

# Scribo: A Tool for Proactive Collaborative Teaching

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## Abstract

We present a piece of writing software *Scribo – A Research Question and Literature Search Guide*, 2004, written by ourselves: the teacher and director in Academic Writing Center at the Humanities Department, Lotte Rienecker and coordinator of library user education and research librarian in political science, Tina Buchtrup Pipa. The design of the software is intended to support and enhance the development of research questioning, information and literature search and the general process of research paper writing for student in university and college settings. In this paper the program is presented, how it functions through an interactive process of posing questions and tasks for the student by supplying information on and examples of formulation of the basic choices steering a student research design. The underlying concept of the genre ‘the research paper’ is presented and exemplified by one of the software’s examples. Notions of genre and of teaching genre as well as views on teaching information literacy are discussed and seen in the light of writing development and student motivation. Finally thoughts on collaborative e-learning and teaching are posed.

## 1 Background: Writing and individual literature (re)search at Danish Universities – Humanities and Social Sciences.

University degrees follow the BA/MA structure. Nearly all students do MA degrees, scheduled to 5 years. The scientific research paper is the predominant genre, and we have a long production time and long texts – often the writing curriculum consists of one 25-page paper per term, students chose their own subjects. Many students do empirical studies, whether it may be analysis of texts or of a collection of social data. Incorporating theories/methods is a requirement in exam syllabuses from the first research paper. Doing your own literature search is not expected until the BA project, and is sometimes restricted to parts of the required reference material.

Most university writing is graded – all writing is given much weight and is “high stakes” (Elbow 2000), but there are few opportunities to learn and get acculturated to writing and literature search methods, techniques and strategies. There are only very few writing programs or facilities of any kind, no student tutors, no general writing courses (except the ones we offer!). What we do have at Danish Universities is individual supervising of paper writing by discipline teachers, generally from 4th semester (BA project) and forth – feedback on drafts is usually offered.

There is no overall program for Information Literacy. Instruction to libraries and information search are to varying degrees incorporated into the discipline courses and introduced by discipline teachers below BA level. This is usually restricted to basic and practical aspects of knowledge of certain material types, concrete resources and local standards. In addition discipline specific and generic - non obligatory and non ECTS giving - courses are offered from institute, faculty and university libraries. Besides the first introduction the knowledge of these courses and attendance is low.

The genres of writing that students would need to master at the Department of Humanities, are:

Genres of Writing at Copenhagen University, Faculty of Humanities

	Semesters	Genres
BA program	1-3	Essays, (research papers) (1 – 15 p.)
BA project	4	Research paper, 25 p.
Master's program	5-9	Research papers 10 – 40p. Trainee reports, Reviews etc.
Thesis	10	Research paper (Monograph) 80 – 100p.
PhD	11-16	Research paper Monograph 1 - 300p.

An essay is defined as a sources/concepts/theory based, argumentative, point-driven paper, often based on definition, categorization, analysis, discussion. Focused, but not necessarily problem oriented.

A research paper is defined as a problem- and source based documentation of a piece of research.

A majority of research papers are empirical, i.e. contains analysis of data, applying scientific methods and procedures + methodological discussions, small-scale (!)

A minority of research papers are theoretical discussions.

The software Scribo is designed with the elements and the requirements of the research paper in mind.

After a presentation of the software contents, this paper will discuss what the software does and does not teach and how we view this in regards to empowering students.

## **2 The Software Scribo – a Research Question and Information-and-Literature Search Guide.**

Scribo's first edition was in 1993. Since then it has changed dramatically, and only really became a success in its latest version which differs from the previous in that it contains an information and literature search module and four commented examples of student papers. For this paper and demonstration a partial translation has been made, there is no full English version as yet.

The program consists of the following *parts*:

1. research question, subdivided
2. information and literature search and strategy part.
3. connection of these introductory steps to structuring and enhancing further steps.

There are six *functions* in the program:

1. Questions.
2. Note pad for drafting.
3. Explanations.
4. Advice.
5. Examples.
6. Dictionary.

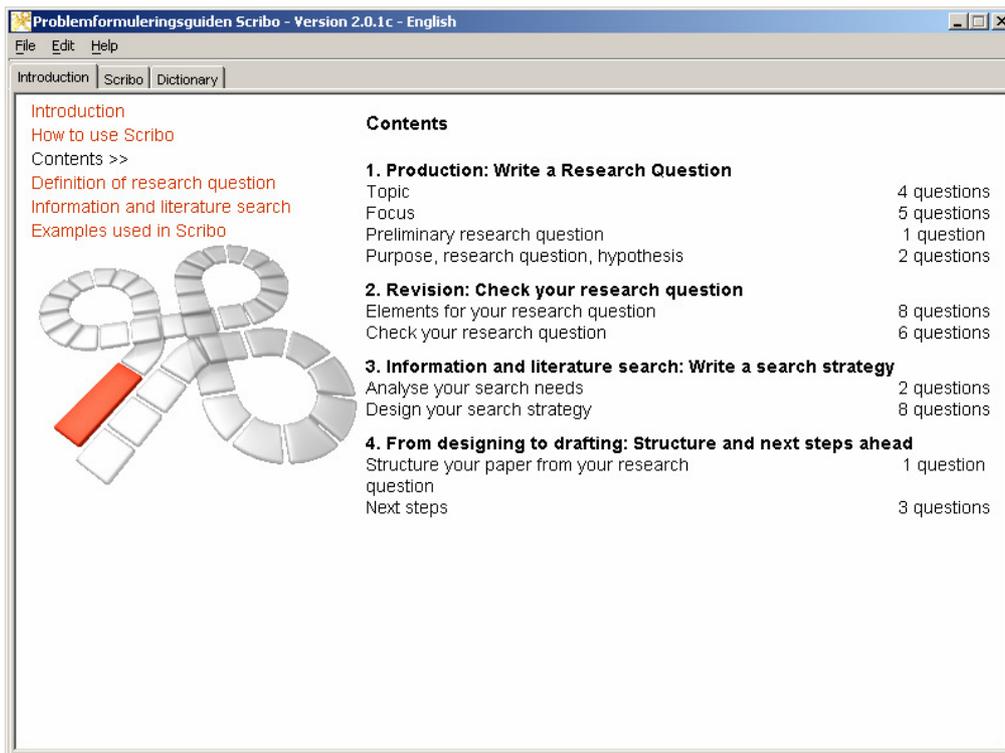


Fig. 1: Overview of Scribo. The 3-leaf clover navigates in the program, each point in the clover signifies a question/task.

The software contains 4 examples from genuine papers and theses. Their research question and literature search are commented on in separate boxes. In the selection of the exemplary papers a good research question has taken priority to an explicit search strategy and reference quality. The literature searches have been deducted from the chosen papers and alternative material and search strategies are suggested. Example B is translated for this demo. The chosen examples cover humanities and social sciences.

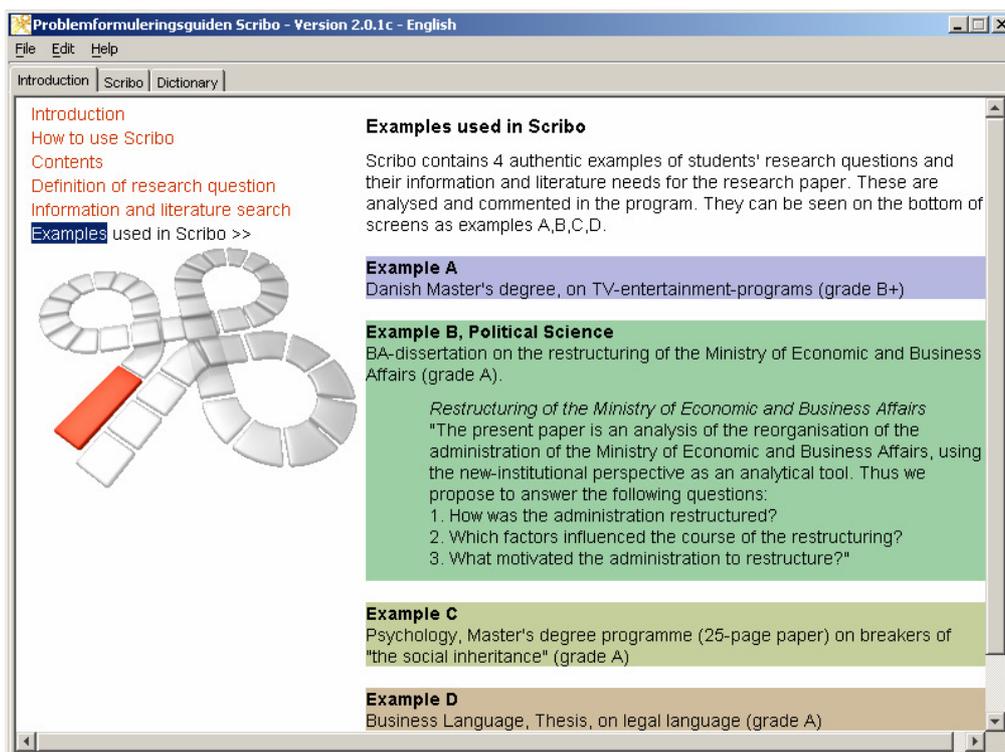


Fig. 2: Scribo's 4 examples. Only example B is fully translated in the demo version.

### 3 Use and users

The purpose of the program is to guide the writer from topic to research question and a literature search, and to teach the research paper genre and academic information literacy to users. It is intended as a preparation for and supplement to the teacher's supervision, not to supplant the work of the teachers, or that of librarians or writing center staff, although shortage of staff, out reach and easy access are important arguments for a supplement such as Scribo.

It often takes a student 2 – 3 hours to work through the program, topic in hand. The user works by writing, reading and at the end of the program gets 6 choices of export from the program: with/without the program questions, the literature search strategy alone etc.

The software is used widely by university students and others. It is sold as site licenses and individual CD-ROMs. This is a list of Higher Education-institutions in Denmark (and a single one in Norway) that have bought a site license (per june 2006.)

#### **Scribo Site License Owners in Danish Higher Education**

- University of Copenhagen: Humanities, Social Sciences, Law, Theology
- University of Århus, Computer Science, Center for Education Development Humanities
- University of Aalborg, Environmental Medicine
- University of Greenland
- Århus Business School
- Sandvika Business School, Norway
- Slagelse Business School Center
- Denmark's Pedagogical University
- The Royal Library, the National Library and Copenhagen University Library
- Denmark's Library School
- 5 Centers for Further Education
- 6 Nursing Schools
- 3 Social Education Colleges
- 2 Teacher Training Colleges
- Midwife College
- Police Academy
- The Finance Sector's Educational Center
- Crime Prevention Educational Center

The total number of students with access is 55.050.

The list shows that Scribo has a very wide use in the educational system and that it has primarily been of interest to fields within the humanistic and social sciences.

### 4 Scibo's Key Concepts

The pivotal point of the Scribo software (and the research paper!) is the research question. The word used in Danish (as in many other Northern/Germanic countries), is directly translated "problem formulation", emphasizing that there is supposed to be a *problem*, not just a question, as the focal point of a paper. There isn't always, but the more you focus on gaps in knowledge, the more the activity resembles research and becomes meaningful as such.

In the Dictionary part of Scribo, 'research question' is defined for the user like this:

#### **Research Question - Definition**

- a gap in "our" knowledge
- unfinished business in a field
- something still not or not satisfactorily
- categorised, characterised, mapped out
- explained
- analysed and interpreted
- discussed, mediated
- argued
- (re)evaluated

- constructed
  - acted upon
- and which *can* be treated with concepts, theories and methods (categories, models, measurements etc.)

In this definition of the research question with a point of departure in “a gap, unfinished business, something still not” etc. it is clear that we consider the specific information search skills to be central to the inspiration, argumentation for, and coining of a research problems. This requires that the student knows what is already known and published on the problem or related problems. The relation between the formulation of research questions and the development of an information and literature search strategy, we see as circular. Sources and what you want to do with them depend on and inform each other, and many writers need to reformulate focus and search strategy several times because of the status of either. Search method and literature/material choices co-determines the literature the researcher/student will be able to find and defines the question, the angles in which it can be dealt with and the possible arguments, documentations and/or solutions to the problem.

### The Research Question and the Information and Literature Search

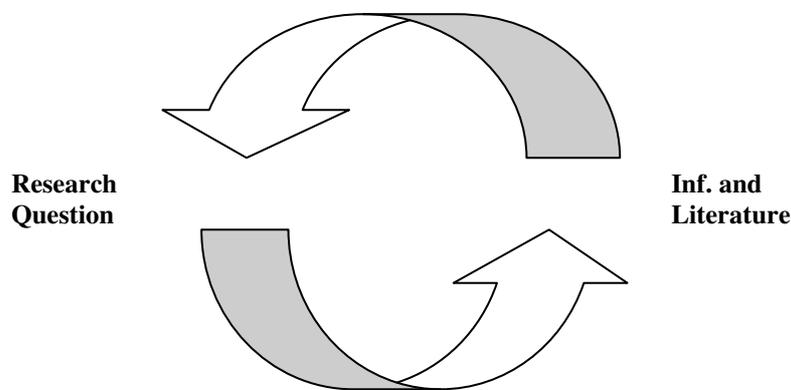


Fig. 3: The circular nature of the relation between the research question and the literature search.

*Systematism of the field* is a phrase used in the program: By that is meant any concepts/theories/ methods used for analysis, discussion etc. in a paper

### Systematisms/ Analytical Tools =

- categories
- concepts
- theories
- methods
- models

used in any discipline.

For Scribo's question to the student on choice of theories, example B' choice of theories and methods is commented by us in the program's examples' box as follows:

“Theoretically we build on the notion that acts and structures, on which actions are based, are constituted through praxis. Hence we consider that the new-institutional perspective is a suitable analytic tool”.

The writers of this paper name a series of theorists that will be included, and the choice of new-institutionalism is motivated further.

A model is being used for the case analysis, and the choice of model is also motivated:

“The Garbage Can-model contributes to identify central events and actors in the restructuring of the Ministry of Economic and Business Affairs”.

Theory functions as a frame for analysis and interpretation, whereas the “Garbage Can-model” is used as a tool for structuring the description of events in a context.

Nearly all questions/tasks in Scribo are accompanied by “Explanations” and the four running, commented “Examples” and “Advice and tips”, thus qualifying the Scribo software's exemplifications of the genre.

## 5 The Underlying Concepts of the Research Paper Genre

The underlying understanding of the crucial elements in a paper is expressed in this pentagon:

### The Research Paper - 5 basic questions

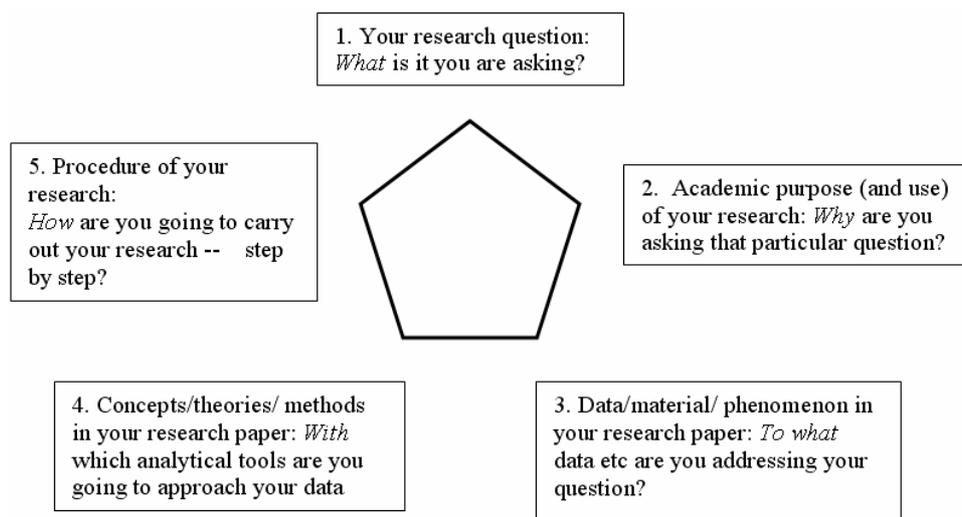


Fig. 4: The research paper pentagon.

Conventional basics of research papers is that the researcher poses a question or a thesis statement (1), with a purpose to solve – or at least address - a still unfinished issue in a field (2), addresses a specified phenomenon or set of data (in some cases this may be a theoretical construct, see below under Discussion papers) (3), uses discipline- or field specific concepts, theories and methods (4), and conducts the investigation through a series of procedures (5).

These five elements are present in almost any (well-functioning, conventional) research paper introduction, from first year university papers to doctoral theses.

The pentagon model is not in Scribo in its full form. because it was not yet developed when Scribo was released in 2004, but the model and the underlying understanding of the genre and its elements underpins the series of questions and tasks presented.

Below information from the example B paper’s introduction in Scribo is inserted into the 5 boxes of the pentagon.

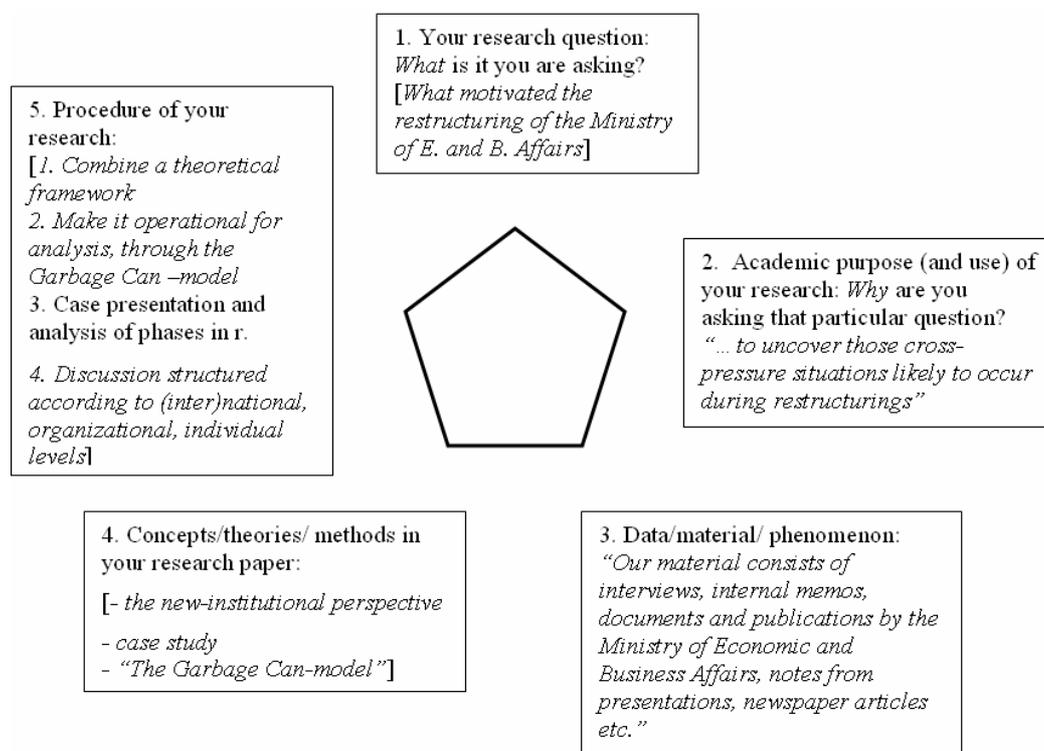


Fig. 5: Example B shown in the research paper pentagon.

## 5.1 Discussion Papers – a Subgenre within the Research Paper Genre

The sample paper here is an analysis paper, and those are by far the most common papers in Humanities and Social Sciences, but other variations of the research paper genre are discussion papers and construction papers, (in which you design a construction, as engineering papers might do).

In a discussion paper, two or more concepts/theories/methods are discussed. A discussion paper should follow the same basic structure as an analysis paper, i.e. the discussion should be conducted from a point of i.e. meta-theory, or just theory/concept/method. In a discussion paper, you may not have empirical data, but abstract concepts/theories in corners 3. and 4 in the model. In fact, many discussion papers turn out less than adequate because the vantage point from which the writer discusses is merely the writer’s common-sense discussion of theories among themselves, leaving no possibility for an analytical breaking down of elements to be discussed from a theoretical viewpoint, i.e. there is no concept from the discipline or wider field in corner 4, but merely a common-sense formulation à la “a discussion among Lyotard and Jameson on the definition of postmodernism”. Ideally, both discussions and constructions performed by students in higher education need to be informed by explicit principles (concepts, theories and methods) governing the discussions and constructions, hence an empty 4th corner will, at more advanced levels of study, reveal if an important element is lacking.

## The Research Paper – Data and Theory/Methods in Discussion Papers

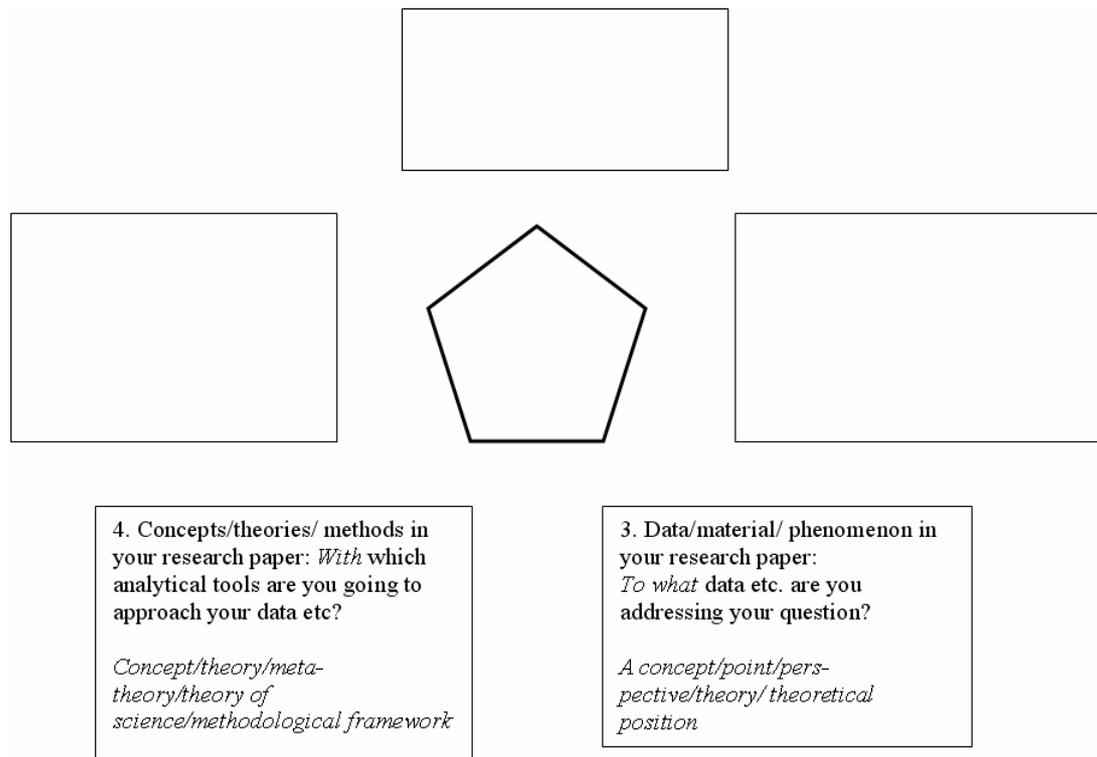


Fig. 6: The pentagon model as it applies to discussion papers.

In relation to the question of what can and must be taught in a discipline specific vs. generic context it is our experience that the genre of the research paper has the same basic elements across disciplines—what varies is content and language, and only specific resources and concrete practices such a specific reference standard etc. are discipline specific for Information Literacy. This view has recently been reinforced in working with an e-self-assessment test for university students in Information Literacy, where researcher, research librarians and librarians from different disciplines and faculties tried to identify discipline specific elements, but were unable to do so. (see [www.ubtesten.dk](http://www.ubtesten.dk) from fall 2006)

## 6 The Genre and the Information-and-Literature-Needs

The underlying understanding behind Scribo's literature search module is that the information and literature needs for a research paper can be broken down into the elements represented in the pentagon, and the pentagon is now used in the library courses and workshops for paper writers. (see also appendix 1)

## The Research Paper – Information and Literature Needs

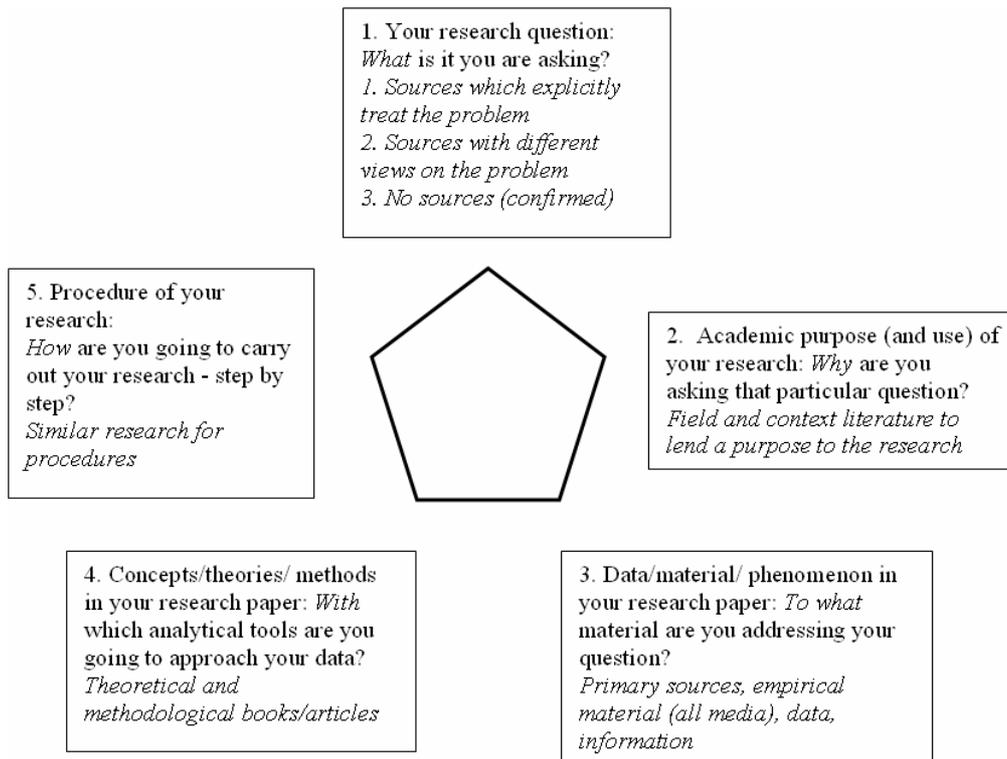


Fig. 7: A pentagon for information and literature needs.

A research question, an introduction can be broken down into needs for certain kinds of sources and a common mistake is not to separate these information needs and/or not to work methodically with finding specific academic search terms. Keywords for the search strategy are analysed and commented in the work-in-progress of the students in the course, and advice is offered for designing literature search strategies.

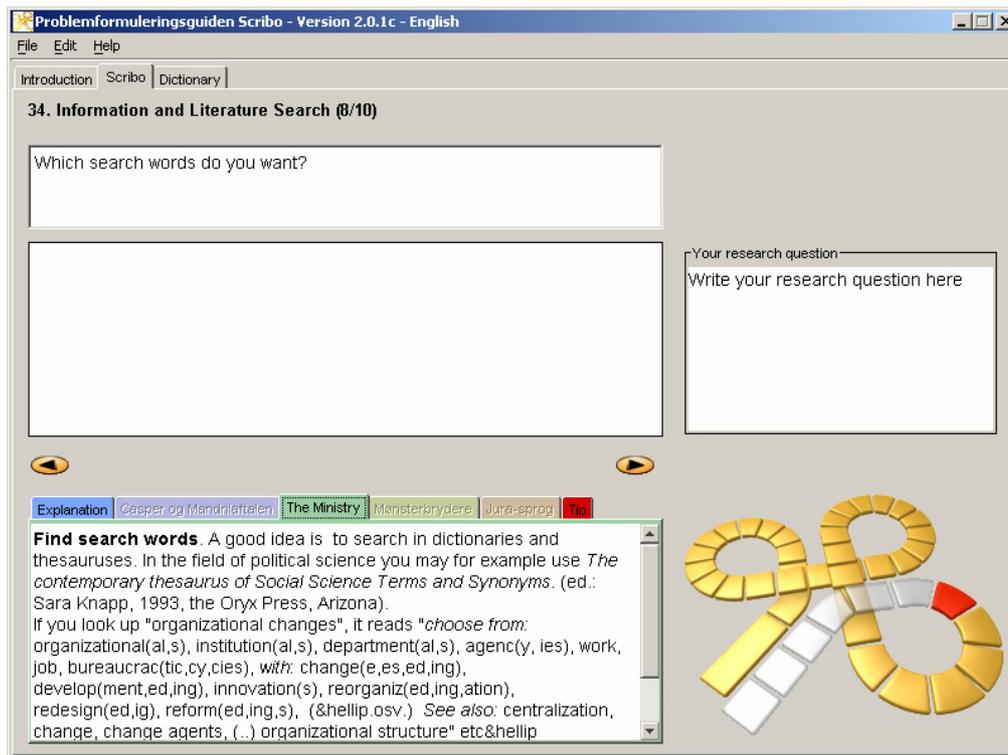


Fig. 8: Example analysis from the information and literature search module.

Similar to the comments to the 4 sample research questions and the use of concepts/theories/methods in the examples given by the Academic Writing Center supervisor (Rienecker), the research librarian (Pipa) comments on the literature searches conducted and opens up new possibilities: What you might want to do (emulate!) in a search position such as the ones exemplified (which we have chosen because they are representative of good, but not necessarily perfect(!) grade A papers), e.g:

Concepts need to be discipline/field-defined, not in everyday-lingo, because only field terminology may be subject to systematic information search. The term “restructuring” (of organisations) may be searched in a library database, but you will have trouble with the broader everyday term “change” – this term will result in too many meaningless hits. Write here as many search words as you can think of. Your advisor or your research librarian may help you with suitable search words later and qualify your choice of concepts.

In addition, inspiration to the literature search and strategy part is especially drawn from Kulthau (and in turn SWIM, an e-learning tutorial developed at Aalborg University Library) and Sconul models on Information Literacy in regards to a research and paper process (Kulthau 1993, Sconul 1999, SWIM has recently been launched in English, see <http://www.aub.aau.dk/swim2/1024/start.html>). Finally it is based on the Copenhagen University Library tutorials and teaching practice, here focused on a research question rather than a topic as basis for a literature search.

## 7 Using Scribo as a Teaching Tool: Large Group Scribo Tutorials

Scribo is mainly used as an individual tool on the university intranet. We hear that some teachers do demonstrations of the software in class to advocate the use. We (the authors) have done a number of demonstrations (sometimes up to 60 students) with the following activities:

- 60 – 75 min. of individual work, during which we are available for questions and help
- print your work
- 60 min. feedback in class on individual examples of research question + purpose, concepts/theories/methods, data/material + literature search strategy. Participants read aloud, and we all respond to the entire “connectedness” of the projected paper. The research librarian reacts specifically to the suggested search strategy, search words, resources etc.

From fall 2006 Scribo will also be introduced in newly launched master thesis workshops for social science students. These workshops are planned and marketed in a collaboration between the Copenhagen University Library and the pedagogical Center at the Faculty of the Social Sciences. The Center regularly does a “road show” to all the master thesis students at their institutes in the beginning of each semester. Here they give advice and the possibility to sign up for writing groups etc. They will announce the workshops, which will be taught by different research librarians. It is important that the literature search course is given meaning and importance by non-library university consultants or researchers/teachers; that the e-learning is presented conventionally and not just with a reference to a link and that other library staff is taking on the programme.

## **8 Lessons Learnt from Teaching Genre and Information Literacy with Scribo**

What we have learnt from using Scribo as a tool for teaching genre is the following: On a practical level, many users spend many hours with the program, reading every bit of information and every example before they write their answers. Many report to use the program only once, “then you sort of know what is supposed to go on in a paper, and you don’t need to see it again”. However others use Scribo for every new paper from the first to Ph.d. level.

The elements of an introduction and their order of appearance is not already known or obvious for those attending, even those in Masters Programs. Many experience the order of questions and the prompts to answer questions you did not feel prepared for as a lesson in what a supervisor or librarian might ask (or might be able to help with!), and what will be expected from the paper. Not being able to answer is a confrontation with the writer’s “empty boxes”, which in turn is raises awareness and a potential to do something about it.

The program was completely redone in 2004, featuring the two new elements 1) information and literature search and 2) the four commented examples. Lotte Rienecker (who was the single author of the first edition) believes that both these features have greatly increased the interest in the program. The literature search module connects a research library’s search tutorial to the writer’s own ongoing paper, and helps break down the research question into needs for specific kinds of sources, as well as give awareness to the methodological elements in applying and integrating information search and strategy into the paperwork and to the need to know of and how to use different search techniques and resources.

In a collaborative perspective working with a research librarian, has shown the writing consultant (Rienecker) that search for literature and information requires a degree of precision in terminology that effectively shapes those genres, which require a substantial literature background. We could only use examples of research questions with a terminology precise enough so that we could design a search strategy (for the commented examples) basis of it. Moreover, especially in the humanities, many research questions contain broad and imprecise key words, which are not instrumental for electronic searches and can sometimes be indicative of a too vague and unfocused problem idea. The very existence of the databases and the search engines, the very fact that a search all too easily renders thousands of hits, will prompt the student towards posing narrower questions, in fact researching more small scale and become explicitly aware of their own influence on coining the problem, perspective and possible analytical outcomes – or revert to asking the supervisor or the librarian what books are on their shelves. We also experience that the terminology open to a writer is shaped by library terminology logic, which may not be identical to the logic of the disciplines in question, nor to the writers. That way the knowledge society and its representatives: the research librarians, teach us to be more scientific, in the sense of being more precise in what we as student and researchers ask, and addressed to which knowledge bases. The librarian mediates what scientific searches demand, and what an information search demands will in it’s turn shape the way research questions can be posed.

From users, supervisors and potential buyers of Scribo, we hear that examples from genuine student papers are paramount, and from the reactions we hear, many users and their supervisors consider it very important that they can recognise examples in Scribo as ‘close to home’. Apparently, our ever-repeated stance that the elements of a paper (and of Information Literacy) are the same across disciplines is not readily accepted. Several representatives from the natural sciences are interested in Scribo only if we include examples from their fields. On the other hand that might just as well indicate that we need familiar examples in order to relate and “get the point”, as well as understand and learn things that are too complex on a more abstract level.

Finally we are convinced that this embedded and collaborative piece of e-learning present itself as relevant to the student, which means that many students will acquire skills, knowledge and competencies in Information Literacy that they would not otherwise have had the opportunity for or interest in. Embedding Information Literacy teaching in this case and for Copenhagen University Library is founded on strategic as well as pedagogical considerations. Integration and embeddedness supplies meaning and relevance to Information Literacy. In Scribo this is done simultaneously, you write, learn, plan and execute your literature search simultaneously.

## 9 Pros and cons – what is the point?

Are we stretching a model too far, adjusting the papers to the model and not the other way around? Scribo applies very well to social sciences, less so to philosophy or any other discipline where research papers may resemble essays, in that they may not be clearly methodological. We will hear students say: I don't have a method, I am doing an unsystematic review of sources, is that wrong? Moreover, it's true that not every research paper in the humanities needs to account for methods or have a problem at the base. But it does not hurt to be asked and to ask yourself – why do I have blanks in my replies? And even to ask your supervisor about it. Scribo is best adapted to *analysis* papers. It is difficult to build into a piece of software such important aspects of teaching writing as rhetorical awareness of specific purposes, formats, themes and audiences.

The goal of all writing development ultimately should be rhetorical awareness, rather than a mere allegiance to format and convention. Rienecker sees writing development in stages, (and quite often stuck in a stage). One can sometimes witness a stage of rigid formatting before more flexible text awareness evolves. The rigidly formatted papers are abhorred by many supervisors at universities, who fear that writers will get stuck at this developmental level as an academic writer – get stuck, because adhering to fixed formats is often enough to get by at university, but 'getting by' is not excellence, originality, thinking for yourself etc. What Rienecker as the writing expert has wanted to do in Scribo, is to address writers on a stage of a writing development where genre and format awareness is still an issue, where a sense of elements in the genre of the research paper is yet not wholly represented for the student. Pedagogically, it is called scaffolding, and the intention behind the software Scribo is to scaffold a process of design of the basic elements of the research paper. The same type of consideration applies to Information Literacy. Many researchers/teachers know by experience how to find and qualify information and literature, but are not explicitly aware of their own praxis and other methods and techniques. By giving different examples of how it can be done and illustrating what the information and literature search process necessarily consists of in order to do independent student research Scribo empowers the student user in a proactive manner, e.g. as opposed to thesis supervision which is in nature generally reactive.

Is it at all possible to teach academic writing, search skills (and other practical and intellectual competencies) by teaching genre and generic competencies across disciplines and external to the subjects taught? We say yes. The research paper is about using systematisms of a field to conduct an inquiry, a piece of research of the student's own, and at its best, it is a training in employing methods, concepts and theories as well as teaching the students information search skills and a sense of academic production of knowledge and academic integrity. These are general academic competencies. Teaching them separately (in supplement to subject-integrated) also gives focus to the field of knowledge, e.g. research question formulation, project planning and information literacy. This makes it possible to use and develop a language to speak of the specific skills and competencies that in turn helps students to be more aware of what is expected of them beyond the discipline specific curriculum. Discipline teachers benefit from this because it becomes clearer and more operational to work with, for instance in grading and supervising. Today much grading and supervision is based on unspoken conventions and too vague and subjective ideas.

In order to set further focus on the requirements and expectations to the students we (Academic Writing Center and Copenhagen University Library) are now launching a collaborative student paper contest for the Faculty of Humanities, fall 2006: "In Search of excellence", where prizes are given to the best paper in terms of writing/communicating, analytical and information competencies. The faculty dean has accepted to be in the panel of judges, which will add even more attention to the competencies as well as to the collaborative element.

What worries us with Scribo (and in textbooks on academic writing, also Rienecker's own), is the way that description of elements turn into prescription, seemingly beyond questioning. It becomes perhaps

too normative, more so than the teachers/supervisors/librarians in those fields will acknowledge. It is also obvious that Scribo does not teach genre differences or sub-genres within fields, adjusting to specific themes and audiences, it teaches the user that a paper is a paper, and then makes reservations: If this question or task is not relevant to your paper, leave it out, but ask your supervisor!

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