Individual versus Teamwork in a Local History Project

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Abstract

This paper investigates the potential of both individual and team work, when the students have to implement a research project and achieve learning goals. The issue is examined through the case study of an interdisciplinary Local History program applied in a Greek schools network (students aged 15 years old) within an action research frame. Difficulties and solutions in team work as well as the extent that individual work can facilitate the students learning are investigated.

Keywords

1.   INTRODUCTION

Though teamwork is often suggested in the educational literature, when the teachers try to engage the students in group work activities, they realize that they have to encounter more problems that they initially may think. These regard both the students' unwillingness to work together and the unsuccessful accomplishment of the assigned tasks. Splitting the students in groups and giving them the assigned task does not necessarily mean that they will indeed work together, nor that they will learn. In order to bridge the gap between the literature guidelines and the specific school setting this research investigates the potential and the limitations of both approaches regarding the students' learning.

This study employs an holistic approach in order to assess the students needs and difficulties and above all in order to investigate the teaching practices and procedures that can facilitate the students' learning. The study presented here is part of a broader research, a case study based on the implementation and evaluation of an innovative interdisciplinary program on Local History within a Schools Network using the collaborative action research strategy. The research project was implemented two continuous years (pilot and final implementation), 2011-2013 in Greece. During the first years' pilot implementation precious conclusions were drawn for next year's final implementation.

2. RESEARCH METHODOLOGY

a. Research questions

The research questions addressed in this article are:

What difficulties do the students encounter when they are asked to work in groups?

When the students have to accomplish a research project, is individual or team work more preferable regarding the learning outcomes?

b. The Local History program

The research was based on the design, implementation and evaluation of a Local History program that was applied in a Schools Network of teachers and students aged 14-15 years, lasting one school year, two hours per week. The Local History program and the educational material were designed taking into account research data from the international literature on the development of historical and critical thinking (Haydn et al., 2003; 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 program the students had to research their villages' local history through the study of the architectural heritage.

The interdisciplinary approach that was applied includes knowledge of basic concepts of architecture and the interpretation of architectural types through the study and the determination of their interrelationship with historical, environmental, social, economic factors. Educational material was created to facilitate the programs' implementation: Teachers' and students' books, power point presentations and selected literature as well.

a. The research

The design, implementation and evaluation of the program were conceived as a single whole undertaken by all participants within a collaborative action-research (Elliott, 1991). 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) and facilitates the interpretation of the students' achievements or difficulties. The formative evaluation was chosen for the continuous improvement of the program's implementation. 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 viewpoints.

b. The sample

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).

In order to study the impact of the program on all students, and not only on those with particular interests or skills, whole school classes participated in the program. Concretely the Schools Network consisted of three school classes of C Gymnasium Grade (9th graders), because students aged 14-15 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 program. Out of school C only eight volunteer students participated, who had the previous year experienced the implementation of a program on the history of their village.

The Local History Schools Network consisted of teachers that implemented the program 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 program. 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 program.

e. Research instruments

There was a definite emphasis on participant observation, on interviewing participating instructors and students and on the journals 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. Journals (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). The students' journals in particular revealed their feelings, their difficulties and their issues regarding the collaboration in groups. 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.

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 program and to a control group with similar characteristics (socioeconomic, cultural profile) that was not involved in the program (C Gymnasium Grade of a nearby school). Personal semi-unstructured interviews of the experimental group students illuminated further the subjects of the questionnaire.

RESULTS

The Pilot implementation

The program was first implemented for a whole year in order to determine the students' knowledge regarding their local architectural heritage and their skills regarding the implementation of a local history research as individuals and as members of a team (needs assessment).

The pilot program was implemented in two whole school classes (9th graders, students aged 14-15) of the same provincial rural school (school E). The same team consisting of three teachers with different specialisations implemented the program in both classes. By keeping variables as constant as possible, that is the socio-economic status, the educational level of the parents, the place of residence, and the school conditions, we thought that we could determine better the needs and the potential of the students. The students had to undertake in small groups a research addressing the following question: why are the houses of their grandparents' time different than the modern ones. Specifically which factors influence the architecture and the traditional houses' typology. They were asked to undertake an interdisciplinary research by examining the historic, societal, economic, and environmental factors that shaped the traditional house types in their village.

The research methodology they had to apply was explained to them beforehand within one teaching hour and an example was applied through a field study. Within a time span of twenty days they had to gather the evidence in groups of four and write it down in each group's "Village Book". The study of the "Village Books" they finally prepared showed that they hadn't investigated thoroughly enough the factors that influence the typology of the houses. When this problem was discussed they claimed that:

a. they couldn't determine the factors that influence the form of architecture
b. during these twenty days they didn't ask for their teachers' assistance
c. only two or three students out of five from each group had worked

The results were significantly improved, when a detailed questionnaire was given to each one of them, as a guide to the evidence and the relationships they were to search for. They were also given guidance for the activities they were to undertake and the methods they should use in order to carry out an individual research in the subject. These resulted in a vertical rise in their interest and in the participation: almost everyone worked and brought the expected texts.

From the conversations with them, the study of their texts and journals and from the observations of the teachers and the researcher it was found that:

a. They had not understood basic concepts of sociology and economy and they are not accustomed to the investigation of cause-effect relationships.

b. In the beginning the students didn't work well in the groups. The barriers were difficulties in collaboration, competition and in the end indifference of the majority. But when the questions for research were given to each one of them individually, most of them worked.

c. The overall conclusion was that the students couldn't undertake the research without systematic step by step guidance, employment of individualized learning methods and more educational material distributed to each one of them.

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The evidence gathered from the pilot study gave us feedback and the outcomes were further studied in the context of the international relevant literature. The pilot implementation led to the improvement of the program for the final implementation during the next school year.

The Final implementation

The next year the program was applied in the School Network. It consisted of three school classes of C Gymnasium Grade (9th graders: 14-15 years), situated in rural villages of the Achaia region. All students of C Gymnasium Grade from School A (24 students: 19 boys and 5 girls) and B (21 students: 9 boys and 12 girls) participated in the program. From school C only eight volunteer students participated, who had the previous year experienced the implementation of a program on the history of their village.

Throughout the implementation the teachers 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, and participant observation. A serious problem, which is related to the lack of sufficient time, is that quite often 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 program again, I would try from the beginning to ensure that I would have enough time to check the material and the work of each student, before proceeding to the next unit." (Group interview).*

Regarding the teamwork the teachers mentioned:

"The groups work well when they are small and when we the teachers are present" (School A teacher's interview)

"There is a problem with teamwork, though you can not always easily detect it. Sometimes a student writes something in his journal and through that you can realize that he is unhappy in his team because someone wanted took had an egoist attitude. The opposite can happen as well. If the team works well, they are all satisfied and they write it down in their journals. In the end they consider it as particularly important to get along within the team well." (School C teacher's interview)

The summative evaluation showed that the program objectives were achieved. The statistical analysis of the questionnaires did not aim at the generalisation of the results, but at the better understanding of the program processes in the particular educational context and the contribution of the applied methods to the students' achievements. In triangulation with the results from the journals and the interviews can contribute to the better understanding of the impact of the methods employed. After the end of the program, the majority of the students (56,3% of school A, 66,7% of school B and 87,5% of school C) could determine two criteria for the choice of the settlements' sites in the past as against 10%, 19% and 12,5% of students of the same schools before the beginning of the program. After the end of the program the majority of school A's (79,2%), school B's (65%) and school C's (100%) students had understood the role of the climate in the typology of the traditional houses.

Regarding the differentiated teaching there was an interesting finding. A statistically significant difference (5%) occurs in the question that checked whether the students had understood that the

economic structure of a society could influence the architecture of the houses and whether they could give some examples. As mentioned above the relationship between architecture and economy was one of the most difficult for the students to determine. In this question there was not even one right answer before the program. The majority of School A's students have 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 each student's "Village Books" in the classroom. The teachers worked with each one of the students clarifying the difficult terms and concepts. In general School A's results were indicative of the positive impact of the individual project work on students' learning. While before the program's implementation only 10% of the students knew the correct answers, after the end of the program 70% of them gave the correct answers,

DISCUSSION

Learning from the difficulties and the failures of the pilot implementation the didactic process during the final implementation that resulted in the successful accomplishment of the program's goals was based on the following principles:

Common problems in team work arose during the implementation. As stated in the literature we had to take into account that the collaboration within a school setting is 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 the goal of working together it was essential to clearly structure the framework of collaboration, a necessity underlined in the literature (Hargie et al., 1996).

Due to the multifaceted character of the interpersonal relationships during both the pilot implementation and the final implementation conflicts and negative competition occurred. The less skilled students were ignored by the more capable ones. Frey (2012) claims that aiming at achieving their goals quite often the more knowledgeable and skilled students in a team undertake the organization, the guidance and the implementation of the basic tasks. The less capable ones either remain their assistances or just indifferent. Consequently the problem was that only a few students from the groups really worked. This was probably due to the above two factors, since when they were given questionnaires for individual research, they all worked successfully. This finding is quite common in programs where the students are asked to undertake a research in groups (Seybold, 1975).

Therefore in the final implementation a different strategy was chosen. The accomplishment of the whole research process by each individual student and the creation of his own "Village Book" facilitated the active participation of each student as well as the differentiated teaching on the part of the teachers.

The efforts for the introduction of innovative programs in the schools are often criticized because they make the same mistake that characterizes the traditional school system. They

encounter the classroom as a whole ignoring the particular needs, skills, interests of each individual student. The result can be that the teaching process and the choices are determined by the minority of the capable students. The majority then cannot follow. This program's final implementation showed that the application of each student's individual research and the creation of the personal "Village Book" can offer a solution to this problem, since each student has the opportunity to undertake every research step and to try to solve the emerging problems by himself. According to the literature each student understands better the research process, because he has to go through all stages and encounter the difficulties (Hungerford et al., 1983). Additionally the teacher can meet each student's difficulties and effectively assist him. Finally all students work to a higher or lower degree, overcoming thus the problem of indifference and personal conflicts.

The questionnaire results mentioned above showed that the school A's results regarding the students knowledge as compared to those from school B were significantly better. The teachers and students had worked more on the "Students' Village Books", individually assisting their research.

Though the results are statistically significant compared to the beginning of the program and the control group still remains the question of the proportion of students that didn't accomplish the expected learning goals. The teachers during the interviews claimed that these results in percentage are seldom achieved during the traditional classes. For them the prerequisites for the achievement of the learning goals are, besides the students' individual work, a smaller number of students and more available teaching time.

Team work skills development is important, not only because they are essential life skills. Research has exhibited that deep understanding of an didactic unit can be reached, when the students have to use the content and the vocabulary of the studied topic in order to communicate and collaborate with their peers in a team (Lee et al. 1996). Therefore team work activities were organized. These were mainly of three types. Verbal interaction during role playing and group debates group. Their local history research findings crosschecking and the creation of every classroom's Village Book. Team constructions of typical traditional houses.

According to the teachers the keys for the successful students' collaboration were the following: the teamwork activities took place in the school classroom where the teachers were present and tried to facilitate the collaboration. As Abercombie (1974) suggests the teacher has to successively give leading roles to each group member and he has to try to support their active participation. Not necessarily by his presence in the group. Simple and specific tasks have to be assigned to each student of the group and to the group as a working unit. The teacher remains an observant ready to indirectly facilitate the collaboration in the team through the task assignment, or questions for discussion.

These teamwork activities were proved successful, since the students in their journals and in the interviews claimed that they have enjoyed the collaboration and that they have learned to work together. Though this is just the first step towards this goal, it is important that they regard their experiences as positive. Then they may want to repeat them. The combined approach of individual and team work during a project's implementation is suggested by many scholars (Marcinkowski, et al. 1990, Hungerford, et al. 1983).

CONCLUSION

For the accomplishment of learning goals the students' individual research is suggested as more effective. Still equally important is to practise teamwork skills in a safe environment, since they are in fact essential life skills.

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