Sharing Knowledge and bridging gaps: Children Teaching Children Computer Skills

Theoretical background

It’s a well-known fact that children nowadays master computer skills at a very early age and often better than adults. Our youngsters also master many qualities usually attributed to grown-ups.

In a book called *Growing Up Digital*, Don Tapscott describes the youngsters, whom he calls the N-Generation (net generation), as:

- **Tolerant, curious, assertive and more self assured and emotionally and intellectually open.**

*The Net Generation summarizes Tapscott, is a generation that combines the values of humanism with societal and technical aspects.*

The aforementioned characteristics, being emotionally open, self confident, tolerant and curious, combining humanism with technical aspects, make the N and digital generation ideal teachers for ICT.

Educational systems (I can mainly attest as to what has been done by the Israeli education system, and partially to what I learnt about the Shanghai education system, where I gave a seminar on the Integration of the ICT in Education, in June 2000), have been investing much time, money and energy in teaching teachers computer and internet skills, sometimes, or should I say often, without spectacular results.

This process of teaching grown-ups a skill in order that later on they would teach it to youngsters, coincides with traditional and old assumptions— that the older teacher is the Ultimate Source of knowledge.

In a world where many children speak the language of computer and the internet as their” mother tongue”, where many of them possess the qualities that make good teachers, it would be most appropriate and only logical to train the children who know, how to teach other children (and adults) computer and internet skills, be it other children in their schools, or children in other schools.
This short paper describes and discusses only one case of children teaching children computer skills: making PowerPoint presentations.

**Project background**

Since 1998 I have been serving as an academic adviser to the Alon school 1-8 in the mate Yehuda region, near Jerusalem. The Alon school is a non-religious school and its population comes mainly from the neighboring Kibbutzim and Moshavim. (two forms of communal settlements, in Israel.)

In 1999 I was asked to work with one elementary school in Mevaseret, the Moreshet school, 1-6. The Moreshet school is a religious school.

In both schools I have been implementing my educational philosophy that of the Dialogue Approach (Aphek 1996).

The Dialogue approach, which is an eclectic approach, maintains that a good educational system is one in which all of the following components are of equal importance and in an ever on-going dialogue: subject matter and information flow, skills, including computer and internet skills, self expression, emotional and social skills, and the values of the specific community in which school is operating.

Much emphasis is given in this approach to computer literacy as a means to achieving much of the above.

The Alon school has been devoting much of its energies to integrating the ICT into its daily routine, and has been blessed with a very dynamic, computer oriented, veteran school headmistress, Ada Mandel. The school has about 32 computers, in the classrooms, 1-2, the science lab, 9 in the library and 13 in the computer room. All the computers are connected to the internet.

Between 1998-2000 all teachers and learners at the Alon school were connected, from school, and many also from the homes, to an intranet in Hebrew: the Telhi network.

Many of the teachers at the Alon school (about 60%) are computer users on various levels.

The computer coordinator at the school, Marylin Metzger, isn’t a computer teacher. She is an English teacher, and maybe therefore, is more open to the idea of fully integrating the computer skills with subject matter, across the curriculum.

Learners at the Alon school use word, powerpoint and to a lesser degree excel, as part of their daily school work. Use of the internet is widespread throughout the school.

Computer skills are being integrated into all subject matter at the Alon school from grade 1 on.
It’s customary for the Alon school learners to tutor peers, younger learners, new immigrants (29 Ethiopian children), and senior citizens, at computer and internet skills.

The Moreshet school

The Moreshet school is a religious-orthodox school, in which boys and girls learn in separate classes.
The school is situated in Mevaseret, a local municipality, near Jerusalem.
The Moreshet school has about 10 computers in one lab with only two computers connected to the internet.
Most of the teachers at the Moreshet school aren’t computer users, and very few use the internet.
The headmaster of the Moreshet school in 1999, Gilaad Marleen, a very open, eager to learn young man, a computer and internet user, was a first year headmaster.
The distance between Moreshet and the Alon school is about 7 minutes ride.

Work in Moreshet

As an academic adviser I mainly work with the headmasters and teachers.
In Moreshet I was asked to work with the teachers of 5-6 grade on implementing the Dialogue Approach in these classes.
My work had several components: Getting the teachers to work as a team, acquainting the teachers with the multi facets of the Dialogue Approach and specifically train them in innovative teaching and learning methods, such as cooperative learning and interdisciplinary instruction and in integrating computer skills with learning skills across the curriculum and not as a separate subject.
My work had some more pedagogic aspects, but since the focus of this paper is how the children in the Alon school taught computer skills to their peers, the children in Moreshet, I’ll skip those.
I met with the teachers at Moreshet once every two weeks, which wasn’t enough.
Due to the many other commitments the teachers there had, it was rather difficult to find more time for meetings.
I connected the 5-6 Moreshet teachers and learners to the closed TelHi Network in Hebrew, and both teachers and learners in Moreshet could start dialoguing (chat) with their counterparts in Alon.
Only a few took the opportunity, due to their lack of knowledge and experience in computer skills.

The teachers and learners in Moreshet were quite dependent on the school computer teacher, who wasn’t always available and had little knowledge of computer communication skills and some knowledge of making PowerPoint presentations, which were an integral part of the program: the work in Moreshet was based on cooperative work on projects, the outcome of which was a PowerPoint presentation. For this we needed some good, skilled help.

Realizing that some drastic intervention was needed as a booster for the children (and teachers) in Moreshet, I came up with the idea of asking the Alon children in 5-6 grade to serve as computer teachers for the children in Moreshet.

I spoke with the headmaster and teachers in Moreshet and the headmistress and teachers of the respective classes in Alon. Both parties felt the experience would be worthwhile and enlightening and that it could have far reaching effects.

It would be important to note here that the Israeli society though very heterogeneous in nature, is very sectarian and we have two parallel education systems: a non-religious and a religious one. The chances of children from a religious-orthodox school (Moreshet) meeting with children their age from a non-religious school (Alon), are very slim, unless an organized attempt to bring them together, was made. Therefore, the meeting between the Alon school children and the Moreshet children had greater importance than just a meeting of knowledge sharing: it was a twofold gap bridging: bridging the gap of knowledge and bridging the gap between the religious and non-religious groups in society.

**Project description.**

On May 30th, after some weeks of coordinating the visit of the Moreshet children in Alon, about 50 children 5-6 grades from Moreshet, came to Alon with their teachers.

At Alon two rooms, the library and the computer lab, one for boys and the other for girls, were ready for the visiting students.

The girls from Moreshet met with girls from Alon and the boys from Moreshet with the boys from Alon.

The assignment was clear: the Alon students were to teach their visitors how to make PowerPoint presentations, each “teacher” and students had to prepare between 3-6 slides.
All Moreshet students prepared prior to the meeting the content material, divided into separate slides and brought with them all the pictures they wanted to scan. In the two full hours during which the two groups met, the assignment was finished, in most cases.

It would be interesting to note that the Morshet children started learning how to make PowerPoint presentations, in mid April, but somehow “things weren’t moving”. After the meeting in Alon all groups (learning was conducted according to the principles of cooperative learning) in Moresehet had by mid June PowerPoint presentations.

Some of the Comments of the participants, before and after the meeting.
Prior to the visit, Ada Mandel, the Alon School headmistress sent to the Moreshet children the following message in the TelHi closed Hebrew network:
“Shalom, Teachers and students from the Moreshet school.
I would like to welcome you to the TelHi network and to commend you for your cooperation with the Alon students. We are very happy to have you at our school and hope new acquaintances and new contacts will be formed.
Welcome and good luck.”

Shaked, (girl) from Alon posted on the bulletin board in the Moreshet forum, in the Hebrew intranet- a huge welcome from the Alon students to the children of Moreshet.

After the meeting, Sara, a student from 5th grade in Moreshet wrote:

Shalom,
I really enjoyed our meeting. I would love to have another session like this one.
I recommend that other schools will learn from this experience and implement this method of teaching. One learns a great deal from such a meeting. Even those who know very little learnt a great deal from the tutoring session.

Eliraz is also a learner at Moreshet, while at Alon, she is sending the following message at the TelHi network:

Shalom,

We are now at Alon, we have just finished working on our PowerPoint presentation and uploaded it to the intranet. We had a great time. Hope to do this again.

Summing up the entire year’s work, Ofra, a homeroom teacher and the coordinator of the program in Moreshet, had the following to say:

Our students underwent a very important and productive learning process which also
skilled them in the new computerized tools. The visit in the Alon School was a great help and I would like to thank again those who organized this visit.

Summary and discussion
There is no doubt in my mind that the new technologies are offering us new ways for learning and bridging gaps in society.
The Alon- Moreshet experiment was successful from certain aspects but unsatisfactory from several other ones.
As far as making PowerPoint presentation is concerned the children in Alon taught their peers from Moreshet, rather well.
Conclusions to be drawn
From other aspects, such as using this meeting as a lever for further meetings between the non religious children at Alon and the religious children from Moreshet, the meeting had no continuation and therefore, it didn’t achieve an important aim..
We also failed to prepare the children at Alon as well as those from Moreshet for the meeting, and didn’t discuss with them such issues as being tolerant and accepting of the other nor did we have a follow up discussion after the tutoring session.
However, on the whole we learnt from this mini- experiment that young children could serve as good teachers for other children as far as computer skills and internet skills are concerned.
Stage 2 of the project
In light of this mini- experiment and the conclusions we drew from it, the Alon school has just started a carefully planned program in which the Alon school children, after proper preparation, tutor children from other schools, religious and non religious, in the neighboring vicinity, in computer and internet skills.
This second stage will last for at least the coming two years.
The first school to be tutored by the Alon school children starting March 4th, is Even Haezer.
This time teachers and headmasters from both schools, are participating in the planning of the program.
A coordinator, Orna Pevzner was assigned to lead the project in both schools.
End note
I strongly believe that our children could and should share the knowledge they have acquired, whether through us, or through others, with other children (and adults) less knowledgeable.

Let's not wait for the teachers to be the source of knowledge in computer and internet skills, let's put the knowledge of children to the use of others and minimize the divide and the huge gaps in society.