"Windows of culture: An analysis of Israeli ORT school websites"

by

Giladi Michal

Submitted in fulfillment of part of the requirements for the

degree of Master of Education

in the Faculty of Education

University of Pretoria

Supervisor: **Professor Johannes Cronje**

October 2004

Abstract

School websites are useful in providing an additional environment to educate and impart culture to the collectivity. They reflect the collective phenomenon of behaviour and traditional ideas, and at the same time, reflect the efforts made by the educators to teach cultural identity, values and social skills.

The work of renowned anthropologist Geert Hofstede (1991) on cultural dimensions has contributed to the study and reassessment of current theories on software and websites, which interact with the cultures of societies in which they function, and are still relevant to the constant evolution of technology (communication tools) in the educational environment.

The aim of this research is to explore how cultural dimensions are reflected on ORT school websites in Israel. This study in a relatively new field offers educators an insight into new options and innovations offered by school websites, and provides reflections on their use in cultural education. In this context, the importance of this research lies in its contribution to the pedagogical dialogue on culture, and as it is reflected on school websites.

This study applies Hofstede's (1991) work, in which he classifies cultural characteristics prevalent in global organizations into five "cultural dimensions": power distance, individualism & collectivism, masculinity & femininity, uncertainty avoidance, and time orientation, and design expert Aaron Marcus' (2001) interpretation and application of this model to website designs worldwide.

The subject of this study consists of 54 Ort school websites operating in Israel.

The findings on ORT school websites echo Hofstede's characteristics on the reflection of power distance in Israeli culture. However, my findings on Hofstede's three other dimensions – collectivism vs. individualism, masculinity vs. femininity, and

uncertainty avoidance – illustrate a more complex picture, with the elements reflected in differing patterns.

ORT school websites reflect both elements of culture as defined by Marcus (2001) and elements of standardization of website design. In recent years, there has been an upsurge in the software available globally to create and design websites, all using the same basic tools and elements of design.

In conclusion, schools' attempts to impart culture as part of their social education policies is reflected in the contents and design of their websites.

Keywords: culture; multi-culture; cultural; dimensions; school website; e-learning; e-schooling; cyber societies; globalization; intranet; interaction; user-interface design; global web design.

Acknowledgements

I wish to express my gratitude to all those who have provided assistance and support:

- Professor Cronje, my supervisor, for his guidance and assistance at the numerous crossroads in the course of my research. His creativity and receptiveness have motivated me and helped me explore new directions.

- My friends at the ORT Israel Development Center, who have provided the data necessary for my research, and particularly Dr. Gil Amit, Jonathan Kaplan, Orit Cohen, Ety Brietbard, and Nechama Shany, for their time and enriching discussions.

- Alona Abiri, Lilach Menaches, and Ariellah Rosenberg, for their insights, knowledge, and participation in the research.

- Vanessa Menasce for her help with the English language.

- My family, for their patience, support and encouragement.

CONTENTS

Appendix List

Chapter 1

Introduction

1.1 Introduction

Technology, and information technology in particular, is a means used to broaden natural abilities, shape the environment, and promote cultural and spiritual aspirations.

Over recent years, we have witnessed significant technological developments in the field of communication, and of information sorting, analysis and transfer. We have witnessed attempts to integrate the use of computers in the educational environment, while technology has been constantly changing. The school environment has gradually been exposed to rapidly growing innovations in the field of information technology: computers, the Internet, different communication tools (e-mail, forum, content management system), multimedia, etc. The encounter between information technology (IT) and education has led to many fascinating directions in research.

Modern education has in general adopted a functional approach, in placing an emphasis on technological innovation. Technological innovations are perceived as a means to improve and enhancing the efficiency of existing pedagogical approaches and methods.

Lately, we have been able to observe a sharp increase in activities on the Internet in schools. Innovations in communication technology have contributed to the development of new software which has led to the creation of school websites (E-schooling). School websites form part of the ***E-culture***, which consists of ***E-learning***, ***E-teaching***, and ***E-schooling***, broadening the

pedagogical-organizational infrastructure of schools. This promises to be fertile ground for cultural research and new applications for information technology in the educational environment. Perceiving education as a medium for imparting culture and for the acquisition of desired knowledge and essential skills, E-schooling reflects not only pedagogical characteristics, but also cultural and social aspects. These serve as windows of culture through which we may catch a glimpse of contemporary culture.

This research explores ORT school websites in Israel in order to determine whether and how cultural dimensions are reflected in this medium. For this purpose, this study applies Hofstede's (1991) classification of cultural characteristics, which he organized into five cultural dimensions, as well as Marcus' (2001) elements of design to the analysis of the ORT school websites.

1.2 Aim of research

The web has become a powerful tool in education. Much has been written on the overt impact of the Internet on the curriculum, but what is the role of the Internet in the transmission of culture? Websites contain embedded cultural values and objectives. These are often determined by group and organizational cultures, such as educational organizations, structures and incentives that affect the content and design of school websites. Some of the embedding may occur unconsciously, a product of the cultural programming of the website participants. Other parts of it are intentional via design requirements, such as the globalization of standardization in user interface. My main interest in this research is: *'can we recognize cultural dimensions on school websites*?'

Hofstede's (1991) work on cultural dimensions contributes to the study and reassessment of current theories on software and websites, which interact with the cultures of societies in which they function, and are still relevant to the constant evolution of technology (communication tools) in the educational environment.

Israel was among the countries studied by Hofstede in his classic research of 1968 and 1972, and was attributed an index score for each of the four dimensions, thus making ORT school websites in Israel a relevant subject to be examined for cultural dimensions. Information technology is a well developed field in Israeli schools, particularly in the ORT educational network. Israel constitutes a valid case study to investigate the subject of cultural dimensions.

In 2001, the ORT Development Center introduced the '***Clickit***' platform, a content management system (CMS), which enables schools to create and manage their own websites. This was the answer to the general criticism regarding the integration of the Internet to the study of various subjects (E-learning). This new direction, described as a "push technology", is perceived as better suited to the needs of schools. It serves as an ***Intranet*** within the school, which provides pedagogical, didactic, and organizational solutions to the schools' requirements. The ***'Clickit*** ' platform's flexibility and simplicity have made it a very popular tool within ORT schools, which makes it all the more interesting to investigate, and draws attention to this new direction: from **E-learning** to **E-schooling**[1].

This study can be useful to school policy-makers, helping to direct educators towards new options and innovations that E-schooling presents. It also raises new issues to be considered, such as:

- *What is the role of E-schooling in the provision of education?*
- *Should E-schooling in the context of culture resemble traditional schooling, or should it differ from it?*
- *How does the role of teachers change in the E-schooling environment?*
- *Does E-schooling change the interaction among teachers, students, parents, etc?*

[1] Definition of E-Schooling: "Use of the WWW as an Extension of the School's Educational and Organizational Infrastructure" (ORT Wingate Seminar 2003).

- Does E-schooling create a new school culture? If so, what is the shape of the new culture?

In order to transmit culture, there should be an awareness of Israel's cultural characteristics when designing websites in Israeli schools.

1.3 Research questions

The major research question to be explored in this study is **how are cultural dimensions reflected on school websites in Israel?**

This question is addressed by applying Hofstede's (1991) well-know work, in which he classified cultural characteristics prevalent in global organizations into five "cultural dimensions" (*power distance*, *individualism & collectivism*, *masculinity* & *femininity*, *uncertainty avoidance*, and *time orientation*), and Marcus' (2001) interpretation and application of this model to website designs worldwide

1.3.1 I have divided the research question into four sub-questions.

1. How is ***Power Distance*** reflected on the design and user interface of ORT school websites?
2. How is ***Collectivism*** vs. ***Individualism*** reflected on the design and user interface of ORT school websites?
3. How is ***Masculinity*** vs. ***Femininity*** reflected on the design and user interface of ORT school websites?
4. How is ***Uncertainty Avoidance*** reflected on the design and user interface of ORT school websites?

I investigate these four sub-questions according to Hofstede's (1991) characteristics (that are applicable to educational organizations) and Marcus' (2001) parameters, focusing my observations

of ORT school websites on three layers of website architecture: user interface, services offered, and accessibility of information, as presented in the following four tables:

Sub-questions 1 - How is **Power Distance** reflected on the design and user interface of ORT school websites?	
Hofstede's characteristics (1991)	***Marcus' parameters*** (2001)
Power distance is "*the extent to which the less powerful members of institutions2 and organizations3 within a country expect and accept that power is distributed unequally*". **Low power distance**: • Limited dependence of subordinates on superiors. • Preference for consultation and interdependence between higher and lower ranks. • Small emotional distance: atmosphere allowing subordinates to approach and contradict their superiors. • Educational system is ***student-centered***. • Teachers treat students as basic equals and expect to be treated as equals by students. • Students argue, express disagreement and criticism in front of the teachers, initiative is encouraged. • Effective learning depends on two-way communication. • System is based on the students' well-developed need for independence. **High power distance**: • Considerable dependence of subordinates on superiors. • Polarization between dependence and counter dependence. • Large emotional distance between subordinates and their superiors. • The educational process is teacher-centered. • Intellectual paths outlined by teachers. • Strict order in the classroom. • All communication initiated by teachers, students speak up only when invited. • Teachers are never publicly criticized or contradicted. • Educational process is highly personalized.	• Access to information. • Hierarchies in mental models.4 • Emphasis on the social and moral order. • Focus on expertise, authority, experts, certifications, official stamps, or logos. • Prominence given to leaders vs. citizens, customers, or employees. • Importance of security and restrictions or barriers to access. • Social roles used to organize information.

[2] "**Institutions** are the basic elements of society like the family, school and the community" (Hofstede 1991, p.28).
[3] "**Organizations** are the places where people work" (Hofstede 1991, p.28).
[4] "A mental model refers to a representation in working memory that can be 'run' by the learner to understand a system, solve problems, or predict events" (Alessi & Trollip 2001, p. 28).

Table 1.1- Analysis of the sub-question on ***power distance*** according to Hofstede's characteristics (1991) and Marcus' parameters (2001).

From the table above one can see that Marcus (2001) makes his own interpretation of the power distance dimension, using the term "hierarchy" to describe the information architecture on the websites (e.g. access to information, or the manner in which the information is organized), and placing an emphasis on the role players (e.g. expertise, leaders, social roles).

Sub-questions 2 - How is ***Collectivism*** vs. ***Individualism*** reflected on the design and user interface of ORT school websites?

Hofstede's characteristics (1991)	***Marcus' parameters*** (2001)
In a ***collectivist*** society, • Identity is determined by the social network to which one belongs. • One's extended family or other in-group offers protection in exchange for loyalty. • Relationships are more important than tasks. • Collective interests are more important than individual interests; opinions are determined by group membership. • Purpose of education is to learn how to do. • Emphasis on adaptation to the skills and virtues necessary to be an acceptable group member of society. • Emphasis on tradition. • Learning is considered as a one-time process only. • Children are taught to think in terms of "we". • In-groups are reflected in the classroom: students from the same ethnic background often form subgroups in the classroom environment. In an ***individualist*** society, • Identity is based on the individual. • One is taught to take care of oneself and one's immediate family only. • Tasks are more important than relationships. • Individual interests are more important than collective interests. • Each individual is expected to have a private opinion. • Ideologies supporting individual freedom are more important than ideologies of equality. • Purpose of education is to learn how to learn. • Education prepares the individual for a place in a society consisting of other individuals: learning to cope with new, unknown and unforeseen circumstances. • Learning is perceived as a lifelong process. • Schools seek to impart the skills necessary for the "modern man". • Children are taught to think in terms of "I". • Speaking one's mind is encouraged.	• **Motivation** based on personal achievement: in individualist cultures vs. collectivist cultures. • **Images of success**: materialism and consumerism vs. achievement of social-political agendas. • **Rhetorical style**: controversial/argumentative speech and tolerance or encouragement of extreme claims vs. official slogans and subdued hyperbole and controversy. • **Prominence** given youth and action vs. aged, experienced, wise leaders and states of being. • **Importance given** individuals vs. products shown by themselves or with groups. • **Underlying sense of social morality**: emphasis on truth vs. relationships. • **Emphasis on change**: innovation and uniqueness vs. tradition and history. • **Willingness** to provide personal information vs. protection of personal data differentiating the individual from the group.

Table 1.2- Analysis of the sub-question on ***Collectivism*** vs. ***Individualism*** according to Hofstede's characteristics (1991) and Marcus' parameters (2001)**.**

From the table above, one can see that Marcus (2001) places an emphasis on the way individuals or groups as collectives present themselves, their identity, personality, priorities, and motivations.

Sub-questions 3 - How is Masculinity vs. Femininity reflected on the design and user interface of ORT school websites?	
Hofstede's characteristics (1991)	***Marcus' parameters*** (2001)
In **masculine cultures**: • Men are expected to be assertive, ambitious and tough, while women are expected to be tender and to care for relationships. • Material success and progress are considered dominant values in society. • Sympathy and support for the powerful. • Achievement is the norm; failing in school is unacceptable. • Boys and girls study different subjects. • Live in order to work. • Emphasis on competition and performance. • Aggressive conflict resolution. • Dominant religion stresses male authority. • Women's liberation means that women will be admitted to positions previously reserved to men. In **feminine cultures**: • Both genders are allowed to be tender and concerned with relationships. • Caring for others, preservation and welfare are considered dominant values in society. • Sympathy for the weak. • Average achievements in school are the norm; failing is not a disaster. • Boys and girls study same subjects. • Work in order to live. • Emphasis on solidarity and quality of work environment. • Compromise and negotiation form basis of conflict resolution. • Underprivileged should be helped. • Highest importance given to preservation of the environment. • Women's liberation means that both genders should share equal tasks at home and work.	User-interface and design elements in **masculine cultures:** • Traditional gender/family/age distinctions. • Work tasks, roles, and mastery, with quick results for limited tasks. • Navigation oriented to exploration and control. • Attention gained through games and competitions. • Graphics, sound, and animation used for utilitarian purposes. User-interface elements in **feminine cultures**: • Blurring of gender roles. • Mutual cooperation, exchange, and support, (rather than mastery and winning). • Attention gained through poetry, visual aesthetics, and appeals to unifying values.

Table 1.3- Analysis of sub-question on **masculinity** vs. **femininity** according to Hofstede's characteristics (1991) and Marcus' parameters (2001).

From the table above, one can see that Marcus (2001) makes his own interpretation of the masculinity vs. femininity dimension of the website's design (e.g. graphics, ways to gain attention, and navigation).

Sub-questions 4 - How is Uncertainty Avoidance reflected on the design and user interface of ORT school websites?	
Hofstede's characteristics (1991)	***Marcus' parameters*** (2001)
High uncertainty avoidance: • Uncertainty is perceived as a constant threat which must be suppressed. • Motivation gained by a sense of security. • Feelings of high stress, aggression, and subjective anxiety are common. • Fear of ambiguous and unfamiliar risks and situations; what is different is dangerous. • Strict rules for children on what is indecent and taboo. • Students are comfortable in structured educational settings and concerned with the right answers. • Resistance to innovation; deviant behaviour and ideas are suppressed. • Teachers expected to have all the answers. • Precision and punctuality are inherent. • Resistance to innovation. • Numerous precise rules which should be followed. • Nationalism, conservatism, law and order prevail. • Negative attitudes towards youth. • Experts and specialization highly respected.	**High uncertainty avoidance:** • Simplicity, with clear metaphors, limited choices, and restricted amounts of data. • Attempts to reveal or forecast the results or implications of actions before users act. • Navigation schemes intended to prevent users from becoming lost. • Mental models and help systems that focus on reducing "user errors". • Redundant cues (color, typography, sound, etc.) to reduce ambiguity.

Low uncertainty avoidance:	**Low uncertainty avoidance:**
• Uncertainty is accepted as a normal characteristic of life. • Aggression and emotions should not be displayed. • Low stress, subjective feelings of well-being. • Comfortable in ambiguous and unfamiliar situations and risks. • What is different is considered curious and interesting. • Leniency towards children on indecent and taboo subjects. • In educational settings, students are comfortable with open-ended learning situations and concerned with good discussions. • Teachers are not expected to have all the answers. • Deviant and innovative ideas are accepted. • Motivation is gained by achievement. • Few and general rules, common sense is accepted. • Rules which cannot be respected should be changed. • Positive attitudes towards youth. • Regionalism, internationalism, tolerance and moderation prevail. • Integration of minorities. • One's beliefs should not be imposed on others. • Respect for human rights.	• Complexity with maximal content and choices. • Acceptance (even encouragement) of wandering and risk, with a stigma on "over-protection". • Less control of navigation. • Mental models and help systems focus on understanding underlying concepts rather than narrow tasks. • Coding of color, typography, and sound to maximize information (multiple links without redundant cueing).

Table 1.4- Analysis of the sub-question on ***Uncertainty Avoidance*** according to Hofstede's characteristics (1991) and Marcus' parameters (2001)**.**

From the table above, one can see that Marcus' (2001) interpretation of Hofstede's (1991) characteristics emphasizes the content on the website, and the way in which it is presented (e.g. simplicity, use of metaphors, navigation).

1.4 Background

1.4.1 ORT

ORT was established in Russia in 1880 to train underprivileged Jews in Eastern Europe and provide them with basic skills to enable them to subsist independently. ORT has grown into a non-profit, non political organization, with activities in more than one hundred countries, and whose objective is to meet the educational and vocational requirements of students worldwide. The first ORT schools in Israel were established in 1949. ORT Israel includes today some 156 educational institutions which provide education to Jewish, Druze, Bedouin, Christian Arab and Muslim Arab students throughout Israel.

In addition to the official mandatory curriculum, ORT Israel provides specialized science and technology education, and a high level of education in a broad range of disciplines from grade 7 onward. Educational programs are established by ORT with the use of advanced and innovative methods and technology. ORT also places an emphasis on the development of universal social-educational values and values of Jewish heritage among its students, as well as the development of an awareness of the need to contribute to the Israeli society and state.

Through the ORT Moshinsky Research and Development Center, ORT Israel strives to offer its activities to all educational institutions throughout the country and provide a variety of educational tracks, from primary schools to colleges of higher education. It also develops and implements an innovative curriculum and educational initiatives, including advanced information and communication technology courseware and software. Furthermore, the development center ensures ORT's resources development - among its principals, teachers and management staff – by training the staff and teachers, publishing written educational material, and developing E-learning

courses such as the '***Aviv virtual school***', and software such as '***Clickit***' – a content management system for Internet sites.

1.4.2 Clickit

'***Clickit***' is an advanced content management system (CMS) for Internet sites developed by ORT to allow users – webmasters, site managers, content developers, on-line teachers, students, and classroom teachers – including those with no programming experience, to easily customize and administer their own websites. The system has a flexible and intuitive interface, and supports Hebrew, English, French, Spanish, Russian and Arabic, reflecting Israel's multi-cultural variety. The '***Clickit***' software can be used to build almost all types of websites currently used on the Internet. As mentioned in its documentation (Clickit 2001), the '***Clickit***' features components such as:

- ***Index*** – produces a catalogue of Internet sites according to a user-defined subject tree, provides short overviews and important information such as the site's language and rating by topic relevance or popularity, sites retrieved through a search operation presented as links with screen shots.
- ***Glossary*** – enables users to create a list of terms or names arranged alphabetically or according to other user-defined parameters. It can include texts, pictures, and links to other relevant websites.
- ***Management system*** – Enables teachers to monitor the individual as well as the collective progress of students in an online course. The up-to-date information on the status of assigned tasks helps teachers identify student weaknesses and strengths and to better gauge the pace of the online course.

- ***Examinations*** – with this component, teachers build a central database of exam questions which can then be used to create written or computerized exams.
- ***Local messaging system*** – registered site users – students, classroom teachers, virtual teachers and online experts – can communicate with each other from any computer using this option.
- ***Calendar*** – Site managers or other authorized users can mark various events throughout the year (meetings, examinations, due dates, etc.). The calendar can be viewed by day, week, month or year.
- ***Bulletin board*** – notices, including pictures, can be posted immediately.
- ***Surveys***- Customized surveys are easily produced and presented on the basis of user-defined parameters. Users can define various cross sections for analysis.

1.5 Previous research

1.5.1 Related research

Research related to the subject of culture as it is reflected on school websites follows two major paths. One focuses on cultural dimensions, their definitions, multi-culture, the role of schools in teaching social behaviour, moral codes and values as part of the existing culture, and social learning theories. The other direction followed by researchers focuses on school websites as windows of culture – from E-learning to E-schooling, including subjects such as interface design of web-based educational sites, interactivity, and the intranet and cyber societies.

The following table summarizes the related research used in this dissertation according to these two approaches.

	Researcher	Subject	Year
Theorists interested in defining culture, Cross-cultural issues and multi-culture.	Kroeber & Kluckhohn	Definition of culture and cross-culture communication, using key words such as patterns, behaviour, transmitted symbols, achievement of human groups, traditional ideas and attached values.	1952
	Edward T. Hall	Cultural anthropology and cultural sociology, concepts of cultural differences – time, context and space.	1963, 1976
	Geert Hofstede	Cultures and organizations – the five dimensions of cultural differences.	1991
	Shalom Schwartz	Cultural differences, list of values as cultural guiding principles.	1992, 1994
	Trompenaars & Hamden-Turner	Classification of culture according to behavioural and value patterns, and focusing on cultural dimensions of business executives.	1994, 1997
	Spencer-Oatey	Definitions of culture, with an emphasis on the role of culture as a factor that both influence and help interpret behaviour.	2000
Social education	Dewey	Social educations, the roles of schools in imparting skills and abilities that help achieve society's objectives.	1916
	Lamm	Social education.	1973
	Albert Bandura	Social learning theory describing human behavior in terms of continuous reciprocal interaction between cognitive, behavioural, and environmental influences.	1977
	Salomon & Perkins	Social learning theory, individual and social aspects of learning.	1998
	Perkins	Social learning theory – the active learner, the social learner, and the creative learner.	1999

	Researcher	Subject	Year
Interface design of web-based learning environments	Evers & Day	Interface design.	1997
	Alessi & Trollip	Web-based learning environments and elements of design.	2001
	Moore	Computer-mediated communication, four categories of student interaction: learner-content, learner-instructor, learner-learner, and learner-interface.	1999
	Hill	Web-based instruction – the dropout phenomenon.	2000
Cultural aspects as reflected on websites	Del Galdo & Nielsen	Internationalization and localization.	1996
	Kersten, Matwin, Noronhs, & Kersten	Software for cultures and cultures in software, highlighting culture, cross-culture, e-learning and web-based learning.	1999
	Gould, Zakaria & Shafiz	Cultural aspects as reflected on websites.	2001
	Marcus	Cross-cultural user-interface design.	2001
	Barber & Badre	Cultural aspects as reflected on websites, cultural markers.	2004
Intranet, cyberspace & virtual community.	Robert Christensen	Educational intranet: levels of complexity.	1996
	Victor	The role of school website.	2002
	Doherty	Cyberspace – as the creation of a new society, cyber society.	1995
	Winner	Cyberspace – the creation of a new community.	1995
	Ebersole	Philosophical assumptions underlying cyberspace.	1995
	Rheingold	The virtual community	1998

Table 1.5: Research related to the culture as it is reflected on school websites.

In summary, the different researches described in the literature review can be categorized into five major themes: the definition of culture, cross-cultural issues and multi-cultures; social education; interface design of web-based learning environments; cultural aspects as reflected on websites; and the Intranet, cyberspace and the virtual community. These different aspects and approaches have helped form the background to the study of culture as reflected on school websites.

Chapter 2

Methodology

I have followed Marcus' (2001) theory that *'cultural dimensions'* as analyzed by Geert Hofstede (1991) might affect user-interface designs of websites. I have made use of Marcus's (2001) hypotheses (aspects) and analyzed ORT school websites according to these aspects, in order to determine whether Hofstede's (1991) dimensions are reflected on ORT school websites.

The method used in this research is observation, focusing on three layers of website architecture: user interface, services offered by the websites, and accessibility of information. By using qualitative methods of research, reinforced by quantitative data, I have been able to address my research question - How ***is culture reflected on ORT school websites***?

2.1 Overview of the study

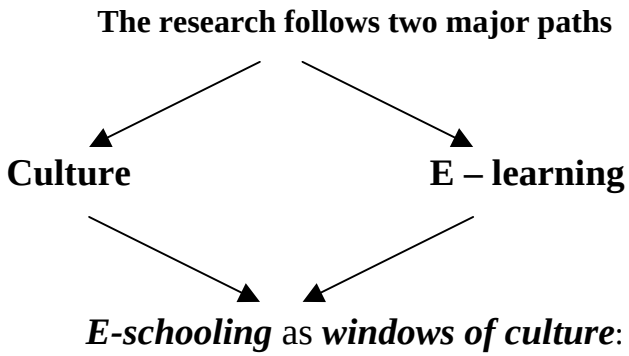


Figure 2.1 Overview of the study

2.2 Type of Research

In this research I have used a ***deductions from theory*** approach, also known as ***'top-down***' research, where deduction is used to refine a hypothesis based upon other plausible premises.

I have followed Marcus' (2001) theory that *'cultural dimensions'* as analyzed by Geert Hofstede (1991) might affect user-interface designs of websites. I have made use of Marcus' (2001) hypotheses (aspects) and analyzed ORT school websites according to these aspects, in order to determine whether Hofstede's (1991) dimensions are reflected on ORT school websites. This has allowed me to confirm (or not) Marcus' (2001) hypotheses (aspects) on the original cultural dimensions theory made by Hofstede (1991).

Marcus' paper *"Iintroduces dimensions of culture, as analyzed by Geert Hofstede in his classic study of cultures in organizations, and considers how they might affect user-interface designs. Examples from the Web illustrate the cultural dimensions*" (Marcus 2001).

My main interest in this research is: *'can we recognize cultural dimensions on school websites*?'

Israel was among the countries studied by Hofstede (1991) in his classic research of 1968 and 1972, and was given an index score for each of the four dimension, thus making ORT school websites in Israel a relevant subject to be examined for cultural dimensions (Appendix B).

Although Marcus (2001) does not reveal his research's methodology, my understanding is that his research is a deductive logic of constructs research, where Geert Hofstede's (1991) theory of 'classic study of cultures in organizations' was analyzed and high level abstract concepts (constructs) were created to express the idea behind a set of particulars, and applied to internet websites, in order to prove or disprove Hofstede's (1991) theory (McMillan & Schumacher 2001, pp. 81-84).

Since the findings of this research are solely based on observations, this study has a predominantly qualitative character. Still, where possible, quantitative measures have been used to triangulate the data. Qualitative and quantitative data in this research reinforce one another. Qualitative research is based on a 'constructivist' philosophy. It assumes reality is an interactive, multilayer, shared social experience. Furthermore, it is based on the assumption that reality is a social construction, and its main concern is to understand the relationship dynamics among the people who are involved. I believe that "*human actions are strongly influenced by the setting in which they occur*" (McMillan & Schumacher 2001, pp. 395-396). By using qualitative methods of research, I am able to address my research question - How ***is culture reflected on ORT school websites***?

The mainstream research in cultural anthropology collects data almost entirely through observation (Hofstede 1991).

However, this method of research is subjective by nature: although the role of the observer is to remain detached from the research subject, it is unavoidable for him or

her not to place judgments based on his/her paradigms[1] (McMillan & Schumacher 2001; Hofstede 1991).

To enhance these findings, I have made use of quantitative data to provide a sense of their significance, thus illustrating relationships and explaining social facts.

Quantitative research allows generalizations to be made: "*Quantitative research is usually based on some form of 'logical positivism' which assumes there are stable, social facts with a single reality, separated from the feelings and beliefs of individuals*" (McMillan & Schumacher 2001, p. 15).

To strengthen the research's validation, I have included in my analysis the observations and comments of three additional qualified experts.

Ariellah Rosenberg (BSc, Hebrew University of Jerusalem, Israel), has many years of experience in science and technology education in Israel and South Africa. She has constructed a science website based on her teaching experience and her knowledge of the needs and requirements in this field from educators, learners and parents.

The site www.kiddoscience.co.za aims to help teachers with lesson plans and worksheets, help learners with projects, experiments and brain teasers and offers parents help with projects, safety issues, and experts' advice. The site has earned the Learning Fountain Award, and the EduNET Choice Award.

Alona Abiri, (BA, Hebrew University of Jerusalem, Israel), started as a teacher and adviser specializing in social education. She then worked for the Education Channel of the national Israeli television, writing and training teachers on the use of the television programs in schools. She later directed a private training company, writing

[1] Paradigms- 'a world view underlying the theories and methodology of a particular scientific subject' (Oxford dictionary 1994).

and advising businesses, individuals and the army. She recently formed a communications company which provides services such as presentations, business programs and publicity material for IT companies, specializing in the medical sector.

Lilach Menaches, who has a background in graphic design, has had vast experience in designing websites for commercial companies. As a web designer, she has contributed her knowledge in web structures and the use of visual inputs (colour, animation, etc.)

Finally, following my observation, for each hypothesis (aspect), I have selected elements on the schools' website that confirm (or not) Marcus' (2001) theory on the original cultural dimensions. The definitions of these elements (variables) are constitutive: I have interpreted Marcus' (2001) terms by using elements which are based on design and content of the school websites (McMillan & Schumacher 2001). Appendix C contains 4 tables summarizing the selected elements for each of the four 'cultural dimensions' (high vs. low power distance, individualism vs. collectivism, masculine vs., feminine, high vs. low uncertainty avoidance).

The qualitative approach is descriptive. I have described each of Marcus' (2001) hypotheses (aspects), as analyzed on ORT school websites. This is supported by relevant quantitative data.

2.3 Subjects of this study

The subjects of this study include 54 Ort school websites (of junior and high schools) operating in Israel. Among the 54 schools, students - boys and girls between the ages of 12 and 18 - from all demographic and socio-economic backgrounds in Israel are included: Jews, Arabs, Druze, Christians and Muslims, religious and secular Jews.

2.4 Limitations of this study

It is important to indicate the limitations that affect this research:

- Marcus' (2001) aspects are not clearly defined; they are very vague – I have to make my own interpretations – interpretations may be subjective.
- The element of subjectivity in anthropological reports is unavoidable (Hofstede 1991) – To minimize this limitation, I have used the expertise of three additional professionals.
- Marcus (2001) sought and used websites that confirmed his theories, while I have used 54 websites, regardless of whether they support or confirm the theories.
- ORT school websites are dynamic – their design and contents are meant to be changed, as it is a fluid medium. This makes it more difficult to analyze and generalize the findings.

  The Hebrew language is written from right to left. Researchers must be aware that the site orientation is from right to left (language, design orientation, and positioning of major elements). Site designers and users (in this case students, parents and teachers) are accustomed to important elements being placed on the right. In order to better understand the importance attributed to different

elements on a website, researchers must be familiar with the language and its spatial orientation, as these indicate the focus of attention and comfort zone of viewers.

2.5 Specific exclusions from this study

There are a number of issues which this study does not cover:

- The websites of other schools in Israel or other countries are not included in this study.
- This research does not study platforms or software other than '***Clickit***' that are used in schools in Israel.
- The effectiveness of the school websites on students' achievements and social education goals is not studied.
- This research does not analyze the pedagogical approaches used in the websites.
- This study does not attempt to determine to what extent school websites teach students about the nature of learning, the role of education, and their position as workers and participants in society.
- This research does not strive to observe and analyze every single message or page in each of the 54 ORT school websites.
- This research does not study the influence of the school websites on culture, or on the creation of a new culture.

2.6 Outline of the Research

This research consists of five chapters, as described in the following table:

Chapter	Name of chapter	Description
Chapter 1	Introduction	Introduces the research question, its rationale, background, and relevant literature.
Chapter 2	Methodology	Describes the research method: overview of approach, observation of ORT school websites, using qualitative and quantitative data.
Chapter 3	Literature review	Covers the two major directions followed by relevant resources: the first focusing on cultural dimensions and social learning theories, the other focusing on school websites as windows of culture – from E-learning to E-schooling.
Chapter 4	Findings	Presents the findings in four sections, according to Hofstede's (1991) cultural dimensions, focusing on the three levels of website architecture.
Chapter 5	Conclusion and recommendations	Summarizes the research findings, discusses what can be learned from this research, and presents recommendations for further research, policy-making and practice.

Table 2.1 - Outline of the research.

2.7 Summary

This research investigates how cultural dimensions are reflected on ORT school websites in Israel. This chapter has laid a basis from which this subject can be studied. The next chapters will help explore E-schooling as windows of culture.

Chapter 3

Literature Review

Introduction

The literature to be reviewed for the study of culture as reflected on school websites focuses on two major subjects:

3.1 '**Culture**' as reflected on school websites

3.1.1 Defining 'culture', cross–cultural issues, multi-culture and social education.

3.1.2 The role of schools in teaching social behaviour, moral codes, and values as part of the existing culture.

3.1.3 Social learning theory.

3.2 School websites as '**Windows of culture**' - From E-Learning to E-Schooling

3.2.1 Interface design of web-based educational sites and culture.

3.2.2 Interactivity through new communication media.

3.2.3 The Intranet – E-schooling.

3.2.4 Cyber societies.

Together, these two subjects form the literature background necessary for understanding school websites as '**windows of culture**' – which reflect current Israeli culture, and at the same time, present a new direction in the use of computers in the school environment,

from web-based learning methods (E-learning), to E-schooling, which provides an additional environment that serves to educate and impart culture to the collectivity**.**

3.1 'Culture' as reflected on school websites

The famous story of Babylon in the book of Genesis describes how man was changed by the attempt to build a tower to reach heaven. Before, humankind consisted of – one culture, one culture group which shared one language. "*And the whole earth was of one language and of one speech… And they said: 'Come, let us build us a city, and a tower, with its top in heaven, and let us make us a name; lest we be scattered abroad upon the face of the whole earth.'… And HaShem said: 'Behold, they are one people, and they have all one language; and this is what they begin to do; and now nothing will be withholden from them, which they purpose to do…Come, let us go down, and there confound their language, that they may not understand one another's speech*.' (Genesis 11:1-7)

Different Cultures were created with different languages, but as well-known Dutch anthropologist Hofstede puts it: ***'different minds but common problems'*** (Hofstede 1991, p. 3). People, groups and nations, all think, feel and act differently, yet at the same time are exposed to common problems, such as how to handle threats, changes, and political, economic, structural and technological dilemmas.

As worldwide communication has become accessible to all, and with it the spread of terms such as 'globalization' and 'the *global village'*; the issue of *'culture differences'* -

understanding the differences among the various 'group-cultures' - has become more and more relevant. (Néstor 1996)

Culture, particularly *'cross-culture'*, *'multi culture*' and/or '*intercultural differences*' are related to *'Cultural anthropology'*, *'Cultural sociology'* and the classification of cultures according to a set of dimensions.

This research focuses on the reflection of culture on school websites. Therefore, it is necessary to begin by defining the term '***culture***[1]' and its characteristics. Furthermore, as the major role of education is "*transmitting the culture of the adult world to the young*" (Hurn 1993, p. 4); in other words, the process through which skills, facts, values, norms, and attitudes, which all form part of the culture, are being taught to the young, we should define this term and its applications on school websites.

3.1.1 Definition of 'culture'

Edward T. Hall is one of the first known researchers in the field of *'Cultural anthropology*' and *'Cultural sociology'*. In his book "*The Silent Language*" (Hall 1963), he stresses the importance of the subconscious in culture, pointing to the unspoken language shared by a group of people of the same culture, but unknown to the 'outsider'. Hall's later publications are more relevant to the subject of my research. Hall (1976, 1984, 1987, and 1990) discusses three important concepts of cultural differences: ***time***, ***context,*** and ***space***. Hall (1990) defines two categories of '*time*' (monochromic vs.

[1] "Culture, is one of the two or three most complicated words in the English language" (Williams 1976, p. 87).

polychronic), which he uses to discuss cultural perceptions of time. Hall (1990) refers to the term '*space*' to describe an individual's personal space, the invisible boundary which can be perceived visually as well as physically.

The concepts of '*time*' and '*space*' are relevant to the school websites environment, but in a different manner. It is commonly said that the use of school websites has broken down time and space limitations.

ORT school websites provide countless examples of the changes in the use of these terms. Teachers and students communicate throughout the day, beyond the schools' physical limitations.

Context: Hall's (1990) definition of 'context' is more applicable to my research in the sense that it refers to the amount of information that a person can comfortably manage, and the way in which it is transmitted, or communicated. Hall (1990) makes a distinction between 'high' and 'low' context cultures. Background information in 'high context cultures' is implicit: people in a high context culture tend to convey more information implicitly, belong to more extensive networks, and usually are better informed on many subjects. On the other hand, much of the background information in low context cultures is made explicitly through interactions. People in low context cultures tend to verbalize much more background information, and are less well informed on subjects beyond their own interests.

Various researches on educational websites have in fact focused on these three terms. For example: *'Designing and Studying Learning Experiences That Use Multiple Interactive Media To Bridge Distance and Time*' (Dede, Brown L'Bahy, & Whitehouse 2002) and *'Anytime, Anyplace and the Community College: Ten Emerging Insights*" (Milliron & Prentice 2004).

High or low context can be reflected on schools websites, enabling us to identify high or low context cultures. Future research following this path may reflect Israel's culture in the way information is placed on ORT school websites.

Kroeber and Kluckhohn's (1952) definition of culture may serve as a guideline in selecting an appropriate content that highlights cultural characteristics on websites in general and on schools websites in particular.

After collecting more than 160 different definitions of the term '***culture***' , Kroeber and Kluckhohn (1952) define culture as consisting of: "*patterns, explicit and implicit, of and for behaviour acquired and transmitted by symbols, constituting the distinctive achievements of human groups, including their embodiment in artifacts; the essential core of culture consists of traditional (i.e. historically derived and selected) ideas and especially their attached values; culture systems may, on the one hand, be considered as products of action, on the other, as conditional elements of future action*." (Kroeber & Kluckhohn 1952: 181, cited in Dahl 2003)

The key words in their definition: '**patterns**' , '**behaviour**', **'transmitted symbols'**, **'achievements of human group'**, **'traditional ideas'** and **'attached values'**, all of which are reflected on websites, help distinguish one culture from another. For instance, symbols may take the form of logos, or traditional ideas may be illustrated with pictures, activities, etc.

Another useful definition of culture introduces a number of additional factors beyond values and behaviour: "*Culture is a fuzzy set of attitudes, beliefs, behavioural norms, and basic assumptions and values that are shared by a group of people, and that influence each member's behaviour and his/her interpretations of the "meaning" of other people's behaviour*" (Spencer-Oatey, cited in Dahl 2003).

This definition not only explains what culture is, but also describes the culture's functions in everyday life: culture may be used to influence behaviour as well as to interpret it. This interpretative role of culture is particularly important when analyzing cross-cultural interaction, or reaction towards products created in a different cultural context.

Spencer-Oatey 's (cited in Dahl 2003) definition of culture raises several issues about user interface (UI) design, especially on school websites which constitute an educational environment. The role of culture as a factor that may both influence and help interpret behaviour, highlights not only the reflection of culture on school websites but also the influence that these websites may have on the users (students, teachers and parents), in preserving culture as well as creating 'new culture' (Davis 1995).

In this research I have chosen to apply Hofstede's (1991) definition of culture and Marcus' (2001) application of this definition to website designs.
Hofstede (1991, p.4) defines culture as "*the collective programming of the mind which distinguishes the member of one group or category of people from another*."
When defining 'culture', Hofstede (1991) focuses on cultural differences in the essential patterns of thinking, feeling, and acting that are well-established by late childhood and manifest themselves in a culture's choices of symbols, heroes/heroines, rituals, and values. Hofstede (1991) uses the *'onion diagram'* as a model to describe these manifestations of culture.

'**Values**' form the core of Hofstede's (1991) model. They constitute the most hidden layer of culture, and represent the ideas that people have about how things "ought to be". As such, Hofstede (1991, p.8) also emphasizes that since they are acquired at a young age,

"*many values remain unconscious to those who hold them. Therefore… they can only be inferred from the way people act under various circumstances.*" According to Hofstede (1991), values strongly influence behaviour.

Abstract values such as respect for the elderly, assistance to the disadvantaged in society, respect for human dignity, and so forth are put into practice by the educational system through activities whose purpose it is to impart these values to the students.

Hofstede (1991) describes three additional layers of culture surrounding the core that are easily observed:

- '**Rituals**', "*are collective activities, technically, superfluous in reaching desired ends, but which, within a culture, are considered as socially essential: they are therefore carried out for their own sake*" (Hofstede 1991, p. 8).

Rituals such as the Holocaust remembrance ceremonies, Independence Day celebrations, and Bar Mitzvah observance are all connected to the cycle of life (rites of passage). They mark events on the timeline of humans and society, and grant symbolic importance to these rituals.

These rituals are recurrent and well ordered, and are characterized by recurring elements. They usually involve the participation of a group of people, which adds an emotional aspect to the events.

- '**Heroes**' "*are persons, alive or dead, real or imaginary, who possess characteristics which are highly prized in a culture, and who thus serves as models for behavior*" (Hofstede 1991, p. 8).

Yitzhak Rabin, the Prime Minister of Israel who was assassinated in 1995, navigator **Ron Arad** whose fate remains unknown since his capture in Lebanon in 1986, **Ilan Ramon**, the Israeli astronaut who perished with the other crewmembers of the Columbia shuttle in 2003, or **Anne Frank**, the Jewish girl who was murdered during the Holocaust

in 1945 and whose diary has provided testimony to the horrors of the Holocaust and has become a symbol of the suffering of millions of Jews during the second world war: all are examples of people perceived as heroes in Israeli culture.

- **Symbols**, "*are words, gestures, pictures or objects that carry a particular meaning which is only recognized by those who share the culture*" (Hofstede 1991, p. 7).

As mentioned earlier, flags, Judaica – objects related to Judaism (the Menorah, the Shofar of Yom Kipurim, etc.), terms such as "the battle of Tel Hai", "Choma ve Migdal", "Dgania, em hakvutsot", and so forth, are symbols.

Hofstede highlights two important characteristics of 'culture': it is a **collective phenomenon** (shared by people living within the same social environment) and it is **learned**, not inherited.

The classical perspective which sees education as an institution aimed at preserving culture and passing it on to the next generation, ties the concept of education not only in the sense of providing skills but also to the concept of cultural identity and values. School websites provide an additional environment to educate and impart culture to the collectivity. They reflect the collective phenomenon of behaviour and traditional ideas, and at the same time, reflect the efforts made by educators to teach cultural identity, values and social skills.

Culture concepts and pattern

Hofstede's (1991) work on cross cultural differences is considered to be one of the most popular in the field.

Before him, behavioural concepts were identified and used to distinguish between different cultures. These concepts, such as paralinguistic concepts (accents, intonation,

speed of talking, etc.), space organization, body movements, and eye movements, play a vital role in intercultural relationships. Hall discusses extensively this subject in his works, *'The Silent Language'* (1963) and *'The Hidden Dimension'* (1969).

On the Internet, these behavioural concepts are invisible, and thus less relevant. In a way, the absence of these cultural differences in this medium can be seen as an advantage, as it is more neutral and promotes communication.

Trompenaars and Hampden-Turner (1997) classify cultures according to a series of behavioural and value patterns, focusing on the cultural dimensions of business executives.

Shalom Schwartz (1992, 1994) uses a list of 57 values (the "SVI" - Schwartz Value Inventory), which he asks respondents to assess, as to how important they feel these values are as "guiding principles of one's life".

These last two approaches could also be applicable to the analysis of school websites. A comparative study of the results of the different approaches would be most interesting. (Schwartz, cited in Dahl 2003)

The main contribution to the field of cultural differences comes from Hofstede's (1991) work on culture concepts and patterns. Hofstede (1991) addresses in his work the problems inherent in the study of cultural differences: the lack of precision and of a universally recognized framework for classifying cultural patterns. Hofstede (1991) developed his theories on culture dimensions by studying work-related values among employees of IBM in 53 countries worldwide (including in Israel) in the 1970's.

His work can be easily applied to a large number of everyday intercultural encounters. It is particularly useful, as it simplifies the complexities of culture and its interactions by categorizing them into five easily understood cultural dimensions: *'power distance'*,

'individualism /collectivism', 'masculinity/femininity', 'uncertainty avoidance', and *'long-term orientation'*. The latter is not included in my study as Hofstede did not study '*long-term orientation*' in the case of Israel.

"*Power distance is often reflected in the hierarchical organization of companies, the respect that is expected to be shown by the student towards her or his teacher, the political forms of decentralization and centralization, by the belief in society that inequalities among people should be minimized, or that they are expected and desired"* (Dahl 2003).

In Hofstede's words, power distance is *"the extent to which the less powerful members of institutions and organizations within a country expect and accept that power is distributed unequally*" (Hofstede 1991, p. 28).

Hofstede's second dimension is ***'Individualism/Collectivism'***, which he defines as: "*individualism pertains to societies in which the ties between individuals are loose: everyone is expected to look after himself or herself and his or her immediate family. Collectivism as its opposite pertains to societies in which people from birth onwards are integrated into strong, cohesive in-groups, which throughout people's lifetime continue to protect them in exchange for unquestioning loyalty*" (Hofstede 1991, p. 51).

Hofstede defines '***Masculinity/Femininity***' as follows: "*masculinity pertains to societies in which social gender roles are clearly distinct (i.e., men are supposed to be assertive, tough, and focused on material success whereas women are supposed to be more modest, tender, and concerned with the quality of life); femininity pertains to societies in which social gender roles overlap (i.e., both men and women are supposed be modest, tender, and concerned with the quality of life)"* (Hofstede 1991, pp. 82-3).

'Uncertainty avoidance', Hofstede's fourth dimension, is defined as "*the extent to which*

the members of a culture feel threatened by uncertain or unknown situations" (Hofstede 1991, p. 113).

It is interesting to note that Hofstede states: "*both within Judaism and within Islam there is also a clearly visible conflict between more and less uncertainty avoiding factions, the first dogmatic, intolerant, fanatical, and fundamentalist ('There is only one Truth and we have it'), the second pragmatic, tolerant, liberal, and open to the modern world*" (Hofstede 1991, p. 133).

A good example is ORT Dati Bait Shan, one of the ORT religious schools, where such conflicts take place. While their website places more emphasis on religion and Jewish tradition, they encourage the students to participate in this 'new' medium.

Since the framework created by Hofstede (1991) is easily applicable, Marcus (2001) follows Hofstede's model to analyze websites worldwide. Although he mentions other organizational anthropologists such as Edward Hall (1990) and Trompenaars (1998), Marcus considers Hofstede's (1991) work to be the most appropriate when analyzing website interface design.

"*The Web enables global distribution of products and services through Internet Websites, intranets, and extranets. Professional analysts and designers generally agree that well-designed user interfaces improve the performance and appeal of the Web, helping to convert "tourists" or "browsers" to "residents" and "customers." The user-interface development process focuses attention on understanding users and acknowledging demographic diversity. But in a global economy, these differences may reflect world-wide cultures*" (Marcus 2001).

The educational system in every country reflects its people's culture. School websites can be considered as windows that allow a glimpse into the different cultures. I have named them "**windows of culture**".

Israel as an example of a multi-cultural society

Israeli culture is difficult to define. Despite its small size, Israel's culture consists of numerous bases: it is a multi-culture. Waves of immigration, Zionism, the land, Jerusalem, the Bible, pioneering ideology: 'Halutziut', the Holocaust, war and the army, religion, the Israeli-Arab conflict, gender roles: the changing role of women, westernization and the decline of collective culture all contribute to the cultural identity of Israel.

Israeli society is constantly moving, changing and developing, pulled in different, at times even contradicting, directions by all the groups and factors affecting its culture. "*Israeli society in the early 21st century is struggling toward a collective identity, caught in a web of internal tensions and contradictions. Individualism may have replaced many of the collective ideals of earlier generations but idealism – although it sometimes becomes muddled with patriotism – has not disappeared entirely*" (Israel 2004).

While this research focuses on cultural dimensions on a national level as they are reflected on school websites, ORT school websites might also reflect some of the multi-cultural elements characteristic of Israeli society. However, this extends beyond the realm of this research.

3.1.2 The role of schools in teaching social behaviour, moral codes and values, as part of the existing culture.

Traditionally, education has been perceived as an institution aimed at preserving culture and passing it on to the next generation, tying the concept of education not only to the necessity of providing skills but also to the concepts of cultural identity, values and social skills.

While some hold the belief that education is a faithful reflection of social reality, and this is how it should remain, thus requiring educators to quickly adapt to change, others believe that education should be shielded from the winds of change, and should offer stability, security, stable values and culture.

There is, however, a general consensus on one of schools' most important roles: imparting social education.

Dewey (1916) perceives schools as first and foremost a social forum. All the activities that teach the students to make use of their own skills and abilities to achieve society's objectives come together in schools.

Social education is based on the desire to tie education of the individual to the creation of a society of which the individual forms an integral part.

The objective is to turn the school environment into a living society, in which students learn to put into practice the fundamental principles of a democratic society, in the hope that they will internalize social and cultural values and norms, adopt positive social approaches and acquire basic human relations skills (Michaeli 2002).

"*What nutrition and reproduction are to physiological life, education is to social life. This education consists primarily in transmission through communication. Communication is*

a process of sharing experience till it becomes a common possession. It modifies the disposition of both the parties who partake in it" (Dewey 1916).

Schools websites offer an additional forum where the formal transmission of culture through communication takes place; they further extend the social framework described by Dewey (1916).

The educational program in Israel addresses the social issues and values of the youth, as well as the questions high Israeli society's agenda.

In the past, the cultural environment of Israeli society was relatively homogeneous. However, at the present, two contradictory processes exist: on one hand, globalization, which contributes to the worldwide westernization (CNN, MacDonald's, Hollywood, etc.), and on the other hand, traditional cultures which are strengthening (such as religious and nationalist movements). Waves of immigration due to factors such as demand for labour, national crises, or ideology (Zionism), have created multi-cultures in developed countries. Among historians, sociologists and anthropologists who have studied Israeli society, it is accepted nowadays that the Israeli society is undergoing a transition from social, cultural, political and economic uniformity and unity, to diversification and decentralization (Gidron, Katz & Bar, 2003).

The religious-cultural, ideological-political, socio-economic synthesis which characterized Israel for the first 30 years of its existence, is no more. (The Israel that Hofstede (1991) studied in the context of his research belonged to that early period.) Taking into account the changes currently taking place in Israeli culture, one should ask, in the context of this research, whether these cultural changes are visible. If so, these could be observed through the school websites. A comparison of current cultural

dimensions on ORT school websites with Hofstede's (1991) findings could reveal cultural changes that have occurred in Israeli society.

3.1.3 Social learning theory

In the introduction to his book, "***Technology and Education in the Age of Information***," Professor Gabriel Salomon (2000, p. 9) states: "*It is easy to understand that a book which seeks to deal with information technology cannot focus solely on information technology ... indeed, this book is supposed to deal with information technology in education, but in the wider context of education in the age of information – this is the essence of this book.*"

I agree with Salomon's views. Indeed, even though this research focuses on culture as it is reflected on school websites, I believe that the subject should be studied in a broader context: social interaction on school websites, differences among school social climates, and their effect on school websites, emerging communities, or cyber societies on school websites, etc.

School websites call for a renewed look at educational, pedagogical and social interactions which occur within the school organization. These interactions are the outcome of the organizational structure, and are tied to the managerial-social climate created by each and every school.

While Marcus' (2001) work is limited to website design and elements of design which reflect culture, there are many more aspects of school websites in the context of culture that could be studied; for instance, the effect of school websites on the social climate and culture of schools.

Albert Bandura is one of the most prominent names in the field of Social Learning Theory in Education. He emphasizes the importance of observing and modeling the behaviours, attitudes, and emotional reactions of others. Bandura (cited in Kearsley 2000) states: "*Learning would be exceedingly laborious, not to mention hazardous, if people had to rely solely on the effects of their own actions to inform them what to do. Fortunately, most human behavior is learned observationally through modeling: from observing others one forms an idea of how new behaviors are performed, and on later occasions this coded information serves as a guide for action*." Social learning theory explains human behaviour in terms of continuous reciprocal interaction between cognitive, behavioural, and environmental influences.

Bandura (cited in Kearsley 2000) formulates his findings in a four-step pattern which combines a cognitive view and an operant view of learning, and which includes the following terms:

1. ***Attention*** -- the individual notices something in the environment.
2. ***Retention*** -- the individual remembers what was noticed.
3. ***Reproduction*** -- the individual produces an action that is a copy of what was noticed.
4. ***Motivation*** -- the environment delivers a consequence that changes the probability the behaviour will be emitted again (reinforcement and punishment).

Bandura's work draws from both behavioural and cognitive views of learning: he believes that the mind, behaviour and environment are all important factors in determining the learning process (Huitt &. Hummel 1997).

The researcher Julian B. Rotter (1954) supports this theory. The main idea in Rotter's social learning theory is that personality represents an interaction of the individual with his or her environment. "One *cannot speak of a personality, internal to the individual, that is independent of the environment. Neither can one focus on behavior as being an automatic response to an objective set of environmental stimuli. Rather, to understand behavior, one must take both the individual (i.e., his or her life history of learning and experiences) and the environment (i.e., those stimuli that the person is aware of and responding to) into account. Rotter describes personality as a relatively stable set of potentials for responding to situations in a particular way*" (Catanzaro & Mearns 2003).

Salomon & Perkins (1998) bring forward a broader view of the social learning theory. Their new approach sees the learning process as a ***socially interactive situation,*** as opposed to seeing it as a cognitive process between the learner and himself. The communication among learners helps them to acquire knowledge, which they would not have gained had they worked on their own. "*Constructionism supports the viewpoint of constructivists that the learner is an active builder of knowledge. However, it emphasizes the particular construction of artifacts that are external, and shared by learners…the processes of construction are more evident when learners produce through social interaction with others and share representations of their understanding and thoughts*" (Han & Bhattacharya, cited in Salomon & Perkins 1998).

In their article "***Individual and Social Aspects of Learning***," Salomon and Perkins (1998) offer six meanings of the term ' ***Social Learning'***.

1. *Active social mediation of individual learning* – a fundamental form of social learning in which another person or team helps an individual learn, such as teachers, trainers, parents, other students, etc.
2. *Social mediation as participatory knowledge construction* – a socio–cultural version which perceives learning as the outcome of participation in a social process of knowledge construction.
3. *Social mediation by cultural scaffolding* according to which, cultural artifacts, together with the culturally and historically-based wisdom and hidden assumptions that went into their design, are perceived as serving as social mediators of learning in a far more important way.
4. *The social entity as a learning system* – a group, which consists of a team, organization, culture, or other collective, constitutes a collective learning system.
5. *Learning to be a social learner* – a fundamental aspect of learning, learning to learn; that is acquiring knowledge, understanding and skill about learning itself.
6. *Learning social content*, which refers to the ability to handle social interactions, such as getting along with others, assertiveness, collaboration with others, collective decision-making and actions, etc.

Perkins (cited in Oz 2000), following the footsteps of the Philosopher D. C. Phillips (1995), identifies three distinct roles in constructivism and calls them "**The active learner**", "**The social learner**", and "**The creative learner**".

The active learner: Knowledge and understanding is actively acquired. Constructivism generally casts learners in an active role. Instead of just listening, reading, and working through routine exercises, they discuss, debate, hypothesize, investigate, and take viewpoints.

The social learner: Knowledge and understanding is socially constructed. Constructivists often emphasize that knowledge and understanding are highly social. We do not construct them individually; we co-construct them in dialogue with others. **The creative learner**: Knowledge and understanding is created or recreated. Often, constructivists hold that learners need to create or recreate knowledge for themselves. Assuming an active stance is not sufficient. Teachers should guide them to rediscover scientific theories, historical perspectives, and so on.

When referring to the term of Social Learning, Bandura (cited in Kearsley 2000) Rotter (cited in Mearns 2004), Salomon and Perkins (1998) among others, actually consider the question "*how do we learn?*" and "*what is the correct way of creating a learning environment which will enable efficient and effective learning?*"

Nahmias (2001) describes a research recently conducted in Israel as part of an international research to find innovations in the application of computers in schools. "*We found that in most [schools] technology was not the trigger for change and innovation, the pedagogical approach was. Schools with a well established pedagogical approach applied all the means, including technology to this use… In these conditions, technological tools have the potential to motivate and promote creativity*" (Nahmias, 2001).

In answering these issues, the researchers mentioned above place an emphasis on social learning theory and stress the active role of schools in creating the positive social climate necessary for effective and efficient learning. Marcus (2001), on the other hand, makes passive observations of a wide range of websites, focusing on elements of culture in their interface design.

In my opinion, all these approaches coexist on school websites. The interface design reflects not only culture but also the social climate of the school.

3.2 School websites as 'Windows of Culture' – From E-Learning to E-Schooling

Ever since the introduction of the Internet to schools approximately seven years ago, teachers, instruction designers and pedagogical experts have sought ways to integrate the Internet to the study of contents of various subjects (E-learning), and have developed great expectations from that media.

When presenting the advantages of E-learning, Microsoft (Microsoft 2003) writes in one of its adverts that with computers connected to the Internet, information is just a few clicks away. Student may explore different subjects more in depth and more significantly than they would have been able or willing to before. Is that so?!

In his article, "*The integration of 'conservative' and 'revolutionary' e-learning courses in schools*", Jonathan Kaplan (2001), the Director of the ORT-Aviv Virtual School and of the Unit for Implementation and Integration at the ORT Research and Development Center, provides a long list of advantages of E-learning:

- The distribution of study material from the developing body (study programs) to the end user.
- Accessibility and utilization of extensive, diversified, up-to-date and authentic sources of information.
- Utilization of these sources of information to develop a research environment.
- Graphic presentation and illustration of complex or abstract processes.
- Active learning through interactions with the computer or with other participants in the course.
- Publication of the students' work.

- Discussions and dialogues through forums (unsynchronized tools), conference calls (synchronized tools) with students or teachers.
- E-learning based on Internet technology helps to break down conventional frameworks of time, place, student group and study program.

The advantages mentioned above underlie the expectation that computers, and E-learning in particular, will lead to changes in teaching methods.

In the pedagogic field, E-learning serves a number of objectives:

- To free learning from time and space limitations.
- To enable the participation of additional teachers and experts in the teaching and learning process.
- To broaden student encounters beyond the classroom.
- To offer new subjects and professions.
- To place an emphasis on the learning process rather than on achievements.

Intensive activities on the Internet are being developed in a large number of schools. These activities are based on the use of the Internet as a means to broaden the pedagogical-organizational infrastructure of schools (i.e.: E-schooling).

In a joint article, Dr. Gil Amit, Director of the Research and Development Center of ORT Educational Organization, and Jonathan Kaplan write:

"According to this approach, the Internet serves as an intranet within the school, and the connection between the students at home and their school through the Internet constitutes an integral part of this intranet. In this approach, the focus shifts from the interaction between the student and the subject matter to the interaction between the students and teachers ***around*** *the subject matter"* (Amit & Kaplan 2003).r

In my opinion, interactions taking place on a school website do not solely focus on subject matters. A website is a window which provides a glimpse into the school community, culture and social life. The interactions taking place on the website highlight the relations among teachers, students and parents (the community) and the different types of social interactions (extra curricular activities – for instance charity work).

3.2.1 Interface design of educational web-based sites.

Websites, like any other products, interact with the cultures of societies in which they function, and contain embedded cultural values and objectives.

Kersten et al. (1999) have introduced two terms, **Software for Cultures and Cultures in Software**, which highlight culture and cross-culture, and at the same time, the issues of e-learning or web-based learning.

Furthermore, they draw attention to the relationship that exists between these two terms: software and culture.

The term "***software for cultures***" expresses the tendency towards globalization and a single global market. New products intended for different markets need to be adapted to the different cultures within each one of the markets. It "refers mainly to the customization of software and to the development of different software for different markets" (Kersten et al. 1999). This tendency has led to the development of research on cultural differences which should be taken into account when designing objects, and particularly websites, in order to achieve the main objective, which in this case is effective learning.

On the other hand, the term "***cultures in software***" refers to the traces of culture found in software and on Internet sites: in every product, on every object, whether intentionally or unintentionally, there are "***cultural markers***". "***Cultural markers***", such as national symbol, colour, or special organization logos on websites, "*are interface design elements and features that are prevalent, and possibly preferred, within a particular cultural group. Such markers signify a cultural affiliation*" (Badre 2000).

Despite the differences between these two approaches, one emphasizing the cultural differences that influence objects and websites, and the other emphasizing the existence of cultural elements in each website and object, both attempt to define and characterize the same cultural elements.

Although this research focuses on identifying those elements of culture that are reflected on school websites ("*cultures in software*"), it would be interesting to further research on how the use of school websites affects the conventional education of culture. Can this influence be seen on Hofstede's (1991) symbolic layer, through which new words, pictures and objects are introduced to a culture?

Cultural and communication terms, emoticons, and objects such as pull-down menus and bullet-style presentation templates have spread from software to television, and into everyday written language, becoming truly global. For instance, "*the word 'bookmark' migrated back from the Internet jargon to spoken English with a different meaning then what was used before the introduction of browsers (e.g., "Let me bookmark this meeting"). These are just few examples of the influences of software developers' culture on other cultures*" (Kersten et al. 1999).

There are two philosophical approaches to technology; one which perceives technology as a mere instrument (the instrumental theory), and the other which sees technology as the source of a new culture (the substantive theory).

These approaches, endorsed by Heidegger and Ellul, are also supported by Pacey (cited in Ebersole 1995) who state: "*technology constitutes a new type of cultural system that restructures the entire social world as an object of control…The issue is not that machines have 'taken over,' but that in choosing to use them we make many unwitting cultural choices. Technology is not simply a means but has become an environment and a way of life: this is its 'substantive' impact*."

Since Israel is a multi-cultural society, it would be appropriate to raise more questions such as: do school websites reflect multi-cultural characteristics? And if so, how do the different cultures interact? Or, what do representatives of different national cultures create through their interaction? (Phillips & Sackmann 2002)

Instructional website designers

The interface design of all educational material is essential, particularly that of computer-based learning and web–based learning software.

Research on interface design of web-based education sites focuses on two main subjects:

1. **The way in which the web can be used in the educational environment**.

   This includes questions such as 'what types of learning environments should be created, 'what are the benefits of using this method of teaching and learning?' and

'will the use of web-based learning environments improve the cost-efficiency of learning?

2. **Factors that need to be considered regarding the nature and quality of educational web-based sites**.

These factors include sensitivity to information architecture (IA), usability, and in particular sensitivity to cultural usability.

The main purpose of information architecture (IA) and usability is to establish order, to transform the assortment of ideas and digital data into a system where logic, order and significance prevail. Every site consists of some element of architectural information. The question is, what is the level of this architecture?

Information architects work with three main variables: the information needs of the user, the quality and nature of the contents, and the objectives and limitations of the organization.

The information architect's recommendations are based on:

- Organization: how will the information be organized? In alphabetical order, chronological order, or according to the subject?
- Presentation: how will the information be presented? Through words, diagrams, illustrations, pictures, sound or video?
- Navigation: how will the website users find what they require? How will they know where on the website they are?
- Change: how will the site develop over time? Will the site structure allow for changes when needed?

The success of a website is directly affected by the degree of its usability, and this is a direct result of the ability of the users to locate information, understand its content, and make use of it (for instance, search, download of files, adding messages, etc.). To a large extent, usability relies on human-computer interaction (HCI) and graphic user interface (GUI).

Alessi & Trollip (2001) address these issues by comparing websites as a teaching and learning method to other methods that make use of computers, such as using open tools ("Office") and prepared lessons presented on a stand-alone disk or on software installed on the computer's hard drive.

They see the role of web-based learning as support for the traditional on-site learning environment and support for distance learning (Alessi & Trollip 2001).

Alessi & Trollip list the following requirements which they consider necessary in a web-based learning environment: a platform, a delivery medium, a communication medium, and an integrating medium for learning and teaching. Regarding the second role, they emphasize those factors that are unique to the web or that must be treated differently when encountered in the context of the web: '*navigation*', *'hypertext links'*, *'hypermedia format'*, '*orientation*', '*browsers*', '*speed*', *'multimedia components'*, *'visual layout'*, '*structure*', '*program boundary*', '*interactivity*', *'web tools provided'*, *'user controls'*, '*stability*', *'privacy*', '*security and safety'*, and *'storing data'* (Alessi & Trollip 2001, pp. 372-399).

They add two additional important factors that are more relevant to this research:

- *'international factors'*

- *'learner and instructor role and philosophies'.*

'learner and instructor role and philosophies'- *"Learner and instructor roles tend to change or blend together in web-based learning environments…Very often when learning communities form, learning is more egalitarian, with the instructor doing more facilitating than instructing"* (Alessi & Trollip 2001, p. 396).

'international factors' – "*three factors come under the scope of web's international nature: language differences, cultural differences, and time differences* (Alessi & Trollip 2001, p. 391).

Wendy Barber and Albert Badre (2004) introduce the following terms: 'cultural markers'[2], 'genre/knowledge domain'[3], 'culturally deep vs. shallow sites' [4]as well as the term 'culturability', which they describe as: "*a term we use to emphasize the importance of the relationship between culture and usability in WWW design, but it can be expanded to apply to any software designed for international use"* (Barber & Badre 2004).

Their research focuses on three questions: *"Are there design elements which can be identified as culturally specific? Are there design elements which can be identified as*

---

[2] Cultural markers are interface design elements and features that are prevalent, and possibly preferred, within a particular cultural group. Such markers signify a cultural affiliation. A cultural marker, such as a national symbol, color, or spatial organization, for example, denotes a conventionalized use of the feature in the web-site, not an anomalous feature that occurs infrequently (Barber & Badre 2004).

[3] Genre/Knowledge Domain: A knowledge domain refers to the type of information being presented on the Web and describes large categories of sites. News and Media, for example, is a knowledge domain that presents similar types of information, but may vary stylistically, such as a magazine, newspaper, or broadcast. We use the term genre in the broadest sense to convey the sort or type of information presented in a web-site (Barber & Badre 2004).

[4] Culturally Deep vs. Shallow Sites: We define a culturally deep website as one that occurs in the native language of its country of origin and links to other native-language sites. A culturally shallow site is one that occurs in a secondary language and links to other secondary language sites (Barber & Badre 2004).

genre specific? What, if any, relationship exists between culture and genre as reflected in WEB design?" (Barber & Badre 2004).

This research joins the work of others mentioned above in enabling us to make a more perceptive analysis of the elements of culture found on websites.

3.2.2 Interactions in the new communication media

Computers were already introduced in schools for the purpose of teaching and learning during the 1970's. Over the next two decades, growth rates were slow and integration processes disappointing. In the 1990's, there was a significant increase in the introduction of information technology to schools (efforts to introduce it continue to grow).

During that period the use of the Internet also permeated a wide variety of uses in the field of communication (accessibility to information, synchronized and unsynchronized tools, discussion groups, chat groups, and e-mail). A powerful tool was added to be used in distance learning, which gave birth to the concept of E-learning.

Perkins (cited in Salomon 2000) claims that within the design foundation of anything – instrument, system or a new social order, lies the logic that determines the design. The design is not only the result of trial and error and not even improvised. Design is made in an informed manner, and is guided by leading questions and considerations which answer these questions. Perkins (cited in Salomon 2000) gives four leading questions which should be answered concerning anything that has been designed or is about to be designed:

1. What is the underlying logic (theory, principles, ideology)?

2. What objectives (declared and hidden) does it seek to achieve?
3. How is it constructed and how does it work?
4. What evidence is there that it is effective?

The questions raised by Perkins (cited in Salomon 2000), the terms used by Wendy Barber and Albert Badre (2004), and Alessi & Trollip's (2001) list of requirements necessary in a web-based learning environment, provide numerous ideas that can and should be applied to user-interface design for multi-cultural audiences and enable us to analyze school websites holistically: education, pedagogy and school as one.

The area of Computer-Mediated Communication (CMC) has drawn the attention of researchers who seek to take a closer look at the kind of interactions that take place in this medium of teaching and learning. Previous research has pointed out four types of interactions that influence the learning process in an E-learning environment. New research has mainly focused on four defined categories of student interaction: (a***) learner-content***, (b) ***learner-instructor***, (c) ***learner-learner***, and (d) ***learner-interface*** (Hillman,Willis & Gunawardena 1994; Moore 1989, cited in Sutton 2001).
The first two (***learner-content; learner-instructor***) can be found in any teaching/learning situation. With the development of education technology (mainly using computers and communication tools) educators pay more attention to the importance and benefit of 'learner-***learner'*** interaction and ***'learner-interface***' (Moore cited in Sutton 1999).
The fourth type of interaction that is unique to distance education, ***'learner-interface***', was added by Hillman, Willis, and Gunawardena (cited in Sutton 1999). The authors describe the ***'learner-interface'*** interaction as the interaction that takes place between the learner and the technology. "*Students must use the technology to interact with the content,*

the instructor, and the other students. In many distance education classrooms, without learner-interface interaction, the other three types of interaction cannot take place".

The main focus of these researches is the question of student achievement and satisfaction. For example in ***'learner-instructor'*** interaction, Sutton (2001), following Moore (1989), points out the role of the instructor as an expert who needs to stimulate the student's interest and motivate them.

According to Sutton (2001) there has been very limited research on the effects of interaction within computer mediated environments (CMC). He, like other researchers, has drawn a comparison between classroom teaching situations and distance education. Again, his main concern is the students' success in an E-learning environment as compared to their success in face-to-face situations. "*Such separation is inherent in CMC-based education, making interaction among students and with the instructor even more crucial. Consequently, educators must be aware of and address the extent, modes, and nature of interactions that can occur among physically remote participants*" (Sutton 2001).

Sutton (2001) presents us with a fifth form of interaction that enhances achievement and satisfaction, and which may occur even when all students do not interact directly. "*Those who actively observe and cognitively process the interactions of other participants should substantially benefit from vicarious interaction"* (Sutton 2001).

3.2.3 The Intranet - E- Schooling

In his article, Steven Telleen (1996) stresses the organizations' need for the intranet: "*There are immediate and compelling reasons for large organizations, public and private, to adopt Intranets. They have been struggling with a series of complex organizational*

scaling issues for decades, and not entirely by chance, the Internet technology applied to internal networks simplifies many of these issues. In addition, many organizations already have in place the infrastructures and attitudes required to adopt an Intranet. They have the need; they have the hardware; and the Internet technology is providing the software to make it all work."

Telleen (1996) indicates the organizational needs and ties them to the level of technological and cultural readiness.

Gil Amit states that E-learning should address the needs of schools and provide solutions to various problems. "*One must find those issues where E-learning solves a problem and makes a contribution which can be perceived and analyzed within an adequate time frame*" (Amit 2002).

Robert Christensen (1996) from the University of Canberra, discusses the issue of educational Intranet and presents the following illustration in order to emphasize that a crucial element in the use of intranets is the level of complexity of the Intranet uses. The diagram below illustrates the various levels of complexity.

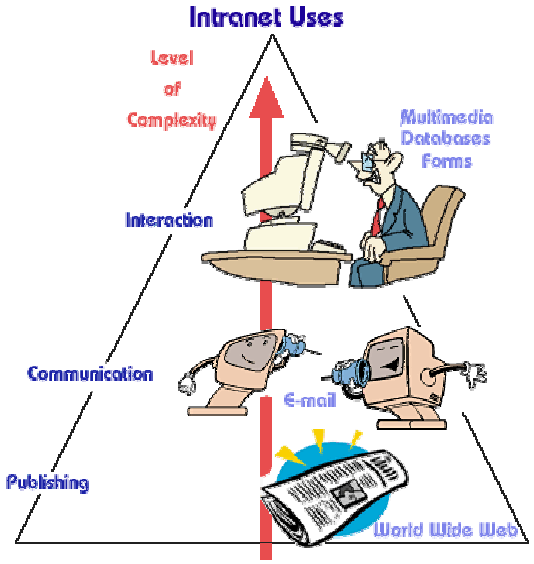


Figure 3.1 – Introduction: Educational Intranet by Robert Christensen (1996)

Christensen states: "*An Intranet typically has three features lacking on the Internet:*

1. *Speed - broad bandwidth*
2. *Security - private internal network (LAN/WAN), protected from Internet users by a firewall*
3. *Control - Enterprise network management to ensure reliability*

The Intranet can be viewed as an information utility for the enterprise. It doesn't matter whether you're using a Mac, Windows or a UNIX workstation - you plug in to the Intranet and find what you need, from documents to email to data to audio and video. Corporate and department information is accessed via the standards of the Internet: e-mail (SMTP), WWW, file transfer (ftp), and other Internet services" (Christensen 1996).

ORT school websites are a good example of this higher level of complexity. They are characterized by a high level of interactions among all the participants.

The State Library of Victoria Melbourne, Australia (1999), provides the following four categories of advantages of setting up an educational Intranet at school: 'benefits for the schools teaching environment', 'benefits for students', 'benefits for teachers', and 'technological infrastructure benefits'.

In response to the question *'Why should schools consider developing an Intranet?*' they give the following reasons:

- *Centralized access to information*
- *Improved communication*

- *Better document management*
- *Ability to share information and resources*
- *Ability to develop Internet/intranet skills*
- *Excellent learning tool*

Various communication technologies have given rise to more researches where the main subject is the different types of interactions in those different mediums: asynchronized vs. synchronized; chat rooms vs. forums vs. email; online vs. offline situation. While some of these researches focus on the question *'What kind of interaction takes place in…?*', others try to answer the question *'What is the difference between …?*' and *'What are the advantages of this kind of interaction*?

See for example researches made by Reid (1991); Wegerif (1998); Harasim (1998) Brenda (2001); Oren (2000) and Birenboum (1999).

Thus the research expands into new directions. One of these directions is the appearance of violence on websites. King (1995) presents us with a research on mood in cyberspace – where *'sad people'* are the source of *'flame wars'* (rude notes in forums*)*. According to his research, flame wars are the *"result of sad, self-focused people using the anonymity of cyberspace for such uninhibited mood outlets*" (King 1995).

In trying to understanding the phenomena of *'flame wars'*, one must account for the inhibition of normal social norms. Being rude, unkind and aggressive in a social situation is highly disapproved of.

"*The lack of the normal social clues, such as tone of voice and facial expressions, that moderate and guide much of social interaction, and would form the bases of social judgment, are completely lacking in cyberspace*" (King 1995).

Rude and offensive language can also be found on ORT school websites. Can this language be perceived as more offensive than when said out loud in the classroom? Or does the fact that we see it in black and white generate a stronger reaction? What is the relation between strong language and the cultural character of Israel? In his research, Hofstede relates to the spoken language when he defines the cultural dimensions and the manner in which parents, teachers and youth talk. He perceives language as not only a symbol, but also as "*vehicles of culture transfer… without knowing the language one misses a lot of the subtleties of a culture and is forced to remain a relative outsider*" (Hofstede 1991, pp. 212-215).

Brenda Danet (2001) studies the phenomenon of the growth of the use of language symbols to create art. Danet (2001) is a sociologist and communication scholar specializing in research on communication and culture on the Internet. *"On the Web individuals interact with images, not with people.* ***Here (in IRC- a chat tool) people interacted with people, via the exchange of images****, while simultaneously logged onto the same IRC channel. The players pursued this activity both for its own sake and as a vehicle for social interaction and the satisfaction of belonging to an emergent virtual community. The images were thus not only "art" but also "communication"* (Danet 2001).

The unique language of symbols analyzed by Danet (2001) is often used on ORT school websites. In my opinion, these reflect a change in culture on a symbolic level, as described by Hofstede (1991).

3.2.4 Cyber Societies

Cyber Societies is a term often used by researchers to describe communities created on the Internet.

In the American movie "*Fields of Dreams*" (1989) an inner voice tells the character played by *Kevin Costner* : "***If you build it, they will come***". Costner complies and builds a baseball field, where deceased baseball players come to play. A common myth regarding the Internet is that if you will build a successful application, the surfers will come. In the case of discussion groups, this myth has turned out to be accurate, and the ability to respond to articles and reports has even become a goal. The sentence: "*on the Internet, everyone can become whatever he or she wants to be*" invites millions of surfers to take advantage of this remarkable characteristic of the Internet: the possibility of hiding behind a shroud of anonymity. Discussion and chat groups enable the exchange of intimate information as well as vicious criticism, without having to deal with the consequences. It may even be said that this anonymity has led to the creation on the Internet of applications such as '*Napster'* which allows surfers to exchange and obtain copyrighted music files, without anyone knowing who provides the files and who acquires them.

Thus, many have been quick to describe what is happening (cyberspace) as the creation of a new society – 'Cyber society'. 'Cyber societies' are described as: "*A new space for human interaction, human socialization, a new area for production of knowledge. This new environment is not geographically restricted, nor is it submitted to the linear pattern of time. The cyberspace integrates different communication technology in a new environment*" (Doherty 1995).

In his article *'**Who will be in cyberspace***?' Winner argues that "*to invent a new technology requires society to invent the kinds of people who will use it, with new practices, relationships and identities supplanting the old… If we limit our attention to their uses and market prospects, we ignore their most consequential feature, the conditions that affect people's sense of identity and community"* (Winner 1995). Winner (1995) raises the main questions through which we can study whether a new community has really surfaced:

1. *Around these instruments, what kinds of bonds, attachments and obligations are in the making?*
2. *To whom or to what are people connected or dependent upon?*
3. *Do ordinary people see themselves as having a crucial role in what is taking shape?*
4. *Do people see themselves as competent to make decisions?*
5. *Do they feel that their voices matter in making decisions that will affect family, workplace, community, and nation?*

Winner (1995) believes that we cannot ignore the contributions of these consequential features on peoples' sense of identity and community.

ORT school websites reveal numerous examples of teachers, students and parents, expressing a sense of identity and community.

Another set of questions is raised by Victor (2002) in his study, the "*potential messages—both overt and hidden… about the nature of knowledge and the role of the schools in its formation and transmission*. In his research proposal Victor (2002) asks the following questions:

- *To what extent are school websites caught up in processes of the transmission of ideology, masking difference, hiding alternative discourse, preparing subjects of the State?*

- *What do schools Web sites possibly teach the children who view them about the nature of learning, the role of education, their position as workers and participants in society?*

In his research Victor analyzes the websites using Johnson's (cited in Victor 2002) "***cultural circuits' model***" of data analysis. In this model, analysis proceeds in four stages:

1. **How was the site produced?** *(name of school, student-produced? Teacher-produced? Faculty-produced? Other?) What are the designers' interests in producing the site? What cultural influences inform the site? (need to publish mission statement, class schedules, etc.)*

2. **What possible meanings are in the site?** *(overt and covert meanings) Examine the site as a literary text. Identify any possible meaning fields. Conduct reconstructive analysis (validity claims, power typology, etc).*

3. **Analyze particular groups exposed to the site** *(students, parents, teachers, community members). What meanings are generated for these representative groups? How are these meanings similar to those found in step 2? How are they different?*

4. **Analyze routine activities of the groups in relation to their interpretations of the site.** *Do they act differently than their interpretations would suggest? Does the site affect their behavior in some way?*

Samuel Ebersole (1995) introduces the philosophical assumptions underlying cyberspace. Following Hunnex (cited in Ebersole 1995), he states that "*The major premises of cyberspace can be illuminated by using the three-fold division of philosophy… **epistemology**, **metaphysics**, and **axiology**.*

Quoting Leibniz's "*Community of minds*," McLuhan's "*Divine Force*" and Ellul (all cited in Ebersole 1995) it is obvious that there is a shared vision where technology will assist the community. "Modern *technology has become a total phenomenon for civilization, the defining force of a new social order in which efficiency is no longer an option but a necessity imposed on all human activity*" (Ebersole 1995).

In the ***axiology*** category, Ebersole (1995) brings to light the issue of '***ethics***' which includes discussions on *abundance, personal privacy, individualism* and *isolation, equality of access,* computer *crime, pornography, job loss, commercialism, materialism,* and *cultural imperialism*. "*While these issues are very specific and tied to specific attributes of the Web environment and specific ways of using the Web, some argue that the larger issue is simply the all-encompassing nature of the technological system, of which this is only one small part*" (Ebersole 1995).

Howard Rheingold (1998) tells the story of 'WELL'- an online telecommunication system launched in spring 1985 in Sausalito, San Francisco Bay, US. Lists of statements made by him show his enthusiasm for this new media and the community it created.

- *Over a period of months, I fell into the habit of spending an hour or two every day gazing in fascination at this window into a community that was creating itself right in front of my eyes.*

- *The vision that McClure and Brand agreed on involved three goals: to facilitate communication among interesting people in the San Francisco Bay area; to provide sophisticated conferencing at a revolutionary low price; and to bring e-mail to the masses.*
- *People who were looking for a grand collective project in cyberspace flocked to the WELL. The inmates took over the asylum, and the asylum profited from it. "What it is up to us" became the motto of the nascent WELL community.*
- *You can't talk about the WELL as a community without meeting Tex, the innkeeper, bartender, bouncer, matchmaker, mediator, and community-maker, another communard who emerged from twelve years on the Farm with a reality-tempered commitment to community-building and a deep distaste for anything less than democratic governance* (Rheingold 1998).

At the same time, Rheingold (1998) shares with us what he calls 'conflict in the WELL environment':

"*Whatever community is, it is not necessarily a conflict-free environment. There has always been a lot of conflict in the WELL, breaking out into regular flame fests of interpersonal attacks from time to time. Factionalism. Gossip. Envy. Jealousy. Feuds. Brawls. Hard feelings that carry over from one discussion to another. When one of those online brouhahas happened and people started choosing sides and unkind words were being said, Tex and I often walked in the hills above Sausalito and talked about how and why on- life can become unpleasant and how to make it work. We kept concluding that simple, corny, all-powerful love was the only way to make a community work when it is diverse, thus guaranteeing friction, and at the same time committed to free expression, which can and does get out of hand*" (Rheingold 1998).

A well known phenomenon surrounding web-based instruction (WBI) is the problem of 'dropping out', abandoning, or not participating in the E-learning course, forums and school website. In trying to answer the question *'Online Learning Communities: If You Build Them, Will They stay?'* Hill (2000) seeks to explain this phenomenon, which she sees as a challenge rather than a problem.

"One explanation for high dropout rates and dissatisfaction with distance delivered courses may relate to a lack of community in non face-to-face courses. In discussing the importance of interactivity, DeVries & Wheeler (1996) discuss the lack of face-to-face contact as a major barrier for distance education. Martin (1999) also mentions the lack of face-to-face contact as a negative aspect to distance delivered courses" (Hill 2000).

As developers, Hill (2000) and others like Palloff and Partt (2002) state that community building can occur in distance delivered courses. They offer us on one hand research that supports evidence of the existence of a community, and on the other hand, provide suggestions and recommendations on how to build virtual communities.

Maboudian (cited in Victor 2002) investigates the part school websites play in defining gender identity. He examines the use of a relatively new cultural form - the Internet webpage - as an instrument of propaganda by a large urban public school district. And by doing so he shows the unique way in which cultural production may be used in powerful ways in the construction of individual and group identity.

Victor (2002) uses Maboudian's (1999) research on school websites to identify ideological features and determine the extent to which school websites perform the function of social reproduction or transformation.

The ***HSFR*** (the Swedish Council for Research in the Humanities and Social Sciences) financed several cyber cultural researches between 1998 and 2000. In four different projects, the researchers tried to see how meaning and identity is shaped through interactive communication on the net. "*The project emphasizes the interplay of symbolic forms, since the Internet as well as various multimedia combines written and spoken words with images and music*" (Fornäs 1998).

What clearly emerges from the literature review, I believe, is a broad background understanding (from different researches) of cultural dimensions as reflected on websites and of the process through which e-learning becomes e-schooling in the educational setting.

In a way, this process represents a "push" and "pull" situation, describing a broader debate concerning the integration of computers in the school environment. Should new technology be "pushed" into schools, or should we wait for demand for technology to rise from the teachers ("pull"). E-learning is considered a "push" technology developed by professionals outside the school environment. E-schooling represents a new direction in a web-based learning environment, while remaining a push technology. On the other hand, cultural dimensions as reflected on school websites can be considered as a "pull" situation, where teachers use the E-schooling platform in a broader way, to teach not only skills and content but also social education in a creative manner. In this process, teachers require new tools to be introduced to the website.

In concluding this part of the Literature Review, I think that the following questions should be asked:

- Can we clearly see the identity of the cultural dimensions described by Hofstede (1991) on school websites? How are the following cultural dimensions - power distance, collectivism vs. individualism, masculinity vs. femininity, and uncertainty avoidance - reflected on school websites in Israel?
- Can the changes that have occurred in Israeli culture over the thirty years since Hofstede's (1991) research be seen through school websites?

Chapter 4

Findings

4.1 Introduction

The findings are discussed in the sequence in which they answer the research questions. The instruments that have yielded the best information to answer these questions are ***observation*** and ***analysis*** of the web designs as well as of the contents.

At the opening of each chapter, I have summarized Hofstede's definition of each dimension, before presenting Marcus' interpretations of how this dimension can affect the user interface and design of a website. I have summarized the reflections of these aspects on ORT school websites, proceeding with a detailed discussion of each element. I have then examined whether Marcus' hypotheses are applicable to them.

I have used relevant examples and screen shots from the websites, tables and graphs to illustrate my findings.

The observations of the ORT school websites are focused on three layers of website architecture: user interface, services offered by the websites, and accessibility of information.

I have organized this chapter into four sections, according to Hofstede's four cultural dimensions:

4.1 How is ***Power Distance*** reflected on the design and user interface of ORT school websites?

4.2 How is ***Collectivism*** vs. ***Individualism*** reflected on the design and user interface of ORT school websites?

4.3 How is ***Masculinity*** vs. ***Femininity*** reflected on the design and user interface of ORT school websites?

4.4 How is ***Uncertainty Avoidance*** reflected on the design and user interface of ORT school websites?

4.2 Research question 1

How is power distance reflected on the design and user interface of ORT school websites:

To what extent do the less powerful members' expectations and acceptance of unequal power distribution within a culture reflect the following aspects of ORT websites' user interface and design, as defined by Marcus (2001):

- **Access to information**: highly (high PD) vs. less-highly (low PD) structured.
- **Hierarchies in mental models**[1]: tall vs. shallow.
- **Emphasis on the social and moral order** (e.g., nationalism or religion) and its symbols: significant/frequent vs. minor/infrequent use.
- **Focus on expertise, authority, experts, certifications, official stamps, or logos**: strong vs. weak.
- **Prominence given to leaders vs. citizens, customers, or employees**.
- **Importance of security and restrictions or barriers to access**: explicit, enforced, frequent restrictions on users vs. transparent, integrated, implicit freedom to roam.
- **Social roles used to organize information** (e.g., a managers' section obvious to all but sealed off from non-managers): frequent vs. infrequent

According to Hofstede's (1991) classic study of cultures in organizations, Israel is a country with low power distance (PD), with a score index of 13.

[1] Mental Model: "refers to a representation in working memory that can be 'run' by the learner to understand a system, solve problems, or predict events" (Alessi & Trollip 2001, p. 28).

A country with low PD, says Hofstede (1991), tends to view **subordinates** and **supervisors** as closer together and more **interchangeable**, with **flatter hierarchies**. Parents and children, and teachers and students, **may view themselves more as equals**. **Equality is expected** and generally desired.

These PD differences are reflected on ORT websites as follows:

- **Access to information**

An examination of ORT school websites supports these findings, both regarding content and site design. The first version of the Clickit platform enables schools to upload their information in three areas: The title area, the side bar and the main area.

Figure 4.2.1- ORT Hanna Senesh school home page as an example of Clickit platform.

This gives the site an asymmetric shape, with two different areas from which information can be accessed.

Access to information on the school website is less structured.

One would assume that since ORT schools form an integral part of the ORT organization, the school sites would present a highly structured access to information,

being subject to the same organization policy. Yet my findings show that there is no structured information access. Furthermore, each school has created its own version of access to information according to its priorities and policies. The sites' contents and design reflect the main values of each school.

Clickit's flexible platform allows each school to organize its information differently, both in content and design, thus making access to information less structured. For example:

Figure 4.2.2: ORT Technikum, Giva'tim School's website.

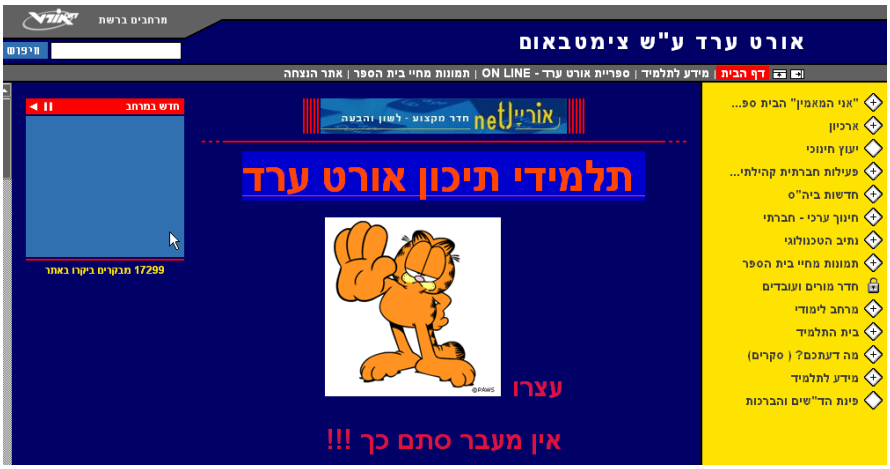


Figure 4.2.3: ORT Arad School's website.

There was initially some evidence of high PD with more structured access to information in the first version of the ***Clickit*** platform, where a template consisting of 5 different areas was given to schools.

Figure 4.2.4- Access to information in 5 different areas as presented on the ORT Afek School home page.

However, the second version of the ***Clickit*** platform is more flexible and schools' webmasters can design the home page screen without any prescribed template. The new version allows for design flexibility and personal style to be applied. The low PD, characteristic of Israeli society, is reflected in the planning of the platform, resulting in a variety of different school websites with less structured access to information.

- **Hierarchies in mental models**

  The term *'mental models hierarchies'* refers to the organization of data, functions, tasks, roles, and individuals in groups in different organizational environments. In the context of websites, it is intended to convey the organization perceived

within the user interface, which is assumed to be learned and understood by users (Marcus, Armitage, & Frank 1999).

An analysis of the ORT school websites must in my opinion distinguish between the ***Clickit*** software as it was built by the ORT IT developers and the manner in which it is shaped by the school users, and the different patterns used to present and organize the contents on the websites.

There are different ways in which hierarchy and organization of information is built into the ***Clickit*** software. For instance,

- There is a distinction between the space destined to advertise the ORT organization itself, and the space dedicated to each school's contents. The space attributed to the ORT organization can be interpreted as an expression of high PD. However, since this space is a dynamic framework used to publish new pedagogical activities and courses developed by the ORT organization, the emphasis is placed on the expansion of the use of the website.
- The upper bar and the side bar on the website have different uses in organizing information: while the upper bar's available space is limited and linked to main subjects according to each school's specifications, the number of folders and sub-folders that may be included in the side bar is unlimited.
- Another expression of hierarchy and information organization in the ***Clickit*** software is the manner in which it determines the order in which the different folders are organized (the default is the alphabetical order of the folders' names or numerically).

The design of school websites carried out by the school teachers and staff is characterized by hierarchy in mental models. This hierarchy does not necessarily reflect the schools' organizational structure (principals, teachers, age groups, etc.).

One may say that the hierarchic structure of each school is shaped by its needs. The folders and links on the upper and side bars reflect the hierarchy and specific needs of each school. For instance, the ORT Holon School attaches great importance to school administrative information (school events and timetables), social forums and the memorial for Israelis fallen during the wars.

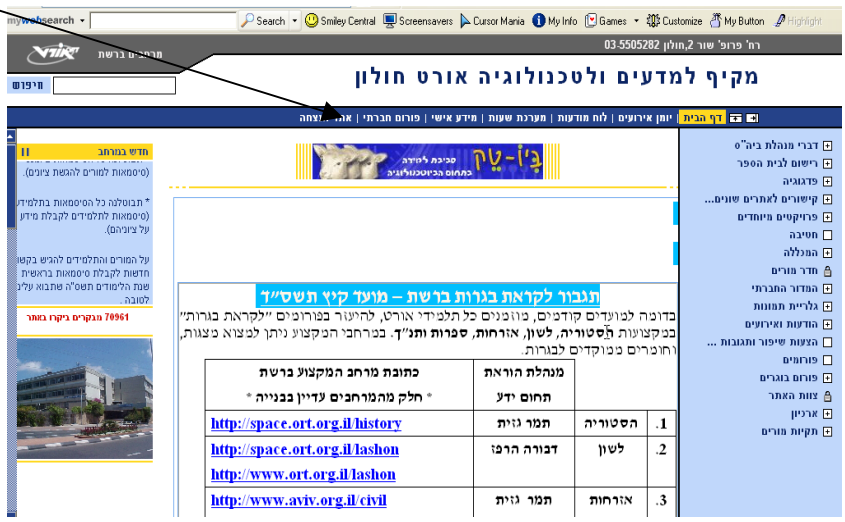


Figure 4.2.5: ORT Holon's school website.

Therefore, an analysis of each school website will reveal the hierarchy in its mental models.

- **Emphasis on social and moral order**

  As opposed to Marcus' (2001) attribution of minor and infrequent emphasis on social and moral order, I have found that social and moral order such as nationalism and religion play a major role in ORT school websites and are frequently used.

Social and moral order can be seen in the following folders:

- Animal rights
- Environmental issues
- Compulsory community projects
- New immigrants
- Student council
- Drug prevention programs
- Assistance to the elderly
- Sexual education
- School counselor
- Violence prevention
- Parties
- School trips
- School spirit
- Ties with the community
- Social education
- Students' radio station
- Road safety
- Picture gallery

Nationalism and religious order can be seen in the following folders:

- Army orientation
- Rabin memorial
- Memorial
- Delegation to Poland
- Jewish holidays
- Tradition and values
- Roots and origins
- Jewish Diaspora
- Site colors

The following table illustrates the emphasis placed by ORT school websites on social and moral order, including nationalism and religion.

Note that each school website can have more than one folder in each of these subjects.

Subject	Number of appearances in Schools
Moral order / Social order	158
Nationalism	63
Religion	42
Total	263

Table 4.2- Number of schools featuring moral/social order, nationalism, and religion on their website.

The table above clearly shows that social and moral order, nationalism and religion play a major role in ORT school websites and are frequently used. In average each of the 54 school websites has between 4 and 5 folders on these subjects.

- **Focus on expertise - authority, experts, certifications, official stamps, or logos: strong vs. weak.**

  In ORT, there is no focus on expertise, nor are the sites organized according to social roles. There is however a use of logos - national, school logos, cartoons, etc - on most of the sites, which will be discussed in the answer to the next research question – Collectivism vs. Individualism.

- **Social prominence**

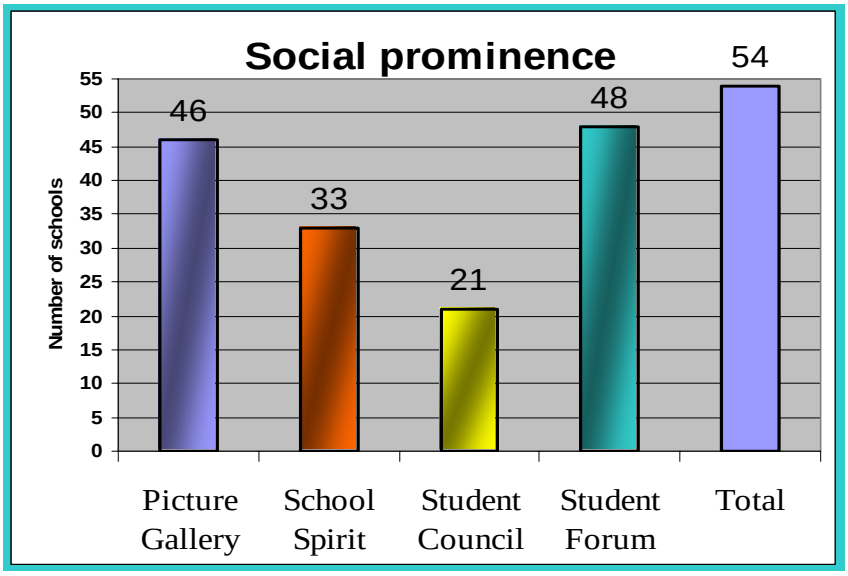
  The educational process is student-centered in ORT school websites, with an emphasis on student initiative.

  Students are regarded as the sites' main customers. Information is directed at them, and the website is their place of self-expression. Students are encouraged to participate, and I found that they often freely express disagreement and criticism,

sometimes even failing to show respect towards their teachers in this open environment.

The *'picture gallery'*, '*school spirit*', '*student council*', and '*student forum*' folders illustrate this, as follows. Of the 54 ORT school websites that were analyzed,

- 46 websites have a *'picture gallery'* folder, which consists of student pictures taken at various school events.
- 33 websites have a *'school spirit'* folder, which includes texts describing various school spirit activities.
- 21 websites have a *'student council'* folder. This illustrates best the website's focus on students as its main customers (for example – ORT Afridar-Ronson Ashkelon student council elections).
- 48 websites have a *'student forum'* folder – This dynamic element is characterized by direct dialogue between students and teachers, school administration and fellow students.



Graph 4.2.1 – Number of schools featuring social prominence aspects.

Students are perceived as partners in building the space / site (for example: ORT Gutman, ORT Acre)

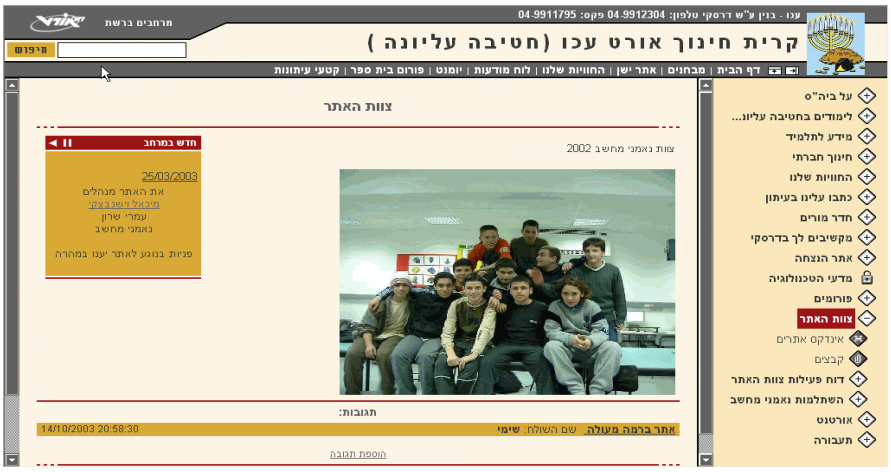


Figure 4.2.6- *'Behind the scenes'* – the team of students at ORT Acre who are responsible for building and maintaining their school website.

- **Important security**

  The Clickit software used on school websites addresses the issue of security by offering the option of restricting access. However, I have found that most ORT school websites are characterized by transparency, and an implicit freedom to roam and move about. Teachers post their lesson plan openly for all to see. Quoting one of the teachers: "Welcome to Phillip's Material… Feel free to use it…" (ORT Yad Leibowitz). An exception is the 'Teacher's Forum,' which requires a password to access.

Figure 4.2.7 ORT Yad Leibowitz: folder of the English teacher

- **Social roles**

  ORT school websites did not reveal any emphasis on social roles. The only example of social role used to organize information is the '*teachers' forum*' folder, which is restricted by user name and password.

The table below summarizes Marcus' seven aspects that are affected by PD, following an analysis of ORT school websites. The + symbol indicates that this aspect is reflected in the school websites, while the – symbol indicates that it is not.

Marcus' 7 aspects of user interface and design affected by PD	Aspects present in ORT school websites
Access to information	+
Hierarchies in mental models	+
Emphasis on social and moral order	-
Focus on expertise	+
Social prominence	+
Important security	+
Social roles	-

Table 4.1 - Marcus' 7 aspects of user interface and design affected by PD as presented in ORT school websites. (Marcus 2001)

The table above confirms that ORT school websites display characteristics of a country with low power distance (PD).

While Marcus (2001) chose websites that best illustrate his 7 aspects of power distance, in my research, I have applied them to all ORT school websites. Therefore, not every aspect may be applicable to all websites.

4.3 Research question 2

How is collectivism vs. individualism reflected on the design and user interface of ORT school websites:

In Israel, which Hofstede (1991) defines as a society characterized by both collectivism and individualism (with a score of **47/48**), how are these characteristics reflected on the design and user interface of ORT school websites?

"*Individualism pertains to societies in which the ties between individuals are loose: everyone is expected to look after himself or herself and his or her immediate family. Collectivism as its opposite pertains to societies in which people are integrated from birth into strong, cohesive groups which throughout people's lifetime continue to protect them in exchange for unquestioning loyalty*." (Hofstede 1991 p. 50)

Based on this definition, Marcus (2001) introduces the following aspects of user-interface and web design which may be affected by individualism and collectivism.

- Motivation based on personal achievement: maximized (expect the extra-ordinary) for individualist cultures vs. underplayed (in favor of group achievement) for collectivist cultures.
- Images of success: demonstrated through materialism and consumerism vs. achievement of social-political agendas.
- Rhetorical style: controversial/argumentative speech and tolerance or encouragement of extreme claims vs. official slogans and subdued hyperbole and controversy.

- Prominence given youth and action vs. aged, experienced, wise leaders and states of being.
- Importance given individuals vs. products shown by themselves or with groups.
- Underlying sense of social morality: emphasis on truth vs. relationships.
- Emphasis on change: what is new and unique vs. tradition and history.
- Willingness to provide personal information vs. protection of personal data differentiating the individual from the group.

In general, ORT school websites are characterized by elements of a **collectivist society,** as opposed to an individualist society.

- **Motivation based on group achievement**

A majority of ORT school websites display the achievements of a group of students from the school. It is common to find messages such as: "*The school's ….. team won first place in the …. national competition" or "congratulations to the high number of grade 5 students who volunteered at the …. pediatric section of the … hospital"* (ORT Tiv'on).

Personal achievement is very seldom recognized on the sites. Therefore, the websites clearly reflect a society characterized by collectivism.

- **Images of success**

The images of success are demonstrated through group achievement of social-political agendas. Images, texts, and slogans found on the websites deal with socio-

political issues such as: animal rights, drugs, assistance to the sick and the elderly, the environment and tolerance.

- Out of the 54 ORT school websites, 20 deal with more than 4 different issues (in different folders), and display student group activities involving these issues.
- 8 additional websites deal with at least 3 issues.
- An additional 19 sites deal with one to two issues.

In conclusion, all ORT school websites display images of success based on a socio-political agenda.

- **Rhetorical style**

  The element of rhetorical style is best observed on the bulletin boards, news flashes, and school forums, where teachers and students may freely express themselves. When examining ORT school websites, one can find both rhetorical styles: on one hand, controversial, argumentative, and sometimes even aggressive speech is used, while on the other, official slogans and subdued overstatements and controversies can be found.

- **Prominence given youth and action vs. aged, experienced, wise leaders and states of being.**

  As I have previously mentioned, ORT school websites are youth-oriented; the emphasis is placed on youth and actions, as is reflected in the student council activities, young leadership programs, picture galleries, school trips, parties, etc.

The study material and pedagogical program are posted on the site by teachers. However, there is no emphasis placed on the teachers as experienced, wise leaders. Although ORT school websites reflect a collectivist society, some exceptions can be found, such as this aspect, which is more characteristic of individualistic societies. These findings support Hofstede's description of Israel as a society with both collectivist and individualist aspects.

- **Importance given individuals vs. products shown by themselves or with groups.**

As mentioned above, an emphasis is placed on group achievements and products, rather than on individuals. For example, the website of ORT Kiryat Bialik features a folder on its young leadership program, with an emphasis on group achievement.

Figure 4.3.1 - ORT Kiryat Bialik: young leadership program.

- **Underlying sense of social morality**

ORT school websites attach great importance to relationships in building a sense of social morality. Folders such as the following reflect this approach:

- Relationships with the community
- Building a bridge between generations (genealogy)
- Relationships with school graduates
- Joint projects with other schools in Israel and abroad

- **Emphasis on change**

This aspect illustrates best the Israeli society as a society with both collectivist and individualist aspects. The schools' dynamic spaces display the contradicting forces prevailing in the Israeli society: on one hand, there is the desire for change and uniqueness; while on the other hand, there is an emphasis on tradition, religion, nationalism, and shared history as a basis for the identity of the collective, and as an integral part of the school's educational goals.

Subjects such as Israeli holidays, traditions, values, delegations to Poland,[2] army preparation, memorials, roots and Jewish communities worldwide underline the desire to preserve the past and to define an Israeli identity.

[2] Every year, youth delegations from Israel set out to tour the extermination camps in Poland.

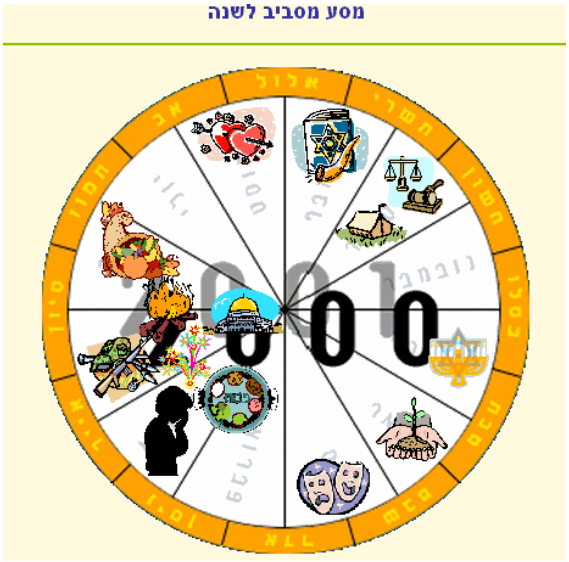


Figure 4.3.2- Israeli holidays displayed on the ORT Gutman School website.

The annual journey to Poland of high school youths clearly reflects the aim and desire to strengthen the Jewish identity and heritage: its collectivity.

Figure 4.3.3 – ORT Afula students on their journey to Poland in 2003.

ORT school websites are increasingly used by pupils in connection with the journey to Poland: to prepare for the trip, document it, and process the experiences after their return to Israel.

The following table displays the number of folders created regarding the issues above in all 54 ORT school websites.

Subject	Number of sites
Memorial	20
Jewish holidays	19
Delegation to Poland	15
Roots and origins	13
Army service orientation	7
Tradition and values	5
History of Jewish Diaspora	5

Table 4.4 - Number of schools featuring folders on tradition, roots, religion, and Jewish history.

At the same time, the websites emphasize the desire for innovation and originality. In 2002, the ORT Development Center reported a sharp increase in teachers' requests for further training on the Clickit platform (Amit & Kaplan 2003). This is an indication of a prevailing willingness to change.

- **Willingness to provide personal information**

As mentioned previously, ORT school websites are open, transparent, and readily provide personal information, particularly in forums. This is used to encourage

relationships to be formed. Although ORT school websites promote group activities, this aspect reflects a more individualistic approach.

Following an analysis of ORT school websites, the table below summarizes the 8 collectivism vs. individualism aspects as they are reflected on the sites. The + symbol indicates that this aspect is reflected in the school websites.

Subject	**Collectivism**	**Individualism**
Motivation based on personal/ group achievement.	+	
Images of success.	+	
Rhetorical style.	+	
Prominence given youth and action vs. aged, experienced, wise leaders and states of being.		+
Importance given individuals vs. products shown by themselves or with groups.	+	
Underlying sense of social morality.	+	
Emphasis on change.	+	
Willingness to provide personal information.		+

Table 4.3- Collectivism vs. individualism aspects reflected on ORT school websites.

The table above confirms that ORT school websites display more characteristics of a country with collectivism features, with the exception of the subjects of *'prominence given youth and action vs. aged, experienced, wise leaders and states of being' and 'willingness to provide personal information'*.

4.4 Research question 3

How is Masculinity vs. Femininity reflected on the design and user interface of ORT school websites:

In Israel, which Hofstede defines as a society characterized by both masculinity and femininity (with a score of 47), how are these characteristics reflected on the design and user interface of ORT school websites?

In defining cultures with masculinity and femininity, Hofstede focuses on gender roles; in other words, the traditional allocation of assertiveness, competition, and toughness to masculine roles, and orientation to home and children, people, and tenderness to feminine roles. A unique aspect of masculine cultures is that the traditional distinctions are strongly maintained, while in feminine cultures, distinctions tend to collapse and overlap gender roles. For instance, Marcus states that "both men and women can exhibit modesty, tenderness, and a concern with both quality of life and material success" (Marcus, 2001). Earnings, recognition, advancement, and challenge are traditional masculine work goals, while management, cooperation, living conditions, and employment security are traditional feminine work goals.

In summary, Hofstede's definitions of masculinity and femininity focus on the balance between *roles* and *relationships*.

Based on these definitions, Marcus introduces the following different emphases of user-interface and web design which may be affected by masculinity vs. femininity.

"Masculine cultures would focus on the following user-interface and design elements:

- Traditional gender/family/age distinctions
- Work tasks, roles, and mastery, with quick results for limited tasks
- Navigation oriented to exploration and control
- Attention gained through games and competitions
- Graphics, sound, and animation used for utilitarian purposes

Feminine cultures would emphasize the following user-interface elements:

- Blurring of gender roles
- Mutual cooperation, exchange, and support, (rather than mastery and winning)
- Attention gained through poetry, visual aesthetics, and appeals to unifying values"(Marcus, 2001)

- **Traditional gender/family/age distinctions.**

Gender-based roles are blurred on ORT school websites. An examination of the websites did not reveal any gender-based information. However, age is reflected through the different folders (*teachers' folders, parents' folders, students' folders according to grade*, etc). This is a reflection of the traditional structure of schools, which consists of age groups and classes.

Age-based folders help the users find relevant information, such as announcements posted on the school bulletin board: "***To all grade 8 students…***"

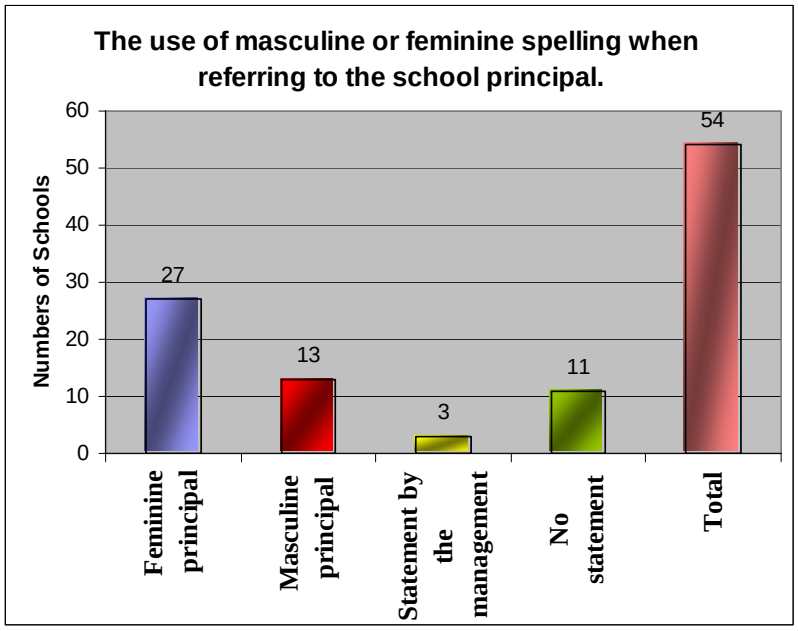
Since the Hebrew language differentiates between masculine and feminine through spelling, I have analyzed the websites' language in an attempt to reveal traditional gender.

My findings indicate a blurring of traditional gender. In some cases, the website edirors stress equality between the sexes, by combining feminine and masculine form in the same word such as: תלמיד/ה

An exception that stands out is the use of masculine מנהל

or feminine מנהלת spelling when referring to the school principal.

- In 27 out of 54 websites - "statement by the (feminine) principal"
- In 13 out of 54 websites – "statement by the (masculine) principal"
- In 3 out of 54 websites – "statement by the management"
- 11 of the websites do not include any of the above.



Graph 4.4.1 Number of schools using masculine or feminine spelling when referring to the school principal.

An analysis of the figures – feminine or masculine - appearing on the website (particularly on the home page) reveals that:

- In 15 of the 54 ORT school websites a dominant masculine figure appears on the site's home page.
- In 11 of the ORT school websites a feminine figure appears.

In most of the ORT school websites, a picture of the school premises appears, without any emphasis on the gender of the students attending these premises. This gives weight to the blurring of gender roles aspect presented by Marcus, regardless of the distinction between genders which is built in the Hebrew language, where the gender is always defined by the different spelling.

- **Work tasks, roles, and mastery, with quick results for limited tasks**

It is common to find in most websites short tasks with quick results. For example, the task given by the English teacher at ORT Gutman to answer 8 multiple-choice questions on the use of the future tense. This might not necessarily be tied to masculine characteristics: in my opinion, short tasks are typical of the internet environment (click, drag and drop, short answer, etc).

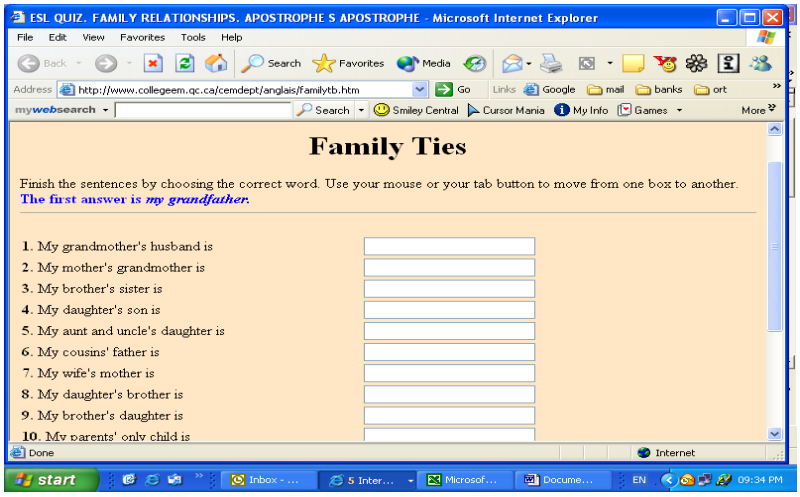


Figure 4.41 - ORT Gutman School website: examples of short tasks.

- **Navigation oriented to exploration and control**

Information on the '***Clickit***' software can be accessed through the side bar as well as the upper bar, and is displayed at the center of the screen.

The websites' structure and organization (within the side and upper bars) are determined by the school management and the site managers. The organizational structure and the titles given to folders and sub-folders determine in large part the accessibility of information on the website.

The complexity of the websites is another factor that differentiates one website from another. In 18 of the 54 websites, more than 15 major folders are found in the side bar.

Pop-up windows, various types of interface controls, and information available through scrolling further amplify the complexity of the websites' content and choices.

An exception is the ORT Gutman school website, in which the site managers dictate to the users which path to follow in order to access the site. The home page presents only 5 folders, 5 paths through which the user can enter the site.

Since this home page is relatively new, and was created only after the completion of the school website, (and onto the old home page), one may ask, what moved the site managers to choose this approach? Does the fact that the website manager is a male student results in the large number of masculine symbols on the site?

- **Attention gained through games and competitions**

Games and/or competitions are seldom used in ORT school websites to attract the students' attention. Of 54 sites, only 15 have folders with games, consisting mainly of information on games websites on the internet. Of these 15 sites, only 8 have (weekly/monthly) riddle competitions, whose participants are school students.

- **Graphics, sound, and animation used for utilitarian purposes**

An examination of the graphic aspect as described by Marcus (2001) shows that ORT school websites reflect both feminine and masculine symbols. These elements support Hofstede's (1991) definition of Israel - with an index of 47 – as a country consisting of both feminine and masculine characteristics.

Most ORT school websites use graphics, sound, and animation in order to attract attention, to present visual aesthetics, as well as to appeal to unifying values.

Contrary to Marcus' article, no gender-specific symbols are found in the graphic design of ORT school websites.

Of the 54 ORT school websites, 30 display a picture of the school on the home page. In part of the sites, the picture is placed at the centre of the page, and some have even created a flash file with changing pictures presenting different angles of the school premises and its surroundings (ORT Hanna Senesh, ORT Afek, ORT Kiryat Tiv'on, and ORT Technikum).

Some of the websites have chosen to display a small picture of the school on the left-hand side of the home page (ORT Holon).

Symbols are an important element in the creation of group identity (Israeli 2003).

One of these unifying symbols is the logo. The ***'Clickit'*** software used in ORT school websites includes a permanent logo of the ORT Israel educational organization on the upper left corner. This logo remains on all the site pages and is linked to the ORT Israel home website.

The upper right corner of the website provides space to add an additional logo, to be determined by the schools.

From an analysis of the ORT school websites, it emerges that 4 main types of logo appear in this space on the home page:

No.	Type of Logo	School name	Example
A	ORT logo + name of the school.	**ORT Sharet**	
B	Logo of national/religious character. e.g. displays the Israeli flag.	**ORT Megadim**	
	Logo of religious significance.	**ORT Sara Herzog**	
C	Name of the school illustrated by a drawing. For example, of a tree.	**ORT Kramim**	
D	Logo without any significance, e.g. a smiley	**ORT Bait Shean**	

Table 4.6 - Types of logo on ORT school websites.

Of the 54 ORT school websites:

- **A.** 19 display the ORT logo with the name of the school.
- **B.** 12 display the name of the school illustrated by a drawing as their logo.
- **C.** 5 display a logo of a nationalist / religious character.
- **D.** 3 display a logo of no particular significance.
- **E.** 15 additional schools do not have any logo.

The above illustrate the predominance of feminine symbols on the website which emphasize unity – the sense of belonging and solidarity with the ORT Israel organization, connection to the school, and national or religious unity.

Feminine cultures emphasize the following user-interface elements:

- **Blurring of gender roles**

As mentioned before, since there is no emphasis on gender roles in ORT school websites, there appears to be a blurring of gender roles.

- **Mutual cooperation, exchange, and support, (rather than mastery and winning)**

The examination of the contents of school websites provides examples of cooperation, exchange, support and willingness to provide personal information, as seen particularly in 'forums'. For example:

"*In this forum you are going to get all the help you need in order to carry out your project properly. I will answer your questions on Tuesdays and weekends*
You may also help each other by giving tips or advice" (ORT Lod).

- **Attention gained through poetry, visual aesthetics, and appeals to unifying values"(Marcus, 2001)**

Although the '***Clickit***' software provides a platform that places an emphasis on practicality rather than aesthetics, ORT schools do make an effort to make the sites visually pleasing.

For instance, on the occasion of the onset of winter storms, the ORT Megadim website features a picture of a rainstorm in the Galilee, accompanied by poems on rain and grey winter days.

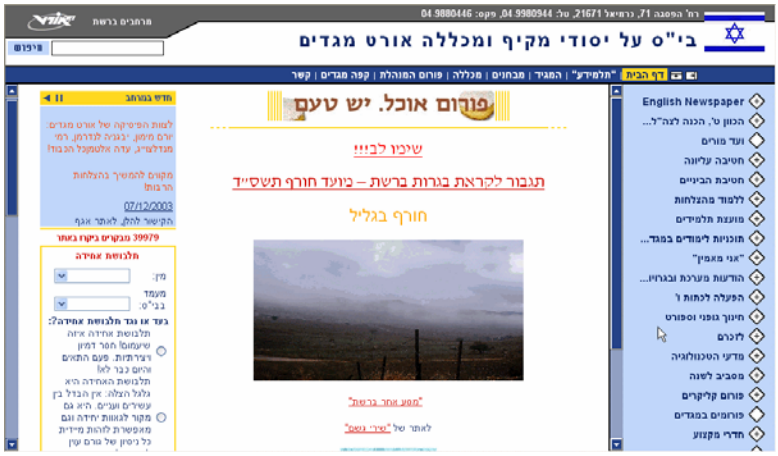


Figure 4.4.2 – **ORT Megadim homepage:** example of feminine characteristics (pictures, poems, etc.)

Other examples are the homepages of the ORT Rose Acre website, which features roses, and of ORT Oren Afula, where a picture of a pine tree (Oren in Hebrew) painted on the school's wall is displayed.

Figure 4.4.3 - ORT Rose homepage: example of feminine characteristics (flowers, poems, etc.)

Figure 4.4.4 - ORT Oren Afula: example of feminine characteristics (tree painting, stylized text, etc.)

The table below summarizes the aspects of masculine and feminine cultures, following an analysis of ORT school websites. The + symbol indicates that this aspect is reflected on the school websites, while the – symbol indicates that it is not.

Subject	Masculine cultures	**Subject**	Feminine cultures
Traditional gender/family/age distinctions	-	Blurring of gender roles	+
Work tasks, roles, and mastery, with quick results for limited tasks	+	Mutual cooperation, exchange, and support, (rather than mastery and winning)	+
Navigation oriented to exploration and control	?	Attention gained through poetry, visual aesthetics, and appeals to unifying values	+
Attention gained through games and competitions	-		
Graphics, sound, and animation used for utilitarian purposes	+		

Table 4.5 - Feminine and masculine aspects reflected on ORT school websites.

The table above substantiates Hofstede's findings (Israel with an index of 47). ORT school websites are characterized by both masculine and feminine elements, with an emphasis on feminine elements.

4.5 Research question 4

How is Uncertainty Avoidance reflected on the design and user interface of ORT school websites:

In Israel, which Hofstede defines as a society characterized by strong uncertainty avoidance (with a score of 81), how is this aspect reflected in the design and user interface of ORT school websites?

"*Cultures vary in their avoidance of uncertainty, creating different rituals and having different values regarding formality, punctuality, legal-religious-social requirements, and tolerance for ambiguity*," (Marcus, 2001) just as people feel various degrees of anxiety towards uncertain or unknown situations.

According to Hofstede, cultures with high uncertainty avoidance are characterized by more formal rules in the business environment, longer career commitments, and focus on tactical operations rather than strategy. "*These cultures tend to be expressive; people talk with their hands, raise their voices, and show emotions*" (Marcus, 2001). In addition, people tend to be active, emotional, even aggressive, and avoid ambiguous situations. Structure is expected to pervade in organizations, institutions, and relationships to help make events clearly interpretable and predictable. Teachers are regarded as experts. "*In high UA cultures, what is different may be viewed as a threat, and what is 'dirty' (unconventional) is often equated with what is dangerous*" (Marcus, 2001).

Based on these definitions, Marcus introduces the following different aspects of user-interface and web design which may be affected by high uncertainty avoidance.

- Simplicity, with clear metaphors, limited choices, and restricted amounts of data.
- Attempts to reveal or forecast the results or implications of actions before users act.
- Navigation schemes intended to prevent users from becoming lost.
- Mental models and help systems that focus on reducing "user errors".
- Redundant cues (color, typography, sound, etc.) to reduce ambiguity.

However, I would like to also introduce characteristics of **low uncertainty avoidance** cultures, as these were also taken into account and analyzed on ORT school websites.

- Complexity with maximal content and choices.
- Acceptance (even encouragement) of wandering and risk, with a stigma on "over-protection".
- Less control of navigation; for example, links might open new windows leading away from the original location.
- Mental models and help systems might focus on understanding underlying concepts rather than narrow tasks.
- Coding of color, typography, and sound to maximize information (multiple links without redundant cueing).

- **Simplicity, with clear metaphors, limited choices, and restricted amounts of data.**

Determining whether school websites reflect 'simplicity' or 'complexity' depends on the definition and interpretation of these two terms. Since Marcus' definition of these terms is vague, I have chosen to analyze the ORT school websites according to the sites' architecture, by examining three layers: the user interface, the services offered by the sites, and the accessibility to information.

ORT '***Clickit***' is a simple, user-friendly platform. The site's template is uniform, with folders on the upper bar and on the side bar. This uniformity is preserved on all the site's pages, on all the school websites, thus allowing the different users (teachers, students and parents) to navigate all the sites with ease.

This uniformity is also preserved through the use of recognized symbols (folders, files, forum, dictionary, navigation buttons graphics, etc.) The services offered by the sites are also uniform. All sites can make use of texts, forums, news flashes, surveys, pictures galleries, etc.

In this regard, ORT school websites reflect the simplicity and clear metaphors characteristic of HUA environments. On the other hand, the complexity of the site is determined by the site management, whose design of the website affects the accessibility of the information. A basic question raised by the user would be: *'how much time will it take me to obtain the information I need*?'

The variations among the different websites take form through the folders' different names and different ways in which they are organized, and reflect a LUA environment. See, for instance, the different names given to folders dealing with pedagogy: 'study subjects', 'subjects', 'specialization', compulsory studies', 'subject matter', 'pedagogical corner', etc.

- **Attempts to reveal or forecast the results or implications of actions before users act.**

The new homepage of ORT Gutman is a good example of these attempts. The opening page offers the user only 5 options: subjects, projects, forums, memorials, and fun activities. An additional sixth option – entitled 'entrance' leads to the old homepage.

Figure 4.5.1– ORT Guttmann's new homepage

This page's resemblance to the one presented by Marcus as an example of this aspect in his article (Marcus 2002) is remarkable.

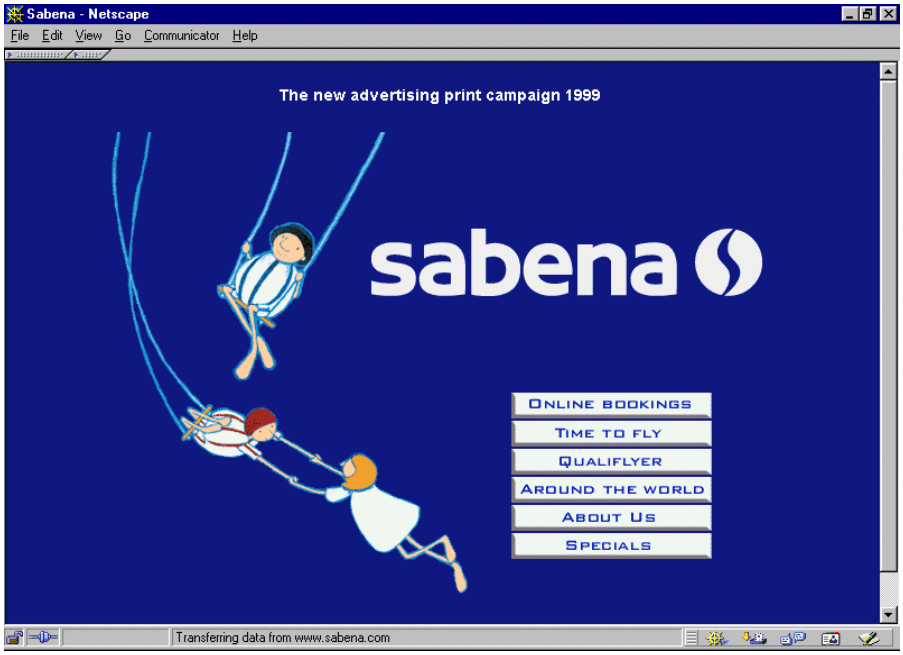


Figure 4.5.2 – Sabena's homepage as presented by Marcus (2001) in his article (note that this company has ceased to exist).

However, it is important to note that ORT Guttmann's homepage is atypical, as the other 53 ORT school websites encourage wandering through the website without necessarily following a direct path, as opposed to 'over-protection'.

For example, the ORT Megadim website has more than 20 main folders on the side bar, each folder containing several sub-folders; this is in addition to the upper bar.

Figure 4.5.3 - ORT Kiryat Bialik new homepage: example of complex site.

Although navigation on the website is simple, a lot of information is available on the opening page, making it a complex page. Navigation in the site sometimes requires the use of the scroll to reach all the information on the page. This contradicts the HUA and reflects acceptance of wandering and risk, with less control of navigation, which Marcus sees as characteristics of LUA on website design and interface.

- **Navigation schemes intended to prevent users from getting lost.**

One can assume that the architectural structure of ORT school websites is aimed at preventing users from getting lost. Yet, the '***Clickit***' software allows the opening of empty folders, thus increasing the sense of uncertainty. Errors on the site could increase the impression of the uselessness of the site. Furthermore, the use of links,

which weaken navigation control, could open windows leading away from the original location.

Therefore, and contrary to Marcus' views, I believe that although Israeli culture is characterized by HUA (according to Hofstede), ORT school websites reflect LUA.

- **Mental models and help systems that focus on reducing "user errors".**

The clear and simple structure of the '***Clickit***' platform, which can be found in all ORT school websites, reflects a clear mental model which diminishes user error.

Yet, there is no '*help*' option, and only a small number of schools have handled this weakness by creating a folder with help guides on how to work with the website.

- **Redundant cues (color, typography, sound, etc.) to reduce ambiguity.**

As previously mentioned, ORT school websites use little redundant cues to reduce ambiguity.

These last two aspects indicate a HUA in ORT school websites, and support Hofstede's findings and Marcus' interpretation of the subject.

The table below summarizes the aspects of uncertainty avoidance as defined by Marcus, following an analysis of ORT school websites. The + symbol indicates that this aspect is reflected in the school websites, while the – symbol indicates that it is not.

Subject	High uncertainty avoidance	**Subject**	Low uncertainty avoidance
Simplicity, with clear metaphors, limited choices, and restricted amounts of data.	+	Complexity with maximal content and choices.	+
Attempts to reveal or forecast the results or implications of actions before users act.	+	Acceptance (even encouragement) of wandering and risk, with a stigma on "over-protection".	+
Navigation schemes intended to prevent users from becoming lost.	+	Less control of navigation; for example, links might open new windows leading away from the original location.	+
Mental models and help systems that focus on reducing "user errors".	+	Mental models and help systems might focus on understanding underlying concepts rather than narrow tasks.	-
Redundant cues (color, typography, sound, etc.) to reduce ambiguity.	+	Coding of color, typography, and sound to maximize information (multiple links without redundant cueing).	-

Table 4.7- Aspects of uncertainty avoidance reflected on ORT school websites.

The table above highlights an apparent contradiction. ORT school websites are characterized by both LUA and HUA with regards to the first 3 aspects introduced by Marcus (2001). For instance, while clear metaphors, limited choices, and restricted amounts of data can be found, complexity with maximal content and choices is also present on the websites. In the mental models and redundant cues aspects, ORT school websites reflect HUA.

This contradiction highlights the ambiguity existing in Marcus' (2001) definition of UA aspects. In my opinion, it is difficult to determine aspects that reflect UA on websites.

Chapter 5

Conclusions

This research attempts to explore how cultural dimensions are reflected on ORT school websites in Israel. For this purpose, I have chosen to apply Hofstede's (1991) acclaimed work, in which he classifies cultural characteristics prevalent in global organizations into five "cultural dimensions" (power distance, individualism & collectivism, masculinity & femininity, uncertainty avoidance, and time orientation), and Marcus' (2001) interpretation and application of this model to website designs worldwide. Israel was included in Hofstede's classical study, conducted in the 1970's (Chapter 3.1.1).

Marcus (2001) approaches this subject from the perspective of a web designer who needs to adopt a global approach, taking into account cross-cultural aspects when designing a website. A basic assumption held by analysts and designers is that a well-designed user interface which acknowledges demographic diversity, improves the performance and appeal of websites, facilitating the global distribution of products and services throughout internet websites.

The educational system in every country reflects its people's culture. In addition to skills and knowledge, schools place an emphasis on values and culture. With the introduction of computers, and subsequently of new means of communication into schools, an emphasis has been placed on broadening pedagogical methods and contents (E-learning). School websites reflect the school environment as a whole, and

can be seen as windows that allow a glimpse into the different cultures. I have named them "**windows of culture**".

My observations of the ORT school websites focus on three layers of website architecture: user interface, services offered by the websites, and accessibility of information.

This chapter summarizes my findings (Chapter 4) and the relevant literature (Chapter 3).

I have organized this chapter into three sections:

5.1. Summary.

5.2. Discussion of what can be learned from this research.

5.3. Recommendations for further research, policy-making and practice.

5.1. Summary

Organizing the main research question into four sub-questions according to the four cultural dimensions of Hofstede (1991) that are applicable to this research, and putting together my findings and the mentioned literature, I have reached the following conclusions on each question.

How is Power Distance reflected on the design and user interface of ORT school websites; to what extent do expectations and acceptance of unequal power distribution within a culture reflect the seven aspects defined by Marcus (2001) on ORT websites' user interface and design: access to information, hierarchies in mental models, emphasis on social and moral order, focus on expertise, social prominence, important security and social roles.

According to Hofstede's (1991) classic study of cultures in organizations, Israel is a country characterized by low power distance (PD), which he describes as tending to

view subordinates and supervisors as close together and more interchangeable, with flatter hierarchies; where parents and children, and teachers and students, may view themselves more as equals; and where equality is expected and generally desired.
My findings confirm that ORT school websites display characteristics of a country with low power distance. Students are regarded as the sites' main costumers. Information is directed at them, and the website is their place of self-expression. Students are encouraged to participate, and I found that they often freely express disagreement and criticism, sometimes even failing to show respect towards their teachers in this open environment.
Still, there are two aspects on ORT school websites – emphasis on social and moral order and social roles – that are more characteristic of a high PD culture . There is no emphasis on social roles used to organize information on ORT school websites. However, social and moral order, nationalism and religion play a major role and are frequently used and prominently displayed.

How is Collectivism vs. Individualism reflected on the design and user interface of ORT school websites in Israel, which Hofstede (1991) defines as a society characterized by both collectivism and individualism.

Motivation based on personal achievement (maximized for individualist cultures vs. underplayed in collectivist cultures), materialism and consumerism vs. achievement of socio-political agendas as images of success, prominence given youth and action vs. age and experience, underlying sense of social morality: emphasis on truth vs. relationships, emphasis on change: novelty and uniqueness vs. tradition and history, and rhetorical style: controversial, argumentative and tolerant vs. official slogans, are

the parameters used by Marcus (2001) to determine individualism vs. collectivism as reflected on websites.

My findings show that ORT school websites display more characteristics of collectivism, with the exception of the subjects of '*prominence given youth and action vs. age and experience'* and *'willingness to provide personal information'*.

Personal achievement is very seldom recognized on ORT school websites; rather, group achievements are emphasized. Furthermore, images of success are demonstrated through group achievement of social-political agendas. ORT school websites are youth-oriented. Teachers and students may freely express themselves through communication tools available on the websites (bulletin boards, news flashes and forums). On the other hand, the openness, transparency and readiness to provide personal information found on ORT school websites are characteristic of individualism, according to Marcus (2001). These findings support Hofstede's (1991) description of Israel as a society with both collectivist and individualist aspects.

How is Masculinity vs. Femininity reflected on the design and user interface of ORT school websites in Israel, which Hofstede (1991) defines as a society characterized by both masculinity and femininity.

In defining masculinity and femininity in cultures, Hofstede (1991) focuses on gender roles, and the balance between roles and relationships.

User interface, services offered by the websites, and accessibility of information reflect characteristics of masculinity or femininity. Marcus (2001) uses aspects such

as work tasks, navigation, graphics and animation, mutual cooperation, exchange and support to determine the dominating gender on the website.

According to my findings, ORT school websites are characterized by both masculine and feminine elements, with an emphasis placed on feminine elements, such as mutual cooperation, exchange, support, emphasis on aesthetics, and blurring of gender roles.

How is Uncertainty Avoidance reflected on the design and user interface of ORT school websites in Israel, which Hofstede (1991) defines as a society characterized by strong uncertainty avoidance.

Cultures differ in their avoidance of uncertainty, developing different rituals and values with regard to formality, punctuality, legal, religious and social obligations, and tolerance for ambiguity.

ORT school websites are characterized by both low uncertainty avoidance (LUA) and high uncertainty avoidance (HUA) with regards to the first 3 aspects introduced by Marcus (2001). For instance, while clear metaphors, limited choices, and restricted amounts of data can be found, complexity with maximal content and choices is also present on the websites. In the mental models and redundant cues aspects, ORT school websites reflect HUA.

This contradiction highlights the ambiguity existing in Marcus' definition of aspects of uncertainty avoidance. Marcus (2001) has attempted to determine different aspects of user interface design that reflect uncertainty avoidance on websites (navigation, colour coding, complexity level, etc). However, these aspects are not effective in determining the reflections of uncertainty avoidance on ORT school websites.

Therefore, and contrary to Marcus' views, I believe that although Israeli culture is characterized by HUA according to Hofstede (1991), ORT school websites reflect LUA.

Overall the four research sub-questions and tables 1, 3, 5, 7 in the findings chapter introduce an intricate answer to the research question. Although ORT school websites display cultural characteristics of Israel, these are not always clear and straightforward. The websites can be compared to shop windows that offer glimpses into the main cities of Israel. Can clear characteristics of Israeli culture be seen in these shop windows? In my opinion, obvious cultural elements such as symbols, language, the flag, local folklore, and so on, can be found. But at the same time, elements representative of the "globalization culture", such as *'Coca Cola'*, '*McDonalds*', *'Levi's*', '*Microsoft*', the use of the English language, and so on, are prevalent.

ORT school websites present a similar pattern. An analysis of the websites using Marcus' (2001) elements of design based on Hofstede's (1991) work on cultural differences highlights the elements of culture that are expressed through the use of logos, colours, activities and cultural contents. Still, ORT school websites do not clearly reflect Hofstede's (1991) cultural dimensions.

In conclusion, tables 1, 3, 5, 7 in the findings chapter echo Hofstede's findings on the reflection of power distance on ORT school websites. However, my findings on Hofstede's three other dimensions – collectivism vs. individualism, masculinity vs. femininity, and uncertainty avoidance – illustrate a more complex picture, with the elements reflected in differing patterns.

Some of Marcus' (2001) elements, which are based on Hofstede's (1991) work, could be found, while the others are much less obvious.

5.2. Discussion

What lessons can be learned from this research? In this section I focus on three issues. I discuss to what extent the results have been affected by the methodology. I compare the results of this particular research with other research on the same subject. Finally, I highlight this research's contributions.

Marcus (2001) interprets Hofstede's research and uses a set of elements to analyze worldwide websites.

Hofstede (1991) concludes from his research that international organizations such as IBM are run according to the local culture and social environment of the country - which he calls ***'software of the mind'*** - its agencies are located in, although they all form part of the same organization. Hofstede (1991) classifies these cultural characteristics into five dimensions: power distance, individualism & collectivism, masculinity & femininity, uncertainty avoidance, and time orientation.

Marcus (2001) maintains that Internet websites accessible to all are also characterized by local cultural traits.

Marcus (2001) defines in his work a long list of design elements on websites that reflect in his opinion dimensions of culture as introduced by Hofstede (1991).

Although we may differ with, change or even add an element as an expression of Hofstede's dimensions, the range of elements presented by Marcus (2001) provides guidance on how to analyze different websites, including the ORT school websites.

Are the findings of this research a result of the methodology – the application of Marcus' (2001) aspects of design to ORT school websites?

Are the results affected by the standardization and homogeneity which increasingly impacts the principles of website design, such as the use of upper bar, folders, tools (search engines, surveys, image galleries, etc), common icons (home page, mail), etc?

In contrast to the commercial websites aimed at the global market, school websites address the local public, such as teachers, students, parents, the close community and extended community. Furthermore, since the role of schools is perceived as imparting and preserving culture, one can assume that school websites will reflect elements of culture in their contents and design.

However, as mentioned previously, the approach adopted in this research does have some limitations. Websites, and ORT school websites in particular, are dynamic by nature, as it is a fluid medium. This makes it difficult to generalize the findings. Subjectivity in anthropological reports is unavoidable. As Marcus' (2001) aspects are vague and not clearly defined, they may be interpreted in different ways.

Therefore, a sustained and in-depth analysis of the contents would be more effective in reflecting elements of culture. Furthermore, a comparative research should be made on websites of schools in other countries. These would provide the data necessary to give strength to findings on culture markers on websites, and school websites in particular.

In my opinion, ORT school websites reflect both elements of culture as defined by Marcus (2001) and elements of standardization of website design.

In recent years, there has been an upsurge in the software available globally to create and design websites, all using the same basic tools and elements of design.
Schools' attempts to impart culture as part of their social education policies is reflected in the contents and design of their websites.
I have compared the results of this particular research with other research in the same field, which brings to light certain issues that are discussed in the literature review.
The two main subjects highlighted in the literature review (Chapter 3) - culture and the role of schools in teaching and preserving culture, as reflected on school websites; and school websites - from E-learning to E-schooling – present school websites as '**windows of culture**' – which reflect current Israeli culture, and at the same time, introduce a new direction in the use of computers in schools, from web-based learning methods ***E-learning***, to ***E-schooling***, which provides an additional environment that educates and imparts culture to the collectivity.

The subjects of cultural differences and cross culture arise in the research on usability of websites on the internet. In order to significantly expand the user base, the globalization of the software system, web page or electronic document must be addressed. It is generally assumed that businesses on the global market need to develop effective websites in order to further their economic interests. There is an increasing number of researches and studies, such as Gould & Zakaria (2001), Gould, Zakaria & Yusef (2000) and Barber & Badre (2004), on the subject of cultural aspects as reflected on websites; Evers and Day (1997), on interface design, and Nielsen (1990) and Del Galdo and Nielsen (1996), on internationalization and localization.

A common thread in all these studies is the attempt to present cultural elements that are reflected on the websites. Barber & Badre (2004) use the term '*culture markers*' that are specific to a given culture: "*Cultural markers are those elements that are most prevalent, and possibly preferred within a particular cultural group*" (Barber & Badre, 2004).

These studies rely on earlier theories and researches in the field of anthropology and sociology on the existence of cultural differences and have created a terminology which can be used to define these differences. Edward T. Hall (1963, 1976), Geert Hofstede (1991), Kroeber and Kluckhohn's (1952) and Fons Trompenaars (1993) are theorists who have developed ideas from their research on cross-cultural communication that can be applied to instructional design. The basic assumption is that there are cultural differences that are reflected on websites. Therefore, we need to take those into account when designing websites in an international setting.

All these studies have addressed the business community wishing to expand globally. However, school websites reflect the culture deemed desirable by the country. The uniqueness of those interactive school websites is that not only they are informative, they also present the existing culture. School websites serve first and foremost the school community: the student body, the teachers and parents. While commercial websites are aimed "outward", directed at the global public, school websites are aimed "inward", directed at the local public. Furthermore, although cultural markers can be found on school websites as well as commercial websites, their significance is different in each case.

The questions raised by school teachers and staff are different from those raised by commercial web designers.

For instance, questions that may be of interest to the school staff are:

- How do websites influence and help interpret behaviour?
- What is the role of culture on websites?
- What influence do websites have on the users (students, teachers and parents), in preserving culture as well as creating 'new culture'?

School websites are also useful in providing an additional environment to educate and impart culture to the collectivity. They reflect the collective phenomenon of behaviour and traditional ideas, and at the same time, reflect the efforts made by educators to teach cultural identity, values and social skills.
This brings forward interesting questions: How is culture expressed on school websites? What is the educational philosophy behind the term 'culture' as it is used on school websites? Do the '*culture markers*' found on school websites reflect cultural education in a social sense, which perceives cultural education as a process through which the students' personality is shaped, and through which students acquire characteristics, develop skills, shape their opinions, and gain knowledge, all of which allows them to become productive members of the society in which they live?

In defining '***culture***', the anthropological approach refers to the behavioural patterns that are acquired and conveyed through symbols and ideals which have developed over time. An additional meaning attributed to the term culture is betterment (from the Latin word '***Cultus***'). Culture in this sense is a state in which an individual or a

society has attained or is at least striving to attain perfection of the human nature. While according to the sociological approach, teaching is a technique through which the youth is trained to participate in the society by practicing social roles, the anthropological approach perceives teaching as a technique through which students are taught the values and principles required by the culture. What cultural significance does this approach attribute to teaching?

According to the anthropological approach, teaching aims to pass on to the students the qualities and skills valued as absolute truths. This approach perceives the role of schools as imparting intellectual, moral, esthetic, and other values to the students, and helping them to internalize them. The role of teaching is to bring together the students and the knowledge which comprises these values (Dewey 1916; Lamm 2002). In my opinion, ORT school websites consists of a blend of both approaches.

With the introduction of the Internet to schools over the past 6 years, teachers, experts in different subjects and IT specialists have sought to apply the Internet to the study of subject matters (E-learning), giving rise to high expectations in the field.

It was widely believed that the adoption of new and emerging technologies by schools and classrooms would allow teachers to help their students comprehend difficult-to-understand concepts and encourage learning, providing their students with access to information and resources, and allowing teachers to better meet their students' individual needs. Technology would enhance learning and improve student achievement for all (U.S. Department of Education, 2001).

Furthermore, a widespread idea was that E-learning would go beyond time and space limitations.

Although the **E-learning** contents acquired by schools were not properly integrated in school curriculums, they contributed, in my opinion, to an essential part of the experience gained by teachers in the use of the internet in teaching and learning. In my opinion, more time should be allowed to value the opportunities offered by E-learning, such as access to information on school ideals, which can be a very useful complement to teaching (Rosenberg 2001).

With the development of tools providing teachers with the ability to introduce pedagogical contents according to their own needs, a new concept in the use of the internet in the school environment has emerged - ***E-schooling***.
The ORT Research and Development Center describes this process as the "*intensive activities based on the use of the Internet as an expansion of the pedagogical-organizational infrastructure of the school (E-schooling). According to this approach, the Internet takes the form of the school Intranet*" (Amit & Kaplan 2003).

While E-learning focuses on the subject matters, ORT instructional designers claim that E-schooling focuses on the interactions between teachers and students around the subject matters. I would also emphasize the importance of the social interactions between teachers and students, and the social climate prevalent in the school.

Therefore, in this context, cultural education is an important issue which must be addressed when building and designing school websites.

What is this research's contribution to the 'scientific body of knowledge' ? What can be learned from its methodology and content?

Three years have passed since the introduction of the '***Clickit***' software to create ORT school websites. By all means, this time span is too short to evaluate the influence this media has on school culture.

ORT instructional designers who monitor the different applications used by schools have disclosed the popularity of some of the tools in contrast to the lack of interest towards other tools. The statistical data collected may be useful in pointing to the more productive approaches to the use of the internet, and even in identifying potential obstacles.

In the introduction to his book, "*Contradictory Logics in Teaching*," Lamm (2002) quotes G. Studard: "*We do not learn to do through thought, nor through action, we learn to do through* ***thought*** *on what we are doing*."

In a way, this research provides reflections on the use of school websites in cultural education. E-schooling – ORT school websites – has prompted a pedagogical dialogue among the staff members within schools, as well as between the school (teachers and students) and the community, the ORT development center, and other educational bodies. This pedagogical dialogue takes different forms and shapes. Some schools place an emphasis on the school's image as it is presented on the website, while others stress the importance of the organization and presentation of the information (knowledge management). Some schools give prominence to the essence of E-learning as is developed by the teachers, while others highlight the special relationship that is formed though this medium between teachers and students. This research highlights and provides insight into some of these pedagogical dialogues. In this context, the importance of this research lies in its contribution to the pedagogical dialogue on culture, and as it is reflected on school websites. For instance, a

comparison of current cultural dimensions on ORT school websites with Hofstede's findings could reveal cultural changes that have occurred in Israeli society.

School websites call for a renewed look at educational, pedagogical and social interactions which occur within the school organization.

5.3. Recommendations

There are a number of recommendations for policy and practice and further research that may be generated from this research.

The review of cultural dimensions presented in this work raises many issues not only on user interface design on the internet, but also on pedagogical questions relevant to school websites.

In this research I have explored elements of design on Ort school websites which reflect culture, based on Hofstede's (1991) well known study on cultures and organizations, and Marcus' (2001) work on user interface and cross-culture.

Following are questions that could form the basis for further studies on the subject of culture on school websites.

- Is what is considered accepted cultural norms in the school environment equally applicable to the internet?
- Are accepted cultural attributes of the real world reflected on school websites?
- What role does culture play on interactions on school websites?

- What role should the community's cultural values play in individualist vs collectivist cultures?
- How much conflict is acceptable in the contents or style of argumentation on school websites, which project the schools' image to the outside community?
- What weight should be given to personal opinion as opposed to group opinion in a society such as Israel where culture has aspects of both collectivism and individualism?
- What should be the focus of school websites: skills, culture and tradition, group interaction, expertise, individual achievement?

Further comparative studies should be conducted on school websites and their development. I share Nachmias' (2001) opinion that the importance attributed to culture on school websites is determined by a well-established pedagogical approach.

All these issues should be addressed by teachers and policy makers in discussions on E-schooling.

References

1. Alessi, MS & Trollip, RS 2001, *Multimedia for Learning, Methods and Development*, Allyn & Bacon, USA.
2. Amit, G (ed.) 'The return of the Lady', *Studies on Technology and Sciences*, vol. 37, January 2004, p. 2. [in Hebrew]
3. Amit, G & Kaplan, J 2003, *From E-learning to E-Schooling: The new Internet generation in School*, 'MOAH' conference, Tel Aviv, Israel. [in Hebrew]
4. *Anytime Anywhere Learning, Turning Vision Into Realitv*, 2003, Microsoft, viewed 13 April 2004, <http://www.microsoft.com/education/default.asp?ID=AALReality >.
5. Badre, NA 2000, *The Effects of Cross Cultural Interface Design Orientation on World Wide Web User Performance*, Technical Report, GVU Center, Georgia Institute of Technology, viewed 15 April 2004, < http://www.cc.gatech.edu/gvu/reports/2001/abstracts/01-03.html >.
6. Barber, W & Badre, NA 2004, *Culturability: The Merging of Culture and Usability*, conference proceedings, AT&T Labs, New Jersey, viewed 14 April 2004, <http://www.research.att.com/conf/hfweb/proceedings/barber/ >.
7. Birenboum, M 1999, *The Porum on the Net*, Ministry of Education, Department of Science and Technology, Tel Aviv, viewed 15 April 2004, < http://www.amalnet.k12.il/madatec/articles/diun.asp >.
8. Brenda, D 2002, *Cyberpl@y: Communicating Online*, Berg Publishers, Oxford, viewed 15 September 2003, <http://atar.mscc.huji.ac.il/~msdanet/cyberpl@y/sitemap.html >
9. Catanzaro, SJ & Mearns, J 2004, *The Social Learning Theory of Julian B. Rotter*, Jack Mearns, viewed 15 April 2004, < http://psych.fullerton.edu/jmearns/rotter.htm >.
10. Chen, D 1996, *The computerizing of the educational system and its implications for the curriculum*, Ramot, Tel Aviv. [in Hebrew]
11. Christensen, R 1996, *Educational Intranet*, University of Canberra, viewed 20 April 2004, <http://www.acsa.edu.au/intranets/intranet_home.htm >.

12. Dahl, S 2003, 'An Overview of Intercultural Research', *The Society for Intercultural Training and Research*, vol. I/10, no. 2, viewed 10 April 2004, <http://stephan.dahl.at/intercultural/about_culture.html >.
13. Davis, B 1995, 'Wheel of Culture', in E Barrett & M Redmond (eds), *Contextual Media: Multimedia and Interpretation*, MIT Press, USA. <http://www.mit.edu:8001/people/davis/Wheel.html >
14. Dede, C Brown L'Bahy, T & Whitehouse, P 2000, 'Designing and Studying Learning Experiences That Use Multiple Interactive Media To Bridge Distance and Time', in C Vrasidas & GV Glass (eds.), *Current Perspectives on Applied Information Technologies*, Harvard Graduate School of Education, Boston. <http://www.lesley.edu/faculty/tbrownlb/T502/index.htm >
15. Del Galdo, E & Nielsen, J (eds.) 1996, *International User Interfaces*, John Wiley & Sons, New York.
16. Dewey, J 1916, *Democracy and Education*, The Macmillan Company, USA. <http://www.ilt.columbia.edu/publications/dewey.html >
17. Doherty EM Jr., 'McLuhan M Meets William Gibson in Cyberspace', *CMC Magazine*, September 1, 1995, viewed 13 April 2004, < http://www.ibiblio.org/cmc/mag/1995/sep/doherty.html>.
18. *E-Learning, Putting a World-Class Education at the Fingertips of All Children* 2001, Government report, U.S. Department of Education, viewed 5 April 2004, <http://www.ed.gov/about/offices/list/os/technology/reports/e-learning.html>.
19. Ebersole, S 1995, *Media Determinism in Cyberspace*, Regent University School of Communication and the Arts, Virginia, viewed 5 April 2004, <http://www.regent.edu/acad/schcom/rojc/mdic/md.html >.
20. Evers, V Day, D 1997, The role of culture in interface acceptance, In Human Computer Interaction, *IFIP TC 13 international conference: proceedings*: 14th-18th July 1997, Sydney, Australia. London: Chapman & Hall.
21. Fornäs, J 1998, 'Digital Borderlands: Identity and Interactivity in Culture, Media and Communications', *Nordicom Review*, vol. 19, no.1, viewed 5 April 2004, <http://www.jmk.su.se/digitalborderlands/digitalborderlands.htm>.

22. Genesis, 11, 1-7
23. Gidron, B, Bar, M & Katz, H 2003, 'Characteristics of Israeli Organized Civil Society', *Israeli Sociology*, vol. 4, no.2, pp.369-400. [in Hebrew]
24. Gould, EW, Zakaria, N 2001, Applying Cross-Cultural Theory to Instructional Design, conference of the Association of American Colleges and Universities, "*Technology, Learning and Intellectual Development: Challenges at the Crossroads of the Education Revolution*", Baltimore, viewed 17 April 2004, <http://www.google.co.il/search?q=cache:GdntlZdlnHoJ:www.rpi.edu/~goulde/Yati/Gould_Zakaria_paper_rev.doc+Gould+%26+Zakaria+(2001),+&hl=iw >
25. Gould, EW, Zakaria, N & Yusef, S 2000, Appling cultural to Web site design: a comparison of Malaysian and US web sites, *The 18th Annual Conference on Computer Documentation*, IEEE, New Jersey, pp. 161-171.
26. Kroeber, A.L & Kluckhohn C 1952, *Culture, a critical review of concepts and definitions*. Papers of the Peabody Museum of American Archaeology and Ethnology, Harvard University, vol. 47, no. 1. Cambridge.
27. Hall, ET 1963, *The Silent Language*, Fawcett Publications Inc., Greenwich.
28. Hall, ET 1976, *Beyond Culture*, Anchor Press, Garden City.
29. Hall, ET 1984, *The Dance of Life : The Other Dimension of Time*, Anchor Press/Doubleday, Garden City.
30. Hall, ET & Hall, MR 1987, *Hidden Differences : Doing Business with the Japanese*, Anchor Press/Doubleday, Garden City.
31. Hall, ET & Hall, MR 1990, *Understanding Cultural Differences*, Intercultural Press, Yarmouth.
32. Han, S & Bhattacharya, K 2001, 'Constructionism, Learning by Design, and Project Based Learning', in Orey M. (ed.), *Emerging perspectives on learning, teaching, and technology, e-book*, viewed 5 April 2004, <http://www.coe.uga.edu/epltt/LearningbyDesign.htm >.
33. Harasim, L 1998, 'Why Computer Conferencing?', The Centre for Systems Science, vol. 16, no. 6.3, viewed 17 April 2004, < http://www.css.sfu.ca/update/vol6/6.3-Why-comp-conf.html>.
34. Hill, J 2000, 'Online Learning Communities: If You Build Them, Will They Stay?', *ITFORUM PAPER #46*, viewed 17 October 2003,

< http://it.coe.uga.edu/itforum/paper46/paper46.htm>

35. Hofstede, G 1991, *Cultures and Organizations – Software of the Mind*, McGraw-Hill books, UK.
36. Huitt, W & Hummel, J 1997, *Observational Social Learning*: An Overview, article, Educational Psychology Interactive, Valdosta, viewed 10 January 2004, <http://chiron.valdosta.edu/whuitt/col/soccog/soclrn.html>.
37. Hurn, CJ 1993, *The Limits and Possibilities of Schooling, An Introduction to the Sociology of Education*, Allyn & Bacon, USA.
38. *Intranet Challenges for Schools* 1998, State Library of Victoria, Melbourne, Australia, viewed 15 December 2003, <http://www.slv.vic.gov.au/slv/educate/slvconf/intranet/schools1.html>.
39. Israel, S 2004, *On Israeli Culture*, article, Jewish Agency for Israel, Jerusalem, viewed 15 January 2004, <http://www.jafi.org.il/education/culture/onisraeli/index.html>.
40. Kaplan, J 2001, 'The integration of 'conservative' and 'revolutionary' e-learning courses in schools', *Conference on Computers and Education*, Ministry of Education, Tel Aviv Israel. [in Hebrew]
41. Kearsley, G 2000, Theory Into Practice database, viewed 15 December 2004, <http://tip.psychology.org/>
42. Kersten, GE, Matwin, S, Noronha, SJ & Kersten, MA 2000, 'The Software for Cultures and the Cultures in Software', *Proceedings of the 8th European Conference on Information Systems*, Vienna University of Economics and Business Administration, Austria, pp. 509-514.
43. King, AS 1995, *Effects of Mood States on Social Judgments in Cyberspace: Self Focused Sad People as the Source of Flame Wars*, article, Grohol.com, Boston, viewed 30 September 2003, <http://grohol.com/storm1.htm >.
44. Lamm, Z 2002, *Contradictory Logics in Education*, Sifriat Poalim, Bnei-Brak. [in Hebrew]
45. Marcus, A 2001, *Cultural Dimensions and Global Web User-Interface Design: What? So What? Now What*?, paper, AM+A, Emeryville, viewed 30 September 2003, <http://www.amanda.com/resources/hfweb2000/AMA_CultDim.pdf>.

46. Marcus, A 1999, 'Globalization of User-Interface Design for the Web', *5th Conference on Human Factors and the Web*, National Institute of Standards and Technology, Gaithersburg Maryland.
47. Mearns, J 2004, *The Social Learning Theory of Julian B. Rotter*, Research Findings on: Negative Mood Regulation, viewed 20 September 2003, < http://psych.fullerton.edu/jmearns/rotter.htm>
48. Michaeli, N 2002, 'The Social Pedagogy', *Hevra* , vol. 2, viewed 20 March 2004, < http://www.yesod.net/info/essayes/hevra2/chevra.htm>.
49. Milliron, M & Prentice, M 2004, 'Anytime, Anyplace and the Community College: Ten Emerging Insights', *Journal of Asynchronous Learning Networks*, vol. 8, issue 1, viewed 20 February 2004, <http://www.aln.org/publications/jaln/v8n1/v8n1_milliron1.asp>.
50. Moore, MG 1989, 'Three types of interaction', *The American Journal of Distance Education*, vol. 3 issue 2, pp.1-6.
51. Nahmias, R 2001, Internet in Education, viewed 20 January 2004, <http://onlineachva.macam.ac.il/news/wellldone.asp?topic=3 >
52. Nielsen, J (ed.) 1990, *Designing User Interfaces for International Use*, Elsevier Science Publishers, Amsterdam.
53. Oren, A 1999, 'All about Talking', *Computers in Education*, vol. 50, pp. 19-28. [in Hebrew]
54. Oze, O 2000, *The influence of educational variables on the development of the use teachers are making with information technology for teaching and learning*, Tel-Aviv University, Tel Aviv. [in Hebrew]
55. Pasig, D 2000, *Future Intelligence, cognitive skills required in future work environments*, Bar-Ilan University, Ramat Gan. [in Hebrew]
56. Perkins, D 1999, 'The many faces of constructivism', *Educational Leadership*, vol. 57, no. 3, pp. 6-11.
57. Phillips, ME & Sackmann, SA 2002, 'Managing in an Era of Multiple Cultures, Finding synergies instead of conflict', in BJ Punnett & O Shenkar (eds), *Handbook of International Management Research*, University of Michigan, USA.
58. Reid Steere, E 1991, *Electropolis: Communication and Community on Internet Relay Chat*, honours thesis, University of Melbourne, Australia, viewed 20 October 2003,

<http://people.we.mediaone.net/elizrs/work.html>.

59. Rheingold, H 1998, The Virtual Community, viewed 20 October 2003, <http://www.rheingold.com/vc/book/>
60. Rosenberg, M.J 2001, *E-Learning, Strategies for Delivering Knowledge in the Digital Age, McGraw-Hill*, New York.
61. Salomon, G & Perkins, ND 1998, 'Individual and Social Aspects of Learning', *Review of Research in Education* vol. 23.
62. Salomon, G 2000a, *Distant learning? Truly at a distance?*, article, University of Haifa Faculty of Education, viewed 24 April 2004, [in Hebrew], <http://construct.haifa.ac.il/~gsalomon/new/>.
63. Salomon, G 2000b, *Pedagogy and Technology, which controls which?*, article, University of Haifa Faculty of Education, viewed 23 April 2004, [in Hebrew], <http://construct.haifa.ac.il/~gsalomon/new/>.
64. Salomon, G 2000c, *Technology and Education in the Age of Information*, article, University of Haifa Faculty of Education, viewed 30 April 2004, [in Hebrew], <http://construct.haifa.ac.il/~gsalomon/new/>.
65. Salomon, G 2001, 'The barricades on the road to the educational revolution', *Conference on Computers and Education*, Ministry of Education, Tel Aviv Israel. [in Hebrew]
66. Sharan, S, Shachar, H & Levine, T 1998, [in Hebrew], *The Innovative School: Organization and Instruction*, Ramot Publications, Tel-Aviv.
67. Sutton, AL 1999, *Interaction*, research paper, Arizona State University, USA, viewed 24 April 2004, <http://seamonkey.ed.asu.edu/~mcisaac/emc703/leahf.html>.
68. Sutton, AL 2000, 'The Principle of Vicarious Interaction in Computer-Mediated Communications', *International Journal of Educational Telecommunication*, vol. 7, no. 3, pp. 223-242.
69. Telleen, LS 1996, *Intranets and Adaptive Innovation, The move from control to coordination in today's organizations*, white paper, iorg.com Business Aligned Websites, Boulder, viewed 30 April 2004, <http://www.iorg.com/papers/amdah1/adapt.html>.
70. Trillo NG 1996, Intercultural Communication Related Website, Hawai, viewed 5 May 2004,

<http://www2.soc.hawaii.edu/css/dept/com/resources/intercultural/Websites.html>.

71. Trompenaars, F 1993, *Riding the Waves of Culture: Understanding Diversity in Global Business*, McGraw-Hill, New York.
72. Victor, PS 2002, 'Information Architecture and the Construction of Ideology: A Proposal for a Qualitative Study of a School District's Web Pages', discussion paper, ITFORUM, viewed 5 May 2004, <http://it.coe.uga.edu/itforum/paper59/paper59.htm>.
73. Wegerif, R 1998, 'The Social Dimension of Asynchronous Learning', *Journal of Asynchronous Learning Methods*, vol. 2, issue 1, viewed 5 May 2004, <<http://www.aln.org/alnweb/journal/vol2_issue1/wegerif.htm>.
74. Williams, R 1976, *Keywords: A Vocabulary of Culture and Society*, Fontana/Croom Helm, London.
75. Winner, L 1995, 'Who will we be in cyberspace?', *The Network Observer*, vol. 2, no. 9, viewed 5 may 2004, <http://dlis.gseis.ucla.edu/people/pagre/tno/september-1995.html>.

Appendix List

Appendix A - Terminology

The terminology that is being used here is based on several sources.

Interaction

Wagner (1994 in Sutton, 2001) defines **interaction** as:

"…*reciprocal events that require at least two objects and two actions. Interactions occur when these objects and events mutually influence one another. An instructional interaction is an event that takes place between a learner and the learner's environment. Its purpose is to respond to the learner in a way intended to change his or her behavior toward and educational goal. Instructional interactions have two purposes: to change learners and to move them toward achieving their goals*" (in Sutton, 1999 and 2001).

E-learning

The **Learning** Glossary Compiled by Eva Kaplan-Leiserson in ***ASTD*** defines

"***E-learning:*** *Covers a wide set of applications and processes, such as Web-based learning, computer-based learning, virtual classrooms, and digital collaboration. It includes the delivery of content via Internet, intranet/extranet (LAN/WAN), audio- and videotape, satellite broadcast, interactive TV, and CD-ROM*."

Intranet

The State Library of Victoria defines the term '***Intranet***' as a private network that applies internet technology to be used internally within an organization. The intranet can be linked to communication by email, forums and search engines of the world wide web (WWW).

Areas within the '***Intranet***' can be protected by passwords to ensure that only authorized people have access to restricted information. Common web browsers are used to access information on the Intranet.

Appendix B

Indexes from: Hofstede, Geert, *Cultures and Organizations: Software of the Mind: Intercultural Cooperation and its Importance for Survival*, McGraw Hill, New York, 1997, ISBN:0-07-029307-4.

PDI: Power distance index;

IDV: Individualism index

MAS: Masculinity index

UAI: Uncertainty avoidance index

LTO: Long-term orientation index

	PDI		IDV		MAS		UAI		LTO	
	rank	score	rank	score	rank	score	rank	score	rank	score
Arab Countries	7	80	26/27	38	23	53	27	68		
Argentina	35/36	49	22/23	46	20/21	56	10/15	86		
Australia	41	36	2	90	16	61	37	51	15	31
Austria	53	11	18	55	2	79	24/25	70		
Bangladesh									11	40
Belgium	20	65	8	75	22	54	5/6	94		
Brazil	14	69	26/27	38	27	49	21/22	76	6	65
Canada	39	39	4/5	80	24	52	41/42	48	20	23
Chile	24/25	63	38	23	46	28	10/15	86		
China									1	118
Columbia	17	67	49	13	11/12	64	20	80		
Costa Rica	42/44	35	46	15	48/49	21	10/15	86		
Denmark	51	18	9	74	50	16	51	23		
East Africa	21/23	64	33/35	27	39	41	36	52		
Ecuador	8/9	78	52	8	13/14	63	28	67		
Finland	46	33	17	63	47	26	31/32	59		
France	15/16	68	10/11	71	35/36	43	10/15	86		
Germany FR	42/44	35	15	67	9/10	66	29	65	14	31
Great Britain	42/44	35	3	89	9/10	66	47/48	35	18	25
Greece	27/28	60	30	35	18/19	57	1	112		
Guatemala	2/3	95	53	6	43	37	3	101		
Hong Kong	15/16	68	37	25	18/19	57	49/50	29	2	96
India	10/11	77	21	48	20/21	56	45	40	7	61
Indonesia	8/9	78	47/48	14	30/31	46	41/42	48		
Iran	29/30	58	24	41	35/36	43	31/32	59		

Ireland (Rep of)	49	28	12	70	7/8	68	47/48	35		
	PDI		IDV		MAS		UAI		LTO	
	rank	score	rank	score	rank	score	rank	score	rank	score
Israel	52	13	19	54	29	47	19	81		
Italy	34	50	7	76	4/5	70	23	75		
Jamaica	37	45	25	39	7/8	68	52	13		
Japan	33	54	22/23	46	1	95	7	92	4	80
Malaysia	1	104	36	26	25/26	50	46	36		
Mexico	5/6	81	32	30	6	69	18	82		
Netherlands	40	38	4/5	80	51	14	35	53	10	44
New Zealand	50	22	6	79	17	58	39/40	49	16	30
Nigeria									22	16
Norway	47/48	31	13	69	52	8	38	50		
Pakistan	32	55	47/48	14	25/26	50	24/25	70	23	0
Panama	2/3	95	51	11	34	44	10/15	86		
Peru	21/23	64	45	16	37/38	42	9	87		
Philippines	4	94	31	32	11/12	64	44	44	21	19
Poland									13	32
Portugal	24/25	63	33/35	27	45	31	2	104		
Salvador	18/19	66	42	19	40	40	5/6	94		
Singapore	13	74	39/41	20	28	48	53	8	9	48
South Africa	35/36	49	16	65	13/14	63	39/40	49		
South Korea	27/28	60	43	18	41	39	16/17	85	5	75
Spain	31	57	20	51	37/38	42	10/15	86		
Sweden	47/48	31	10/11	71	53	5	49/50	29	12	33
Switzerland	45	34	14	68	4/5	70	33	58		
Taiwan	29/30	58	44	17	32/33	45	26	69	3	87
Thailand	21/23	64	39/41	20	44	34	30	64	8	56
Turkey	18/19	66	28	37	32/3	45	16/17	85		
Uruguay	26	61	29	36	42	38	4	100		
USA	38	40	1	91	15	62	43	46	17	29
Venezuela	5/6	81	50	12	3	73	21/22	76		
West Africa	10/11	77	39/41	20	30/31	46	34	54		
Yugoslavia	12	76	33/35	27	48/49	21	8	88		
Zimbabwe									19	25

Appendix C

The following tables summarize the selected elements for each of the four *'cultural dimensions' (high vs. low power distance, individualism vs. collectivism, masculine vs., feminine, high vs. low uncertainty avoidance)*

1. *High vs. Low Power Distance*

Marcus' (2001) hypotheses (aspects)	***selected elements on ORT schools websites*** (looking at user interface, design and contents)
Access to information	The shape, design and access to information of the school websites. An asymmetric shape of school websites with two different areas from which information can be accessed.
Hierarchies in mental models	Looking for a unified format of structured information access on the school websites
Emphasis on social and moral order	Counting social, religious and moral order folders such as: *'Jewish holidays'; 'Tradition and values'; 'Roots and origins'; 'Drug prevention programs'; 'Sexual education'; 'Assistance to the elderly'; 'School counselor';* National symbols of the flag, the colour of the site etc.
Focus on expertise	Evidence of contents or quoting expertise. Looking to see if the sites were organized according to social roles.
Social prominence	The *'Picture gallery*,' '*School spirit*,' '*Student council*,' and '*student forum*' folders illustrate the social prominence of students which are regarded as the sites' main costumers.
Important security	Examples of transparency vs. close and restricted area of the sites or folders which require a password in order to access.
Social roles	Evidence of social roles such as principal, teachers, parents etc.

2. *Collectivism vs. Individualism*

Marcus'(2001) hypotheses (aspects)	***selected elements on ORT school websites***
Motivation based on personal/ group achievement	Examples in the content of personal/ group achievement, projects. Examining statements made by teachers, students, and parents on the *'bulletin board*'; *'forums*'.
Images of success	Examining images, texts, and slogans of success, based on a socio-political agenda on the sites' homepage.
Rhetorical style	Examples from the *'bulletin boards'*, news flashes, and school '*forums*', where teachers and students may freely express themselves**.**
Prominence given youth and action vs. aged, experienced, wise leaders and states of being	Examining folders of: *'student council activities'; 'young leadership programs'**;** 'picture galleries'**;** 'school trips'; 'parties'; etc.*
Importance given individuals vs. products shown by themselves or with groups	Examples of group achievements and products.
Underlying sense of social morality	Reflection of social morality through the following folders: *'relationships with the community'; 'building a bridge between generations (genealogy)'; 'relationships with school graduates'**;*** etc.
Emphasis on change	Examining the desire to preserve the past through content in folders such as: '*tradition*', '*religion*', and '*nationalism*'. Subjects such as Israeli holidays, traditions, values, delegations to Poland[1], army preparation, memorials, roots and Jewish communities worldwide underline this determination to preserve the past and to define an Israeli identity. At the same time, examining the prevailing willingness to change as it takes place on the dynamic websites, the constant change of the school website designs.
Willingness to provide personal information	Examples of transparency, and willingness to provide personal information, as seen particularly in '*forums*'.

PT[1] TP Every year, youth delegations from Israel set out to tour the extermination camps in Poland.

3. *Masculinity vs. Femininity*

Marcus'(2001) hypotheses(aspects)	***selected elements on ORT school website***s
Traditional gender/family/age distinctions	Examining the structure of the site (folders created based on gender/ age distinctions). Analyzing the way the language is used for evidences of gender /age distinctions.
Work tasks, roles, and mastery.	Examining the content on the school website, type of tasks that is commonly found.
Navigation oriented	The websites' structure and organization (within the side and upper bars). The accessibility of information on the website and its complexity. Pop-up windows, various types of interface control, and information available through scrolling demonstrate the complexity of the websites' content and choices.
Games and Competitions	Counting folders of games and competitions.
Graphics, sound, and animation used	Examples of the use of graphics, sound, and animation to attract attention, to present visual aesthetics, as well as to appeal to unifying values.
Blurring of gender roles	Symbols and graphic design of gender roles on the school websites. The type of logo (logo of national/religious character; ORT logo etc.)
Mutual cooperation, exchange, and support, (rather than mastery and winning)	Examining the content on the school website. Examples of cooperation, exchange, support, and willingness to provide personal information, as seen particularly in '*forums*'.
Attention gained through poetry, visual aesthetics, and appeals to unifying values	Examples of visual aesthetics in the use of graphic design as well as poetry, with emphasis on unifying values in social order.

4. *High vs. Low Uncertainty Avoidance*

Marcus' (2001) hypotheses(aspects)	***selected elements on ORT school website***
Simplicity vs. complexity of contents and choices	The sites' architecture. Examining three layers: the user interface, the services offered by the sites, and the accessibility to information.
Attempts to forecast implications of actions	Degree of user control allowed in navigating the site. Direct path vs. different paths.
Acceptance of wandering and risk	Users may configure their web browsers in many ways. Main types of user control includes: forward progress and exiting, control of audio volume, access to printing, copying, e-mail, newsgroups and bulletin boards, control of page design (colour, text size, font page background colour etc.)
Degree of control on navigation	Navigations methods (hypertext, hyperlinks, buttons and menus). Secondary use of indexes, tables of contents, picture collections in the gallery folder and text searching. The characteristics of hyperlinks (object types, purpose, density, visibility, screen location, semantic cueing etc.)
The use of mental models and help systems	The structure of the '***Clickit***' platform. The image in working memory that can be 'run' by the users to understand '***Clickit***' platform. (Alessi & Trollip, 2001, p. 28)
Coding of colour, typography and sound	Colour, typography and sound for emphasis. Good contrast between foreground and background colours, especially for text. Minimum number of colours and consistency in the use of colour. Colours in accordance with social conventions. (Alessi & Trollip, 2001, pp. 76-77)

Appendix D – List of Tables & Graphs

Chapter 1:

Chapter 2

Chapter 4

Chapter 4

Appendix E – List of Figures

Appendix F - Examples of school web pages.

Figure 1. ORT Hanna Senesh school home page as an example of Clickit platform.

Figure 2. Access to information in 5 different areas as presented in ORT Afek school home page.

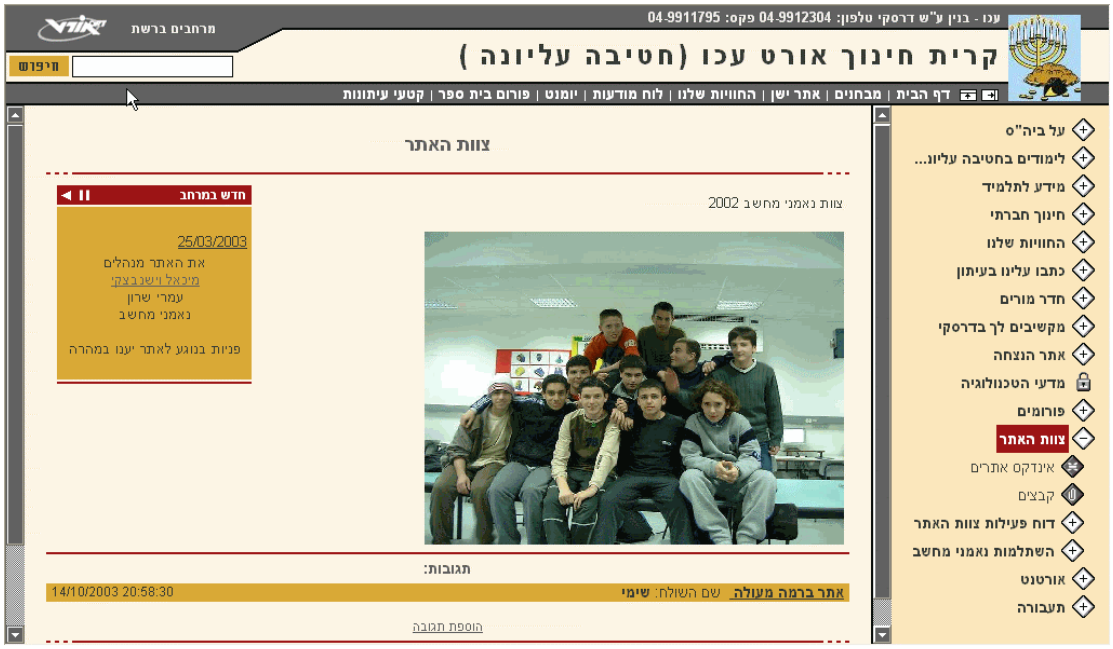


Figure 3. *'Behind the curtain'* – the team of students at ORT Acre, responsible for building and maintaining their school website.

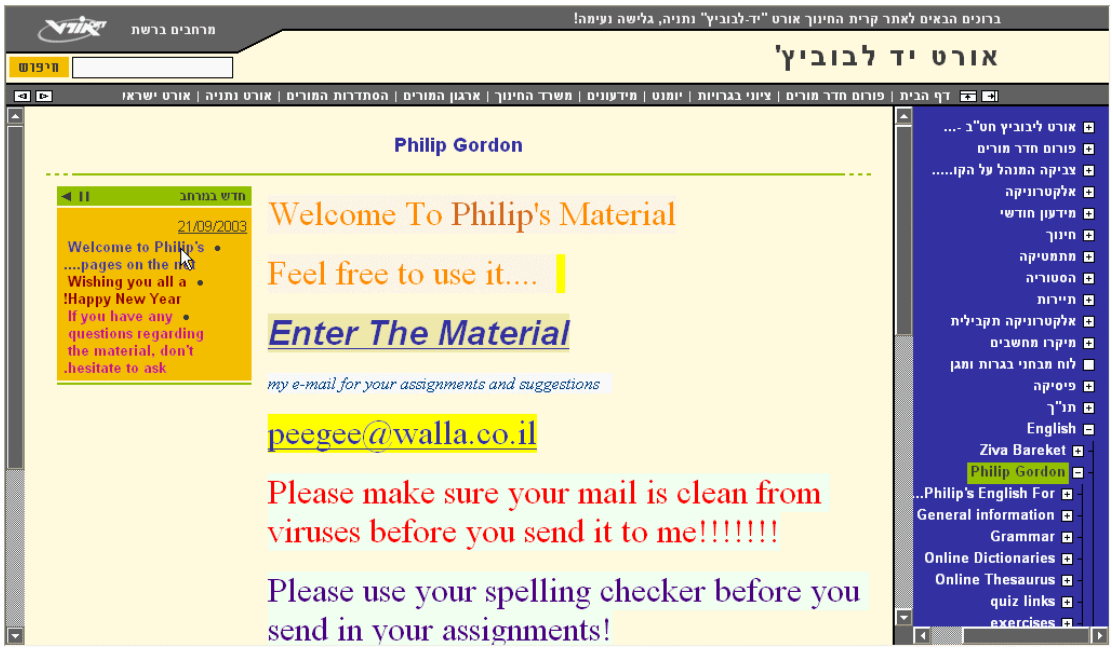


Figure 4. ORT Yad Leibowitz English teachers folder.

Figure 5 - ORT Kiryat Bialik: young leadership program.

Figure 6. Israeli holidays in ORT Gutman school website.

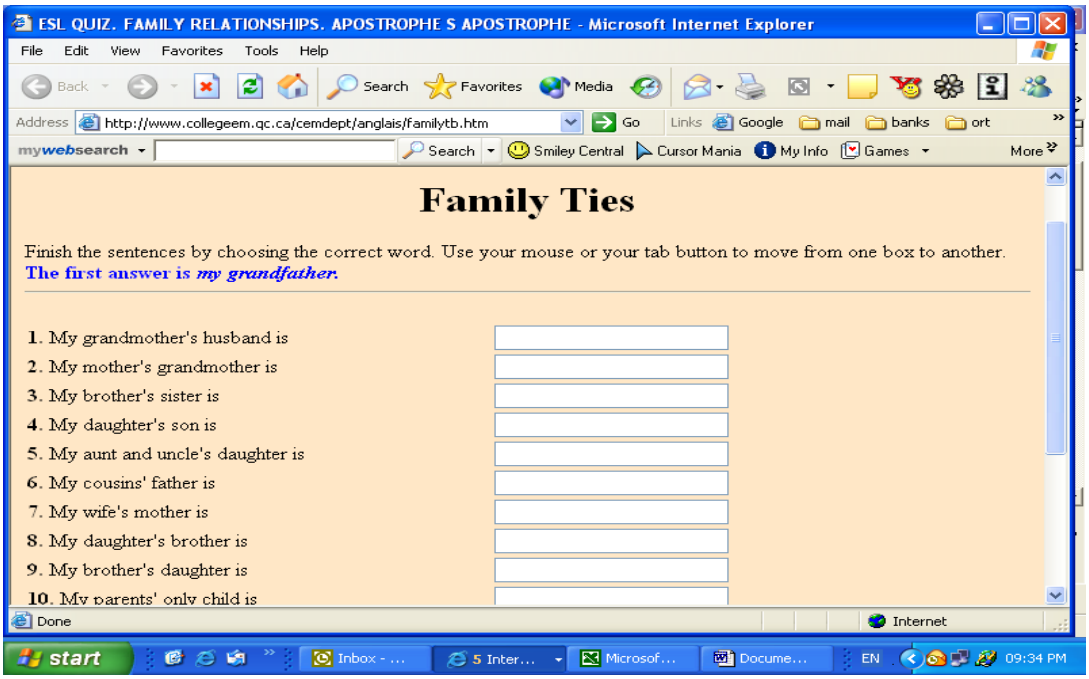


Figure 7: ORT Gutman school website.

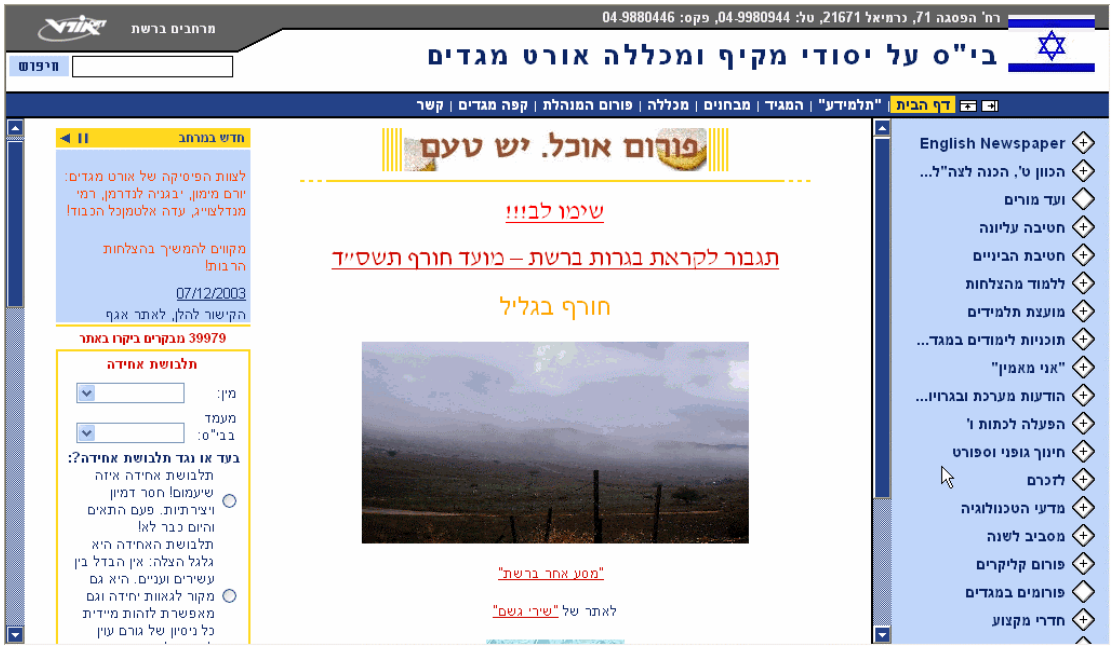


Figure 8 : ORT Megadim homepage: example of feminine characteristics (pictures, poems, etc.).

Figure 9: ORT Rose homepage: example of feminine characteristics (flowers, poems, etc.).

Figure 10: ORT Oren: **:** example of feminine characteristics (tree painting, stylized text, etc.).

Figure 11: ORT Guttmann: example of masculine characteristics (strong boys figures).

Figure 12: ORT Kiryat Bialik a new homepage: example of complex site.