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A map for literacy research

This literature review classifies literacy research under three meta-frameworks which are the quantitative, qualitative and metaphorical one. The review examines five actual frameworks of literacy research through their definitions of literacy. The frameworks of the inquiry are: literacy rate, functional literacy, the Freirean concept, the socio-cultural framework, and "literacies of information". The article organizes literacy research through two dimensions. First, literacy can be defined as universal or contextual. Second, it can be identified as text management or communication. The outcome is four conceptual maps.

Mikko Perkiö

INTRODUCTION

Literacy is the most important prerequisite for lifelong learning. Its significance has grown with the increasing amount of information in our lives. Today, literacy is understood in a far broader sense than previously. Literacy research has been seen through four following perspectives: 1) an ability, 2) a part of an individual's life, 3) a social practice and 4) a process of critical interpretation (Lytle & Wolfe, 1989). In this article these four perspectives will be modified to fit better to the real discourses that currently exist. Also a needed update is offered by including "literacies of the information" discourse later in the text. This article aims to formulate a valid model of its subject matter but it is exploratory in nature: hence this work is far from setting the ultimate words in the debate.

The scholarly orientation of literacy research can be viewed through *three meta-frameworks*: the *quantitative, qualitative* and *metaphorical* one (see chart 1 below). These three meta-frameworks include *five frameworks*, quantitative and qualitative both consist of two each, and the metaphorical is the fifth. First, quantitative tradition assesses literacy skills by a dichotomous *literacy rate* or with a continuous scale of the *functionality* of certain literacy proficiency. Second, qualitative

tradition includes the *Freirean* approach and the *socio-cultural* approach which both emphasize the context-bound nature of literacy. Third, *literacies* required in the context of the *information* society add yet an applied dimension to the discussion.

"No standard international definition of literacy captures all its facets: Indeed there are numerous different understandings of literacy, some of which are even contradictory" (UNESCO, 2006, 30). This cross-section review aims to create a coherent picture required in the diverse field of literacy research. The inquiry captures the five most commonly used literacy frameworks and analyzes their definitions of literacy through two dimensions (see chart 1). First, I will examine the multidimensionality of literacy and how this is understood. There is constant tendency towards more diverse understandings of literacy (Collins & Blot, 2003, 3; Cope & Kalantzis, 2000; Lankshear & Knobel, 2006). Second, I will show the extent to which literacy is seen either as a universal or a local, context-bound phenomenon. This dimension owes especially to Street (1984) who presented the profound critique over the universal literacy concept. In contrast to this Brandt & Clinton (2002) offer the enlightening analysis on how to balance transcontextual

and local potentials of literacy. I will distinguish the role of each framework in the field of literacy research. These five frameworks have each one chapter which is followed by the final chapter consisting of the analytical discussion around three conceptual diagrams. The final chapter summarizes this review.
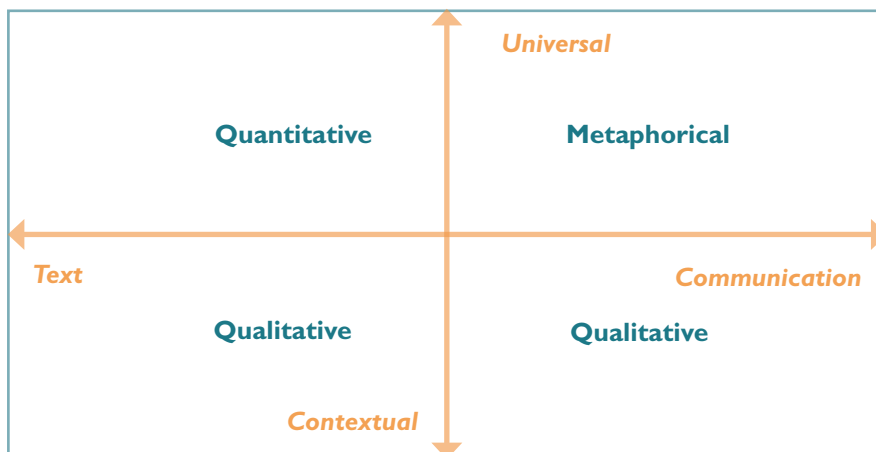
LITERACY RATE

The literacy rate is a simplistic measure, for which it is often criticized. However, this concept is still widely used by international organizations, the media and some significant research, so it is still worth analysing. Literacy rate is a dichotomy that divides people to two categories, one of literate and another of illiterate.

Early dichotomist assessments of literacy can be found in marriage records, conscription records and censuses from some Western and Northern European countries, for example, Sweden (a pioneer when considering the literacy of the whole population) as early on as the 1500s. In Western countries literacy records became more systematic from the 1800s (Cipolla, 1969, 113-130; Graff, 1981).

The still most commonly used definition of adult literacy was formed at the 1958 UNESCO general conference. It states that all aged 15 years and over whom can both read and write — with comprehension — a short simple statement on their everyday life can be considered literate. The criteria of basic literacy have been under discussion for over half a century. For example, the USA, Great Britain and the World Bank define literacy as a basic skill that covers reading, writing and arithmetic (See UNESCO, 1957, 18–34; 2006a, 149–159).

Utilizing the two dimensional measures of the literacy rate, UNESCO's (1957, 13–15) first broad literacy survey reported census data from over sixty countries and estimated that in the 1950s 55–57% of the world's adult population were literate. Currently, the comparative figure is 83.6%. Seldom is the very basic criterion of literacy high-

Chart 1. Conceptual dimensions and meta-frameworks in literacy research

Universal

Quantitative   **Metaphorical**

Text   Communication

Qualitative   **Qualitative**

Contextual

lighted: "a person who can both read and write, with comprehension, a short simple statement on their everyday life can be considered literate"(UNESCO, 2006, 63–66, 162–163; UNESCO, 2008, 23).

Comprehensive international statistics from the 1970s onwards are available, although these should be regarded with caution (UNESCO, 2002) due to serious reliability problems of the data, which will be discussed later in this chapter. Though the literacy rate is a rough measurement with substantial shortcomings, it works as an indicator that shows great disparities between world regions, as well as within many countries. All regions with low literacy rates (Arab states, West and South Asia and Sub-Saharan Africa) have large literacy gaps between adult men and women (UNESCO, 2005b, 72). Literacy gaps between young and older age cohorts are also substantial and these peak regionally in Arab states. Similarly disparities occur between rural and urban residents, and in relation to wealth. Naturally, whether or not an individual ever went to school has the strongest effect on literacy (UNESCO, 2006, 167–179).

Despite the problems discussed soon, in some particular situations data on the literacy rate can be considered coherent enough to study social variation. With literacy rate we can grasp the stage in the process of *making of a literate society* which is a catchword in current literacy research (see Olson & Torrance, 2001a; UNESCO, 2006, 189–213). Additionally, Basu and Foster (1998) used literacy rate in their calculations on household based literacy variations between Indian states. Even one literate family member improves the socio-economic standing of the whole household (Basu & Forster, 1998; Basu, Narayan & Ravallion, 2002).

Literacy assessments are based on the cognitive idea that literacy — reading, writing and arithmetic — are a group of acquired skills that are considered universal (UNESCO, 2006, 149). Many prominent literacy researchers tie literacy inseparably to text-bound skills, such as reading and writing (Ong, 1982; Olson, 1994; Goody, 2000). The critics of this view will be introduced alongside the sociocultural approach. The literacy rate contains inaccuracies which are based on the universality, comprehensiveness and reliability of the data collected. Here, I concentrate on the issues related to the problems of reliability.

These problems arise firstly from the non-standardised definitions of literacy used by some countries which do not correlate to UNESCO's standard definition for basic literacy (see four paragraphs above). For example, some countries use the ability to read newspapers, while others use attained years of schooling as the proxy measurement. The latter example is problematic due to the differences in teaching standards. Another problem arises out of missing information. Data collection in countries of high illiteracy has only recently commenced. By contrast some countries of high literacy evaluate only the school attainment level, not the level of basic literacy. Secondly, a country may change the definition of literacy which further complicates comparisons. A case in point is Pakistan, where in each of its five national censuses a different definition of literacy was used. (UNESCO, 2006, 156–164.)

Thirdly, another matter of global variation arises from the age that people are generally considered to be (literate) adults. The most common definition is 15 years and older. In some cases, the age of the adult population has been set at 10, 7 or even as low as 5 years of age. Fourthly, there is variation between the methods of data collection. Until quite recently, all cross-national literacy assessments were based on official national census figures in which three methods were used: self-declaration, third-party assessment often reported by the head of the household (both of these measures are subjective measures) and the educational attainment proxy. All of these methods have their shortcomings (UNESCO, 2006, 163–164). Direct testing has revealed that the indirect literacy proficiency assessment methods used in na-

tional censuses almost always overestimate the country's literacy rate (Schaffner, 2005a).

Direct and therefore objective assessments that have been applied in recent years provide a more realistic picture of an individual's literacy level than recorded levels (UNESCO, 2006, 156-164). In Ethiopia, subjective measures claimed it took 4 years of schooling for 95% of the students to be considered literate, whereas through objective assessment this threshold is not crossed before 6 years of schooling. In Nicaragua the comparable figures are 3 years by subjective and 5 years by objective assessments (Schaffner, 2005b). This shows how problematic educational attainment is as a proxy of literacy. The inconsistencies in the quality of education and its levels result in diverse learning outcomes between countries. Schnell-Anzola, Rowe & LeVine (2005, 874) conclude from a study of the literacy of 167 mothers in Nepal that 27.6% of the women who claimed they could read scored zero when they were later tested. All these examples cast doubt on the validity of subjective measures of literacy assessment.

Currently available literacy rates do not provide information on what individuals know or what they are able to do using different texts of varying degrees of difficulty. The dichotomist concept also does not cover numeracy skills (UNESCO-UIS, 2009, 15). In addition to the non-standardized definitions and the reliability problems of the assessments and surveys, problems also arise out of the use of the single term "literate" that is applied to both rudimentary forms, as well as highly developed forms of literacy. Direct testing is at the core of the activities aiming to provide a richer picture on the continuum of literacy skills. Through direct testing we can gain both more reliable and more comprehensive information than is not possible with the census based dichotomist literacy rate. *Functional literacy* is the concept that links direct assessment to the focal discussion on what is universal in literacy across cultures.

FUNCTIONAL LITERACY

Functional literacy drew attention to the fact that in different cultures, societies and communities a unique form of literacy is required. Functional literacy was the first critique aimed at the over-simplified nature of the literacy rate. Gray (1956, 19) famously defined functional literacy "A person is functionally literate when he has acquired the knowledge and skills in reading and writing which enable him to engage effectively in all those activities in which literacy is normally assumed in his culture or group." UNESCO (1957, 179) presents a fine illustration on the possible pre-conditions for literacy. A chart of 35 countries shows that literacy is connected closely to urbanization and industrialization.

In the 1960s and 1970s functional literacy was used as a concept that connected literacy either to economic growth or to the development of a nation. Simultaneously, the idea of literacy as a changing force of society was born. The concept has been troubled by the fact that it does not have clear standards. Kenneth Levine (1982) argued that the concept is extremely elastic of meaning (see also Maddox & Esposito on this, forthcoming). The concept of functional literacy has been attached to mutually contradictive objectives or needs. On the one hand, it has been connected to the economy and productivity, and on the other, it has been used to highlight the need of furthering participation and consciousness (See Gray, 1956; UNESCO, 1973; Verhoeven, 1994; Raassina, 1990, 19-57). Despite the contradictions there exists a commonly used definition of functional literacy. At the 1978 general conference UNESCO defined it in the following manner:

A person is functionally literate who can engage in all those activities in which literacy is required for effective function of his or her group and community and also for enabling him or her to continue to use reading, writing and calculation for his or her own and the community's development (UNESCO, 2006, 154).

The latest UNESCO (2005a, 21) definition of literacy has similarity with the definition of functional literacy.

Literacy is the ability to identify, understand, interpret, create, communicate and compute, using printed and written materials associated with varying contexts. Literacy involves a continuum of learning in enabling individuals to achieve his or her goals, develop his or her knowledge and potential and participate fully in community and wider society.

The idea of functionality can be found as one motivation for measuring literacy proficiency. Various international assessments of literacy provide the concrete applications of functional literacy. The International Association for the Evaluation of Educational Achievement (IEA) has examined the literacy proficiency levels of students since the 1960s. In a comparative study of 15 industrial and developing countries, Thorndike (1973) found vast differences in text comprehension between the two groups of countries. This approach initiated by the IEA, is followed by the international evaluation programme of 15 year olds in the PISA (Programme for International Student Assessment) implemented by the OECD from 2000. The latest assessment consists of a test of reading skills with examinations in mathematics and science skills. The students were tested in 70 countries that account 90 % of the world's economy. The students in China, Korea, Finland and Singapore did particularly well in the latest evaluation (OECD, 2010).

During 1994–1998 a survey of 20 OECD countries (where citizens are totally or highly literate in terms of the literacy rate) was carried out. In this International Adult Literacy Survey (IALS), literacy was defined as *an ability to manage printed information in daily activities, at home, at work and in the community to achieve one's goals and to develop one's knowledge and potential*. Proficiency tests mapped out abilities in the three following areas; prose literacy, document literacy, and quantitative literacy, including the ability to handle simple arithmetic tasks in the context of text comprehension.

The survey saw literacy as a continuum of five ability levels. Level 1 indicates very low literacy skills, where the individual may, for example, have difficulty identifying the correct amount of medicine to give to a child from the information found on the package. Level 2 respondents can only handle simple material. Level 3 is considered as the minimum desirable threshold for living in a modern urban society. Levels 4-5 show increasingly higher literacy and information handling skills (OECD & Statistics Canada, 2000; Linnakylä, Malin, Blomqvist & Sulkanen, 2000).

A notable proportion of the adult population in the Western world has a modest level of literacy. Over one in five adults on average stayed at the level 1. According to IALS results in some Eastern European countries almost 70 %, and in Chile over 80 % of adults, remain at the lowest levels of 1-2 on the 5-point scale, while in the US, the UK and Canada over 40 % receives similar low results. The Nordic countries attained the best literacy proficiency. In Sweden less than one out of four read at the low levels of 1–2/5 (OECD & Statistics Canada, 2000, 16–18).

It is important to consider literacy proficiency alongside the problematic measure of the world's adult literacy rate (83.6%). We can draw a rough illustrative estimation using the IALS results as a point of reference for the Global South. It is most likely that over half of the world's adult population are at level 1 or below. It can be also estimated that roughly only one tenth of the world's adult population read well on the scales of 3-5.

Statistics Canada & OECD (2005) continues the comparison of developed countries in its ALL-survey (Adult Literacy and Life Skills). This includes comprehensive data of the relationship between literacy and health, family background and labour markets in eight sample countries. Murrey, Clemont & Binkley (2005) have compiled a book on the methods, teamwork as well as information and communication technology literacy of the ALL survey. The successor of the ALL-survey, PIAAC (*Programme for the International Assessment of Adult Competen-*

Table 1. Areas assessed in adult literacy surveys
(first three columns from OECD 2011, 5)

OECD & Statistics Canada			UNESCO
IALS 1994-1998	ALL 2002-2006	PIAAC 2011	LAMP (pilot) 2011
Prose literacy	Prose literacy	Reading literacy	Prose literacy
Document literacy	Document literacy	Reading literacy	Document literacy
Quantitative literacy	Numeracy	Numeracy	Numeracy
	Problem solving	Problem solving in technology-rich environments	

cies) by the OECD is the most comprehensive survey on adult skills ever undertaken. It covers 26 industrial countries. Africa is not represented and Chile is the only country in the sample from South America. The major surveys on adult literacy are presented in the table below according to the years of data collection.

Due to the lack of standardized in-depth information on the literacy rates and the limited country coverage of IALS- and ALL-surveys, there is a need for the global evaluation of literacy proficiency. UNESCO's *Literacy Assessment and Monitoring Programme* (LAMP) aims to evaluate world literacy by a similar method to IALS and ALL, with the exception of not evaluating problem solving (see table 1 above). LAMP is the most significant effort in cross-national measurement of literacy and numeracy due to its global reach. While IALS and ALL were conducted mainly in industrialized countries and European languages written in the Roman alphabet, the pilot phase of LAMP focuses on developing countries (El Salvador, Mongolia, Morocco, Niger and Palestinian Autonomous Territories) with a wider array of language families (5 vs. IALS/ALL had 2) and scripts (3 vs. IALS/ALL had 1) (UNESCO-UIS, 2009, 22).

Researchers of the socio-cultural framework have criticised IALS for being based on the assumption of a homogenous supranational culture. According to these researchers, the test elements are always better known to inhabitants of some countries than to others, and this distorts the results (Hamilton & Barton, 2000). Nevertheless, it is worth considering how the questions of modern society could be applied to members of a culture that relies on a subsistence economy.

One of two main axes of literacy observes whether literacy is defined as a text-bound or a communicative phenomenon (see chart 1). LAMP as a text-bound framework shows receptivity to the critique presented by the socio-cultural literacy scholars by addressing the following aspects:

• *Orality, oral cultures and oral languages and their relationship to literacy*
• *The relationship between literacy and literacies*
• *The relationship between the skills of individuals and social practices linked to written materials*
• *The value of literacy and education in general and different visions of the social world.*
(UNESCO-UIS, 2009, 19–21).
LAMP admits that "oral cultures have cultural traditions as rich as any other", and "there is no way to test literacy skills in a language that is not written". In contrast to this, LAMP worries about the situations where the orality of a culture is connected to marginalisation of the community. LAMP is conscious that "literacies" in the

context of information society refers to "specific sets of skills". LAMP can not involve this plurality into its scope. The measurement of individual skills by LAMP provides rich and systematic information, but does not preclude the contribution from the alternative views. E.g. the argument on the proximate literacy, discussed briefly earlier in this article, completes the individualistic design. LAMP endorses a view of literacy that goes beyond the economic benefits of literacy. It stresses the fact that education is a fundamental human right (UNESCO-UIS, 2009, 19–21).

A Harvard University research project interviewed over 160 women both in Nepal and Venezuela. The project carried out the direct assessment of literacy and language skills and was able to identify the mechanism of how *female* literacy enables positive social change in people's lives. (See also Rene Raya's, Maria Luz Anigan's and Cecilia Soriano's contribution in this issue of LLinE.) New knowledge, models and aspirations gained in school shape reproductive, child-rearing and health patterns in multiple ways. Literacy is advantageous as it is a general set of skills, an *academic register*, that helps women in their contact with the modern services and administration (LeVine & al., 2001; 2004; Schnell-Anzola & al., 2005).

Hannum and Buchmann (2005) demonstrate how the educational level of mothers very closely connects to health and demographic outcomes such as children's immunization rates, child mortality and fertility in the eleven poor countries studied. Additionally, Schnell- Anzola & al. (2005) state that the effect of childhood schooling retains on the scores on an academic literacy test many years. The next chapter elaborates on this perspective as the focus in the Freirean approach is in this transformative potential of literacy.

THE FREIREAN FRAMEWORK
This approach is named after the Brazilian educator, Paulo Freire. His classic manifesto *Pedagogy of the Oppressed* (1972) highlights the meaning of collective learning in creating social justice. The book was first published in

Portuguese in 1968, and was translated and published in English in 1970. In Freirean pedagogy the poorest part of the population learn literacy skills when they work on the concepts of their everyday lives in dialogue with a teacher (Freire, 1987; 2001). The significance of literacy arises from the fact that existence is realised through new interpretations of language: "Reading the word is reading the world" says the classic Freirean proverb from the book name (Freire & Makado, 1987). Freire was of the opinion that societal development was only possible when the masses become conscious and powerful enough.

REFLECT is a powerful world-wide programme that works within the Freirean framework, with the practical visualisation methodologies developed within Participatory Rural Appraisal. REFLECT was developed to help many traditional literacy programmes, which were based around the use of a literacy primer. "Each literacy Circle develops its own learning materials through constructing different types of maps, calendars, matrices and diagrams to systematise the existing knowledge of participants and analyse local issues" (p. 5). The review of 16 REFLECT evaluations gives a general picture of the method that has been used in unexpectedly diverse contexts (Duffy, Fransman & Pearce, 2009). The programme has created a handbook *Communication and Power* (Archer & Newman with the REFLECT practitioners world-wide 2003) which helps various groups to form their own practice.

Auerbach (2005) criticises Freire's point of view for simply assuming literacy as a transformative vehicle. Her concept *pedagogy of not-literacy* means, that what matters is how literacy education is embedded in political struggles either on a local or global level. The grassroots movements that concentrate on practical problems can, as a side effect, produce literacy. What Freire, REFLECT and Auerbach have in common is their idea of highlighting an individual's activity within a group and learning literacy in connection to everyday experiences. Another example of this view is an action-oriented *El Sis-*

tema. This Venezuelan social programme integrates excluded children by introducing them to music. The poor, often illiterate children are given a musical instrument and a seat in the orchestra. Later on they can even be a part of the symphony orchestra. This empowerment of the children can be assumed to lead to a desire to acquire literacy skills that are essential in a modernizing society.

Freire's ideas receive support from the UNESCO report (2006, 139) amongst others, which introduces several examples of how the educational level, and through that the rise of literacy levels, have a positive effect on political involvement. People who are more highly educated tend to vote more often and they generally have more liberal attitudes. They support democracy. Also see Hannum & Buchman (2005, 345–347) on the link between education and political change. Additionally, the political involvement of Nepalese women is intrinsically tied to how actively they take part in the adult literacy programme (Burchfield, Hua, Baral & Rocha, 2002).

Literacy can be seen as either a tool of control or liberation. The Freirean perspective sees it as a tool of liberation. In contrast to this, Lévi-Strauss (1973, 392, orig. 1955) reminds us of the other side of the coin:

The only phenomenon with which writing has always been concomitant is the creation of cities and empires, that is the integration of large numbers of individuals into a political system, and their grading into castes and classes (…) it seems to have favoured the exploitation of human beings rather than their enlightenment.

Still, in the various contexts of the modernizing world, the Freirean view is more relevant than the long-term historically valid control view by Lévi-Strauss. Next, the socio-cultural literacy research offers detailed accounts on literacy in context, which helps to avoid too wide generalizations.

THE SOCIO-CULTURAL FRAMWORK

The pioneer of the socio-cultural approach, Hoggart (1957), was significantly ahead of his time when he ap-

proached literacy as a part of everyday life and examined its usages in popular culture. Particularly, researchers from the 1980s onwards (Scribner&Cole, 1981; Street, 1984; Gee, 1990; Collins, 1995 to name but a few) have shown that literacy is a far more multifaceted phenomenon than previously thought. This is why nowadays it is also discussed in its plural form, literacies. Graff (1979) emphasized the need for literacy to be examined in specific historical and social contexts. With his concept *the literacy myth,* he referred to the fact that literacy has been turned into an omnipotent and over-simplified cause of social change.

Before the turn in thinking during the 1980s literacy was largely connected to a binary way of thinking. Binary opposites included literate/illiterate, educated/uneducated, as well as modern/traditional. In addition to these, civilised and barbaric, and written and oral cultures were connected to discussions of literacy (Collins & Blot, 2003, 3-10). Street (1984, 19–125; 2001, 7–10) challenged this binary way of thinking by creating a typology that later became classic. In this theory he criticised the type of literacy concept that does not pay attention to the social context, or oversimplifies the role of literacy in relation to oral culture. He has called this approach the *autonomous* model which criticises certain previous studies (for example, Goody, 1968; Ong, 1982). The binary opposite to the autonomous concept is the *ideological* model which takes into account the context and power-structure, as well as its own position in defining literacy.

Along the lines of Street's (1984) critical typology, which forms the core of the socio-cultural approach, the so called *New Literacy Studies* (Gee, 1990; Street, 1993; Collins, 1995) was established. It focuses on what literacy is used for, and it emphasizes the situational and context-bound nature of literacy research (Street, 2001, 10–11; UNESCO, 2006, 151). Ethnographic methods are central in socio-cultural literacy research. For example, Barton & Hamilton's (1998) study based in Lancaster deals with how people use

their literacy skills in organising their daily lives, as well as in operating in their local community. Hare (2005) analyses which of the practices of the native Canadians can be regarded as "literacy". Recent studies located in the Global South have documented the multiplicity of literacies, as well as the variation of the cultural contexts which have not previously received enough attention (see Street, 2001; Olson & Torrance, 2001a; Robinson-Pant, 2004). This framework works at its best in mapping the colourfulness of literacy practices. Beyond this, originally a socio-cultural scholar himself, Maddox (2009, 188) criticises Street, considering the socio-cultural framework too general to work well in understanding how literacy impacts on development and change.

An early work of the socio-cultural framework, Scriber & Cole (1981) studied literacy of the Vai people, a small West African group who have developed their own syllabic script in the early 1800s. The group's complex lingual and scriptural settings include Vai and Arabic as non-schooled literacies and English as schooled literacy. Each of these languages had a distinctive 'literacy mode' connected to particular *practices* and particular profile of skills. Scriber & Cole introduced word *practice* which is elementary for this framework and current understanding of literacy. Additionally, they concluded that rather than the familiarity with literacy, the particular style of schooled talk was crucial for cognitive skills of Vai people studied (Olson & Torrance 2001b, 7).

Street (1984) became aware of the limits of the binary literacy concept when carrying out anthropological fieldwork in Iran at the beginning of the 1970s. The prevailing form of literacy was Maktab-literacy, based on learning verses of the Koran by heart in Koranic schools. By the international literacy definition, these Iranian students reciting the Koran would have been classed as illiterate, despite their noteworthy grasp of literary text.

In its definition of literacy *The New Literacy Studies* approach highlights the meaning of communication. In this approach, the text is only one form of communication. Literacy research as a whole, therefore, contains two differing interpretations as to whether text-based communication adds anything significant to reality construction. The question of how writing differs from other forms of storing cultural knowledge and communication methods can be posed (Collins & Blot, 2003, 160–167.) How can other forms of symbolic representation such as pictographic writing, smoke signals or ritual dance be compared to written text (Barton, 1994, 112–115; Hare, 2005)? According to Street (1995, 150–159), it is language and concepts that construct reality, not the matter if the words are written or spoken. According to this interpretation, pictures, rituals and stories constitute reality in contrast to the beliefs of Ong (1982), Olson (1994) and Goody (2000).

Literacy as a textual skill does not cover all that is integral to communication. However, colourful oral communication skills alone do not achieve the benefits of the communication of the written word, such as effective data transfer, data storage and possibilities of analysis. Due to these benefits of data management, reading and writing aid abstract thinking. Writing offers the opportunity to introduce thought patterns to various audiences, as well as to oneself (Barton, 1994, 43–45). For a modernizing society, writing plays a significant role as an organisational tool (Ong, 1982; Goody, 2000; Olson & Torrance, 2001b). The role of writing in knowledge societies (see UNESCO, 2005b) will be discussed in the next chapter.

Literacy is a meta-ability learned via language use, and the realisation of this meta-ability has socio-political significance (Gee, 1990, 149-154). Heath (1983) also came to this conclusion in her comparative study on socialization into literacy and language use in three different South-Western communities in the USA. The communities consisted of one white, and one black working class community, and a mixed black and white middle class community. Heath noted racism's connection to literacy. She found that for official institutional practices, languages of the community or linguistic practices of the home were not ascribed as much value, and that black cultural linguistic difficulties were defined on harsher terms than those of white people. Ethnographic research proved that literacy is not neutral, and that power structures are produced and renewed through language. The multiculturalism of the USA makes literacy an important means of building cross-cultural unity, though this may simultaneously squeeze cultural diversity (Hirsch, Kett & Trefil, 1987). Heath's study is a useful reference for any research on multiculturalism.

The great challenge to education and literacy is formed by the multiplicity of world languages. There are over 6000 languages in the world in less than 200 countries. So, multilingual countries are the rule, monolingual the exception. For example, in Asia there are 2000 languages. Out of these, only 45 are official languages in 30 Asian countries leaving the others mentioned with unofficial status. For example China has pursued a single language policy based on Mandarin Chinese in direct contrast to India which has 19 official languages. These language policies - as possibilities to multilingual education - concretise people's cultural rights. In addition to community language, a language for the participation in the wider society is often required. This usually means learning an official language. Cultural rights related to small languages – be they oral or written – are both highly important and highly political (UNESCO, 2007 2–4; 2006, 202–205; UNESCO-UIS 2009, 19 see also Barton, 1994, 69–74). The majority of the world's over 6000 languages are spoken but do not have a written form. UNESCO (2008, 19) states: "It is true that not all languages are written but there are well-known techniques to develop writing systems, so every language can serve as a means of literacy." Collins and Blot (2003, 99–167) analyse literacy in the context of colonialism and the cultural repression faced by the indigenous people of North America. In today's multicultural world, literacy is constantly connected to a political struggle for the right to a certain culture and identity.

Education, for the most part, is provided in the official languages leaving members of minority language groups without education in their mother tongues. In Sub-Saharan Africa where the situation is the worst, only 13% of populations are taught in their mother tongue. By contrast, in Asia two out of three children can learn in their mother tongue (UNDP, 2004, 34). Half of the world's drop-outs are youngsters who cannot obtain education in their mother tongue (World Bank, 2005, 1). The destinies of many individuals or groups are decided in national language and education politics. Provision of education in the mother tongue is essential as it increases the effects of learning. The central issue is how to integrate multilingualism into formal education and adult learning programmes (UNESCO, 2006, 204; 2007, 6–16). Aikman (e.g. 2001) has written extensively on the meeting points of culture, education and literacy across the Global South.

Bommaert's (2008, 7) *grassroots literacy* brings a new dimension to the conceptualization of literacy in the globalizing world. He defines: "Grassroots literacy is a label I use for a wide variety of 'non-elite' form of writing (…)." Grassroots literacy can be identified by:

• Hetero-graphy, which means people deploying graphic symbols in the ways that defy orthographic norms.
• Vernacular language varieties being used in writing.
• People writing in distant genres, to which they have been only marginally exposed and whose full realisation they often lack required resources.
• People being partially inserted in knowledge economies. They may rely on spoken knowledge sources rather than using literate corpuses.
• Texts being often only locally meaningful and valuable.

Blommaert (2010, 197) outlines the positive programme on *grassroots literacy* with the concept of "vernacular globalization" that recognizes "the myriad ways in which global processes enter to local conditions and circumstances and become a local reality". Language shifts from a static, totalized and immobile system to a dynamic, fragmented and mobile one.

The socio-cultural approach to literacy has taken a critical stance towards power. The ethnographical approach however, tends to over-emphasize locality and disregard external forces, such as colonialism or globalization (UNESCO, 2006, 151). Brand & Clinton (2002, 351–352) show that many studies (e.g. Heath, 1983; Street, 1984) on "local literacies" conceptualize human action and things involved in the studies through "localizing moves". This means that the "globalizing connections" are in danger not to be noticed. They cite Vincent's (2000) notion on the effect of the growth of steamships and railroads alongside the simultaneous creation of a Universal Postal Union for the transcontinental letter sending. The number of letters and postcards sent through the system reached 25 billion in 1922, which was mostly an international practise. "Obviously the computer and internet are globalizing instruments par excellence but so are any other things associated with unified communication systems." The next chapter debates the links between current communication technology and literacy.

LITERACIES OF INFORMATION

This chapter introduces two interconnecting issues. The first concerns a conceptual shift towards a multidimensional understanding on literacy, as the meaning of literacy is reshaped in the context of the information society. Secondly I discuss the most important "new literacies" which are information literacy, digital literacy and media literacy (see also e.g. John Potter's contribution in this issue of LLinE). Bawden (2008, 17) calls these "literacies of information", which is the best name for the whole framework. Lankshear & Knobel (2006, 24) argue these literacies are "new" because "they consist of a different kind of 'staff' from conventional literacies (…)". Here is a conceptual breaking point.

The extended conceptualization of the multidimensional understanding identifies literacy as a metaphor for "competence" or "proficiency" (see Lankshear & Knobel, 2006, 20). In this view literacy refers to "understanding of an area of knowledge" (Barton, 1994, 13). In this new broad understanding literacy has become a widely used concept in the information society. In addition to cognitive competences nowadays one can have "emotional literacy" or "moral literacy" (Collins & Blots, 2003, 1–3). With foresight, Linnakylä (1991) questioned why everything has to be discussed under the general heading of literacy instead of talking about the issues with their own names.

A conceptual extension is offered by Lankshear and Knobel (2006, 64), who define "'literacies' as socially recognized ways of generating, communicating and negotiating meaningful content through the medium of encoded texts within contexts of participation in Discourses (…)". The primary focus lays on communication whilst text is an encoded element behind communication. It is unclear how much their "literacy" really relies on text. However, currently communication and texts are increasingly multimodal (Kress, 2003). Lankshear and Knobel (2006, 69) wrote: "Someone who 'freezes' language as a digitally encoded passage of speech and uploads it to the internet as a podcast is engaging in literacy. So, equally, is someone who photoshops an image – whether or not it includes a written text component." Lankshear and Knobel (2006, 105–136) want to extend the borders of writing by citing the ideas of Lawrence Lessing on "the digital remix as writing" who considers *writing with text* as just one way to write. The more interesting ways are increasingly to use images and sound and video to express ideas. As discussed earlier, many forms of symbolic representation constantly challenge the definition of writing.

Also UNESCO's (2004, 7) "plurality of literacy" definition broadens from individualistic to various societal perspectives but does not account of the metaphoric understanding of literacy which UNESCO openly admits. UNESCO's emphasis on social literacy links to another catchphrase of the framework. The concept of *multiliteracies* refers to two arguments: increasing

salience of cultural and linguistic diversity and the multiplicity of communications channels and media (Cope & Kalantzis, 2000, 5). Both of these processes are true in the current era, but packing these under the term "literacies" is conceptually confusing. This article keeps these aspects separate. We have already discussed cultural diversity in the previous chapter. Let's see now what new communications channels and media, "literacies of information", have to offer to "old literacy".

The pioneer of media literacy, Marshall McLuhan (1964) contemplated the effects of new ways of experiencing reality and communication. Media literacy is the central viewpoint of the now popular subject of media education. Media literacy is a perspective with which we interpret the media messages we face (Potter, 2001, 4). Literacy in the digital age is connected to the multiplicity of information channels and their simultaneousness. Media literacy along other "literacies of information" faces a shift to blogs, podcasting and vodcasting, of all which Lankshear and Knobel (2006, 137–178) provide colourful examples.

In an information- intensive society, we are witnessing a transition from the verbally transmitted story to the visually conveyed message. The screen is replacing the book as one of the central communication tools (Kress, 2003, 1–6; 172–175). A central part of media literacy is the ability to form a visual literacy which is "the ability to understand the cultural meanings of visual signs". Being able to read images is an important element of visual literacy (Seppänen, 2002, 19, 148–150). Images have been an important teaching method prior to the spread of literacy, an example of which is the icons and paintings in churches.

Currently people face an ever increasing amount of information and require more information processing tools. Digital literacy, internet literacy and computer literacy each draw a distinct map of literacy with which to navigate the information society. With the concept of information literacy, Bawden (2001) refers to a broader framework than solely specific skill-

> ❞ *Writing with text is just one way to write.*

based abilities such as computer literacy. Bruce (2003) introduces seven faces of information literacy. These windows range from using information technology and constructing knowledge even to approaching elements of wisdom. Gilster (1997, 1) on the other hand, ties the concept of digital literacy to knowledge acquired via the computer and Internet.

In the Global South, these "literacies of information" are to be promoted simultaneously alongside the "old" form of literacy as both are equally needed. How could the typical low literacy proficiency level in the South and electronic communication be combined in a productive way? What is, for example, the significance of radio, TV, mobile phones, newspapers or the internet in different countries? As audio-visual media takes over globally, abilities to utilize modern media differ greatly between the South and North. Do oral culture, rudimentary literacy, and the lack of media literacy put people at risk of a one-sided dependency on such media messages and governance that pursue goals other than those of the community? And how do new text-based communication modes such as SMS and e-mails motivate people of the South to learn literacy skills (see UNESCO, 2006, 178)?

MAPS OF LITERACY RESEARCH

This article has discussed five concepts related to literacy research. Charts 2 & 3 below portray these frameworks from two dimensions. The size of the boxes in chart 2 bear no relation to the significance of the frameworks, however, the position the concept is located in is important. The horizontal axis refers to either to text management or communication. The vertical axis displays the degree to which cultural differences are emphasized.

The literacy rate assumes literacy as a skill of text management and numeracy that could be defined in the same manner everywhere. Similarly, literacy

proficiency, which is the core of functional literacy, is based on culture-neutral skills of text management. Actually, the diversified framework of functional literacy balances between universality and contextuality. Instead, the Freirean and socio-cultural approaches call complete attention to contextuality. The socio-cultural framework more often defines literacy as communication practices (charts 2 & 3). The Freirean approach emphasizes critical agency within the community, using literacy as a medium in the social struggle (see chart 2 & 3). Currently this framework is enhanced by vital programmes such as REFLECT. Since the publication of the iconic "Pedagogy of Oppressed" by Freire this framework has been a distinctive and influential approach in literacy research (see chart 4). The Freirean framework has worked well in diverse contexts. Can the Freirean approach also be applied to learning "literacies of information" as well as learning reading and writing?

"Literacies of information" also often refer to communication skills and practices rather than to text management (see chart 2 & 3). New communication devices and practices replace text but simultaneously also create a demand for text skills. The "literacies of information" framework emerged on the coattails of the socio-cultural approach (see chart 4). That is why it is surprising how "literacies of information" are posed as a normative social reality for all, with little discussion on social or cultural diversities. Socio-cultural research has exposed "autonomous" claims between "old" literacy and development but can the same critical position be applied to "new literacies". At the current unchallenged stage, this "literacies of information" framework is characterised as a universal communication based literacy concept.

Chart 4 is based on a perusal of the frequently cited texts in literacy research. It provides a general picture of the field. Chart 4 shows that literacy rates were the only way of analysing literacy until the end of the 1950s. The functional literacy framework first connected literacy to economic and social

development. It also substituted the literacy rate as a way of discussing literacy. The international assessment on literacy proficiency has added more concrete content for functional literacy, especially since 2000 when the IALS survey was published. Functional literacy is also an applicable concept when discussing learning difficulties or the integration of immigrants. International

Chart 2. Frameworks of literacy research

Chart 3. Analytical map of literacy research

Chart 4. Timing of the frameworks of literacy research

> ## Will we return to oral culture in the future?

measurement of literacy is still needed, and it is carried out in ever more nuanced and precise ways. Simultaneously, we are increasingly more conscious of the lingual and cultural diversity that challenges the validity of the international literacy comparisons.

In the 1980s, socio-cultural literacy research and the application of ethnographic methods to literacy become more common. The context, situation and community in which literacy was being examined became important. Socio-cultural research has also clarified the position of oral and literary culture. This framework has a critical stance towards international literacy measurements and towards "dominant literacies" (Street, 1993) eroding cultural independence of a community. There is still much to do with equalizing possibilities to literacy, as this links to sensitive lingual rights issues with crossing political interests. Furthermore, increasing mobility of symbolic commodities and people across cultures creates hybrid cultural globalization which forms colourful substance for sensitive accounts on literacy. Additionally, can the socio-cultural framework also challenge some of the universalities related to media and IT as arenas of literacy?

The site of literacy learning also matters. Schools and related facilities offer the best possibilities for learning. The world is very unequal in terms of schooling starting from the lingual rights and ending with the material resources. Beyond schools there are informal ways of learning which also vary considerably in extent across the globe. The Freirean REFLECT is a flexible down to earth programme for gaining literacy skills while promoting communal good. Though literacy is an individual set of skills it also works as a communal resource which can be shared within a household.

In the information society, literacy sporadically refers to reading and writing but more often literacy is used as a
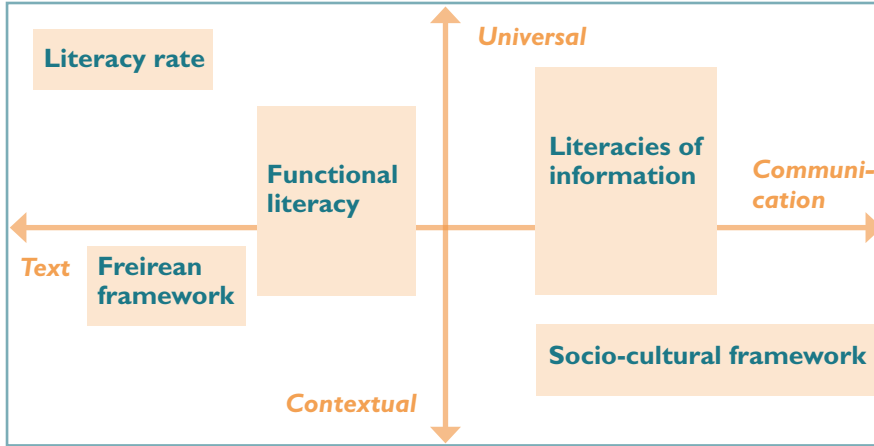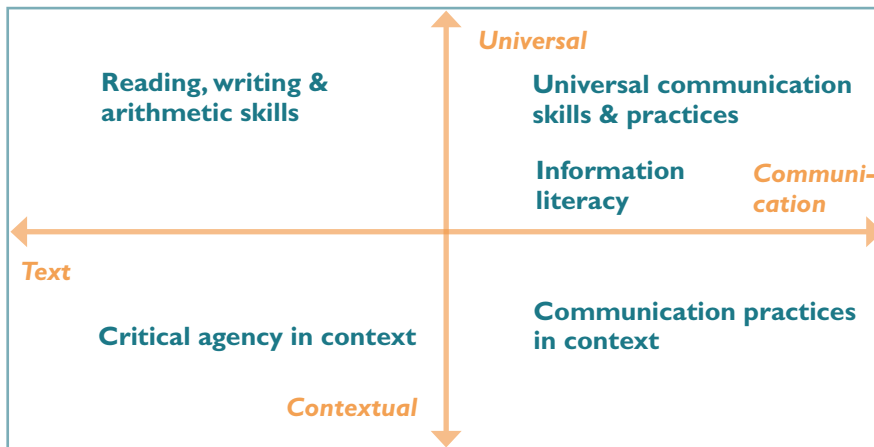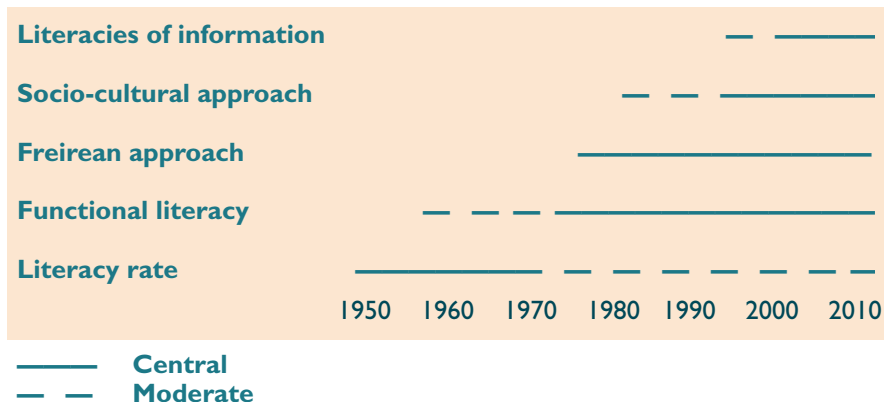
synonym for "competence". This is the case for example with media literacy and information literacy. Because the visual image is re-gaining importance as a transmitter of meanings, image reading abilities are also required. Both text and image are increasingly in electrical form, and supplemented by sound and video.

With the help of the charts above, we are able to choose a convenient way of understanding literacy in different contexts. There are many good research questions connected to literacy in the South, such as whether uneducated people can go from oral culture to laptops? Can a part of the population of urban mega-cities in the South operate solely on image and speech based information? When answering these questions, it is important to bear in mind the multiplicity of literacy. On the one hand, the different concepts of literacy help answer these questions. On the other hand, using more than one approach can render the study and its interpretations relative.

Whatever the case, the traditional abilities of reading and writing, as well as "literacies of information" affect which kind of practices are possible, in addition to affecting how citizens can take part in public discussions concerning themselves. From a global point of view, oral culture has a long history. In contrast, the 20th century and more intensively a few last decades emphasize the value of written culture and literacy (see chart 4). Will the future see a return to oral culture? I do not mean the old form of local culture, but an oral culture coloured with electric communication of images and videos crossing geographical boundaries. How long will written word maintain its central position? The options are not irrelevant in the frameworks of global governance and global justice.

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