

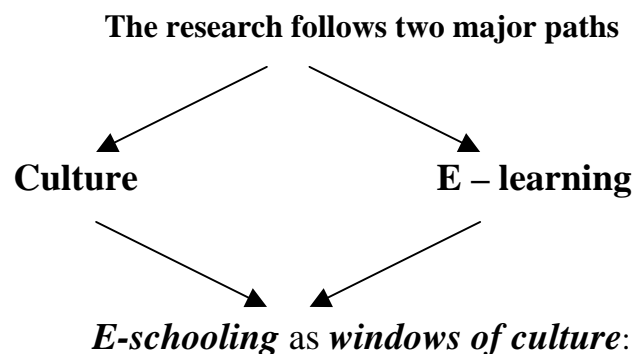
Chapter 2

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



The development of web-based learning environments, reflecting local culture and affording a glimpse into culture

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.

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Marcus' paper "*Introduces 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 paradigms¹ (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.