E-learning for Global Citizenship with Conectando Mundos

A South African Experience

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Abstract—**In this paper we discuss the work we have been doing with Connecting World, a global online platform which brings together children from around the world to engage collaboratively, on different topical issues towards finding workable solutions. The project draws on some aspects of collaborative learning to ensure that a rich virtual learning environment is created for learners. Working closely with teachers in their facilitator role, we assist schools and learners from different countries, backgrounds to share their experiences and tackle difficult questions on Connecting Worlds. In this paper, we share our experiences incorporating South African schools on this platform. Through an open ended questionnaire, teachers evaluated the 2010 edition of Connecting World in South African schools on climate change. The teachers also participated in a focus group discussion. From the findings, issues of time, language and technical problems were prominent.**

Keywords-Connecting Worlds; Collaborative Learning; Climate Change.

I. INTRODUCTION

Collaborative learning has over the years become a powerful participatory teaching and learning strategy. It enables students to develop critical thinking skills and be responsible for what they learn and what others around them learn [1]. Although it is a difficult way of imparting knowledge as it requires the teacher to be aware of what each student brings to the class and shares with others, its team work approach and learner-centeredness make it a choice for the discussion of topical issues, which are sometimes hard to teach in a normal teaching environment.

In this paper, we discuss Connecting Worlds, an online platform that gives students from all over the world an opportunity to share experiences and learn in a collaborative manner. Central to the learning that takes place is the Education for Global Citizenship drive of Oxfam, which provides for content and topics used for Connecting Worlds discussions.

The first section of the paper focuses on collaborative learning which forms the bases of the work we do with Connecting Worlds. We then move on to describing the project before we discuss the South African experience with Connecting Worlds. A section of this paper is dedicated to the challenges South African teachers faced as they facilitated the project.

II. COLLABORATIVE LEARNING

Collaborative learning by definition uses teamwork as its main method of learning. It involves joint intellectual effort by students for understanding, solutions and meaning or creating a product [1]. Collaborative learning is about building cooperation and teamwork and getting students involved in the learning process. It is about building learning communities. In a class situation where collaborative learning is used, the teacher takes a facilitator role and allows students to explore content given to them and make sense of it without the teacher teaching or presenting the content. This promotes critical thinking skills in students as they have to engage with the content themselves.

Collaborative learning views learning in five critical ways as outlined by [1]. Collaborative learning views learning as an active, constructive process. In order to learn students must find a way to integrate new information with what they already know. In some cases students might have to reorganise what they already know based on the new information. Learning is depended and influenced by rich contexts. Through collaborative learning students are exposed to challenging tasks or questions which provide a context for which they must use facts and their ideas to tackle the tasks or questions. Collaborative learning also views students as diverse because they bring multiple perspectives to the classroom based on their diverse backgrounds or experiences. Collaborative learning enables students to tap on each other's diversity as a way of learning. Finally, learning is understood as inherently social. Collaborative learning allows students to talk, much of learning happens through talking [2].

III. CONNECTING WORLDS

A. What is Connecting Worlds?

Connecting Worlds is an online multilingual educational platform which allows students aged from 6 to 17 years to work and interact with other students with different cultural, economic and social realities [3]. The work combines classroom activities with networking among students and is carried out in a cooperative manner in working teams of the same age range. Students are drawn from all over the world. Content is available in 7 languages, Italian, Spanish,

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Portuguese, English, Galician, Catalan and Basque. Each year, Connecting Worlds tackles a specific issue related to Education for a Global Citizenship such as labour standards, climate change or poverty and there is a different educational topic for each age group. Education for Global Citizenship is an initiative of Oxfam, which argues that due to globalisation, education plays an important role in preparing children and young adults to survive in the world today [4]. The initiative focuses on a number of topical issues which children and young adults tackle using multiple participatory methodologies such as discussions, role plays and debates. The project was designed by four countries namely Italy, Spain, Malta and Portugal. Connecting Worlds seeks to meet its main objective of fostering intercultural dialogue among students belonging to different social and geographic environments via Information and Communication Technologies (ICTs), which enable mutual knowledge sharing, diverse realities and discovering common problems.

Teachers are central to the success of this project. As a facilitator of this learning process, a teacher can register a class online and commit to assisting learners throughout the duration of activities. Students work in groups on each activity before connecting with a 'working team' on the internet. Working teams are made up of students from all over the world. Presentations of 'working teams' findings and reflections are made to Connecting Worlds, in Spain by students from Spanish schools.

B. *Connecting Worlds in South Africa*

The Connecting Worlds project started in South Africa in 2009. Teacher training started on the 27th January 2009 at Rhodes University, Grahamstown. Learners started activities on 16th February 2009 and finished on 29th March 2009. Schools that are involved are C.M.Vellem, Nombulelo, Nathaniel Nyaluza (all in Grahamstown) and Ngwane in Dwesa. Since the platform used by Connecting World is in several languages, South African teachers and students had to translate the communication they had with students from other countries whose languages are part of the platform. All South African participants communicated in English.

IV. METHODOLOGY

A. *Description of the context and sample*

The four schools that participated in the Connecting Worlds project in South Africa came from a class of 20 teachers who were doing a professional development course at Rhodes University, Grahamstown in the Eastern Cape province of South Africa. The Eastern Cape Province, where all the schools that participated in this project are located, is one of the poorest provinces in South Africa [5]. Marginalised schools in the province are faced with the challenge of basic infrastructure such as decent, secure classrooms [6]. According to the NEIMS report [7], over 6% (395) of the schools in the Eastern Cape Province are mud schools. This figure still stands in 2011 [8]. While over 20% (1177) schools in the province do not have electricity supply [7], 90% of schools (not including private/special schools) do not have a computer lab [7].

The teachers were all registered for an Advanced Certificate in Education in Information and Communication Technologies (ACE ICT). The course caters for in service teachers interested in ICT and learning how to use ICT in their classes. All schools are in the Grahamstown townships. In the South African context, the term township usually refers to 'the urban living areas (often underdeveloped) that during the apartheid era were reserved for non-whites i.e. blacks, coloured and working class Indians' [9]. Townships were usually built on the periphery of towns and cities.

Over the years the ACE ICT course has catered for teachers from marginalized schools, who do not have the capacity to train teachers in the use of ICT (mainly computers) in their teaching. Marginalization is described as 'occurring when individuals or groups are excluded or in the peripheries of dominant groups'[10]. 'Marginalization has roots in geographic isolation, race, gender, class, nationality, ethnicity, religion, sexual orientation, learning disabilities, etc. It most often brings about reduced opportunities to fully take part in economic, political and social processes' [10]. In South Africa marginalization has roots in Apartheid which divided communities, resources and wealth according to race. Since independence the South African government is trying to redress these past imbalances, but most of the previously disadvantaged schools remain heavily under resourced and marginalized.

Most of the teachers in the course were senior citizens. It is interesting to note that most of South Africa's teachers are on average over the age of 40 [11] as the profession struggles to attract young people due to the low salary and lack of status associated with teaching in South Africa. With our involvement in the teaching of this course we have noted how these teachers struggle to grapple with the course that is very much technology driven.

B. *Selection of the sample*

Connecting Worlds project was introduced to the ACE ICT class and the project and involvement of the teacher and their students described. Teachers voluntarily agreed to be part of the project. We must emphasize that we got more teachers who were interested in the project but could not be included in the final number of teachers who participated because their schools did not have computers and or internet connection. Selected teachers met with the Connecting Worlds representative at Rhodes University for training.

C. *Data collection*

Data were collected through an online, opened ended questionnaire. Questions were grouped according to five broad areas. Beside questions on the teachers views on the strengths and weaknesses of the project, we asked questions on the knowledge of subject (of climate change), impact of the project on the students, change to students' behavior and the use of the spaces during the activities. Each teacher prepared this evaluation and presented before the class. We realize that asking participants to present their evaluation might be seen as inappropriate. However, for this project, the

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teachers were made aware that they were the first group to participate on Connecting Worlds in South Africa and that the purposes of their feedback were to help improve the project and ensure that future participants enjoyed the experience. We found that using this open method was useful as teachers were able to add more to others views and it also helped to trigger fresh thoughts and ideas that would have otherwise not been included in the written report.

This was particularly important during the focus group discussion, which focused on the challenges faced during the project and solicited teachers suggestions for improvements. This provided a platform for an open, honest discussion among the teachers.

V. FINDINGS

Data analysis was done through grouping findings into the five themes according to how the questions were grouped in the questionnaire. As we continued to interact with the data, we found that two main themes were prominent and these are presented and discussed below.

A. Valuable lessons from the activity

While computer skills were never the focus of the study, teachers felt that the activity had an added value of increasing student's computer proficiency. Teachers found searching for information on the internet about sources of energy was relevant for students. "It was a good experience to work with the computers…gathering information through internet about the topic". Teachers also said a project like this would help in that it encouraged students to search for information on the internet, once this skill is mastered students will always be able to find the necessary information on any topic and be aware. Teachers shared how students were excited to interact online with students from another country.

For the teachers, the activity was also a learning curve. "We are able to communicate with other people from different countries through the internet. You share ideas with different people. You learn a lot from other people's experiences".

Although it was not possible to talk of real change, as the activity was short, teachers expressed how team work was reinforced. Learners participated quite well in all the activities that were set for them. The project increased knowledge on climate change "looking for information from the internet increase our knowledge, we find out more things about this climate change". However, teachers noted that given enough time for the students to absorb all the information, the project had the potential to form an aware global citizen. One teacher said "my group was between 8 years and 10 years therefore it was not easy for learners to capture the whole information immediately, but they learnt a lot about energy use".

B. Collaborative learning

Teachers felt that the project through its activities gave their students a platform to share ideas with other students from all over the world. One teacher said "They [students] had an opportunity to see and read what learners from other countries wrote and created". This is one of the main objectives of the Connecting Worlds and collaborative learning, to encourage students to tap into their diversity [1] in a classroom situation in order to enrich their learning. The activity also promoted communication and collaboration among students from different countries.

Learning through discovery as has been seen to work in other research [12, 13, 14] was confirmed in the online learning that took place during the activities. "The learners worked independently, they discovered some skills on their own by helping each other. Activities were learner cantered". "They [students] are able to search for information using internet independently",

Group work was the most important of all class work "The actual value of this activity was to develop listening, discussion as well as inventing skills; students were able to share ideas". Another teacher said "group work reinforces working together" and encourages sharing experiences as a way of learning. Allowing for the group work involved all students. "Working in groups taking part in group discussions has involved students in a more participatory and enthusiastic way, because sometimes some children do not feel comfortable working or talking in front of their teacher". "The students know how to work in groups and look for information from the internet".

Teachers found the activities allowed for participatory learning. One stated "Both online activities and classroom activities involved student in a more participatory and enthusiastic way. Creation of a little windmill using different materials was done in the classroom and later it was on the online activity". "In both activities they participated very well because in the classroom activity they move around looking for materials for building a windmill and online activities they were looking for information from the internet".

VI. CHALLENGES

A. Language

Language was mentioned as the biggest challenge. Since all the teachers and students from South Africa were IsiXhosa mother tongue speakers, and not proficient in English language, it was difficult for the students to express themselves within the working teams in English. One teacher said "Learners exchanged with other groups, but because of the language problem they could not read other languages, nevertheless they felt encouraged for participating". Teachers were confident though that the experience motivated learners to practice more with English and to strive to have a good command of the language that serves as a lingua franca on the global scene. Another challenge came from the fact that the default language on the Connecting World home page site is Spanish. Teachers

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struggled at times to change this to English. As a result, there was a discussion about the possibility of translating the website into IsiXhosa so that teachers and students from South Africa can use a language that they fully understand. Localization of websites is on the increase in African languages [15, 16].

B. Technical problems

There were several technical problems along the way, chief among them being Internet connection problems. The schools that took part are part of another project at Rhodes known as Eyethu whose aim is to provide internet connectivity to schools in the township [17, 18]. Schools are therefore provided with a limited amount of internet connection quota after which a school can be disconnected. On a number of occasions, schools found themselves without internet quota and were unable to connect to the internet and students had to wait until the school could connect again to search for information and prepare for their activities. In cases where internet was available, students were allocated limited time to browse the web.

C. Time

Teachers felt that the one day training that they received before the project commenced was too short. There were also teachers who felt the six weeks period of the project was short for the students who participated in the project. More time, it was argued would have given the students time to interact with the data and make meaning changes to their way of thinking. There were also concerns about the timing of the project. The teachers felt that the project fell during times when teachers and students alike were busy at the schools and had to make time during weekends and after schools for the project.

D. Teacher training and facilitation

The teachers said the guide and instructions for the project were not clear enough for them to follow. Since there was no facilitation from the authors during the actual activities that the teachers and students had to undertake as part of the Connecting Worlds project, the teachers said they faced a number of challenges. These included difficulties with registrations on the website and logging in for activities, being unable to retrieve the training manual off the internet and translations. Teachers were confident that with facilitation some of these minor challenges could have been avoided.

VII. SUGGESTIONS FOR IMPROVEMENTS

Three critical areas emerged from the data as pointed out by the teachers; these are time, technical problems, and language. More time allocated for the activities was cited as a possible way of improving the project. Teachers also suggested more training time for teachers, now that there are teachers that have undertaken the project, training can now be done for a longer duration and done at peer to peer level. They also stated the need for a contact person in South Africa who can assist teachers along the way if they cannot access the internet to contact Italy.

While language was viewed as a critical point as it had implication for the whole learning that was intended to take place during the activities. Teachers made a few suggestions towards curbing the problem of language, teachers suggested an easier translation process on the website as most of them struggled "there was a way of translating but it was not easy to do that". Teachers were unfamiliar with other languages and did not know which language was which in order for them to translate it. "Countries should try to state their language they use when responding so that it will be easy to do translations". "We could not identify any foreign language nor could we not read the responses from other countries".

VIII. CONCLUSION

In this paper, we described the Connecting Worlds online platform, which brings together children from all over the world to discuss topics around Education for Global Citizenship. We showed how this project draws from collaborative learning as its theoretical underpinnings. The objectives of Connecting Worlds among others are to foster intercultural communication and learning among students from different countries though the sharing of experiences and their realities through ICTs. The main aim of the project is to prepare students who are able to survive as a global citizen, aware and informed of what is happening around them. With the project growing in the European countries we discussed the introduction of South African schools teachers and students to the online platform. In this paper we focused on the evaluation of the project made by the teachers who participated. Teachers thought the project enhanced teamwork through the collaborative and participatory teaching strategies that were used such as group work. Language, time, technical problems and teacher training and facilitation were noted as the main challenges for the South African experience. Teachers suggested way of dealing with these challenges. We are of the view that the same collaborative and participatory learning strategies as those used in the Connecting Worlds project can be used to development students' critical thinking skills elsewhere.

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APPENDIX

Questions for teachers: Strengths/weaknesses

1. In your opinion what were the strengths and the added value of this type of activity?
2. What are the main critical points of the activity? What could make it more effective?
3. Which part of the activity did you find more relevant and interesting (input online activities in the classroom - group work/research - or in the territory, the exchange between students of different countries, exchange with colleagues from other countries etc.)?
4. As to online activity, which was the impact and value of the work?
5. As for the work done in class, what were the impact and the actual value of the activity?

Questions for teachers: Knowledge on the subject

6. With regard to learning, do you believe that this activity has increased your knowledge and the knowledge of your class in respect to the subject of climate change?
7. Do you believe that an activity/project of this type is really useful for the formation of an aware, informed and responsible citizen of tomorrow?

Questions for students

8. Which part of the activity (online activities, activities in the classroom.) has involved students in a more participatory and enthusiastic way?
9. To what extent has the class exchanged experience with other classes of the group? Have you found that your students have felt encouraged by participating in shared activities with students from other countries and of other languages?
10. Has Conectando Mundos changed the dynamics of student learning (group work, researching materials on the internet)?

Change of behaviour

11. Have you been able to verify a real change of behaviour in class and individual students, regarding the issues studied?

Use of space

12. Did you and your class use other spaces/tools platform (blackboard, forums)? If not, why?