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Do UNESCO Schools in Finland Prepare Their Students for the Future?

A Study of Their School-based Curriculums

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1 Introduction

What does the future look like as the third millennium is approaching? In terms of global future, many of us would probably consider it to look rather chaotic, even gloomy. The reality of the world is shadowed by numerous global problems whose severity and potential deleterious long-term effects people have only recently began to realize. Worldwide injustice and poverty, ever more disastrous human conflicts, uncontrolled demographic growth, the threat of nuclear arms, and the serious degradation of the environment have, only for instance, been considered to constitute a global crisis from which it is unlikely there will be a way out if patterns of human behaviour remain unchanged. It is bewildering that humankind itself has not only caused the majority of these problems it faces nowadays, but also sustains them by the policies society has put in place. For example, Sen (Drèze, Hussain & Sen 1995; Sen 1981), who won the Nobel Prize of economics in 1998, has shown how hunger in the world is not primarily due to food depletion but politics. Yet, that is only one sad piece of evidence of the way humanity is wounding itself by ignoring the needs and rights of some of its members. What is even more incomprehensible is that mankind is not only seriously deteriorating the living conditions of other species but also its own: By exploiting the life sustaining capacity of the earth we are putting under severe threat our very own survival. This is something that contradicts both biological theories of species’ behaviour, and common sense. To a great extent, the increasing debate about the global crisis hinges around the modern way of life and its global consequences. Nevertheless, in addition to the problems the world is confronted with, it is also undergoing other kinds of profound changes, due to rapid technological progress and globalization of world structures of which the future consequences are extremely difficult to predict.

In this light, it is no wonder that the future has become not so much something to look forward to, but a cause for concern. However, it must not be as gloomy as it may look because the future is never merely a zone of threats but also of possibilities. It is that part of history which is still open to change, and recognizing the human actor as the key shaper of social and economic structures, politics, and technologies increases possibilities to direct the future development significantly. In fact, in addition to personal and national futures, people have recently started to become increasingly interested in and investigate global futures, and look for ways to reach a more peaceful, just and sustainable world. Furthermore, the approach of the third millennium has prompt greater interest in the future. Such a rare temporal change invites us to assess what has gone, what we wish to leave behind and what to take forward into the new century. It has thus been considered a good occasion for an inventory of the past, and a symbol for a potential turning point in human affairs.

What is then the role of education in this whole pattern? What kind of education is needed in these turbulent times? Whatever the nature of changes required, education is of paramount importance. The well-being of the future generations depends greatly on the skill with which we inform and inspire those young people currently in schools. After all, they are the ones who will continue decision making
after us and be the central agents of change. The question about education’s abilities to prepare young people to face the challenges of the future is thus significant and necessary.

This study is based on the issues outlined above, and a genuine interest in global developmental questions, international politics, and how education relates to them. In addition to personal interest, the futurological perspective in education was chosen because of its believed significance. Furthermore, only a little research has actually been conducted on the relationship between education and the future.

Consequently, this study approaches the question of whether students are prepared for the future by school education. Its scope being extremely wide, indeed world-embracing, the study concentrates on one specific aspect in its frame of reference: It analyzes the future-orientation of Finnish lower-stage UNESCO schools’ school-based curriculums, in other words, studies how they reflect the schools’ abilities to educate their students for the future. School-based curriculums were chosen to be the focus of the study for two reasons: Firstly, their exploration is believed to be one way of getting information about teaching and learning in school communities. Though curriculums do not tell anything about their actual realization, they can be assumed to give information about the plans and intentions of a schools’ teachers, and what kind of education they want and intent to promote. Secondly, it was considered interesting and meaningful to study these newly designed educational documents, whose drafting had become the right and responsibility of every local school only five years ago. In addition, as the UNESCO schools have themselves announced their willingness to emphasize a global perspective in education and generally carry the ideology of this United Nation’s organization, which is future-oriented indeed, they were regarded as an appropriate and interesting object for this study.

The purpose of this research is to examine the future and global aspects of educational discourse and practise, and justify their importance. Another aim is to publicize the network of UNESCO schools’ which seems to be little known in educational circles in Finland.
Concern for the future is a natural element of the human condition. Whilst people’s prime concern is generally with their personal futures, they are essentially related to broader societal and global futures. Interest in the wider future has grown rapidly during the twentieth century to a great extent due to rapid socio-cultural and environmental change. People have come to realize that the future requires much more careful consideration than before. In addition, interest has also grown in the notion of the rights of the future generations which can be considered a significant step forward in future consciousness. (Hicks & Holden 1995, 19–21)

The growing interest in the future has led to the emergence of “futures field”. According to Bell (1998, 15), though it has had many precursors dating back at least to the early Greeks and especially to utopian writers, beginning with Sir Thomas More, it was not until the mid-1960s that it emerged as an established, multidisciplinary field of inquiry.

Beare & Slaughter (1993, 109–111) considers a futures field to have three foci today: futures research, futures movements and futures studies. Firstly, futures research is an area occupied by specialists who focus on forecasting, planning and exploring futures by using analytic and quantitative methods. Futures movements, on the other hand, are primarily concerned with promoting social and political change. Although they seldom consider themselves “futurists” they share some image of a more desirable future by concerning themselves with issues such as the environment, peace or gender welfare. Between these two poles are futures studies where critics, academics and teachers, for instance, try to balance specialized work with more informal approaches, and understand the futures field as a whole. It is the latter category this chapter particularly concentrates on. These three areas of a futures field can be considered comparable to Rubin’s (1995, 9–10) definition of three different approaches to the future being anticipative, critical and interpretative approach.

It is often emphasized that the purpose of futures studies is not prediction, but rather the exploration of alternative futures. By describing different possibilities for the future, futurists attempt to help people design and achieve the futures most desirable to them. (Bell 1998, 23) The major task of futures studies is hence to explore possible, probable and preferable futures which are described by Bell (1998, 21–22).

Firstly, possible futures refer to futures that could conceivably come about. Since the fact that we have a variety of possible futures before us is often unrecognized or forgotten, their identification and presentation is the central agenda of futurologists.

Secondly, probable futures refer to futures that are most likely to come about if things continue as they are or if a particular condition under certain assumptions changes. The study of images of the future, which is one of the most important aims of a futurologist, belongs to this category. Hicks & Holden (1995, 27) argue that their significance was first understood in depth by the Dutch social scientist, Fred Polak, who identified the close relationship between social imagination and social transformation. From his detailed research of Western historical evidence
from Sumerian times onwards, he concluded that, throughout history, images of the future have directed people’s actions, and thus drawn societies on towards its envisioned future. As long as a society’s images of the future are positive it blossoms, but once its images begin to lose their vitality, for instance as a result of social disintegration, it cannot survive for long (Polak 1973). Consequently, by studying people’s images of the future, valuable information is obtained about what will probably happen in the future, if they are not modified or changed.

Thirdly, futurologists study preferable futures which refer to futures that we feel ought to come about. In this way they assess the desirability of alternative futures. After this is a very value-bound practice, they are expected to state clearly the ethical foundations of their judgements. The study of preferable futures is important because they offer direction and purpose to individuals’ lives, and provide motivation and hope to change things (Hicks & Holden 1995, 25). According to Kumar (1991), they also relate to a long utopian tradition in western society which emphasizes the need to explore the nature of the good life and the good society.

From the basis of exploration of alternative futures futurists design scenarios. Scenarios provide a detailed framework of the major features of alternative futures, and are created to clarify the range of options available and thus to help planning at various levels (Hicks & Holden 1995, 29–30).

In brief, Rubin (1994, 7–8) states that the central purpose of futures studies is, by providing knowledge and increasing future awareness, to raise debate about the alternative futures, and support the decision making of leaders and all individuals so that decisions could be made on long-term basis, and their consequences would be as close to the hopes and aspirations of people as possible.

However, there has been criticism of futures studies during the past decade. It has been criticized particularly for its domination by western epistemology. For instance, Inaytullah (1998, 55–67) accuses futures studies of focusing on the future merely from a western civilisation’s point of view, and demands them to open up also to non-Westeners’ epistemologies and methodologies which are quite different from the scientific method which is heavily reliant on rationality and logic. In addition, Sardar (1993) argues futures studies to be one more attempt of Western intellectuals to colonize the future, as they colonized the world in the past, in the way which ignores non-Western perspectives, histories, needs and priorities.

Also women have introduced different perspectives for the future. Masini (1987), for example, argues that current society, the techno-industrial enterprise, has been based entirely on masculinist values. However, she believes that, since women did not build it, they are better adapted to change towards a new society, and thus they may, and should, become constructive and visible builders of the future in post-industrial society.

It is extremely important to recognize and value widely differing perspectives on the future. Hicks & Holden (1995, 33), for instance, regard the non-Western and feminist views presented as vital in the discourse on futures which they admit to have a strong Western male bias. Also futures studies must become truly multicultural and strive to contribute to the welfare of the entire human population.

The futurological perspective has also emerged in educational discourse. It has been considered particularly valuable when discussing the fundamental purposes of education. An abundance of futurologists are already working in this domain which aims to inform educational theory and practice of the futures perspective and its significance, and to provide educational implementations to be used in schools and other educational institutions. However, a growing need for educators and futurists
to work together and learn from one another is recognized. Both professionals need each other’s expertise to be able to develop education along lines which better prepares growing children and youths for their lives in the future. (Beare & Slaughter 1993; Slaughter 1998)
3 Overview of the World Today 
And Its Future Prospects

3.1 A Global Crisis and Globalization as the 
Major Development Trend

To begin with, the reality of world today is shaped by changes. We can see fundamental changes happening before our eyes: For instance, changes in the environment are altering the most basic conditions of life on planet earth, and advances in information technology are eliminating geographical boundaries as never before. Although change has always been an unavoidable part of human societies and the natural world, the change process has accelerated expansively in the past century. When the change was slower, technologies primitive and human populations small, the past provided reliable guidelines for the future. Conversely, today it has become more and more problematic to predict future conditions and outcomes of these changes. (Beare & Slaugfter 1993, 6–7, 106; Dalin & Rust, 1996, 2)

There is a growing agreement about the seriousness of the global crisis that mankind faces. Hicks & Holden (1995, 5) state that the two major global concerns making an increasing number of people anxious everywhere are that damage to the biosphere continues to increase whilst the improvements to human welfare continue to decrease. The irreversible degradation of the environment and inability to meet the needs of the majority of the world population are inextricably interrelated.

However, stating the problem on the global scale clearly masks major national and regional differences. According to reports of both GNP (Gross Domestic Product) and HDI (Human Development Index - considers also human attributes, e.g. adult literacy and life expectancy, not merely incomes of countries when comparing them as does GNP), the gap between the richest and the poorest countries has continued to grow during the last decade (Human Development Report 1998). The trend is, and has been for a long time, that the rich are getting richer while the poor are getting poorer. Numerous writers (e.g. Hicks & Holden 1995; King 1991; Larrain 1989) argue that the dominance of Western capitalism is efficiently ensuring that developing countries will remain in the periphery also in the future, if the patterns of unequal exchange and allocation of resources remain unchanged. However, neither can Western industrialized countries anymore be considered as homogenous area where well-being is an equal right for all. A new human poverty index, HPI-2, is designed to measure the extent of human poverty and deprivation also in industrialized countries where populations have increasingly began to divide between well-to-do people and people more badly off (Human Development Report 1998, 16, 27–29).

An abundance of specific problems can be identified within the global crisis: Demographic explosion, world poverty, malnutrition and starvation, inequality, enforced migration, problems caused by urbanization, serious human conflicts, the nuclear arms race, resource depletion, and exploitation of the nature and environment have been considered the major threats for the future of human kind and the earth (Burrows, Mayne & Newbury 1991; Kennedy, 1993). In terms of the envi-
ronment, the Worldwatch Institute (Brown et al. 1998) describes in its annual report “The State of the World” the most severe effects of continuing economic growth on nature and the environment. According to it, shrinking forests, falling water tables, eroding soils, collapsing fisheries, rising temperatures, and disappearing species are consequences of the collision between the expanding economy and the earth’s natural limits. However, though all these problems can be stated individually they are never isolated issues, but extremely interlinked and usually manifestations of wider global changes and trends.

Globalization is a development trend which has been a subject of much debate since the beginning of the 1990s (Featherstone & Lash 1995). It is an extremely multifaceted phenomenon which is believed to affect the world’s future in a most profound manner. Anderson (1998, 27–37) differentiates between four facets of globalization: economic, political, cultural and biological globalization. Naturally, these are neither distinctive processes but rather different conceptual windows which can be used to understand the complex phenomenon.

First, economic globalization means that the world economy is being integrated as new markets and commercial linkages are created. It refers to such developments as the growth of international trade in goods and services, the internationalization of finance and, the conversion of many domestic corporations into multinational ones. Second, political globalization refers to development where the global community will increasingly influence decision-making at the local, that is usually at the nation-state level. It also implies that there will be a growing number of organizations, of which the United Nations is the centerpiece, that involve themselves in global governance and politics. Third, evidence of cultural globalization can also be seen everywhere as the wholesale importation and exportation of pieces of cultures worldwide has grown immensely. Not only Western modernity and ideas, but Chinese food, African music and Eastern spirituality among many others are being popularized and universalized everywhere. And fourth, there is biological globalization. The movement of plants, animals, insects and micro-organisms has been escalating rapidly in the last decades. Numerous species have traveled to distant lands as humans have moved, and as trade in plants and animals has increased to serve the purposes of agriculture and medicine.

On the other hand, Giddens (1990, 64) defines globalization in the following way: As a whole, globalization means the intensification of worldwide social relations. These relations link distant localities in the way that local happenings are shaped by events occurring far away from that locality and vice versa. In addition, he introduces another kind of four-fold classification of globalization and goes deeper into its mechanisms. According to him, globalization includes four dimensions which characterize its very nature: a world capitalist economy, the nation-state system, a world military order, and an international division of labour (Giddens 1990, 70–78).

Firstly, capitalistic mechanisms characterize the globalized world as a whole. Capitalistic enterprises are the dominant agents within the world economy and both their size and power is ever growing. Secondly, though globalization refers to diminishing the role of nation-states, they are still the principle “actors” within the global political order. This is due to the fact that they have legitimate territories and within those territories they control the means of violence, neither of which corporations can establish themselves no matter how great economic power they may have. Thirdly, one dimension of globalization is that the world military order is being globalized. This can be explained, for instance, by military alliances between
nations of truly a global scope (e.g. NATO), the immense global weaponry and war industries, and the way local conflicts become matters of global involvement. And fourthly, globalization is characterized by the expansion of the global division of labour. It does not occur only at the level of job tasks, but particularly at the level of regional specialisation which expands global interdependence.

Differing arguments have also been put forward about the consequences of globalization. After we cannot go very deep in that multilayered discussion here, only the major problematic issues raised in the discussion are presented.

Globalization has been questioned as a process leading to homogenization of the world where differences and particularities are eliminated (See e.g. King 1991; Robertson 1992). For instance, Robertson (1992) defines the problem of globalization to be the relativization or cultures, societies, citizenship and identities. Much of the debate has also concentrated on the role of nation-states in a globalized world order. As it has been mentioned, the global begins to replace nation-state as the decisive framework for social life and decision-making (Featherstone & Lash 1995; Giddens 1991). Moreover, critical voices have been raised over the issue of globalization as a process of westernization. Since global tendencies have, almost exclusively, arisen from the Western framework, the dominance of the West over the “rest” is believed to be ever strengthened (Featherstone & Lash 1995). And last, relating to the previous critique, the global economy has been considered a highly problematic issue both because of its dominant position in the world system as a whole, and because of the unequal starting positions of the Western and non-Western countries in participating in this massive competition (See e.g. Hoogvelt 1997).

Dalin & Rust (3–4, 27–58) believe that the profound socio-cultural, economic, political, and environmental changes in the world structures imply that it is presently going through a paradigm shift, moving towards a new historical era. The nature of this coming era will significantly depend on decisions made today. Consequently, the deep-seated problems the world nowadays faces can no longer be denied and left untouched. Neither can major development trends be left without critical consideration of their basis and consequences. Instead, the world community has to face reality and determinedly begin to solve the global crisis.

3.2 Reasons for the Crisis and Solutions for a “Better” Future

In this chapter, one approach that can be used to explain the reasons for the current global crisis is introduced, and solutions suggested for the creation of a “better” future are presented. The term “better” is naturally very relative and value-laden. However, here it is used to refer to a future which is more peaceful, just and ecologically sustainable for ourselves and yet unborn generations. The creation of such a future is considered to be the issue of the twenty-first century, and it will only be possible to reach it by deliberate action on humanity’s part (Beare & Slaughter 1993; Hicks & Holden 1995, 17).

We first have to find an answer to the question of why people in general seem to contribute so little to solving world problems although their seriousness has been widely acknowledged. It is argued (Giddens 1990; Beare & Slaughter 1993) that
the magnitude of such intractable problems result in them losing their meanings. It leads to psychology of denial wherein people minimize or even ignore the difficult issues (Hicks & Holden 1995, 6–7): Denial is a psychological response of people when they are faced with concerns they consider too massive to deal with. Nevertheless, by shielding our awareness from unpleasant truths we both create and sustain the global crisis. Therefore, it is believed (Beare & Slaughter 1993, 15, 96) that a shift from despair to empowerment depends most crucially upon the recovery of meaning and purpose in people’s lives, and overcoming the sense of fragmentation and immoderate individualism pervading modern cultures.

Beare & Slaughter (1993, 20-71) claim that the most serious problems societies face nowadays arise from three models of thinking which have dominated Western people’s world views for around two hundred years: First, the success of the industrial world view, which was born in the past century and today has expanded to dominate nearly the entire globe, is a cause for major problems in the world today. Its mechanistic, competitive, consumption- and profit-centered model of life, of which the aim is to remove limits and strive to expand everything at an ever-growing speed, has alienated people from their natural environments and each other. Second, the industrial way of life created a short-sighted and self-centered idea of people being the masters of nature, separate from and above natural processes. The severe disturbance of natural environment man has brought about, is most often the result of this idea. Third, the strong belief in Western scientific method as the only means to gain “real” knowledge has resulted in an inability to understand world systems as a whole. As scientific method fragmented knowledge and reality into tiny component pieces, it, at the same time, fragmented our world views and failed to see the interrelations of phenomena in the world.

Consequently, the writers (Beare & Slaughter 1993) argue that the world must begin to develop along lines which break with the earlier paradigms if it is to adapt meaningfully to the next century. The question is about cultivating a new world view which supercedes the paradigms presented above. Nevertheless, they believe that a change in attitudes seems already to be occurring at least in the way we perceive ourselves and the earth we inhabit: People have gradually started to understand the earth as a delicately balanced living organism whose health human action affects enormously (Beare & Slaughter 1993, 47). As Chief Seattle said in 1885: “All things are connected. Whatever befalls the Earth befalls the sons of the Earth”.

Additionally, this “one-world-view” raises the fundamental question of development: What development really is? It must be asked because the Western conception of development, born in the industrial era, as linear growth in the name of progress, no longer holds water: It is becoming ever more evident that the earth simply cannot sustain life very long if that development model is not be revised, and the concept of development redefined.

In addition to a new world view, Kivistö’s (1994, 7–13) model of a new view of human being is introduced. It deals with human consciousness which is believed to contain enormous potential to reverse undesirable development trends. Kivistö argues that there are four criteria for evolution to continue: the growth of ethical, global and environmental consciousness, and an increase in spare time which is, at least partly, used for the good of others.

To begin with, human consciousness has to move from rational reasoning to ethical reasoning. As a result, social and human action will predominantly be characterized by an ethical and moral orientation instead of logical and rational orientation which has so far directed decision-making. This shift is necessary for life to
continue since the problems humankind nowadays faces are mainly ethical, and thus cannot be solved only by using intelligence. Secondly, alongside the growth of ethical consciousness, the expansion of global consciousness is another necessary cornerstone when aiming at a healthier future. In addition to the problems being ethical, they are also global: They are not limited by national or geographical boundaries but touch the whole of humankind. The global perspective need to be understood as the smallest frame within which to view human affairs in the future. Thirdly, environmental consciousness refers to internalizing the challenge of sustainable development: The consequences of human action and the limits the natural world sets to it must be deeply understood, and the environmental aspect needs to become a natural part of any decision-making process. However, Fien (1998, 245) notes that, sustainable development does not only refer to ecological sustainability but also to social, economic, and political sustainability. According to Kivistö, the fourth criteria of a better future is the increase in spare time which is partly used for the good of others. As advances in the technological culture have lessened the hours people spent in traditional work, further human potential is released. It could, and should, be viewed that the societal duty of man to work will partly shift to another kind of duty to promote humanity by not merely taking care of one’s own well-being but also that of other people.

In his model, Kivistö emphasizes the role of each individual in the change process: The traditional means, political decision-making, and the expertise of professionals are all inefficient without the support of individuals. Thus, at the core of change, there is the mental growth of human beings of which the starting point is a good self-knowledge. People need to see the truth in themselves, their real values and aspirations.

Furthermore, they need to free themselves from the ballast of the past and from feelings of guilt and fear, because they bind significant material and mental capacities which can be used in a more constructive way.

Kivistö’s model, although it in no ways deals with how its ideas could be realized in practice, can be considered theoretically valuable particularly in the sense it has a strong faith in human potential discussed above. As Beare & Slaughter (1993, 107) claim, human and cultural potential have all too often been underestimated in change processes whereas the role of technology tend to have been overvalued. Nevertheless, the power to create a better future does not come from outside human beings but is inside them.
4 Education And The Future

Though it is impossible to predict exactly the effects of global changes and development trends, and appropriate behaviours vary from one local environment to another, there are still various conclusions to be drawn from their direction and the state of the world today, and what their consequences will be in terms of education (Dalin & Rust 1996). But before discussing them, the general relationship between education and the future is first examined by stating a few major reasons why the future is an essential and necessary dimension in education.

4.1 The General Relationship Between Education and the Future

The role of future in education can be illustrated by viewing it as one of the three temporal dimensions which education, and human life in general, necessarily embraces being past, present and future. The past offers education substance to work from, but not towards. The present, on the other hand, stimulates learning here-and-now. In addition, it is naturally hoped that teaching and learning have immediate benefits, and some educational activities can be considered worth doing just for their own sake but education merely for the present is not rational since things change (Beare & Slaughter 1993, 103). The role of the future in educational activity is at least as fundamental as those of the two former: Any act of teaching and learning occurs primarily to achieve ends in the future, whether personal, professional, or social. In fact, without the future the whole education establishment would be meaningless and senseless because, in the end, it is intended to contribute toward the further development of the society (Slaughter 1998, 49). All the three dimensions are thus inevitable and important in education but, as Beare & Slaughter (1993, 106) argue, today, the future requires greater attention than ever before.

Beare & Slaughter (1993, 102–103, 105) also ground the importance of future dimensions in education by their significance in the present action and present existence: Future concerns are deeply involved in creating the present because of the very nature of human mind, human intentionality. All plans, intentions and purposes, being humanly significant features and referring necessarily forward in time, direct and motivate present behaviour. Every act of teaching and learning thus takes place not simply as a result of a push from the past or the present, but also, and usually specifically, because of the pull of the future. Consequently, it would not only be contradictory to disregard future dimensions in education since they are already present in all learning situations, but ignoring them would also mean ignoring one of the most fundamental constitutives of human consciousness, intentionality.

Furthermore, a comprehensive and balanced understanding of the world, one of the fundamental purposes of education, requires the future’s aspect in education. Hicks & Holden (1995, 14) explain this by distinguishing time and space as the
two major axes of human existence and thus they consider their exploration an important concern of education: In the spatial dimension education helps students to understand the world from personal and local levels all the way to the global level. In the temporal dimension, on the other hand, it adds to the understanding of the world by exploring the world in the past, present and future. By becoming familiar with all these dimensions, a person can understand the continuity of life and the way phenomena in the past influence the reality of the world in the future.

Consequently, education is inevitably future-oriented action. As Beare & Slaughter (1998, 50) have said: Educators are already in the “futures business”, whether they realise it or not.

4.2 The Future Is a Challenge for Education

The future needs to be viewed as a challenge, rather than a burden, for education. This chapter discusses this challenge from two viewpoints: Firstly, from the viewpoint of possibilities education has to influence the realization of a desirable future, and secondly, from the viewpoint of responsibilities education and schools have in preparing young people for their lives in the future. After all, learning is for life, not for school.

At first, it has to be noted that, due to the nature of education as a future-oriented action, education in all cases influences the future. Whether we planned it or not, education, as all human actions, has future consequences. Thus, the crucial question is not whether education has a possibility to influence the future—it is self-evident it has—but rather it is about the possibility it has to affect the realization of a future we desire, and how aware we, as educators, are of this possibility.

“If you want to change the world, then tell the kids first” cite Beare and Slaughter (1993, 18) to their teacher friend. The citation refers directly to the enormous potential education has for catalysing change. After this hopeful exclamation we have to ask where does this potential come from. What, indeed, are the reasons for claiming that education has a possibility to contribute to the realization of a “better” future?

The most significant reason is that education as an activity has to do with human beings. In the same way Kivistö (1994) regards human beings as the most central agents of managing and directing change, also Malaska (1996, 9) views them as the “possibility”. He reminds us of the enormous potential individuals have inside them which is, in one way or another, released during their life time, and considers the way this potential is channeled to be crucial. And it is particularly in this channeling of human energies that education can have a significant influence. In addition, in terms of school education, the age of pupils also offer further possibilities, and responsibilities: As children and young people are actively constructing their identities not yet having very fixed attitudes or values, they are particularly open to influences from their surroundings.

Education’s potential to affect the direction of future development lies also greatly in the fact that school is the only institution to which every member of society belongs for a certain period of time, and which thus guides the whole population through a systematic learning process. Beare & Slaughter (1993, 99) even argue it to be, of all the institutions western society has used over the years to guide
cultural transformation, the only one which has survived: The church, which once had the role, has lost it; The influence of the local community, the village, that was once the shaper of culture and identity, was dissipated by the Industrial Revolution; Even the influence of family has recently weakened dramatically because of the modern way of life. However, this paradigm can be criticized for ignoring how a very new institution school is compared to the church or village community, in particular: It has not yet lost its status but after five hundred years, it will presumably will be very different from what it is today. Additionally, Dalin & Rust (1996) state that the role of school has already began to dramatically weaken as it has to increasingly compete with other institutions and interests for the attention of the youth. Particularly electronic media, data technology and peer groups influences affect strongly today’s youth and transmit different, and often contradictory, values than those the educational establishment cherishes. Although schools continue to be helpful to many, they are increasingly in the margins for a growing number of students. Consequently, they argue that to maintain its role as a place that stimulates learning, it must raise its awareness of the reality and backgrounds of its students which are changing more rapidly than ever.

After acknowledging the potential education has for catalysing change, the question how it can be directed along the desired lines, becomes central. The creation of visions, discussed in the following paragraphs, is an important tool which helps educators in this task.

Elgin (1991, in Hicks & Holden 1995, 138) has said: “We cannot build a future we cannot imagine.” Vision, as a concept, refers to imagining, at first generally and then with increasing specificity what a person really wants of the future (Meadows, Meadows & Randers 1992). Hicks & Holden state (1995, 126, 138) that the value of visions lies in the way they offer means to set clear goals for the future, whether in one’s personal life, nationally or globally, and give motivation and energy for concrete action and work for the realization of the vision. They stress particularly the importance of this symbiotic relationship between vision and action. Furthermore, Dalin & Rust (1996, 59) note that a vision is of little value unless it becomes shared, but when it creates a community and people are bound together working for a common ambition, its capacity to turn into reality increases enormously.

Consequently, educators need to construct a vision of the kind of future they would like to come about in order to know what to pursue, and to be able to set clearer goals (Dalin & Rust 1996; Hicks & Holden 1995). Nevertheless, first they need to become aware of their unconscious images of the future, and reflect on what kind of behaviour they have created. According to research (Hicks & Holden 1995, 138), teachers’ images of the future are often fragmentary, even fearful, and thus, as such, not very fruitful starting points for educational purposes. Nevertheless, if educators construct their visions consciously, and let them persistently guide and give direction to their daily work, the future is not anymore a matter of chance but of choice. It has even been considered a central pedagogical duty of educators to contribute to the creation of new and productive ideals that guide their work (Dalin & Rust 1996, 60).

Dalin & Rust (1996, 59–70), for instance, have defined ten visions for the next century which they believe to construct a sound, holistic future vision. They are in short:

1 An Ecological Vision: Life in Harmony with Nature
2 A Vision of a Fair, Democratic Society
These visions, as visions in general, raise the fundamental question of values. Dalin & Rust (1995, 69) argue that the world does not only need a common future vision, but it also needs to begin to develop a common set of values to guide societies and thus to make the vision reality. However, the question of universal values is itself extremely complicated. It has to be asked whether a campaign to establish universal ethics would in the end lead to a homogenized world where differences would be eliminated and cultures and societies relativized, and would it even be possible. Nevertheless, certain values, for instance ones relating to human rights, have already been declared as universal. The question is extremely up-to-date and interesting, but it would require so much theoretical and practical thought, that it is not possible to go deeper into it here.

Wild, idealistic visions can also be regarded as being close to utopias which were discussed in chapter two. Delors et al. (1996, 22) admit that an attempt to foster a deeper form of human development in education endeavouring to attain the ideals of peace, social justice and environmental responsibility may well be a utopia. However, he argues that such educational utopias are necessary, indeed vital, in striving for a better future. In addition, Giddens (1990) states that a humankind needs to create “models of utopian realism” which are models of a good society, and which should not be isolated from educational practice but show it direction and purpose.

Alonside possibilities schools, as educational institutions, have to contribute to the realization of a desirable future, they also have responsibilities to prepare pupils for their responsibilities, opportunities and experiences of adult life. The adulthood of those starting primary school now will last well into the latter part of the twenty-first century. Consequently, teachers can be considered to have a legal responsibility to prepare pupils for the period approximately between 2000–2075. (Hicks & Holden 1995, 7)

4.3 What Kind of Education Is Needed to Prepare for the Future?

Education in schools has been criticized for relying on outdated notions of the world and their role in it. Schools are said to be shaped by yesterday’s problems (Miettinen 1990; Rauste-von Wright & von Wright 1994, 160). Additionally, educational debate has been considered to reflect a fairly static world-picture where educational affairs are treated as they were two hundred years ago, though, particularly nowadays, the universe is anything but static. In contrast, its dynamism poses powerful challenges to education. (Beare & Slaughter 1993, 4) Therefore,
schools can not act using the framework which has determined their role in the past, but must reform it to match the challenges of today.

This chapter aims to answer the question of what kind of education is then needed to prepare pupils for the future. Educational needs and models defined by various researchers are first introduced separately, and at the end of the chapter, a concluding figure is presented which gathers the most relevant aspects of the models together.

4.3.1 Futures Education

In terms of educational needs for the future, futures education is an approach which needs to be established in schools and in any educational practices (See e.g. Beare & Slaughter 1993; Hicks & Holden 1995; Hicks & Slaughter 1998; Pitkänen 1994; Remes & Rubin 1996; Rubin 1995). At first, it has to be separated from another similar term “futures studies” which is also commonly used in terms of education. While futures studies refers to a specific futures subject or course dealing with different aspects of futures thinking, futures education is used more broadly to embrace also an approach to education itself. Thus a school may have a concern to promote future-orientated education and recognizes the need for a futures perspective across the curriculum although it may not have a specific subject for futures. There is also a third term “education for the future” but it is more or less synonymous to the term futures education. (Hicks 1998, 2–3)

According to Lister (1987, as reported by Hicks & Holden 1995, 10), futures education can be seen as a concern rooted in the new movements in education which emerged during the 1970–80s. They introduced a diverse range of educational initiatives which were concerned with global and human-centered issues such as peace, human rights, development, multiculturalism and environmental degradation. This kind of global dimension in education was considered to be very radical at the time. However, it was adopted by so many educators that it can be considered to have brought a future-orientated perspective on the world to the school.

Pitkänen (1994, 48–54) understands futures education as being two-sided: developing in pupils such competences which they are assumed to need in the future, and developing their future awareness. From this distinction she arrives at two central aims of futures education: cultural competence and future consciousness. According to her, cultural competence refers to methodological capacities needed in life which involve not only skills for interaction, but also abilities to make independent and critical judgements about institutionalized models of thinking and acting. Additionally, it refers to abilities to understand one’s needs, prioritize values and make value-based decisions on rational grounds. On the other hand, future consciousness refers to knowledge-based and ethical capacities to take the future into consideration in today’s decision-making, and understanding that the nature of the future is defined by decisions made today. However, it has to be remembered that people can never base their behavior merely on knowledge or reason though they would like to. Their behaviour is always a sum of interpretation of various factors: what they know, their socio-cultural background, personal motives and goals, and broader social, political, economic and spatial limitations (Maat ja kansat 1980, 915).

In the way educators specialized in environmental concerns emphasize that teaching “about” the environment is not enough but we have to teach “for” the en-
vironment, similarly, Hicks & Holden (1995, 10) stress that futures education should aim specifically at educating “for” the future. Consequently, futures education should prepare students to actively participate in the creation of tomorrow which requires that they themselves actively explore their ideas about the future: their hopes and fears and alternative futures, including probable, possible and preferable as well as personal and global futures. They also need to reflect on the values that lie behind the ideas and what kind of action is needed to create a world they desire.

On the other hand, Beare & Slaughter (1993, 127–129) are of the opinion that the primary purpose of futures education is to help people build qualified optimism about their ability to determine their own life prospects: People need to see themselves as agents, not mere spectators of their lives, and be able to develop autonomy through decision-making and choice. This should also give them an improved sense of purpose and direction in their lives. According to them, other objectives in futures education are that students develop their own visions and goals for the future, and also feel willing to join with others in defining and working to reach shared goals. In addition, fears and worries for the future should be confronted and turned towards more constructive ends, and emotions such as empathy and compassion strengthened.

Nevertheless, Hicks & Holden (1995, 16, 115) reminds us that futures education is more than a collection of classroom activities, however innovative and effective they may be. It is rather a new way of thinking. Particularly, it is a slow process that aims at legitimizing futures perspective into schools so that it will not remain a marginal concern of only few enthusiastic educators.

4.3.2 Transformative and Lifelong Education

Fien (1993) has distinguished three ideological orientations to education which differ from each other in the way they perceive the social role of school and the fundamental purpose of education. According to conservative orientation, a school is an institution which maintains and legitimises existing social, economic and political structures. Reformative orientation, however, perceives the task of the school as being to prepare students to participate in the reform of the society. Transformative orientation takes the thinking even further: School has a definite role to play in challenging social, economic and political inequalities: Its task is to transform self and society.

Hicks & Holden (1995) state, that in order to challenge undesirable development trends of today and prepare young people for changes ahead, education must take a transformative orientation. Though cultural transfer will naturally still be of relevance, this socially critical approach is needed. It requires schools to be prepared to leave outmoded practise behind and pioneer new ways of living and being.

According to Fien (1993), transformative education requires the boundaries between school and surrounding community and society to be flexible. Various other educationalists are also of the opinion that education which prepares for the future must have a stronger social action component that it has so far had. (Dalin & Rust 1996, 139; Delors et al. 1996; Hicks & Holden 1995, 10) Children should learn ways and get concrete experiences about how they as individuals can act for their concern or any matter they consider important. Beare & Slaughter (1993) refer to it as a pivotal “human response” that after all matters the most. Hence, there
is a notion of active and responsible citizenship at the center of education preparing for the future and an effort to empower the growing youth.

An idea of learning and education as a life long process is nowadays widely recognized and popular. It is considered particularly essential for adapting to and mastering the demands of the future (Burrows, Mayne & Newbury 1991, 260; Delors et al. 1996, 22, 99-100). Delors et al. (1996) use the concept “learning throughout life” and regard it as the key to the twenty-first century: It is meets the challenges posed by a rapidly changing world since no one can hope to amass during his or her youth an initial fund of knowledge or skills which will serve for a lifetime. According to Delors et al. (1996, 111), learning throughout life also links up with another concept often put forward, that of the “learning society”. The society is to continuously learn as well, and without hesitating correct its behaviour accordingly. In addition, this view of lifelong education presupposes each individual “to learn how to learn” (Delors et al. 1996, 22), an ability which should be emphasized already at the initial stage of education. The Finnish National Board of Education stresses its importance as well (Framework Curriculum for the Comprehensive School 1994, 14).

4.3.3 Towards Holistic Education

Burrows, Mayne & Newbury (1991, 268, 272) state that new holistic thinking has emerged simultaneously in different strands of thought during the 20th century. It is characterized by a pursuit to build synthesis of ideas and understand the world and reality as a whole. This integrated approach has also raised its head in educational discourse. Holistic education is believed to provide a basis for creating a healthier form of development in the future.

In this chapter, holistic thinking is discussed from three viewpoints in terms of education: First, education needs to be designed to view the world as a whole. Second, it has to view human beings holistically. And third, it needs to take a holistic approach to learning.

To begin with, Dalin & Rust (1996, 103, 138–139) argue that most contemporary models of education are limited because of their singular focus. The focus may be environment, peace, information technology, languages or multiculturalism. According to them, the problem is that these important issues are seen to be isolated from each other although many of them have interconnections, overlapping concerns and are indeed different facets of one complicated system, the world.

Consequently, they (Dalin & Rust 1996, 103–135) have outlined a broader and more comprehensive educational model for the future to encompass holistically different global issues which today’s pupils will have to be prepared to face in the future. They consider it inevitable and appropriate that different schools will stress different facets of the global concern. However, all pupils should be introduced to the reality of the world at large in order to understand the interrelatedness of problems and phenomena although studying some of them at deeper level. The educational design is again presented briefly by differentiating its seven categories:

1 Schools in the service of democracy
2 Schools in the service of multiculturalism
3 Schools response to media
4 Schools in the service of survival
Dalin & Rust’s educational design is an example of an effort to approach the world and reality as a whole in terms of education. A holistic view of the world can be considered a prerequisite for schools to be able to educate citizens that are broadly aware of world phenomena and their interconnectedness. Nevertheless, Dalin & Rust’s model can be criticized for at least one thing: It seems to view schools as “servants” of society. Undoubtedly, schools are that too, but it must be asked whether education has or should have its own ideologies outside its societal frame of reference which it promotes and cherishes. However, we will come back to this question in chapter 5.1 when discussing curriculums.

In addition, one aspect in Beare & Slaughter’s critique towards Western world view (presented in chapter 3.2) deals particularly with this question about the holistic approach to the world in terms of education. It was argued that the Western scientific method has fragmented reality and thus our world views into small pieces, resulting in an inability to understand the world in its wholeness. Moreover, Beare & Slaughter (1993, 61) claim that the whole education establishment has reproduced this distorted world view by operating in the same bits-and-pieces approach characterizing the scientific method: Human knowledge has been broken down into individual subjects and courses which have been studied separately without endeavouring to understand their interconnections. However, they (Beare & Slaughter 1993, 88) also believe that school cultures are in a key position to convey a more holistic view of the world: By favoring a consistent way of dealing with different issues teachers can dramatically reform the traditional thinking patterns, and sponsor a different orientation towards wholeness, connectedness and balance.

Secondly, education needs to move towards a holistic view of human being. Burrows, Mayne & Newbury (1991, 249) and Delors et al. (1996, 86, 95) state that education must begin to cherish the picture of the whole human being as body, mind and spirit, and endeavor to develop him or her holistically. The end of education should be the complete fulfilment of man in all the richness of his personality. No aspect of a person’s talent or overall potential should be disregarded by education. Delors et al. (1996, 86) call this purpose “revealing the treasure within each of us”.

In addition, Burrows, Mayne & Newbury (1991, 260) highlight the fact that the individual and social potential of each person must equally be emphasized in unified education. Delors et al. (1996, 86) confirm the view by stating that it should focus on both the individual and the individual’s place in society. Individual development is a dialectical process which starts with knowing oneself and gradually opens out to relationship with others. Thus education of the complete person should be understood as being two-sided: both a very individualized process and at the same time a process of constructing social interaction (Delors et al. 1996, 95).

Thirdly, education should adopt a holistic view of learning. In its report to UNESCO (Delors et al. 1996, 85–95), the International Commision on Education
for the Twenty-first Century argues that a narrow perspective on learning has characterized education for too long. It states that education should be organized around four fundamental types of learning if the challenges of the next century are to be met. They are: “Learning to know”, “Learning to do”, “Learning to live together” and “Learning to be”. They represent different dimensions of learning which are all believed to be needed to approach a broader view of education and human life. The following paragraphs explain each dimension more accurately.

“Learning to know” does not primarily refer to acquiring accurate information, but rather to mastering the instruments of understanding. Understanding different aspects of the environment enables individuals to make independent choices, and thus to participate in the world’s affairs. Nevertheless, a sufficiently broad general education with the possibility to work in depth on a small number of subjects is considered a “passport to life”.

The dimension “Learning to do”, on the other hand, aims both at applying knowledge learned into practice, and at enabling an individual to act creatively and meaningfully in her or his environment. In order to learn the rich skills and competencies, to which this dimension refers, students should be offered opportunities to develop them also outside the school environment in different fields of society.

Developing respect for other people and their different ways of living and thinking is at the core of the dimension “Learning to live together”. It is believed to be the key to non-violent conflict resolution and peaceful human interaction worldwide. A gradual “discovery of others”, by developing an understanding of the diversity of the human race, and concrete action with other people are considered to be the paths to reach this aim.

Last, “Learning to be” refers to the all-round development of individuals—mind and body, intelligence, imagination, sensitivity, aesthetic sense, personal responsibility and spiritual values—aiming at the complete fulfillment of their personalities and a feeling of autonomy and responsibility in their lives.

It is argued (Delors et al. 1996, 86) that formal education has traditionally focused almost exclusively on the dimensions “Learning to know” and to a lesser extent on “Learning to do”. The two others have been neglected leaving them to chance, or assumed to somehow evolve from the two former. Nevertheless, all the dimensions are considered equally important in order to make education a total experience.

Furthermore, Kivistö’s (1994) model of the evolution of human mind (also introduced in chapter 3.2) casts new light on learning for the future. He argues that the growth of ethical, global and environmental consciousness are the necessary criteria for human life to continue in the future. In terms of education, what must be highlighted is that developing consciousness is not the same as acquiring knowledge, though learning is definitely involved in the process. Consciousness is something more: It refers to a deep understanding and an ability to make decisions upon that awareness. It can be said that endeavouring to develop the ethical, global and environmental consciousness of students on which their would base their behaviors, means aspiring for learning in its most holistic form where all its dimensions are involved.

This chapter concentrated mainly on holistic thinking in terms of educational aims and approaches. The holistic viewpoint in terms of curriculums and the selection of contents of education will be further discussed in chapter 5.3 when dealing with curriculum planning for the future.
FIGURE 1 concludes the discussion of what kind of education is needed to prepare children and young people for the future by drawing together the central aspects of the different models introduced.

FIGURE 1. The central aspects of education for the future (A combination of the models introduced).
5 Curriculum And The Future

5.1 Curriculum as a Concept and Curriculum Theories

The concept of a curriculum has been considered difficult to define (See e.g. Atjonen 1993, 23; Kelly 1989, 14; Malinen 1992, 17). The term has thus been used with several meanings and a number of different definitions of it have been offered. The problems associated with its definition are partly due to multidisciplinary attempts to define it which have led to an understanding of curriculum as a dynamic concept: It is ever changing depending on the field it is approached from, and therefore cannot be defined too closely (Atjonen 1992, 9). However, some of its dimensions have been identified.

Hirsjärvi (1983, 132) has defined a curriculum as “a plan of all the the actions used to reach the educational aims set for the school”. Also Syrjäläinen (1994, 9) considers a curriculum as a plan of teaching and distinguishes it from the term “teaching” which refers to the realization of that plan, and the term “didactics” which refers to a wider learning system on how to teach.

However, many educationalists are not satisfied with these kinds of definitions of curriculum which focus mainly on the planning side of education. Kelly (1989, 12-13), for instance, insists on including into the definition also the “hidden” and “received” curriculum. According to him, a curriculum must be equally concerned with what is actually received by pupils in reality, not only what is intended in theory, and hence its definition cannot exclude them from critical consideration. Additionally, Antikainen (1986, 124) believes that, though curriculum is an entity consisting of themes such as aims, contents, technology, timing and evaluation of education, it is not only a plan prepared beforehand but refers also to its “lived” and “experienced” aspects. Furthermore, Kelly (1989, 10) describes curriculum as an overall rationale for an educational programme of an institution where learning objectives and contents are not only stated, but also justified by declaring their purposes and other underlying principles of the institution.

When exploring the concept of curriculum, a distinction between Lehrplan and Curriculum models has often been presented. The Lehrplan model refers to curriculums in which different subjects, their aims and contents, are presented separately. Conversely, the Curriculum model has rejected subjects as a basis for planning, and instead concentrates on planning holistic learning experiences in which pupils are actively involved. Finnish curriculums have strongly followed the Lehrplan tradition. (Syrjäläinen 1994, 8)

Sears & Marshall (1990) have identified different theoretical approaches to curriculum: A traditional approach, and a variety of alternative approaches which, though being diverse in their beliefs, are united in their discomfort with the traditional view. First, the traditional, and the most persistent, position emphasizes the role of organized subject matter and knowledge to be learned efficiently, and sees the teacher as the conveyor of a detailed curriculum planned at a higher level of authority. Second, scholars emphasizing self-understanding focus on holistic development of the individual and the creation of personal meaning in learning, and
the curriculum emerges through the process of teacher-student planning. Third, scholars emphasizing the role of the teacher perceive teachers as a source of fundamental curriculum knowledge, and thus recognize them as major curriculum decision-makers. Fourth, scholars emphasizing society realize that the intent of a curriculum is to help build a better society, and thus stress the importance of social issues and values in learning and a participatory curriculum, being a result of democratic process in a classroom. Fifth, scholars emphasizing curriculum as a field of study focus their study on the overall field of curriculum, that is its history and accumulated knowledge, and by highlighting critical issues encourage all other approaches to explore them from their own viewpoints.

On the other hand, Syrjäläinen (1994, 7) has identified another kind of distinction between curriculums. According to her, they can also be approached from humanistic (stressing the overall development of pupil, learning for life, self-evaluation), technological (stressing detailed objectives, scientific knowledge, adaptation to industrial society) and futurist (stressing anticipation of the future, means to gather information, ability to withstand uncertainty) viewpoints.

From these different approaches to curriculums we can understand how complicated it is to define curriculum in only one way as well as the vary nature of it: Curriculum development is a heavily value-laden activity.

A variety of planning models of curriculums have also occurred over time. Taylor’s (1949, as reported by Kelly 1989, 15–16) model of curriculum planning as a linear activity consisting of four separately analyzable elements: objectives, content, methods and evaluation, has nowadays been challenged by a number of curricularists, but yet can be seen to have served the basis for many of them. For instance, the objective-oriented model, which claims that to qualify education as a rational activity objectives must be the focus of planning, has predominantly been preferred for the last few decades. However, it is today widely criticized for regarding education as an instrumental activity and human being as a passive fulfiller of expectations. Content-oriented model, on the other hand, suggests that curriculum planning should start with the contents of learning. This view has been considered to characterize the traditional approach presented earlier, and has currently been largely rejected for regarding education as merely a process of transmitting knowledge. According to the present understanding (Kelly 1989; Framework Curriculum for the Comprehensive School 1994, 10), the process-oriented model of curriculum planning is the most appropriate for educational purposes. According to it, education is primarily concerned with setting in motion certain development processes in children (e.g. development of responsibility or independent thinking), rather than with teaching knowledge or modifying behaviour in certain ways. Therefore, the core of curriculum planning should be the developmental processes which education wishes to promote in children, and which are also believed to form the basis for initial selection of objectives and contents. Indeed, the whole curriculum is viewed as a dynamic process in which all its elements are constantly interacting with each other. (Kelly 1989)

The significance of curriculum can be discussed at both macro and micro levels. At the macro level, the curriculum is the most central document through which society declares its political will towards education (Atjonen, 1993, 15; Kansanen 1992, 55). It thus serves as an official element of control which ensures that the development of educational system is politically appropriate. From the macro point of view, the school system is a social and political institution, and the curriculum,
being a part of educational policy, is a means to develop society in certain direction (Syrjäläinen 1994, 16).

At the micro level, on the other hand, a curriculum is a pedagogical document which offers the foundation as well as substance for schooling. It can also serve as an important tool for the development of both the school and its individual teachers. (Syrjäläinen 1994, 16–17) However, research has shown that its significance for the school community is not self-evident, but curriculums have often had a very marginal role in the reality of schools (see e.g. Atjonen 1993, 122). On the other hand, Syrjäläinen (1994, 15) has stated that their distance may simply be due to the fact that they have, until recently, always been designed somewhere else than in schools.

However, differentiating the influence of a curriculum in such a matter-of-fact way masks some fundamental problems in its relationship with society. Sears & Marshall (1990) asks: “Should community shape curriculum or should curriculum shape the community?” In addition, Antikainen (1986) inquires how independent education as an institution is compared with other societal institutions: Are its aims set under the dominance of other institutions or can it have a fairly independent position and influence the development from its own perspective? These are extremely complex political questions which are widely debated at the moment, after the central administration, that is the macro level, has loosened its control over schools. We have to ask, if the central administration is only loosely directing the educational establishment, and if education is not a relatively independent institution, who then is directing its development? Educators have declared their concern particularly over the impact of economics which is putting increasing pressure on all fields of society, not least on the educational establishment. It is believed that if education becomes largely directed from an economic perspective, some of the most valuable aspects of education within its own frame of reference will be lost (Beare & Slaughter 1993).

Nevertheless, in whatever direction the situation develops, the relationship between society and education must be understood as being dialectic: Their mutual influence is inevitable (Antikainen 1986; Sears & Marshall 1990). In addition, all societal institutions are interlinked and thus their planning can never be isolated from each other. Consequently, the interests of other institutions and society at large offer an inevitable and necessary context to curricular planning, but the question to what extent they are justified to set limits to education as an institution in its own right, can be discussed further. However, Antikainen (1986, 41) has emphasized that the way should be paved for more co-operative educational planning rather than education being a battleground for the competing interests of a society.

In any case, curriculum can be considered a significant instrument of change and renewal at various levels (Dalin & Rust 1996; Skilbeck 1990, 40): both in its micro and macro environments, and when promoting either its own ideologies of desirable change, or adapting to external changes from or ideals of the surrounding society.
5.2 Curriculum Reform in Finland—Introduction of School-based Curriculums

A noteworthy curriculum reform was carried out in 1994 in Finland. National curriculum guidelines for the comprehensive school were completely revised, and curriculum options and student choice enlarged in a significant way. At the same time, much of the former powers of central administration were devolved to the local authorities and to individual schools. Norris et al. (1996) regards the reform as a natural consequence of a conscious trend in Finnish educational policy which, since the 1980s, has endeavoured to decentralize educational decision making by increasing the autonomy of localities.

As a result, the National Board of Education published a book called “Framework Curriculum for the Comprehensive School 1994” which has since then offered guidelines for educational planning at the local level. It aimed at renewing the content of education and reforming traditional classroom practices, which were believed to be best achieved by relaxing the often very detailed regulations of the earlier core curriculum and updating the educational objectives (Norris 1996). National guidelines also defines a set of values which are to form the core of the work in individual schools.

Consequently, the reform led to the introduction of school-based curriculums. Each individual schools has nowadays a right and responsibility to draft its own school-based curriculum by interpreting, adapting and adding to the National Guidelines. Though it is still confirmed by and for the municipality, the individual school has today substantial latitude to plan its own educational design (Norris 1998).

The National Board of Education (Framework Curriculum for the Comprehensive School 1994, 11) states that, behind this renewal, there is a view to enhance the internal development of the school community and that certain strengths can be identified in each community. Teachers’s participation in the writing of the curriculum is believed to be an important prerequisite for any real changes in the inner workings of the school. It is considered to augment the commitment of both teachers, pupils and parents to the curriculum. In addition, the National Board of Education (Framework Curriculum for the Comprehensive School 1994, 9-12) grounds the need for the curriculum reform upon changes in the society, values, curriculum theory and theory of learning and knowledge. In short, it was believed to improve the quality of education.

However, Syrjäläinen (1994, 20) argues that this independence of schools is not a simple matter which necessarily reveals only strengths within the system. Educational equality, particularly, is a concern which has raised widespread debate. In addition, decentralized administration can also be interpreted as means to make individual schools accountable for their achievements.
5.3 What Kind of Curriculum Is Needed for the Future?

5.3.1 A Curriculum Framework for the Future

Many educational writers (Beare & Slaughter 1993; Hicks & Holden 1995, 14–15) have argued that futures perspective has extremely rarely been included in curriculums. For instance, Hicks & Holden (1995, 14) state that most curriculums are temporally imbalanced since they give the present and particularly the past more frequent and explicit attention than the future. They believe that a forward-looking educational approach is required to conceptualize the role of education specifically in these times of change and the coming of the third millenium.

We are thus confronted with the question, what kind of curriculum is needed for the future. To answer it we will present a curriculum framework of the future which Dalin & Rust (1996, 159-163) have outlined on the basis of belief that education for the future should, above all, be holistic thus concentrating on the development of the complete person and covering all areas of human life. It consists of four main areas: “Nature”, “Culture”, “Myself” and “Others” (FIGURE 2).

![Curriculum framework for the future (Dalin & Rust 1996).](image)

The four areas are the basic elements of curriculum which are believed comprehensively to cover human reality. Broadly, the area “Nature” covers all the phenomena which exist in the natural world independent of human action, whereas the area “Culture” represents everything the humankind has constructed and invented in the world. The area “Myself”, on the other hand, deals with the development of an individual, while the area “Others” deals with the individual’s relationships with other individuals, and she or he as a member of community. The following paragraphs explain more precisely, what these areas are supposed to cover in the context of school learning.

The area “Nature” focuses on nature’s qualities and ecology. Students should gain understanding and insight into the basic laws of nature, the complex interdependence between humans and nature, and learn, how balance in nature can be
maintained. Experiences in nature and outdoor life is needed to learn holistically about this area.

The area “Culture” concentrates on peoples’ history and cultural development. It deals with all human cultures, starting with the immediate culture, in which a child is located. Essential sides of economic and technological culture also belong to this area of study. Furthermore, it should strongly support efforts for peace, and educate for responsible solidarity with people in need.

Students must be given space to discover themselves, develop sound self-esteem, attitudes, proficiency in communication skills, artistic abilities, and to learn to take care of their bodies. These, and other matters concerning personal development, belong to the area “Myself”. They form the foundation of school learning, and, indeed, all of an individual’s life.

The concern of the area “Others” is to gain understanding about other people, at both local and global level. Pupils’ relationships with other people, cultures, religions and languages should be discussed in a spirit of tolerance. To fulfill this part of the curriculum, a school must be open to the surrounding communities, and seek to co-operate with them as much as possible.

Dalin & Rust argue (1996, 162) that curriculums have so far focused mainly on the areas “Nature” and “Culture” thus neglecting the other two areas “Myself” and “Others”. However, all the four elements are considered equally important, and thus should be balanced in curriculums of the future. In addition, Dalin & Rust believe that values should form the core of every curriculum and help teachers, along with the curriculum, to pay equal attention to all the four areas in their work.

5.3.2 Formulating a Model of Future-orientated Curriculum

In this chapter, a model of future-orientated curriculum is presented. It is formulated to direct the study of the lower-stage UNESCO schools’ school-based curriculums in terms of the question whether they prepare their students for the future. It will be used as the foundation for the construction of content categories which will give accurate norms for the analysis of curriculums.

The four basic elements of futures curriculum, defined by Dalin & Rust (introduced in the previous chapter 5.3.1), and the four aspects of learning, defined by the International Commission on Education for the Twenty-first Century (introduced in chapter 4.3), are used as a framework for the model of future-oriented curriculum (Figure 3).

The model shows that all the four areas of curriculum—“Nature”, “Culture”, “Myself” and “Others”—and all the four dimensions of learning—“Learning to know”, “Learning to do”, “Learning to live together” and “Learning to be”—are balanced in a future-oriented curriculum.

The reasons for why the two particular paradigms were chosen instead of many others to serve the basis for the model of future-orientated curriculum and thus the whole research, need to be explained.

The first two reasons give grounds for the selection of the individual models. Firstly, since the purpose of the research was to study UNESCO schools, it was regarded both rational and interesting to include UNESCO’s viewpoint in it, and thus to investigate how the curriculums reflected the recommendations of the organization. Secondly, Dalin & Rust’s model of the four areas of curriculum was considered to be very appropriate because their design was based on a broad discussion and analysis of the role of education and schools in the future. In fact, their thinking has consciously been introduced in various parts of the theory section to help the reader to understand the background of their model, and also to justify the decision to base this study on it.

Moreover, since it was particularly a design for curriculums, it offered a constructive framework that could be used to study school-based curriculums.

Nevertheless, the third reason for choosing the two models is the most important: Because both of them approached education from the holistic viewpoint, they were considered to offer a possibility for also approaching the curriculums holistically. Conversely, many of the other models introduced in the theory section tend to concentrate on stressing the importance of some individual aspects of education (for example, raising consciousness or developing certain skills assumed to be needed in the future), and thus did not give means for a very broad analysis of curriculums. Consequently, having the two theories as the foundation of this study, the
ability to concentrate on analyzing the very basic elements of the curriculums and the complementary aspects of learning, was believed to have enabled the researcher to get more comprehensive information about the curriculums. It also enabled her to dive deeper into the basic assumptions and ideologies behind them, which could not have been done by concentrating on only one aspect in their frame of reference. Additionally, since most of the writers concerned with education and the future recognize the need for this unified approach, the choice of an overall holistic paradigm should be justified.

And fourthly, the combination of the two models seemed interesting. They had a similar structure: They were both four-dimensional, and they required the dimensions to be balanced. It seemed attractive to investigate that balance: To what extent was it realized in the curriculums, and to what direction did it possibly incline. In other words, the simplicity of a model of future-oriented curriculum which could be formulated using the two models was considered attractive and, at the same time, seemed to offer a challenge.
6 Unesco Schools

The United Nations Educational, Scientific and Cultural Organization, UNESCO, launched an Associated Schools Project (ASP) in 1953 to promote education for international understanding, co-operation and peace. The Associated Schools Project consists of individual schools and other educational institutions around the world which are willing to include the ideals and ethical message of UNESCO in their curriculums and everyday life. Therefore, in a variety of ways, UNESCO schools, also called ASP or Associated Schools, emphasize the promotion of peace, human rights, democratic principles, tolerance and intercultural understanding, and environmental respects in their teaching and education.

Since 1953, the ASP network has expanded at various levels of education. At present, there are more than 3,200 ASP institutions in some 123 countries (Meyer-Bisch 1995). They vary from pre-primary, primary and secondary schools to vocational institutions and teacher training departments. Any educational institution can apply to become an Associated School. After acceptance, UNESCO provides it regularly with educational material which helps it implement the various global issues presented above in its projects. UNESCO’s National Commissions play a significant role in delivering the materials, answering requests, organizing seminars and courses for teachers, and otherwise informing schools about matters related to UNESCO and the ASP network. There are also two channels of communication between the Associated Schools and the International Commission for UNESCO in Paris: newsletter “Looking at the ASP”, and bulletin “International Understanding at School”.

In Finland, UNESCO schools have been active since 1959. Nowadays, there are 54 institutions which include UNESCO’s ideology in their teaching. Most of them concentrate on their local environments organizing courses, theme days and inquiry projects, and thus raising awareness of the unity of nature and culture. In addition, cultural minorities and indigenous peoples are often under study to promote understanding of and respect for distinctive customs and world views. (Elo 1996, 7) Many schools also co-operate with other Associated Schools abroad with which they may have common projects, exchange of students and teachers, and other shared activities. Studies in international education are emphasized.

Behind the Associated Schools Project there is a belief that considerable progress in global and humanitarian affairs can be made by developing an effective international network for communication and curricular innovation which shares the perspectives of sustainable development and culture of peace (Meyer-Bisch 1995). Furthermore, Andersson & Nevala (1996, 5) believe that UNESCO’s ethical message and the values of liberty, dignity, justice, and solidarity it fosters, are today more valid than ever.
7 Research

7.1 The Aim and Problems of the Research

The general aim of this study is to bring forward the futures perspective and the global framework in educational discourse and practice, and generally raise awareness about them. Additionally, I wish to point out the significant role education has in building the future, and to encourage schools and individual educators to explore their own future visions and allow them to affect their daily lives both at work and in private.

I also want to introduce the UNESCO schools and the ASP network, which seem to be little known in educational circles in Finland. Their ideology represents a global and humane thinking that, in my view, should characterize all schools worldwide.

I have defined the main problem of the research to be: Do Finnish lower-stage UNESCO schools prepare their students for the future at the level of their school-based curriculums?

Based on the model of future-orientated curriculum I have constructed and presented in chapter 5.3.2, I have formulated the following three subproblems:

1. To what extent are the four areas of curriculum—“Nature”, “Culture”, “Myself” and “Others”—balanced in Finnish lower-stage UNESCO schools’ curriculums?
2. To what extent are the four dimensions of learning—“Learning to know”, “Learning to do”, “Learning to live together” and “Learning to be”—balanced in Finnish lower-stage UNESCO schools’ curriculums?
3. Are the four dimensions of learning equally emphasized in the four curricular areas in the UNESCO schools’ curriculums?

I will attempt to answer these questions by examining the curriculums of each Finnish lower-stage UNESCO school, and by eventually drawing the results of the individual schools together to present the situation of all the Finnish lower-stage UNESCO-schools analyzed. I will use content analysis as the research method.

7.2 Sample

I was naturally interested in examining lower-stage schools in this study because I am going to become a teacher at that stage. When I was collecting the research material, that is the school-based curriculums, there were only ten lower-stage UNESCO schools in Finland which made it possible for me to include all of them in the research. However, a few new schools have since then been registered as UNESCO institutions, and hence the sample does not represent the entire population anymore, but still the most of it. Consequently, the sample of this research
consisted of ten school-based curriculums of Finnish lower-stage UNESCO schools. As UNESCO schools have committed themselves to deal in their work with issues such as human rights, peace and sustainable development which have a clear focus on the future, it could be assumed that their curriculums would reflect a broad, future-orientated view of education.

The ten UNESCO schools of the research are situated all over Finland. They have participated in the ASP network for various lengths of time; Some have been active since 1954 when the network was introduced in Finland while some joined a few years ago. Three of them are university training schools. Nine of the schools are Finnish and one is Swedish. Thus, nine of the curriculums were in Finnish and one curriculum was in Swedish.

The curriculums were collected during the spring of 1998 and analyzed in the summer of 1998. All schools were willing to participate in the research.

7.3 Research Method

7.3.1 Content Analysis

Content analysis was chosen as a research method in order to get systematic information about the research materials, the curriculums. According to Pietilä (1976, 4) (whose book on content analysis, though being fairly old, is still a basic guide for its statistic methodology), content analysis is a set of techniques which makes it possible to collect and analyze information from the contents of written documents according to scientific norms. Also Stone (1966, 5) considers as content analysis any research technique that systematically and objectively identifies specified characters within text in order to make inferences from that text.

Content analysis can be used for two purposes when studying documents because they can be assumed to contain information of two kinds, direct and indirect. Firstly, on account of the direct information documents contain, content analysis can aim at describing their contents as they are, in other words, viewing documents as phenomena. However, on the account of the indirect, implicit information they contain, content analysis can aim at making inferences from some other phenomena: In such cases, the documents are not actually in the focus of content analysis, but rather the other phenomena of which information can still be collected from those documents (Pietilä 1976, 22-24, 28-29). This kind of analysis is in question in this research: By studying UNESCO schools’ curriculums, the aim is not to describe the contents of the curriculums as such, but to make inferences from the schools’ ability to prepare their students for the future.

In addition, Pietilä (1976, 25) differentiates various comparative approaches which can be used when examining the contents of documents. One comparison, which is used in this research, is a comparison of a content to norms or ideals: This research compares the contents of UNESCO schools’ curriculums to a certain ideal, an ideal model of future-orientated curriculum, and studies the extent to which they fulfil the requirements of that ideal.
Furthermore, the contents of documents can be described either statistically, verbally or using them both. If the research material is extensive and if description aims at any level of generalization or comparability, a statistical description is usually a more effective method than a mere verbal one. (Pietilä 1976, 31–35) In this research, I will mainly use statistical descriptions because I want to be able to compare the contents of the curriculums.

However, in spite of using quantitative statistics, making inferences from a text is fundamentally qualitative interpretation. In content analysis, though having made certain criteria beforehand, the researcher is eventually the one who interprets the meaning of words and sentences.

7.4 Procedures

In this chapter, I will discuss the procedures used in the research: First, I will deal with the process of category formulation; second, the process of unitizing; and third, describe the general procedures of the research which require further clarification.

7.4.1 Category Formulation

Statistic content analysis requires formulation of categories which is considered to be the most important stage of content analysis research (Berelson 1952, 147; Pietilä 1976, 96). This is because categories offer the grounds on which the whole classification of material can be made. This stage became one of the most problematic but also interesting stages of my study.

In research where the contents of documents are explained using a certain theory, that theory can define rather accurately the categories used (Pietilä 1976, 97). This was the case in this research: The model of future-orientated curriculum defined the main categories for the analysis. The main categories were decided to be the four elements of curriculum: “Nature”, “Culture”, “Myself” and “Others”.

The reason why they were defined as the main categories instead of the four dimensions of learning was that, in addition to study the balance of both the curricular areas and the dimensions of learning in the curriculums separately, I also wanted to study learning within those areas (as can be concluded from the third subproblem). In other words, I intended to investigate whether the four dimensions of learning were equally emphasized when learning about “Nature”, “Culture”, “Myself” and “Others”.

Attempts were made to map the four dimensions of learning to each main category (“Nature”, “Culture”, “Myself”, and “Others”). However, as Pietilä (1976, 97) has noted: Ready-made theories seldom describe research materials as such. Categories have to often be modified, some categories combined and/or new ones created, to make them rational and practical from the point of view of the material (Pietilä 1976, 97). In other words, the combination of the two theories in its simplest was not evident in the curriculums, and thus the definition of subcategories became somewhat different. After careful consideration and redefinition of the
subcategories with three school-based curriculums, I arrived at the system of categories presented in **FIGURE 4**:

![FIGURE 4. The system of categories of the research.](image)

The system of categories is described in more detail in APPENDICES 1–4. The entry terms for each category and examples of them drawn from the school-based curriculums are also given.

As it can be seen, all four dimensions of learning could not be included as subcategories in each main category. Firstly, the dimension “Learning to know” was omitted from the area “Myself” since the curriculums did not support its creation there: They hardly contained any statements which could have been classified into this category. Knowledge about “myself” in terms of biology or psychology, for instance, did not seem to be a concern of lower-stage education though this category would probably have been essential if the object of study had been upper-stage or high school curriculums. On the other hand, expressions such as “knowing myself”, referring to knowing about such things as one’s strengths and weaknesses, I considered to belong to the development of self-awareness and thus describe the dimension “Learning to be” better. Secondly, the dimension “Learning to live together” was included only in one curricular area, in the area “Others”. This was the most crucial decision of the process of category formulation since it changed the intended nature of the system of categories in a profound way. However, I consid-
ered the decision necessary since, also in this case, the curriculums only extremely rarely implied this dimension when referring to learning in the areas of “Nature”, “Culture” or “Myself”. We need to remember that, by the dimension “Learning to live together”, UNESCO’s model referred particularly to living with other people, not, for example, with nature. Statements referring to living in harmony with nature were included in category 1.2. Consequently, I excluded the dimension “Learning to know” in the curricular area “Myself” and the dimension “Learning to live together” in other curricular areas than “Others” in order to not construct non-representative categories which the documents under study did not support because, according to Pietilä (1976), these kinds of categories should always be avoided in content analysis.

Consequently, the system of subcategories turned out to follow fairly consistently the old distinction of the three basic elements of learning: knowledge, skills and attitudes. In fact, in my view, only the category “Myself” differs more from this distinction because of the exclusion of the “knowing category”. This is because also the category “Learning to live together” in the curricular area “Others” refers to “doing” something, that is “living”, calling for an abundance of practical skills. Yet I wanted to name it “Learning to live together” because, by so doing, I was not only able to stick to the conceptual framework of the model of future-orientated curriculum, but I also thought that I should retain the emphasis on UNESCO’s model in my study: It stressed the undivided value of being able to live in peace with other people in a co-operative and caring spirit. This message would have been lost if “living together” had been replaced by the extremely neutral word “doing”.

However, I did not feel very comfortable about viewing learning in the four curricular areas in this often used three-fold way, until I found two statements which made me realize how fundamental it was. One citation was in Framework Curriculum for the Comprehensive School 1994 conveying the view of the National Board of Education: “The importance of community ... gains in significance in a world undergoing great changes. Knowledge, skills and attitudes that have to do with promoting physical, intellectual, and social well-being are important tools for these changes. They are valuable in themselves and are, at the same time, a part of the general education of a balanced individual who is in charge of his own life” (Framework Curriculum for the Comprehensive School 1994, 17). The other citation was in the same UNESCO’s report which introduced the four dimension of learning: “In this view of the future... Each individual must be equipped to seize learning opportunities throughout life, both to broaden her of his knowledge, skills and attitudes, and adapt to a changing, complex and interdependent world.” (Delors et al. 1996, 85) Consequently, I understood that the the three-fold distinction of learning is so profound and powerful that it has not, at least not yet, been challenged by any other. However, certain aspects within the three elements may be emphasized—like skills in living with others within the skill element—but they cannot but “temporarily” be ranked among them.

Furthermore, categories for “Other” had to be included in the system of categories. This was because, in the curriculums, there were sentences which clearly expressed an intention to educate pupils in some of the four curricular areas but did not specify learning within those areas in any way. For instance, in one curriculum it said: “Environmental issues are of central importance in our school.” Such references I placed in “Other” subcategories. According to Krippendorf (1989, 75), these kinds of categories have to sometimes be formed to create an exhaustive
system of categories but the number of references to be classified into them should not be extensive.

7.4.2 Unitizing

Statistic content analysis calls for the quantification of content elements. As a basis for counting relevant aspects of the content, certain standard subdivisions need to be made. Such subdivisions are called the units of content analysis and the process of defining them, unitizing. (Berelson 1952, 133)

**Sampling unit**

The first unit to be defined in content analysis is a sampling unit. Sampling units are simply units which make up a sample. They are drawn from the population and are regarded to be independent of each other (Krippendorf 1989, 58). In this research, one school-based curriculum of a UNESCO school corresponds to one sampling unit. Thus, there are ten sampling units in this research.

**Recording unit**

Recording units are separately analyzable parts of a content. They carry the actual information and are placed in a category, if they are thought to belong to that category by their contents (Berelson 1952, 135; Krippendorf 1989, 58; Pietilä 1976, 106). A recording unit may be a word, a sentence or some other larger unit of a text. In this research, I defined two recording units: a sentence and an “item”. An “item” is a “natural” unit of research material of which cannot be broken into smaller pieces (Berelson 1952, 138-142; Pietilä 1976, 111). In this case, an “item” was defined to be a list, table or figure which did not consist of complete sentences but carries verbal information. The curriculums contained such an abundance of them that I considered their inclusion in the research necessary: Ignoring them would not have produced reliable results since a lot of valuable information would have been lost. According to Pietilä and Berelson (1976, 115–116; 1952, 143, 146), it is possible to use more than one recording unit when the research material requires it.

At times, a recording unit could belong to several categories. I then put it to all those categories. This is recommended by Pietilä (1973, 113) too, so that no information is lost.

**Context unit**

There is also the concept of context unit in content analysis. It means a larger unit of content which is taken into account when examining a recording unit (Berelsen 1952, 135; Krippendorf 1989, 59-60; Pietilä 1976, 107). According to Pietilä (1976, 107), an accurate definition of a context unit is rarely necessary. However, in this research, I considered it necessary to define the context unit to be a paragraph when the recording unit was a sentence. To be able to explain why, I will give an example taken from one curriculum: “The final purpose of environmental education is to protect biodiversity and further sustainable development. To reach this aim, the creation of positive attitudes and maintaining them is essentially im-
portant.” In these kinds of cases, “important” words which express a reference of belonging to a certain category (Here: “environmental”, “biodiversity” and “sustainable development” refer to the category, “Nature”) are not repeated in every sentence of the paragraph. However, from the context it is clear that the subject under discussion has not changed, and the latter sentence too refers to the same category as the former. The repetition of words have only been avoided to make the text more fluent. Consequently, in cases like these, I took into account the context, i.e. other sentences in a paragraph, and placed also sentences which did not directly refer to a certain category, in it.

*Unit of enumeration*

When a recording unit is placed in a category it needs to be given a numerical value. This value is called a unit of enumeration and it is usually one. (Pietilä 1976, 107) The unit of enumeration was also in this research defined to be one. Consequently, I gave the value one to each recording unit, that is a sentence or an “item”, containing relevant information, and placed it in the observation matrix.

7.4.3 Carrying out the Research

I began the research by reading through all the curriculums to get a general idea of their contents. Even at this stage, I modified the categories since I noticed they could not be constructed in the way I had imagined. After that, I reread and systematically analyzed three of the school-based curriculums before the categories got their final forms and the definition of units was completed.

The analysis was carried out in the following way: At first, I numbered all the sentences and “items” in the chosen curriculum. Then, I started to read the curriculum sentence/ “item” at the time. For each sentence/ “item”, I decided whether it contained a reference which belonged to any of the main categories of the system. To help me in this decision, I had created a question which I asked myself: “Does this sentence/ ‘item’ express a will or an intention to teach or educate a child in any of the areas ‘Nature’, ‘Culture’, ‘Myself’ or ‘Others’?” If I thought it did not, I moved to the next sentence/ “item”. However, if I thought it did I continued by asking: “To what dimension of learning does it refer to?” If I considered it to refer, for instance, to the dimension “Learning to do” in the main category “Culture” I placed it in its place in the observation matrix. Nevertheless, if the type of learning could not be defined but the sentence/ “item” clearly expressed an intention to educate a child in some of the four areas of curriculum, I placed it in the subcategory “Other”. After that, I moved to the next sentence/ “item” and analyzed it in the same way.

After I had analyzed all the curriculums once, I went through the same process another time to verify the observations. In the second analysis, apart from a few cases, I categorized the materials in the same way.

Titles and tables of contents were omitted from the analysis: They are usually used to compress information in the actual text, and thus the information they may contain should be contained in the text. In addition, some curriculums contained poems, words for songs or pictures which were also excluded from the analysis.

In APPENDICES 5–6, an observation matrix of one school-based curriculum is presented as an example to give a better picture of the actual research process.
8 Results And Conclusions

8.1 A Few General Words About the School-based Curriculums and Their Analysis

Before the examination of the actual research results, some general thoughts and observations about the school-based curriculums and their analysis are presented.

Naturally, the ten school-based curriculums were fairly different from each other as the schools themselves are different too. In my view, half of them were wide and detailed reports which, in addition to subjects, described the schools’ action overall, their “ideologies”, and also certain educational issues comprehensively. The number of pages they contained varied from ca 60 to 130. Another half of the curriculums were shorter and more general describing chiefly the basic functions of the schools and learning in different subject areas. The shortest curriculum was only eight pages long (however the school was very small with only two teachers), but these shorter curriculums were otherwise between ca 20 and 35 pages long. In all, 3524 references from the ten school-based curriculums were collected and classified in the content analysis. The number of them in the individual curriculums varied from 61 to 725.

Stated already earlier, the definition of subcategories was rather complicated in this research: All the subcategories which I had expected to find in the materials were not present, and thus some of them had to be excluded. However, not only that, but the definition of the entry terms of those which were present was also not a straightforward process: In the curriculums, manifestations of the phenomena the categories represented were so diverse that it demanded some effort to find clear entry terms for them which described the categories widely enough, but still accurately enough to avoid misinterpretation. To be able to take into account as many manifestations as possible, I had chosen the three largest curriculums to be the ones for which I carried out the definition of categories. Category definition was thus a very slow and at times difficult process, but when I began the actual analysis of the curriculums I noticed it had been worthwhile: Though the analysis was also slow in the beginning, the categories had took their forms as they now emerged rather easily from the curriculums. Gradually, the analysis also started to speed up and, in the end, the coding of the curriculums became a routine which progressed without much effort.

Of the main categories, “Nature” and “Myself” could be seen most clearly from the school-based curriculums and thus expressions referring to them were classified most easily. Yet, I was sometimes confused with the category “Culture” since it, because of its wide scope, collected references implying to so many diverse matters. In terms of the category “Others”, the definition of subcategory, to which of some expressions referred to, caused a few difficulties. However, the subcategories generally emerged fairly well from the curriculums too since “knowing”, “doing”, and “being” can after all be rather easily differentiated from each other.

Additionally, most of the expressions referring to the area of curriculum “Myself” (excluding the ones referring to artistic skills) and “Others” were in the beginning of the curriculums in sections where the general educational ideas and
8.2 The Model of Future-orientated Curriculum in UNESCO Schools’ School-based Curriculums

8.2.1 Results of Individual School-based Curriculums

The results of individual schools are examined by means of two tables. In the first table (TABLE 1), the percentage proportions of the main categories are presented, in other words, the extents to which the four areas of curriculum are balanced in the ten school-based curriculums are shown. The second table (TABLE 2), on the other hand, presents the percentage proportions of the subcategories, in other words, shows the percentage distribution of all the eleven dimensions of learning in the curriculums. After each table, the major differences between the results of the individual curriculums and a few other noteworthy results are examined.

The absolute observational values of the individual curriculums, of which the percentages have been calculated, are presented in APPENDIX 7.

The most remarkable difference between these results of the individual curriculums can be found in the curricular area “Myself” in terms of school 8: The proportion of the area “Myself” is clearly the lowest (16%) in this curriculum compared to the others. However, in the area “Culture”, the differences between the curriculums are not so notable. Nevertheless, the highest percentage proportion of the table is found within this area in terms of school 7 (40%). In the area “Nature”, the range of percentage proportions can be seen to be fairly extensive (12-28%) though no result particularly stand out. On the other hand, in the area “Others”, the differences between the results of the curriculums are smallest. Yet the lowest percentage proportion of the table is found within this area in terms of school 9 (11%). Half of the schools, schools 1, 3, 4, 5 and 9, follow a very similar pattern emphasizing “Culture” most, second “Myself”, third “Nature”, and “Others” the least.
**Table 1.** Percentage (%) proportions of the four areas of curriculum for the individual UNESCO schools.

<table>
<thead>
<tr>
<th>School</th>
<th>Nature</th>
<th>Culture</th>
<th>Myself</th>
<th>Others</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>19</td>
<td>34</td>
<td>31</td>
<td>16</td>
</tr>
<tr>
<td>2</td>
<td>17</td>
<td>32</td>
<td>36</td>
<td>16</td>
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<td>3</td>
<td>25</td>
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<td>39</td>
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<tr>
<td>10</td>
<td>13</td>
<td>37</td>
<td>35</td>
<td>15</td>
</tr>
</tbody>
</table>

**Table 2.** Percentage (%) proportions of the dimensions of learning for the individual UNESCO schools.

<table>
<thead>
<tr>
<th>School</th>
<th>Nature 1.1 know</th>
<th>Culture 2.1 know</th>
<th>Myself 3.1 do</th>
<th>Others 4.1 know</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>9</td>
<td>20</td>
<td>18</td>
<td>6</td>
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<tr>
<td>2</td>
<td>8</td>
<td>19</td>
<td>25</td>
<td>3</td>
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<td>12</td>
<td>14</td>
<td>17</td>
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<td>11</td>
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<td>7</td>
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As it can be seen in Table 2, the results of the individual curriculums are fairly consistent with each other. In the curricular areas “Nature” and “Culture”, they follow almost without exception a pattern which stresses the dimension of learning.
“Learning to know” the most, secondly “Learning to do”, and lastly “Learning to be”. Similarly, in terms of the area “Myself”, the curriculums emphasize nearly invariably the dimension “Learning to do” over the dimension “Learning to be”. Nevertheless, references classified into the area “Others” distribute without any clear consistency into its three subcategories, but yet no notable differences between their percentage proportions emerge.

Actual differences between the results of the ten curriculums rise mainly because of one curriculum, that of school 8. The results obtained for this curriculum break the general consistency of the results in a variety of ways: Its percentages are considerably low in categories 2.2 (3%) and 3.1 (8%), and high in category 1.1 (20%). Furthermore, both the highest and the lowest percentages of the whole table are found within the results of this school 8, and both within the curricular area “Culture”: the highest being the subcategory 2.1, “Learning to know” (29%), and the lowest 2.3, “Learning to be” (0%), the only one which did not have a single reference. However, one result of another school’s curriculum still stands out: In terms of school 4, the percentages of the subcategory 2.3, “Learning to be” in the area “Culture”, is relatively high (9%) compared to the ones in other curriculums. Though this difference is not very big, it still is worth noticing since the percentages for this dimension of learning are otherwise very low (except in the area “Myself”).

In my view, the results of individual school-based curriculums are thus amazingly consistent with each other. I consider it interesting because, on grounds of the external differences of the curriculums, I expected more marked differences also in their contents.

The subcategories “Other”, however, were excluded from the table since they contain no information about the dimensions of learning in the school-based curriculums of interest to this study. They have already served their purpose by contributing to the proportions of the four areas of curriculum.

8.2.2 Combined Results of All School-based Curriculums

The combined results of school-based curriculums are presented in graphs and described briefly in connection with analyzing the three subproblems of the study.

1. Subproblem:

To what extent are the four areas of curriculum—“Nature”, “Culture”, “Myself” and “Others”—balanced in Finnish lower-stage UNESCO schools’ curriculums?
Figure 5. Proportions of the four areas of curriculum for the UNESCO schools.

As it can be seen in Figure 5, the areas “Culture” (34%) and “Myself” (32%) are almost equal in strength in the Finnish lower-stage UNESCO schools’ curriculums. In addition, the proportions of the areas “Nature” (19%) and “Others” (15%) are fairly close to each other. However, clearly less emphasis is paid to the latter areas than the formers in the school-based curriculums.

2. Subproblem:

To what extent are the four dimensions of learning—“Learning to know”, “Learning to do”, “Learning to live together” and “Learning to be”—balanced in the Finnish lower-stage UNESCO schools’ curriculums?
“Learning to do” (39%) is the most stressed dimension of learning in the UNESCO schools’ school-based curriculums, yet the dimension “Learning to know” (32%) does not come far behind it. The dimension “Learning to be” (22%), on the other hand, takes a clearly lower proportion of the references in the curriculums but is still considerably higher than the dimension “Learning to live together” (7%), which has a very marginal role in the curriculums.

3. Subproblem:
Are the four dimensions of learning equally emphasized in the four curricular areas in the UNESCO schools’ curriculums?
FIGURES 7–10. Proportions of the dimensions of learning in each area of curriculum for the UNESCO schools.

In the area “Nature”, “Learning to know” (48%) is clearly the most emphasized dimension of learning compared to the dimensions “Learning to do” (36%) and “Learning to be” (16%).

Also in the area “Culture”, the order of the dimensions follows the same pattern. However, the dimension “Learning to know” (56%) has an even more central position compared to the dimensions “Learning to do” (35%) and “Learning to be” (9%), in particular.

In the area “Myself”, the dimension “Learning to do” (63%) is laid clearly more emphasis than the dimension “Learning to be” (37%).
Nevertheless, in the area “Others”, the three dimensions of learning are more equal in strength, yet “Learning to live together” (44%) being the most, “Learning to know” (32%) the second most, and “Learning to be” (24%) the third most stressed dimension of learning.

The subcategories “Other” have been excluded also from these figures because of the same reason as with TABLE 2: They contain no information about the dimensions of learning of interest to this study.

Having answered the three subproblems of the research, one more figure is given to complement the presentation of the results before their closer examination in the next chapter. In FIGURE 11, all the subcategories studied in the content analysis are set side by side to be able to compare their proportions not only within, but also between the four areas of curriculum.

![Figure 11. Percentage (%) proportions of all subcategories for the UNESCO schools.](image)

Of all the subcategories, two of them clearly stand out in the lower-stage UNESCO school’s curriculums: “Learning to do” (20%) in the area “Myself” and “Learning to know” (18%) in the area “Culture”. Also the two next most emphasized dimensions of learning are found within the same areas: “Learning to be” (12%) in the area “Myself” and “Learning to do” (11%) in the area “Culture”. On the other hand, when studying the dimensions of learning which are emphasized the least in the curriculums, three of them rise: the dimensions “Learning to be” in the areas “Culture” (3%), “Nature” (3%) and “Others” (4%). Nevertheless, of all the subcategories, the not representative categories “Other” have the lowest proportions within every area of curriculum which can be considered to be good in terms of the success of the content analysis.
8.2.3 Conclusions

In this chapter, the results presented are discussed and interpreted more closely. They are dealt with in the same order they were presented thus following the sequence of the three subproblems.

The results of the four areas of curriculum showed that the UNESCO schools’ curriculums concentrate clearly more on learning about the areas of “Culture” (34%) and “Myself” (32%) leaving the areas of “Nature” (19%) and “Others” (15%) in their shadow. At first, the result surprised me in the sense that the area “Myself”, not “Nature”, was in the focus of the curriculums with the area “Culture”. The position of the area “Culture” had been considered self-evident because cultural transfer has been the primary purpose of the school establishment throughout its history. However, I would have expected, not least because Dalin & Rust (1994, 162) did too, its “partner” to be the area “Nature” instead of “Myself”. Nevertheless, the result seems no longer so surprising after reviewing the set of subjects schools teach: Cultural studies, and arts and practical subjects being specifically concerned with the development of “myself”, cover the majority of the subject matter and, additionally, most of the intercurricular issues relate to these same areas too. As a result, the share of natural studies, let alone subjects relating to the area “Others”, is in fact rather small in the system. Consequently, the strong showing of the curricular areas “Culture” and “Myself” can be understood from this viewpoint. However, it does not only explain this result, but also tells us about the position of subjects in the curriculums generally: Though some of the school-based curriculums were even very broad reports on the school’s action overall, they still reflected strongly the Lehrplan tradition viewing curriculums as documents which are primarily arranged around different subjects whose objectives and contents are stated.

The results of the four dimensions of learning in the curriculums are somewhat problematic in terms of the dimension “Learning to live together”. What is the reason for its such a marginal role (7%)? It cannot really be explained by its inclusion as a subcategory in only one area of curriculum, because all the references in the school-based curriculums implying it were still collected and classified (into category 4.2), and thus the results can be considered to show its reliable position in them. However, it can rather be understood by the very nature of this dimension which was already discussed in the chapter 7.4.1: It does not refer to any fundamental element of learning as the three other dimensions of learning (being knowledge, skills and attitudes), but rather it is one aspect of the dimension “Learning to do”. Certainly, this aspect can, and undoubtedly should, be emphasized (e.g. by separating it as its own dimension of learning as it was done in the UNESCO’s model and thus in this analysis too) but its possibilities to rise to as high a percentage as the other three dimensions, are in my view rather limited in terms of contemporary school education.

Another thing which is surprising and interesting in the results of the four dimensions of learning, is that the curriculums’ stressed more the dimension “Learning to do” (39%) than that of “Learning to know” (33%). Moreover, the share of the former could have been even higher if the dimension “Learning to live together” had been viewed as only one of its aspects, as discussed above, and had thus been included in it. In my opinion, the result seemed surprising for two reasons: First, because knowledge has always persistently characterized school learning, and second, because “Learning to do” was actually a dominant dimension of
learning in only one of the four areas of curriculum. What is then the reason for it have such a high share? The answer for this, like that for the low share of the dimension “Learning to be” (22%), can be reached by taking a closer look at how the different dimensions of learning were distributed in each of the four curricular areas.

Consequently, in the next paragraphs, the results of learning in each of the four curricular areas in the curriculums are reviewed and discussed.

According to their school-based curriculums, UNESCO schools preferred learning knowledge (48%) about Nature clearly more than learning how to apply this knowledge and concrete action for (36%), and attitudes and emotions towards “Nature” (16%). The pattern was similar in terms of learning about Culture but in this case, knowledge (56%) possessed an even more powerful position compared to skills and participation in cultural and social affairs (35%), as well as to the development of pupil’s cultural identity, and emotions and attitudes towards cultural heritage (9%). Consequently, what can be concluded from these findings, and easily seen from Figures 7–8, is that knowledge has “stolen” attention specifically from emotions and attitudes in these areas of curriculum for “Nature” and “Culture”: This is because the share of “doing” in them (as it occupied approximately a third of “all learning”) reached its “theoretical ideal” for the three dimensions to be in balance. In the area “Culture”, in particular, the share of the affective side of learning was remarkably low. Consequently, the results of the curricular areas “Nature” and “Culture” do not explain the highest proportion of the dimension “Learning to do” in the curriculums, which was commented on in the earlier paragraph, since they follow the traditional and hence expected pattern of school learning emphasizing knowledge most, with doing in second place, and attitudes in last place.

However, this “strange” dominance of “Learning to do” in the set of all dimensions of learning, can be explained by its very strong stand in the area Myself. In it, “doing”, referring to different personal skills (such as thinking, studying, social, artistic and practical skills) was highly emphasized (63%) leaving “being”, the overall mental development of child (development of e.g. self-esteem, emotions, values, view of life etc.), a notably less important role (37%). If we thus consider that this area “Myself” had only those two subcategories (whereas the other areas had three) in which to classify the great number of references it attributed to in the curriculums, we can understand that this single subcategory 3.1 raised “Learning to do” to eventually dominate all the other learning dimensions of the analysis. Of course, its relatively strong and steady stand also in the other areas of curriculum has contributed to its final position. Nevertheless, the reason for the curriculums focussing clearly on learning skills instead of developing mental capacities within this area “Myself”, is again most presumably due to the status of subjects in the school world: There is an abundance of subjects, such as arts, music, crafts and physical education, which contribute specifically to this practical side of learning about “Myself”.

Finally, the UNESCO schools’ curriculums showed a fairly good balance in terms of learning in the area Others: Learning skills and competences needed in interaction with other people (45%) were stressed the most, and learning knowledge (32%) more than developing attitudes, emotions and willingness to co-operate with other people (24%), but the differences between their shares were not really notable. Because of these results, one cannot help wondering to what extent their balanced view of learning is due to the fact that there really are no school subjects
which directly refer to the curricular area in question, “Others”. Could it be that, since most of the school subjects have been created using scientific disciplines as model, it is not only difficult for them but also unnatural for them to attempt to withdraw from the knowledge-centeredness which so strongly characterizes their very essence? Could learning from totally different basis, for instance from the basis of themes or phenomena of the reality, thus not only succeed in approaching those phenomena holistically, but also help making the learning itself more holistic and balanced in a natural way? In terms of curriculums, these thoughts deal with Curriculum instead of Lehrplan approaches to planning learning, and are thus nothing new in educational discourse but, in my view, they are worth careful consideration today. They relate to very complex and difficult questions which eventually challenge the whole scientific framework as the predominant basis for knowing about the world and reality. In fact, they refer directly to what Beare & Slaughter (1993) considered necessary for the humanity to begin plotting a healthier path for the future.

Finally, I would like to summarize the main results obtained in the content analysis, in which the ten lower-stage UNESCO schools’ school-based curriculums were analyzed on grounds of the model of future-orientated curriculum: The curriculums laid the main stress on two areas of curriculum, “Culture” and “Myself”, and thus concentrated on the areas “Nature” and “Others”, in particular, clearly less. Of the dimensions of learning, “Learning to know” was placed far more emphasis in the areas “Nature” and “Culture” than the other dimensions in those areas. The dimension of learning “Learning to do”, though generally being well balanced, was overstressed in the area “Myself”. The dimension “Learning to be” was undervalued in all the areas of curriculum, but particularly within the area “Culture”. However, in the curricular area “Others”, all the dimensions of learning were fairly balanced, including the dimension “Learning to live together” which nevertheless had an extremely marginal role compared to the three other dimensions of learning in the school-based curriculums.

8.3 Do Lower-stage UNESCO Schools in Finland Prepare Their Students for the Future?

Before I attempt to answer this difficult question which was the main problem of the research, I need to pay attention to the nature of the research. In this study, the curriculums of Finnish lower-stage UNESCO schools were compared to a model of future-orientated curriculum which was developed based on two other models concerned with the question of what kind of education is needed to prepare individuals for the future. Naturally, the model was theoretical and could have been formulated in various other ways too, and as curriculums are written documents they cannot give information about actual reality. Therefore, direct reliable conclusions about whether the UNESCO schools prepare their students for the future or not cannot be drawn from this research. In fact, the question is of such magnitude that it cannot simply be answered by yes-no answers in any case. However, the research results of the curriculums can be used as bases for discussions and suggestions for improving them can be given. Consequently, this research has offered one way to
look deeper at curriculums, and via them approach the important question of whether schools prepare their students for the future.

Consequently, my duty is to discuss the question on the ground of the results obtained in the content analysis. I will approach the question from two directions. Because the results were varied, in some respects they can be considered to support the answer “yes” to the question, and in some respects the answer “no”. I will thus present both kinds of results, in other words, on the basis of the results, argue both for and against the statement “UNESCO schools prepare their pupils for the future”. I believe this to be the most rational and constructive way to discuss this ambiguous issue. It will also help me to give justified suggestions for revising the curriculums to better match the challenges of the future.

The research results are affirmative in at least three respects for the question under discussion:

First, the dimensions of learning “Learning to do” and “Learning to live together”, which refer to skills and practical competences, were well balanced in all but one area of curriculum. In the areas “Nature”, “Culture” and “Others”, they received approximately a third of all the references classified in those areas which was the “recommendable” amount to enable learning within them to be balanced. As UNESCO’s model argued, all the dimensions of learning should have an equal role if education is to prepare individuals for the twenty-first century (Delors et al. 1996, 86).

Second, the curriculums reflected an exemplary balance between the three dimensions of learning within the curricular area “Others”. I consider it particularly good that the dimension “Learning to live together”, though having a marginal role in the set of all dimensions of learning, was slightly more stressed than the other types of learning within this area. After all, I believe being able to live “in practice” with other people, meaning being able to interact with them peacefully and cooperatively, help them, and create interpersonal relationships, is the ultimate purpose of the whole area “Others”. According to Delors et al. (1996, 91), it is one of the major challenges education faces today.

Third, among all the subcategories of the analysis, the relatively high percentage of the dimension of learning “Learning to be” in the area “Myself”, can also be regarded to speak for the UNESCO schools’ ability to prepare for the future: Of the eleven dimensions of learning, it was the third most stressed. The overall mental development of child in all its forms, being the focus of this dimension, can be considered to be one of the most central, if not the most central, purpose of education. Mental well-being, after all, forms the foundation for all other areas of human life. Furthermore, Kivistö (1994, 10–12) regarded the mental growth of a human being, of which the starting point is a good self-knowledge, as the key factor for change worldwide, and even a necessity for human life to continue in the future. In this light, the significance of this category in school education cannot be overemphasized.

However, despite these strengths in the school-based curriculums, at least four research results can be presented to argue against the UNESCO schools’ ability to prepare their students for the future.

Firstly, the schools concentrated clearly more on the curricular areas “Culture” and “Myself” than on “Nature” and “Others”, though all the four should be paid equal attention to as Dalin & Rust (1996, 162) stated. To give further grounds for the importance of the area “Others”, also Delors et al. (1996, 86) argued that for education to be comprehensive it has to focus equally on the individual as well as
her or his relationships with other individuals. Additionally, in terms of the area “Nature”, to solve the crisis man has caused to nature and to learn to develop his culture within the limits of the natural world, education to prepare for the future must have a firm hold on issues relating to the area “Nature” (See e.g. Fien 1998).

Secondly, though I already praised the fairly good position of the dimension of learning “Learning to be” in the area “Myself” in the set of all subcategories, in other three curricular areas that dimension had far too marginal a role, and its position also in the area “Myself” could be more recognized. Referring to the earlier discussion of its significance, this dimension is specifically important in future-oriented education.

Thirdly, knowledge was given far too much emphasis in the school-based curriculums, particularly when learning about “Nature” and “Culture”. The status of learning knowledge should be put in a new framework also in schools in these times of overwhelming information flow. In addition, Beare & Slaughter (1993) were of the opinion that the status of western scientific knowledge should in general be strongly challenged in order to unify our world views again, and begin to understand and treat the world in its wholeness.

Fourthly, the school-based curriculums seem to have ignored the dimension of learning “Learning to live together” almost entirely, if it is considered to deserve an equal position with the other three learning dimensions, as UNESCO’s model suggested (Delors et al. 1996, 86). However, I have discussed the problems associated with it before and thus will not go deeper into it here. Nevertheless, its role can hardly be overstressed in learning which aims at the future.

After these arguments, I would like to present one more observation which is not actually based on the research results, as the contents of subcategories were not further analyzed, but I consider it worth mentioning. As it has been mentioned several times, the dimensions “Learning to do” and “Learning to live together” were overall fairly well balanced in the curricular areas. However, in the curricular areas “Nature”, “Culture” and “Others”, these subcategories referred not only to the application of knowledge, but also to concrete action for the nature and other people, and active participation in common social and cultural affairs. I noticed the share of the latter, the social action component, to be very marginal in the curriculums since the references classified into these categories almost exclusively implied only to the former. Nevertheless, various educational writers (e.g. Dalin & Rust 1996, 139; Delors et al. 1996; Hicks & Holden 1995, 10) stress its importance as a necessary part of school learning which is orientated to the future.

Consequently, in this chapter, I have discussed the main problem of the research “Do lower-stage UNESCO schools in Finland prepare their students for the future?” On the basis of the results obtained in the content analysis, arguments can be presented to support both the answers “yes” and “no” to the question. Consequently, the UNESCO schools can be considered to prepare their students for the future in a nonuniform manner: In some respects, as presented in the beginning of the chapter, their school-based curriculums seemed fairly balanced and thus showed their abilities to meet the needs of the future. However, in others, presented later in the chapter, their abilities to do it can be questioned. The results of the individual schools were nevertheless notably consistent with each other. In addition, it is to be remembered that the research results are only concerned with the contents of the ten lower-stage UNESCO schools’ curriculums analyzed, and can not be generalized to any larger population.
Having answered the question within the strength of this research, I will now give a few suggestions of how the UNESCO schools could revise their instructional plans to be more in line with the ideology the model of the future-orientated curriculum represents: The role of natural studies and environmental issues in general should be raised. The schools would also need to concentrate more on “discovering others”, thus teaching in various ways about other people both in their immediate surroundings and farther away. The distribution of knowledge should be strongly reduced, and learning directed more to emotions, attitudes, as well as willingness and a readiness to take action in common matters. The schools could also focus a little less on teaching of specific personal skills and instead invest more in the overall mental growth of children and the development of their personalities. In addition, more stress should be laid on learning to live and work with other people in the spirit of peace and co-operation.
9 Reliability And Validity

Validity and reliability designates the quality of research results. In this chapter, I will discuss them, and the procedures I took to make this research valid and reliable.

Reliability refers to the reliability of a research method. It means that the research method chosen, in other words, the measuring instrument used and the procedures taken, produces results that are accurate and free from errors. Reliable results are also stable meaning that they are unchanging over time and thus replicable by other researchers. (Krippendorff 1980, 129–131; Pietilä 1976, 233–239, 260–261; Stone et al. 1966, 211, 215) In content analysis, the measuring instrument is the system of categories since it defines the norms for the classification of the material, and thus a careful construction of categories is vital (Pietilä 1976, 238, 260). To obtain reliable results in this research, I tried to make the categories and their definitions as logical and consistent as possible. I defined the units, also a context unit and two different recording units, carefully, and described them as well as the procedures I had taken accurately. Furthermore, I analyzed the materials twice at different points of time in order to ensure the intra-individual reliability of research (Pietilä 1976, 234; Krippendorf 1989, 130–131). However, parallel coder(s), referring to inter-individual reliability (Pietilä 1976, 234; Krippendorf 1989, 131), who could have also analyzed the research materials were not used because of research economical reasons: To profit from the use of different coders, they have to be educated by properly initiating them to the research material and content categories formulated (Pietilä 1976, 246). Such a process was not possible for this study.

Whereas reliability assures that the results represent something real, validity assures that they represent what they claim to represent. In other words, validity indicates if a measuring instrument is capable of measuring what it is designed to measure, thus in this study, the extent to which the school-based curriculums correspond to the model of future-oriented curriculum developed (Krippendorff 1980, 155; Pietilä 1976, 248, 261; Stone et al. 1966, 217). In the context of content analysis, the question is whether the references classified to certain categories really are indicators of the phenomena the categories are meant to represent (Krippendorff 1980, 156; Pietilä 1976, 248, 261). Consequently, the careful conceptual definition of categories becomes critical: In a valid content analysis, classification of material is free from conceptual uncertainties (Krippendorff 1980, 155-156; Pietilä 1976, 248–249, Stone et al. 1966, 218). To receive valid results in this study, I looked up the basis for categories from up-to-date educational theories but, as suggested by Pietilä (1976, 97), defined the categories more accurately together with the materials, that is the school-based curriculums. Moreover, I chose the three curriculums with which I carried out the definition to be the largest ones to be able to formulate the categories as profoundly and extensively as possible. I defined and presented the entry terms of the categories carefully and gave example sentence(s) of each category (Appendices 1–3) to ensure the consistency of and clear criteria for the analysis. Pietilä (1976) considers also this essential since a detailed description of the norms on how data was collected in research material makes the replication of the research possible. Furthermore, when analyzing the materials I pondered the meaning of each record-
ing unit carefully, before assigning it into various categories.

However, even though categories had been constructed carefully and described in detail, the question of reliability and validity in content analysis, which is eventually qualitative, is problematic. Despite statistic analysis, it is after all fairly value-bound to define concepts and classify references in a text to different categories. A researcher rather interprets than measures the content of his or her materials. Nevertheless, qualitative interpretation is not merely a weakness but to a large extent a strength, of these kinds of studies; It may well be able to dive deeper into the meaning of contents than, for instance, a mechanic computer program could ever.
10 Discussion

In this research, I have studied how the Finnish lower-stage UNESCO schools prepare their students for the future at the level of their school-based curriculums. The curriculums have been analyzed by comparing them to a model developed to represent an ideal curriculum framework for the future, in which learning within different content areas is balanced and all its dimensions are taken equally into account. On the basis of the results obtained, the schools’ abilities to prepare for the future have been discussed.

The research method used influences what kind of information is obtained about the object under study. Content analysis, though generally regarded as a reliable research method when examining written documents, can be considered limited in terms of examining the school world: Written documents, in this research school-based curriculums, do not necessarily tell us much about the reality of schools since the real actors, children, teachers and other school personnel are not considered in the study. It could be assumed, for instance, that the area of curriculum “Others” and the dimension of learning “Learning to live with others” of this study, may well have stonger stands in the real lives of UNESCO schools than they had in their curriculums: Teachers usually need to spend a lot more time than they have planned on settling with children unpredictable issues which come up in a class and which often relate specifically to living and being with other people. Consequently, if a researcher would like to know, what kind of education is really given in schools and to what extent teaching is balanced and reflects abilities to prepare their students for the future, he or she would have to spend a lot of time in the schools, observe lessons, and interview teachers and children. And even that might not be enough. However, I believe curriculums and their analysis offer one viewpoint and way to look into the work of schools, and information they contain must not be undervalued. Especially school-based curriculums must be assumed to reflect teachers’ thinking since they have only recently been designed and confirmed by themselves: As educational plans and objectives seems to generally be the focus of those curriculums, they inevitably tell us about what kind of education the school communities want and intent to promote.

The fact that the UNESCO schools’ curriculums were structurally very different from each other has also affected the research results: In one curriculum, nearly everything was written in full sentences whereas in another, most of the information was presented in lists, figures or tables. This caused problems for the definition of recording unit. Though I defined two recording units (a sentence, and an “issue” for lists, tables and figures containing verbal material) to balance the structural differences found in the curriculums, they presumably have influenced the results: A matter in one curriculum may have been more emphasized in the analysis if it was written in full sentences (thus having the possibility of getting as many observations in the matrix as there were sentences), than a similar one in another curriculum which was presented, for instance, in only one figure (thus having the possibility of getting only one observation in the matrix). I could have left the recording unit without a standard definition, but define it always depending on the context. However, though it may theoretically be the most succesful way to ana-
lyze divergent documents, it can also be regarded to be very demanding. Thus I considered it better to standardize the recording units of this content analysis, as it is usually done.

As it has been mentioned, the question of whether schools prepare their pupils for the future is very problematic. The future in itself is such a multifaceted issue and can be viewed from so many standpoints that it is extremely difficult, actually impossible, to define any one reliable criteria which schools should meet to be considered to educate for the future. Thus it can, and should, be approached from various directions. In this research, it was decided to approach from the viewpoint of two models: one by Dalin & Rust (1996) concerned with the four basic elements of futures curriculum, and the other by UNESCO (Delors et al. 1996) concerned with the four aspects of learning needed for the twenty-first century. As I have said, various other models could also have been used as a basis for the analysis but for the purposes and interests of this research, these two were considered to be the most appropriate.

However, it is difficult to assess how well I succeeded in combining the two theories. The formulation of the four dimensions of learning as subcategories to the four areas of curriculum proved to be fairly complex, and some other researcher could well have made different kinds of decisions concerning this than I did. For instance, the fact that the four dimensions of learning did not receive equal positions in the system of categories, and that it finally came to follow perhaps more consistently the older way to differentiate three aspects of learning than UNESCO’s model which defined four of them, can be criticized or regarded even as a failing of this study. However, it can also be considered a part of a process of ultimately qualitative analysis, and an experiment which produced somewhat different and unexpected, but still informative results. After all, as a result of long contemplation, this categorization was considered to function best in the school-based curriculums under study. In addition to the “real” results, perhaps one unexpected result of this research can be viewed to be the extreme difficulty to shake the recognized three-fold distinction of learning into knowledge, skills and attitudes.

The difficulty in combining the two theories may, at least partly, be due to the thing that their elements are, after all, very close to one another. In fact, the ultimate purpose of the dimension “Learning to be” could be fairly the same as that of the curricular area “Myself”, and “Learning to live together”, in the end, aim at the same as the curricular area “Others” does. In addition, all knowledge, referring to “Learning to know”, and application of knowledge, referring to “Learning to do”, schools teach, could presumably be included in the areas of curriculum “Nature” and “Culture” if only were they defined broadly enough.

This research has produced one way and a model to evaluate the future-orientation of school-based curriculums. It has shown their emphasis on cultural knowledge and individual skills. This observation leads to the recommendation that schools should encourage the development of the emotional dimension of learning, and pay more attention to issues concerning nature and other people. A balanced education, concentrating on the development of the complete person, is capable of bringing up balanced adults who have the strength to face the challenges of the future and intelligence, means and sensitivity to direct it along the lines they desire.

Further research on schools abilities to prepare children for the future is needed. Research which would study the issue particularly in the reality of schools should be conducted. It is important that different models and ideologies should be applied
in the study to be able to approach and investigate the complex relationship between education and future from various viewpoints. Since many educational writers consider the learning of social action to be essential in school learning the extent to which it is really taken into account in school environments should also be studied. We need to know if pupils in our school system grow to active citizenship and transformers of the society, or rather passive adapters to changes and fulfillers of external expectations. In addition, it would be interesting to conduct research not only into future images teachers have, being already fairly widely studied, but also on their conscious visions of the future. They could, for instance, be compared to visions, which researches of various fields consider healthy for the world and all of humankind (e.g. those of Dalin & Rust introduced in chapter 4.2). Finally, it would be interesting to see comparative research conducted for UNESCO schools and “ordinary” schools. UNESCO schools, being special in the way they have themselves expressed an interest to contribute to global issues relating to world peace, justice and environmental concerns, may, though not necessarily, reflect a different view on education than other schools.

This work has highlighted the need to have a clearer futures dimension in educational discourse and practice. It is becoming ever more essential in these times of rapid change and severe global problems. By adding a conscious futures dimension to learning processes, we will provide direction, purpose and greater meaning to whatever is being studied.

Curricular decision making is one important level of educational innovation and reform. Although a curriculum’s effectiveness on the reality of schools has often been questioned, it yet holds a great potential for setting educational reforms in motion. The introduction of school-based curriculums has particularly opened up renewed possibilities to carry out instructional innovations in a school community according to the ideologies of its members. The task of each school is thus to aim at drafting a dynamic, proactive and responsive curriculum which truly endeavours to prepare the growing children for their experiences and responsibilities in their lives ahead. Curricular decision making can neither afford to miss the enormous potential education has for trailblazing changes and contributing to the realization of a more peaceful, just and sustainable world.

The central purpose of education for the future is to develop mentally strong and broadly aware human beings who have confidence in themselves and their abilities to define the story line of the future society. Education in the spirit of hope is thus particularly important in these turbulent times. The great challenge of schools is to take a firm hold on the future and design such educational goals which match the real needs of humanity. As individual educators, the choice, and the responsibility, are ours.
References


APPENDIX 1

THE SYSTEM OF CATEGORIES OF THE RESEARCH: LEARNING IN THE FOUR AREAS OF CURRICULUM

1 Nature

1.1 Learning to know
– about and understand nature, the relationship between human and nature and the environment
“A student learns to know organisms, their habitats, and to understand the relation between organisms.”

1.2 Learning to do
– learning to apply knowledge learned in this area into practice
– learning to act for the nature and the environment; living within the limits of the natural world
“Our school endeavours to promote sustainable development by recycling waste paper and by composting organic waste, and also by guiding students, their families and other people in the school to take care of the environment.”

1.3 Learning to be
– developing attitudes and emotions towards the nature and the environment
– developing interest and willingness to learn more about them and to take care of them
“In addition, the purpose of studying environmental and natural studies is to enhance interest in and appreciation of nature and life, and encourage each child to form a personal relationship with nature.”
APPENDIX 2

2 Culture

2.1 Learning to know
– about and understand the knowledge base human cultures have gathered about themselves and the world, one’s own culture, and cultural interdependence
“One of the aims of learning history is that students acquaint themselves with the history of their country and home district.”

2.2 Learning to do
– learning to apply knowledge learned in this area into practice
– learning to act as a member of one’s own culture and society, and as a “world citizen”; participation in common cultural and social affairs
“A child learns to behave naturally in church and participates in services.”
“Ways to influence the future of the society are discussed.”

2.3 Learning to be
– developing attitudes and emotions towards cultural knowledge and one’s own culture; cultural identity
– developing an interest and willingness to learn more about cultural issues, and contribute to affairs locally and globally
“The development of cultural identity, being a central aim of mother tongue, gives children a foundation to grow as Finns in a multicultural world.”
APPENDIX 3

3 Myself

3.1 Learning to be

– developing issues such as self-esteem, self-awareness, sense of responsibility, autonomy, ethical awareness, emotions, and view of life; everything referring to the mental self-development of child

“By offering children experiences, possibilities to be sensitive and active in their own learning, we want to strengthen children’s self-esteem and develop their values, awareness of attitudes and a sense of responsibility.”

3.2 Learning to do

– developing learning and thinking skills, social and communication skills, and artistic and motor skills
– learning to take care of one’s mind and body

“From the basis of the values we defined, the aim of our school is to develop independent thinking and social skills.”
APPENDIX 4

4 Others

4.1 Learning to know
– about and understand other people: their lives, cultures, religions and ways of thinking
“Students receive information about the countries, people, habits and cultures of the language area.”

4.2 Learning to live together
– learning to interact with other people; co-operation and conflict resolution
– learning to act for other people and create interpersonal relationships
“Methods and study habits should lay emphasis on learning co-operation and the consideration of others.”

4.2 Learning to be
– developing attitudes and emotions towards other people and their ways of life
– developing interest and willingness to learn more about them and co-operate with them
“Education for tolerance and openness towards different cultural backgrounds and viewpoints pave the way for a more peaceful world.”
An Example of an Observation Matrix of One School-Based Curriculum

This is available only as a paper version!

Numbers in the first row of the matrix refer to the categories of the content analysis. Numbers in the columns, on the other hand, refer to the sentences/“items” in the curriculum, which were numbered before the analysis. (Because only those sentences/“items” which were classified to certain categories were placed in the matrix, some numbers seem to be “missing”.)

In the last page of the matrix, the values of the fifteen categories have been added up to show the final, absolute observational values of the curriculum. The percentages for the results have been calculated from these values.
APPENDIX 7

THE ABSOLUTE OBSERVATIONAL VALUES OF THE SCHOOL-BASED CURRICULUMS

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