

# TEC CENTER: LINKING TECHNOLOGY, EDUCATION AND CULTURAL DIVERSITY

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## ABSTRACT

*To many people, "Israel" is perceived as a "high-tech" nation, but in the same breath, as a "nation in conflict". So why not apply Israel's technological advantage to battle the multicultural conflict within? In this article, we will review the multicultural segregation in Israel, the traditional attempts to bring conflicting groups together, and finally, we will conclude with the TOCE (Trust Building in Online Collaborative Environments) model developed by the TEC center founders, and its' implementation in various academic programs and projects. Research on the programs carried out by the TEC center indicate that structured Information & Communication Technology (ICT) intervention can reduce bias, stigmas, and ethnic prejudice among project participants, and turn them into major technology proficient agents of social change.*

*Keywords: ICT, TOCE, Education, Cultural Diversity, Technology, Trust-Building, Collaboration, Israel, Arab-Jewish Conflict, Online.*

## INTRODUCTION

### *Multicultural Segregation in Israel*

What can bring people from allegedly rival groups together? What can make them cooperate? Is it possible to agree to disagree and still collaborate and respect one another? How can we break down stigmas and prejudice? Israel has been dwelling on these questions for decades, as it is a home not only to Jewish people coming from many different countries and cultures (75.5%), but also to Arabs (20.3%), Christians (4.2%) and others (Ganayem, 2005)

Israelis of diverse religions and backgrounds live close to each other geographically, but are distant psychologically through prejudices and stereotypical beliefs. As a result, inter-cultural tensions and political enmities, differences, rather than similarities, are often in the forefront of public discourse and in the minds of many Israelis (Abu-Nimer, 1999). The polarity is evident mostly between secular Jews, religious Jews and Arabs. Segregation of these three groups is a common reality not only in the way of living, but also within the construction of the educational system.

### *Segregated Educational System*

The Israeli educational system reflects the different

ideological and religious affiliations, as most sectors in Israel have their own school curriculum and often their own teacher training institutes. The Jewish sector is divided into secular and religious streams. The Arab sector includes Moslem Arabs, Christian Arabs, Druze and Bedouins, both religious and secular. The private schools are normally associated with a specific religious or ideological lifestyle. Consequently, in the normal course of events, students from different educational streams seldom have the opportunity to meet or interact. As a result, in this conflict-ridden society, in which daily occurrences and events often serve to further divide rather than to unite, mutual stereotypes are reinforced.

### **Multicultural Projects and Initiations: Traditionally- Bridging between Two Opposing Groups**

Inter-cultural dialogue is essential in a country like Israel, which comprises a broad range of ethnic groups and religions, all of which share a small patch of land. It is vital that groups living in such close proximity meet, identify, and build on commonalities, rather than dwell on differences and areas of potential conflict. Accordingly, there have been various attempts to bring together members of two opposing groups (face-to-face and virtually). (Smoocha,

1989; Maoz, & Ellis, 2001; Mollov, 2006; Ellis, & Moaz, 2007; Kampf, 2011; Maoz 2011).

Maoz (2012) categorizes these attempts into four model types:

### ***Coexistence***

Programs that emphasize the commonalities and similarities, and supports notions of togetherness and cooperation between Jews and Arabs. Such programs seek to promote mutual understanding, tolerance and reducing stereotyping, fostering positive intergroup attitudes and advancing other goals in the spirit of the contact hypothesis. This model was brought to Israel in the 1980's and has been the major dominant model for peace encounters. This model ignores the gap between the two parties.

### ***Joint Projects Model***

Programs that include joint activities to achieve common goals, such as choirs, study groups, mixed soccer teams and online courses and projects. This model has been in Israel since the 1980's. It is similar to the coexistence model and is based on studies showing that working together to achieve a common goal can increase empathy and encourage the formation of a common identity. (Allport 1954; Amir, 1969).

### ***The Confrontational Model***

Programs that emphasize the conflict between the sides in intergroup interactions, as a mean of transforming attitudes. The goal of the model is to modify the construction of identity of minority and majority groups, and to encourage greater awareness of the asymmetrical relationships in Israel. This model is based on the Social Identity Theory, and was first presented and applied by Arab facilitators in the early 1990's who felt that the other models did not answer their needs as a national minority group.

### ***The Narrative-Story-Telling model***

programs in which participants use story-telling to share their personal and collective narratives, experiences and suffering with regards to the Middle East conflict. The assumption of this model is that in order to achieve reconciliation, groups in conflicts need to work through their

unresolved pain and anger by using story telling. In contrast to the confrontational model, this model succeeds in fostering acceptance, mutual understanding and constructive dialogue between rival groups due to the personal stories (Bar-On, 2010).

### **Information & Communication Technology Initiative: Bridging between Three Opposing Groups**

The technological reality of the 21st century provides the tools to further communication between opposing groups and to combat the perpetuation of stereotypes. It allows for in-depth acquaintance with other cultures based on common universal values, thus developing a more open, understanding, and respectful dialogue.

Traditionally, online initiatives facilitated attempts to bring together members from two opposing groups, but in the last decade the TEC center has introduced innovative programs that allow three distinct cultural groups to interact in a life changing learning experience, while improving their technological skills. Secular Jews, Religious Jews and Arabs meet, mainly online, not to talk about conflict or to discuss differences but to advance a joint educational mission. Through these online interactions, they get to know each other as colleagues on an equal basis.

### **The TEC (Technology, Education & Cultural Diversity) Center**

#### ***Background***

The TEC Center develops and implements a collaborative learning model, based on advanced technologies for lecturers, teachers, pre-service teachers and pupils from different ethnic groups and religions, yielding constructive dialogue and cooperation between diversified groups and eventually - tolerance and mutual respect. The Center was established in 2004 by the authors as a collaborative initiative of three diversified teacher education colleges in Israel: Seminar Hakibbutzim College of Education (secular Jewish college), Al-Qasemi Academic College (an Arab Muslim college) and Talpiot College of Education (Jewish religious college). Since 2010 the TEC Center is under the auspices of the Mofet Institute (The center for research and development of programs for all teaching colleges in Israel).

## Main Objectives

- To develop innovative educational models that bridge among cultures, using and applying advanced technologies;
- To train teachers from diverse cultural backgrounds to use the internet and other advanced communication technologies as teaching tools while becoming acquainted through collaborative small group learning;
- To develop online teaching units that encourage acceptance of those who are "different" and make them part of the curriculum in teacher education colleges and schools;
- To create an inter-cultural online community, comprised of the teaching staff of education colleges and schools;
- To generate ties among teachers, pre-service teachers and students from different cultures;
- To stimulate cooperative multicultural ventures among educational institutions and non-profit organizations, as well as with the Ministry of Education in Israel and in other countries facing multi-cultural challenges.

*Target Audience includes:* Academic staff in teaching colleges, Students in the teaching colleges, Teachers in schools and Pupils in schools who collaborate on educational projects.

## The Model based on the rational of "Learn Technology-Practice Coexistence"

The course activities employ advanced internet technologies and are based on a collaborative learning model called the TOCE model (Trust Building in Online Collaborative Environments). This is an extension and adaption of Allport's contact hypothesis (Allport 1954; Pettigrew & Tropp, 2000; Pettigrew & Tropp 2004, Hoter et al 2009) to online environments. The components of the model are illustrated in the following figure (Figure 1):

The model is implemented within small teams from diverse cultures, progressing from online communication (textual, oral, visual) to face-to-face interaction, in order to gradually build trust between participants (Lea, Spears, & de Groot, 2001; Turner et al., 2007; Salmons, 2008, Shonfeld et al

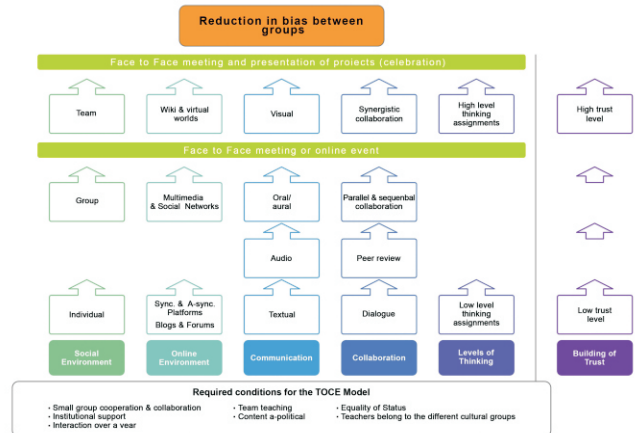


Figure 1. The TOCE Model final

2012). Through online collaboration via joint assignments over a period of at least one year, team members get to know each other, develop mutual respect, eliminate stigmas and reduce mutual prejudices. As a result of participating in those programs, when the pre-service teachers become teachers they are then able to implement the program, with their educators, in the public schools in which they teach and thus serve as major agents of social change, impacting generations of students.

In order for the model to work, the project must meet a number of conditions: Full support from each participating institution; Group collaboration rather than personal collaboration; Neutral topics for joint work rather than loaded topics of conflict; Collaboration rather than competition; Equal status of participants; Gradual process of at least one year, starting with interaction via the Internet, followed by text and voice exchange, and finally, after a positive online experience, face-to-face encounters; "Team Teaching" of the online course by a multi-cultural group of teachers who demonstrate positive collegial cooperation (Hewstone, & Brown, 1986; Amichai-Hamburger, & McKenna, 2006; Krebs, S. A., Austin 2006, Austin & Anderson, 2008; Hobman, & Bordia 2006; Smith, 2008; Hoter, Shonfeld & Ganayem, 2009).

## The Methodology in Practice - TEC Center Programs

The TEC center has developed and implemented a number of programs within the education system:

### Programs for Academic Staff

The programs for academic staff and faculty include, conferences, building a community of practitioners,

Webinars and workshops. In addition, the center provides year long online and face to face support and training for lecturers teaching in the programs (Shonfeld et al 2006, Ganayem, Shonfeld & Hoter 2007).

### *Programs for Pre-Service Teachers*

The TEC center initiated, in 2005, a multicultural IT teaching course, in three multicultural teaching colleges, which soon evolved to nine colleges working together using online collaborative teaching and learning methods (Shonfeld et al 2008). These multicultural, virtual groups collaborate online throughout an academic year during which they complete a number of group projects and tasks. The course is delivered online synchronously and asynchronously based on team teaching and group projects, in a cooperative, non-competitive environment (Johnson & Johnson, 1994; Jarvenpaa, & Leidner, 1998; Stephan, W. G., & Stephan, C. W. 2001). The multi-collegial IT course focuses on computerized tools and online teaching methods (including forums, blogs, wikis, film editing programs, and more). Teachers' to-be learn how to utilize technology in teaching, and they jointly practice the implementation of such acquired technological tools through a given topic or discipline of their choice (Hoter, Shonfeld & Ganayem 2006, 2007, 2009).

The participants work in small multicultural groups of six members, each comes from a different college, and each pair of colleges are affiliated with one of the different cultural sectors, i.e secular Jewish, religious Jewish and Arab. (Polzer, Crisp, Jarvenpaa & Kim, 2006; Walther, 2008; Walther, 2009; Walther & Bunz, 2005). The communication among the groups begins with text-based forums, but as the course progresses, the online educational platforms enable audio communication. Initially, there is a lecture with two-way communication between the lecturer and the trainees (Walther, Slovacek & Tidwell, 2001). Later, the groups begin to communicate directly through audio programs. After a few months of meetings through the Internet almost every week, the students meet either through a video conference or face-to-face. At the end of the academic year, the students meet to socialize and present their group project exhibitions. At that point, the groups' interests have become paramount and the

cultural differences have become irrelevant.

Course topics reflect subjects taught within the formal education system (such as: science, environmental studies, special education, nutrition and health, mathematics, current events, drama, music, etc.). In addition to reading articles, the management of and participation in discussions, and online instruction, the collaborative Internet teaching and learning include the collaborative creation of online and multimedia educational materials, such as: (i) development of an educational game; (ii) creation of a video clip; (iii) involvement in Internet research, including use of various databanks; (iv) using collaborative online tools such as "voicethread" "mindomo" and "google docs" (v) participation in activities incorporating understanding and the implications of safe and secure Internet use; (vi) reflection via personal blogs; (vii) building of treasure hunts and Web quests; (viii) working and collaborating on a wiki, second life and social network.(<http://tecs.macam.ac.il>)

The course is based on online units where part of the work is asynchronous, coupled with synchronous lessons that take place every two to three weeks. Its unique format allows trainees to learn and interact at their convenience in a Learning Management System (Moodle), which includes learning materials, tasks, and discussion forums. The communication component provides a virtual café, where participants can get help, feedback and support on group assignments from their peers. The webinars are conducted through the "elluminate" program. Clear rubrics are given for each assignment including both an individual grade as well as a group grade, in which both cooperation and collaboration are taken into consideration. In order to achieve the maximum grade participants need to collaborate with their partners.

Teachers are potentially major agents of social change and dialogue among cultures in that they are charged with the important task of training the future generation. Therefore, it is vital that students in teacher colleges be exposed to courses on multiculturalism or to exchanges with sectors and groups other than their own. This is true not only between Jews and Arabs but also between secular and religious Jews. As a result, when these students

become teachers, they will reflect their "new" and moderated point of view of the "other" among the children they teach, and thus can help diffuse the long going stereotyping of the "other".

The TEC Center's mission is to have the online multicultural collaborative learning course, available and accessible to every student who is studying to become a teacher in an academic teaching college in Israel. In the year 2011 a new course was inaugurated focusing on biology where participants from different colleges work with the TEC model.

## Evaluation and Conclusion

As mentioned above, in order to evaluate the various projects, questionnaires and interviews were conducted. Questions regarding attitudes between the three groups were given to the students before, during and after the course. For example: "To what extent are you willing to meet... (Arabs, religious Jews, secular Jews)?" "Would you be willing to visit...?" and "Are you willing to help...?"

With some minor fluctuations, the students' answers indicate that participation in the course reduced students' prejudicial attitudes toward the other groups, and in particular between the Jewish religious and the Arab group, among which the wall of preconceived notions, mistrust, and lack of readiness to even listen to the other, appeared to be even greater at the beginning of the course (Walther, 2010). Such change in attitude was movingly reflected in the words of a religious Jewish student living in a settlement in Samaria: "I am leaving this course with an important contribution. Tomorrow, when I teach my pupils, I will be able to say that we are all equal human beings, even if we have our differences. When I say the word 'Arab' to my pupils, it will have a different meaning from what it meant prior to the course." It was also evident from the ongoing observations that an attitude of tolerance and acceptance of differences was developed, and there was a noticeable decrease in preconception of the "other"-the religious, the secular, the Jew, and the Arab. The atmosphere in the face-to-face meetings was at most times pleasant and empathic.

Feedback from the projects' participants indicates that the projects enable communication between students from

different cultures, who do not communicate on a daily basis. The collaborative work presented an opportunity that otherwise would not have existed to get to know the other side. For example M. (from a secular college) stated: "After working together, the understanding of the other sector changes. The work together during the course narrows barriers and stigmas, allowing the other side to get to know the other and breaks down prejudice. The positive experience allows us to view the other culture somewhat differently".

There were initial concerns about cultural and religious differences among participants. For example N. (from an Arab college) reported: "It was difficult for me at first. I had doubts until I got to know my Jewish friends. It was the first time I got to know people from another school". From another perspective, T. (from a religious college) stated: "As an observant woman from the ultra-Orthodox world, I initially thought that I would run into communication difficulties with other course participants, as we are all from different backgrounds, but, to my surprise, I got along with everyone during the course...The course exposed me to a great deal of information regarding people from other ethnic groups".

As to the creation of new friendships distinction can be made between social connections formed during the participation in the project, and those that lasted beyond the duration of the project. Although friendships were developed during the course of the joint cooperation, they did not continue after the course was over. As a result, and in order to encourage the continuous collaboration and dialogues, a social network for course alumni was recently set up (<http://tecs.macam.ac.il>).

While satisfaction was reported in interviews, problems were reported as well, and lessons were learnt for further improvement of the course's format. Most of the problems evolved around cultural differences, language barriers, different study habits, Inter-cultural competitiveness and the selection of loaded topics that heated up the atmosphere. There were also ideological and psychological barriers. For example: It was difficult for orthodox Jewish male students to attend the face-to-face meeting, as it included both men and women; Secular

Jews were anxious about collaborating with both orthodox Jewish students and Arab students, who look different and espouse different religious beliefs; For the Arab students, the barrier was one of language and fear of facing inequality in the group (varying technological levels, different learning pace and style etc.). To overcome the occurring challenges, implement lessons and feedback, and in order to offer courses of highest academic level, the TEC Center's projects have undergone changes, adaptations and improvements over the years, pedagogically, technologically and structurally.

The TEC Center is well aware of the significance of the mandate granted to it by the Ministry of Education to stimulate social change and impact the future generations, through its multicultural collaborative ICT projects and programs, and is charged with a zealous drive to make a true difference!

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