in-action (Schon,1987) within an appropriate collaborative Network of hierarchically equals. Gradually the schools organized common actions. In the literature it is underlined that in the Network teachers have the opportunities to solve the problems they address through discussion and common action (May & Zimpher, 1988). Beyond their collaboration in the design, implementation and evaluation of the project, they organised together a field trip and research in the historical centre of Athens (Plaka, neo-classical residential architecture). They presented together their work in Congresses and seminars and published articles in Greek educational journals. They took the initiative to reach contact and exchange experiences with schools and institutions in other parts of the world that investigated the same subject. They produced leaflets sponsored by the Greek Committee of ICOM/UNESCO.

6.7. Follow up outcomes

The follow up interviews showed that next year they introduced the methods and the subjects of the programme in the school curriculum (history, language, ancient Greek). As they claimed in the Network they found the emotional support needed for the introduction of such innovations in the traditional school.

The year after this research, most of the teachers involved took active part in university teams on action research, organised Local History and Environmental Education programmes on new subjects in their schools, and/or introduced didactic methods and practices of the program in the school curriculum.

7. CONCLUSIONS

The Schools Network collaboration contributed to the more holistic approach of the programme's implementation and to the teacher's professional development.

- Through triangulation of the evidence we could enquire and understand in greater depth the research questions. The reliability of the outcomes could be better checked.
- Safer and more reliable interpretations of the educational procedures were given.
- The rational of the similarities and the differences in the implementations in the schools of the Network could be more readily identified.

Regarding the teachers' professional development their participation in this research gave them the opportunity:

- to judge in practise their underlying perceptions that guide their work
- to develop self evaluation techniques in order to reflect on their teaching
- to design and implement a variety of teaching strategies and practises in order to implement their goals
- to effectively collaborate, exchange experiences and learn from other teachers.

Above all, a proper context was created for self-evaluation and collaborative mutual learning. Its effectiveness is further attested by the follow up teaching and educational initiatives they undertook after their participation in the research.

Consequently, action-research within a School Network can contribute effectively to teacher training in a consistent educational philosophy, not theoretically but in action, by evaluating their own experiences and checking the potential and the limitations of Greek school settings.

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