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IMAGINED COMMUNICATION SITUATIONS
A typology developed on the basis of an analysis of students' talk while surfing the internet together

1. INTRODUCTION

Most of the definitions of multimodality that I have knowledge of says that a text is multimodal when the text-consumer needs to take more than one sense organ in use to consume the marks constituting the text. This means that a text consisting of images and letters is not multimodal because both letters and images is sensed with the eyes. Likewise a text consisting of fragments of other texts, and internal and external links is not multimodal. I propose a definition that takes the perceptional part more into consideration:

A text that requires the consumer to percept or read in different modes is multimodal. Or expressed in a more strict way: Some texts **requires the consumer's perception to be multimodal**, that is requires him or her to use different „languages" at the same time. I prefer the last wording because it accentuate the it is the reading that is something – not the text which is nothing but what the reader makes of it.

With this definition I argue that internettexts requires multimodal reading. This leads me to ask an important question: **What are the concrete academic competencies which the students need to get the full use of the internet as a search and surf tool.**

This question is a specific instance of the general question: What are the concrete academic competencies (skills and knowledge) which the students need to get the full use of working with computers in everyday life and in school.

"Search the internet!", says the progressive teachers in classrooms around the western world. But both teachers and researchers have experienced that this often leaves the students with low benefit (cf. O'-Sullivan and Scott, 2002). To search the internet successfully demands a great number of academic competencies such as developing search words which result in a small number of predominantly useful pages, reading the search machine's links pages or analysing the page producer's qualifications and interests in the subject. **In this paper I will show that there is a connection between the type of imagination students have of the communication situation they are a part of and their skills in surfing the internet for information.**

The study I will present is a part of my Ph.d. project, which is an action research project in which I and a number of teachers from the danish *folkeskole* (lower secondary school) are developing methods for integrating teaching in, about and with ICT particularly in the Danish classes. To get an idea of what the students were capable of before starting the project, technically, use oriented and in relation to the reflective dimensions of their understandings, I led off with an interview. I had the students sit together by a computer in groups of three. I was seated with them asking them questions from time to time. The séance was recorded on digital video.

The students should solve a number of assignments I had designed on my homepage. Among them was one[1] in which the common fictitious character named Katrine was told by her friend, Pia, that Warner Bros. was paying Coca-Cola to advertise for the first Harry Potter movie. In the introductory presentation Katrine expressed doubt that Coca-Cola should be the receiving part in the partnership. The students were now to prepare a search on the internet. After the preparation they should solve three assignments. The first two was: Find Pia's source, and find the truth about the partnership.

Both in the preparation and in the actual search on the internet the students exhibited an **understanding of the internet as a collection of sites** and not as a searchable fulltext database. Their plans for the investigation were to go to the websites of *Coca-Cola*, *Harry Potter* and *Warner Bros*. And that was what they used the search machine for. Especially when searching a specific text it would be a more adequate solution to use the search machine, e.g. Google, as a full text searcher in a search using the words of Pias explanation as search words – for example *Coca-Cola*, *Warner Bros.*, *Harry Potter*, *sponsor*, *pay*, *advertise* and so on. None of the students were using Google in that way – and many of them were themselves of the conviction that they were skillful internet users.

Even though I am not convinced that students should spend a lot of time studying the more subtle technicalities of computers to be able to use them, this is in my opinion a finding that has to be taken seriously when using the internet in school. The students have to get a grip of

what the internet is and what the search machines do to be able to use them adequately.

Being inadequate in relation to having success in finding Pia's source, the strategy of the students gave me an unexpected view of how the students imagine the communication situation they were a part of by investigating how they read and orientated themselves on the pages they were surfing. By analysing the way the students were reading and what strategies they used to decide what to do next I will show how this reveals four types of imagination of communication situations.

2. IMAGINATION OF THE COMMUNICATION SITUATION

My analysis is concerned with the talk and interaction of the students and founded in a dialectical discourse analysis tradition (cf. Bang 2001, Døør 1998, Lindø 2002).
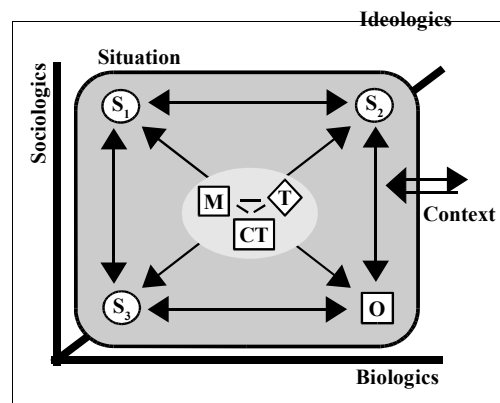

Figure 1. The Dialectical Dialogue Model (Bang & Døør 1993/Bundsgaard 2002)

The model primarily differ from traditional models (such as Shannon & Weaver 1949, Jakobson 1960 and Bühler 1933) by claiming that a

dialogue is always constituted by three subjects (denoted S_{1-3}). The third group of subjects is the persons that participate in the dialogue by being mentioned or in other ways influence or being influenced through the communication between S_1 and S_2. S_3 can for instance be the child listening to its parents' talk, the pupil waiting when the examiner and the external examiner are agreeing on the grade or it can be a group of consumers mentioned or thought of in a talk between marketing directors of soft drinks companies. S_3 can also along the lines of Bachtins superaddressee (1995) be a somewhat more abstract or imagined ideal dialogue partner who understands and answers. Subjects have *interests, qualifications* and *projects*.

The *O* in the model denotes the objects referred to, the theme of the dialogue. In the center of the model I have added a circle consisting of three factors not mentioned in the original model. These are the *medium*, the *text* and the *communication technology*. I only designate as the medium the concrete physical object in which *marks* are marked, e.g. a screen, the air, a paper. The marks are set by the use of a communication technology, e.g. a computer and the electronic devices and programming behind the screen; cameras, transmitters, antennas and TV sets or simply the speech organs and the speaking skills. Humans are, to different extents in different situations, capable of reading the marks and thereby composing a text out of them.

Describing the medium and the technology as concrete physical entities leaves a dimension of their role in the communication. The medium and the technology are treated as more than physical entities

when used in communication. They are treated as tools created by humans with an intention and as things with a purpose, playing a role in the social praxis. This understanding of technology and media is in accordance with the the russian action theoreticians (Vygotsky 1973), calling media, technology and language ability a *tool*, and the modern action theoreticians (cf. Østerud & Wiig 2000, p. 21ff.) calling it an *artefact*. I follow the newer school and call the technology together with the medium an artefact – an *arte factum*.

All factors in the model are connected with each other by arrows which should be conceived as the dialectical arrow drawn from the context towards the situation. This arrow indicates how all factors are dialectically interrelated – influence each other – with one factor historically dominating the other. In principle the dialectical arrow could go from the situation towards the context – one communication situation could revolutionize the whole context, but it is fortunately a rare instance. The context is constituted of three dimensions: the sociological, the biological and the ideological dimension (cf. Døør 1998).

All communication situations are constituted as the model depicts. A concrete communication situation can be described by inserting the factors that form part of the situation in the model; this I call the *real model of communication*. In the concrete situation we have a more or less extensive and conscious imagination of who & what constitute the situation we are a part of. We have what I call an *imagination of the communication situation*.

Reading strategies

In the remaining part of the paper I will investigate how the students imagines the communication situation they were a part of as S_2, especially with regard to how they imagined S_1. By reading the transcripts of the students talking together it occurred to me that they were reading the texts on the screen differently – and that these differences in reading were connected with their imagination of the communication situation.

In the following two figures I present two dimensions of reading strategies: a) the physical orientation of the look on the pages, i.e. the way the eyes move across the pages and b) the processing of the text's contents.

Central reading	Reader attention orientated towards the center of the screen
Peripheral reading	Reader attention orientated towards the periphery of the screen
Linear reading	Reader reading from the upper left towards the lower right corner

Figure 2. Orientation reading strategies

Focus reading	The reader reads strategically for the information she seeks
Survey reading	The reader forms a general view of the text in front of her
Close reading	The reader reads the text closely and with attention paid to all details
Skimming	The reader reads the text to see what it is all about
Surfer's reading	The reader lets the text pass by following the itinerary lay out by a) the producer or b) whichever road that seems intriguing at the moment.

Figure 3. Contents reading strategies

I have evolved the categories through an analysis of the students' dialogues and interactions, and for the sake of a more comprehensive list, I have supplemented this analysis with a phenomenological analysis of my own reading strategies.

The *central reading strategy* can be compared to the way we read a picture and the way we focus in everyday life: right in front of us, at least until something which demands our attention happens next to us. Most professional company home pages are build up around the center of the screen. In this center the information that S_1 regards as the essential part of the message is situated. Note that the organization of information is due to the project of S_1. If S_2's project is not in the line with S_1's, S_2 has to take the bearings to the more peripheral parts of the screen – most company homepages place links to more remote topics in the peripheral areas of the screen. These are the information and

links the reader with the *peripheral strategy* is focused on. The third strategy called *linear reading strategy* is the traditional strategy used when reading a book, a newspaper article, a letter and so on.

The three orientation reading strategies are connected to and combined with the contents reading strategies. For instance linear reading can be done at different speed and then leads to *skimming* and *close reading* respectively. A central reading in combination with a peripheral reading can reflect a focus reading strategy. The *focus reading strategy* is my term for what happens when the reader tries to surf the direct way through a hypertext to a text with the contents that the reader intended to find. Focus reading differentiates from the survey reading strategy in the respect that the survey reading pays attention to what S_1 intends to communicate, while the person that focus read is not necessarily interested in what S_1 intends to say, but maybe search for something completely peripheral to the project of S_1 – which S_2 then might read very closely. Thus in the focus reading strategy it is not certain that the reader gets a general view of the text.

It is my thesis and interpretation that these strategies reflect different imaginations of S_1.

In the dialogue fragment in figure 4, Chris's centrally oriented surfers reading strategy meets Elisabeth's centrally and peripherally oriented focus reading. Chris has typed "Coca Cola" in AltaVista's search box and the link page shows the first 10 links, the first of them being to Coca-Cola.com.

At first Chris's attention is catched by the conspicuous balls changing shapes; he uses the central reading strategy. Elisabeth does the same to begin with, but her strategy proves to be focus reading, since she notices the word *partnership*; a word she associate to the danish word *partnere* which she in the preparation of the search has generated as a word to be searched for.

Elisabeth continues her focus – and evaluates the potential text; it reads "Youth Partnership" – and she says in low voice: "Uarh, I don't know", as it was not that kind of partnership she was after. But Chris undaunted clicks the link and Elisabeth tacitly withdraws her doubt.

1 Chris	I just go into dot com. Here. (*Clicks the top link in AltaVista's links page. The Coca-Cola home page appears*). Okayyye!
2 Inger	Ohh. Wauu.
3 Chris	Coke Music. (*Chris moves the mouse from one ball rhythmically growing and diminishing to the next. He and Inger read the names out loud by turns*)
4 Inger	Vanilie Coke, Oh!
5 Chris	American Idol.
6 Elisabeth	Partnership (*points to one of the circles named Youth Partnership*). Uarh, I don't know (*low voice*).
7 Chris	(*Clicks on Youth Partnership – and Elisabeth withdraws her doubt. The picture appears*) So let's see.
8 Elisabeth	Just maximize it now.
9 Chris	Oukay. Tiger Woods. (*A voice and some sounds are heard, Chris reads inaudible aloud from the page*).

10 Elisabeth	I don't think there is so much there. (*While Chris and Elisabeth are talking together, Inger is speaking in low voice, apparently to herself. Chris and Elisabeth look at the screen for other opportunities*).
11 Chris	Well, it is definitely not this we need.
12 Elisabeth	Should we try to click some of this up here? (*Chris moves the mouse from left to right in the top menu and stops at three fourths*)
13 Chris	(*Reads aloud*) "What do you think?" We can go into this.
14 Elisabeth	Let's try.
15 Chris	"Name", we'll just write mine. (*Starts to fill out a form where the users are asked to write their opinion about the site, the specific pages they have just visited and so on*).
16 Inger	Oh, disappointing (referring *to Chris writing his own name*).
17 Elisabeth	What do we need to write? What is the use of writing something there?
18 Chris	Well, it is because we send them something and then we get an answer. (*Looks at his watch*) No, we haven't got time for that in eh ... two minutes. We might as well forget that.

Figure 4. Reading strategies of Elisabeth and Chris, 6th grade.

On the next page Chris is immediately caught by the center of the screen again. He says: "Tiger Woods", a well known golf player who is pictured in the center of the screen, while Elisabeth forms a general view, she survey reads, and says: "I don't think there is so much there". Chris agrees and Elisabeth proposes that they shall periphery read: "Should we try to click some of this up here?" Now Chris reads linearly – moves the mouse from one link to the next – and apparently

he focus reads too, when he stops three fourths down the top menu at "What do you think" and assumes this to be a usable link: "We can go into this" (my conjecture is that Chris does not fully understand the meaning of the link text). Elisabeth accepts and Chris once again central reads: Chris suppose the form where he can write his opinion on the site to be a form where he can ask a question and get an answer from someone in the Coca-Cola company: "Well, it is because we send them something and then we get an answer".

I interpret Chris's imagination of S_1 as diffuse and vague; somehow metaphorised by the teacher willingly ready to answer the questions Chris asks.

Opposite to Chris's imagination stands Elisabeth's. She is evidently aware that S_1 does not share her project. She is not the intended addressee. So she uses a focus reading strategy to find into the areas of the hypertext where the answer to her question might be found. Chris is carrying a Type I-imagination, and Elisabeth a Type II-imagination of the communication situation in the categorization outlined in figure 7.

3. EVALUATION

Evaluation of contents and usability

Reading is not only determined by orientation and contents reading strategies, but is also conditioned by methods and criteria for evaluation of texts, especially when dealing with hypertexts; from the reader's point of view a hypertext can be conceived as constituted of one *actual* and a number of *potential texts*. The reader has the actual text in front of her and in this text there is a number of links represen-

ting potential texts to be evaluated for usability. The reader does rarely have the time or the energy to actualize (click on the link) or read them all – and therefore she must have methods for evaluating potential texts on the basis of a few features of the text, e.g. the text on the link and the close and more distant context, or, on a search machine's links page, the page title and the keywords-in-context presented.

When Chris saw the link "What do you think", representing the potential text asking for reader opinions, he evaluated it to be a link to a text where he could ask questions. Elisabeth accepted his evaluation in the first place but as opposed to Chris who did not reassess his evaluation when entering the actual page she changed her mind when evaluating the actual text. This observation supports the classification before of Chris's and Elisabeth's imaginations of communication situations.

In figure 5 I have outlined the method used when evaluating contents and usability of a potential and possible actual text. The outline is based on my analysis of the students evaluating texts, and, to get a more comprehensive outline, also on a phenomenological analysis of my own practice.

1. The reader arrives at a hyperlink where the context indicates relevancy to the reader.
2. The reader sets out a *hypothesis of the contents* of the imagined potential text in the light of the close and more distant context
    a) At a site the reader examines
       - the appearance (place, graphics, effects)
       - the text on the link
       - the description of the potential text, if any
       - the surrounding text
    b) At a search machine's links page the reader examines
       - the page title
       - the context of the keywords
       - the domain and the rest of the URL
3. The reader evaluates the imagined text against the background of her hypothesis.
4. The reader evaluates the actual text before she reads it closer.
    a) Examines form and appearance (graphics, layout, text volume, wording, spelling etc.)
    b) Looks for emphasized words, skims, surveys.

Figure 5. Method for evaluating potential and actual texts.

Evaluation of reliability and bias

It has eventually been widely acknowledged that reliability and bias in relation to the internet are issues which the students must be taught to handle as a major concern (cf. O'Sullivan and Scott, 2002). The students I interviewed did in no incident by themselves question the bias or reliability of the pages they visited. When I asked them if the page they visited was reliable or biased the majority of them were capable of doing a rudimentary analysis of the contents of the page, cf. Figure 6 where Tom is reading the text[2] that Katrine's friend, Pia, has her knowledge from. Tom notices the modality[3] of the text and uses that

observation to support an argument on the unreliability of the text he is reading.

Tom	"I *think* it has something to do with the fact that Coca-Cola..." They don't say that...
Louise	Try to scroll up again. I'll have to read it.
Michael	Yes.
Tom	"I *think* it has something to do with the fact that they get money for advertising for the Harry Potter movie."

Figure 6. Tom, 9th grade, analysis the reliability of a text.

This kind of textual analysis was common. It is focused on the content of the page, but in some cases the students also paid attention to the layout etc. Analysis of this kind comes under the Type III-imagination in figure 7.

The next step I was trying to lead the students through was to analyze the project, interests and qualifications of S_1 and how S_1 relates to O, S_2 and S_3. Furthermore when having a project not coincident with that of S_1, the reader must take the S_2 intended by S_1 into consideration; these intended addressees can be considered crucial S_3-s to the reader. Most of the student's knowledge of the internet was so rudimentary that they did not know how to carry out such an analysis. When I showed them how to find out who had produced a given page, a number of them was, however, capable of participating in an analysis of the producers' qualifications and projects, while getting insight into the producer's interests was difficult for them.

Typology of imagined communication situations

Type I. S_2 imagines a diffuse producer (often referred to as "them", even if S_1 is only one person). S_2 expects O for S_1 and the text to be the same as S_2 searches information of. The text is attributed authoritative status – it is written there so it must be true.
Type II. S_2 tries to imagine what the project of S_1 is and through that considers where in the hypertext the information is to be found.
Type III. As Type II, but including a critical assessment of S_1's qualifications and interests based on analysis of the content and appearance of the page.
Type IV. As Type III, but furthermore tries to find out what project, qualifications and interests S_1 has by searching contextual information on S_1 (e.g. by going to the first page in the hypertext hierarchy).

Figure 7. Typology of imagined communication situations

The typology in figure 7 can be understood as levels of comprehension. But in my opinion we do not for ever and in every situation carry the same type. The person carrying type IV in one situation (e.g. the critical TV viewer) can be carrying type I in another situation (e.g. the reliant lexicon reader).

4. SCAFFOLDING THE IMAGINATION

If the students shall be able to use the internet adequately it is necessary to work with their knowledge of which situation they are a part of. The teachers must develop their skills in analysing their student's concrete skills and competencies in order to know how to direct their efforts.

The next step is to reflect on how these competencies can be developed through education. When I showed the pupils the page from which Pia had her information, several of them were surprised – Chris went so far as to call her a liar. Being led to the observation of who is the producers of the information they had searched for and in some occasions believed, they were capable of participating in a discussion on the reliability of the page, and on the internet as a reliable source for information search. I consider this a good example of how a scaffolding can challenge the pupils in their zone of proximal development (cf. Vygotsky 1978).

Scaffolding as coined by Bruner (1978) is a pedagogical practice to be carried out by adults or more capable peers. "In this model, the novice reader or writer learns new skills in contexts where more skilled language users provide the support necessary to carry through unfamiliar tasks" (Applebee & Langer 1983:168).

I was not the only one unconsciously scaffolding. In the dialogue fragment in figure 4 Elisabeth is also performing what could be developed into an explicit method of scaffolding Chris. In utterance 10-13 Elisabeth is performing an analysis which Chris tries to imitate and participate in. This makes it possible for Chris to feel a part of the decisions being made – and eventually he will discover how the peripheral parts of the screen can contain relevant links.

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1   Cf. http://www.jeppe.bundsgaard.net/phd/udkast/delprojekter/elevinterview/opg2/
2   The text was written by a 13-year old Harry Potter fan: http://harrypotterfantasy.tripod.com/vidste du at....htm
3   I use the term *modality* in a wider sense than in traditional linguistics. In dialectical linguistics modality is considered one of three dimensions of a text (the others are deixis and metaphor). A text's modality is the way the text relate to the subject and the context (cf. Bang 2001).