Literacy in Vocational Programs in Denmark:

How does literacy affect drop-out rates?

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In this paper, I will present a study of literacies in a field of practice, namely a Vocational Program, which is often considered much more practical than literary. In Denmark, only lower secondary education is mandatory, which means that everyone is required to attend the first 10 years of school. Attending upper secondary education is not required. In the past two decades however, changing Danish governments have tried to ensure that 95% of each cohort successfully complete a secondary education. However, only 80% of the 2010 cohort enrolled in secondary education. 36% attended the Danish 'Gymnasium', somewhat similar to high school, and 44% attended a Vocational Program. Vocational programs, a part of the upper secondary education, unfortunately, show very high drop-out rates. Drop-out rates appear to have stabilized at around 50%.

(These numbers vary over the years and the numbers shown here are the approximate numbers according to Ministry of Education and the The Economic Council of the Labour Movement (AE) (L. Andersen, 2011; Thorsen & Pedersen, 2011))

The students' reasons for dropping out have been studied in both small and large scale studies, and all though not all of these studies discuss the retention correlation with student skills and teaching, several of these studies have shown that the competences achieved in primary education are important, and literacy particularly so (Koudahl, 2005; Regeringsoplæg, 2005a, 2005b).

The Danish study PISA-Longitudinal identified a correlation between students' reading scores and their statistical likelihood for finishing any upper secondary education (D. Andersen, 2005).

Furthermore, according to reports from, among others, the Danish Evaluation Institute,
teachers report that students find texts complicated and the teaching goals implicit and unclear (EVA, 2004; Hedeboe, 2002; Juul, 2006).
Paradoxically, students at the vocational educations are left in charge of their own learning processes, unlike students in the academically oriented ‘Gymnasium’, which is characterized by a structure resembling traditional school and very well-defined learning objectives. Some teachers argue that the vocational programs have become too academic, which makes studying more difficult for the exact students that these programs were designed for (Cort, 2008; Juul, 2006; Krogdal & Andreasen, 2012).
Therefore I hold that these students’ literacy is just one among many reasons for the high drop-out rates, and that it is necessary to focus more on literacy teaching in primary education to meet the rapidly changing literacy requirements in the vocational training.

The primary aim of my project is to describe some of these literacy skills, referred to as literacies in Gee’s Discourses (Gee, 2007), and to suggest how a linguistically based literacy teaching in primary school can impart the literacy skills required in vocational programs. The secondary aim with my project is to design and test an analytical tool based on Systemic Functional Linguistics (SFL) and the Genre Theories (e.g. Halliday & Matthiessen, 2004; Martin, 2009; Martin & Rose, 2003, 2008).

My presentation in this paper mostly concerns the exploratory part of the project. I shall describe my observations in one of the vocational programs that I follow, but I will also briefly describe my analytical tool, which is still under development.

In this project, I use a couple of definitions: According to Barton and Hamilton, Literacy is a social practice that includes texts, literacy practices and literacy events, and teaching, therefore, is a social practice that takes place in the school domain. A study of literacies in vocational programs, then, is a study of applied texts, literacy practices and literacy events in these programs (Barton, 2007: 36; Barton & Hamilton, 2000: 7).
Language is an important part of text, literacy events and literacy practices in every domain, but language must always be seen in context, according to Gee, and therefore I study the literacies by means of social-semiotic linguistics, in which language is viewed as a system of choices in a specific context (Gee, 2007: ix).
In Systemic Functional Linguistics, or ‘SFL’, language produces meaning in several strata e.g. the (situational) contextual stratum, the semantic stratum and the lexico-grammatical stratum. In SFL, language has three meta-functions:
• The ‘ideational’, which is used to express knowing and experience about the world,
• The ‘interpersonal’, which is used to express the relation between those interacting, and
• The ‘textual’, which connects the two others and makes language useful
(The exact meaning of these terms differs between different authors. I primarily use the terms from Halliday’s work on SFL)
In my analysis of teaching as literacy events, I combine the ‘New Rhetoric’-approach with the SFL approach to genre (e.g. Chen, 2008; Devitt, 2008). My discussions in this respect, however, fall outside the scope of this presentation, and here genre is defined, quoted from Martin and Rose: “…different types of texts that enact various types of social context” (Martin & Rose, 2003: 8)
In my analysis of texts, I investigate lexical density and vocabulary, understood as choices of entities and processes understood as both domain- and genre specific (Martin & Rose, 2003: chapter 5). Later in this presentation, I will provide some examples of these choices of entities.

I combine Gee’s ‘Discourse’ (with a capital D) with the term ‘domain’ from Barton and Hamilton and with Hetmar’s term ‘way of culture’ (Barton, 2007; Barton & Hamilton, 2000; Hetmar, 2004).

According to Gee, language is socially situated, which means that, when we speak, what is important is language plus being the ‘right’ who doing the ‘right’ what (Gee, 2007: 127).

Discourse, according to Gee, is a domain characterized by the talking, writing, using, acting and interpreting of language and literacy in different ways. It is, in other words, an identity. Gee defines the ‘primary Discourse’ as the Discourse found at home and other very familiar and personalized surroundings, while secondary Discourses, of which several can exist, are found at work and school etc.

Gee argues that students have to learn the secondary Discourses through both acquisition and learning to develop a meta understanding of them and to become literate (Gee, 2007).

In her research of teaching literature in primary school, Hetmar’s uses the concept ‘domain’ in the same way Barton and Hamilton uses it, and she defines three different domains as important for a teaching situation in school. Note, however, that Hetmar does not use the word domain, but rather talks about ‘ways of culture’ (Hetmar, 2004).

As I understand this term, it means the same as domain, and Hetmar defines those three ‘ways of culture’ as

- The specialized way of culture which includes specialized literacy and a symmetrical communication, as when two plumbers discuss how to fix a faucet in a highly specialized language in which they refer to specialized texts.
- The unspecialized way of culture, such as when you and I would discuss how to fix the faucet using only our everyday language and common sense texts and anecdotes about others in similar situations.

In school, the two previous ‘ways of culture’ are merged into the school’s way of culture, which includes asymmetrical communication between teacher and students. As when students in a Vocational Program are taught about a faucet from a teacher, who knows how to fix it, for instance in a situation where there might be no faucet at all or the faucet is not actually broken. This in-school way of culture is bound to be, according to Hetmar, since there will always be an asymmetric relation of power between teacher and students at school.

Using the word ‘domain’ rather than Discourse, I call the three domains in the literacy events I studied ‘everyday domain’, ‘specialized domains’ and ‘school domain’.

The term ‘school domain’ is translated from the Danish and Norwegian term ‘skolsk domæne’ and denotes, according to Hetmar, the domain or Discourse ‘inside School’ (Hetmar, 2004). The domains are not just physical ‘places’ but rather a way of doing, being, acting and talking that makes you belong to the domain.
In the model here, the Specialized domain includes Specialized literacies, the everyday domain includes everyday literacies and the school domain includes in-school literacies in the same way as Hetmar describes it. According to Gee and Hetmar, students carry (parts of) their primary and secondary Discourses with them into the school domain (Gee, 2007; Hetmar, 2004).

I analyzed my data by means of an analytical framework based on SFL, and I view the texts from the (situational) contextual stratum. Since literacies occur in specific Discourses, my analysis is discursive and the analytical tool is used along with standard terms from SFL. The study concerns the ideational meta-function as the one to express experience and knowledge of the world, i.e. as choices of terms that define the domains mentioned above (Martin & Rose, 2003).

I focus on vocabulary, meaning the choice of entities and processes, processes being an expression from SFL for verbs and categorized as either material, relational, verbal or mental, I needed no further distinction.

I categorized entities as either ‘pronouns’, ‘everyday domain’ or ‘specialized domain’ nouns, and ‘nouns from the school domain’. Every-day and specialized nouns were further categorized as either ‘concrete’, ‘abstract’ or ‘nominalized’. This structure was inspired by, but is not identical with, those introduced by Martin and Rose and Hetmar. While Martin and Rose distinguishes between specific and abstract, I found in my work that a distinction between everyday and specialized entities seemed more appropriate, since, I, unlike Martin and Rose, find that both everyday and specialized language can be abstract and concrete, and both may use metaphorisations as nominalisations, which are considered the most abstract of entities (Hetmar, 2011: 47; Martin & Rose, 2003: 114).

This classification allows me to distinguish between vocabulary belonging to the everyday domain, the specialized domains and the school domain. The result is an analytical tool, which I am currently trying out in my analyses of texts from the vocational programs. My categorizations are not without problems, but a full discussion about these problems fall outside the scope of this presentation. For now, I shall just assert that each entity must be
seen and defined in the specific context (Edling, 2006). For my analysis, I use the program UAM Corpus Tool, which allows me to color code transcripts, photos, diagrams etc. in any hierarchy I want. The way I color code is shown in this slide:

In the following, I shall give you a few examples from specific literacy events and the texts involved. The literacy events were observed in the course of 8 lessons from an introductory course for carpentry students about safety at work. This class is mandatory for all students in this particular vocational program. The group I studied comprised 16 young men, half of whom had an immigrant background. The mixed ethnicity of the group led to certain challenges, which, while outside the scope of my project, did impact the teaching. The material I study includes the texts read and/or written by the students and the discussions and teaching that takes place during the lessons. This was audio recorded. The students are supposed to read a variety of texts in a compendium that the teacher had put together. These texts include some flyers and brochures, printed photos, drawings and diagrams from various official sources as unions, safety-at work-organizations etc., and texts produced by the teacher, most of which were more or less obviously copied from the Internet. In the lessons, students were given forms to fill out if they had an accident at work. The texts varied in length, from half a page to 2½ pages.

I found that, for this particular literacy event, texts are specialized, but also that they, surprisingly, are dominated by specialized concretes. When I combined the data from the different texts, I found that entities from the specialized domain accounts for 63% of all entities in the texts, whereas entities from the everyday domain accounts for 24%. The rest are 7% entities from the in-school domain and 5% pronouns. Solely looking at the specialized domain, I find that 60% entities are concretes, 20 % abstract and 20% nominalizations, which tells us that the texts are specialized but concrete. It is puzzling that specialized texts as these are used in the school domain, since they would be more meaningful in specialized domains where these concrete entities could actually be pointed to, touched and seen.
How does the teacher cope with this?

I found that the teacher used a specific genre to mediate between the different domains that are at play in the teaching situation: He used what is called Personal Recount, which is a genre that has a 'point', and that Martin and Rose says: "...functions in a variety of social contexts to share experiences and attitudes of all kinds" (Martin & Rose, 2003: 51). In this case, the Personal Recounts contains more everyday entities and fewer specialized entities, and generally comprises a much more concrete vocabulary. This was even more pronounced for the students, when the teacher encouraged them to produce a Personal Recount. As you can see in the figures below, their vocabulary was primarily chosen from the everyday domain and was very concrete, with no use of a more abstract vocabulary at all.

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<thead>
<tr>
<th>Pronouns</th>
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<tbody>
<tr>
<td>Everyday concrete</td>
<td>5 %</td>
<td>6 %</td>
<td>18 %</td>
</tr>
<tr>
<td>Everyday abstract</td>
<td>15 %</td>
<td>30 %</td>
<td>41 %</td>
</tr>
<tr>
<td>Everyday nom.</td>
<td>7 %</td>
<td>5 %</td>
<td>47 %</td>
</tr>
<tr>
<td>Specialized conr.</td>
<td>2 %</td>
<td>1 %</td>
<td>0 %</td>
</tr>
<tr>
<td>Specialized abstr.</td>
<td>15 %</td>
<td>5 %</td>
<td>6 %</td>
</tr>
<tr>
<td>Specialized nom.</td>
<td>38 %</td>
<td>44 %</td>
<td>35 %</td>
</tr>
<tr>
<td>In-school</td>
<td>12 %</td>
<td>6 %</td>
<td>0 %</td>
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<tr>
<td></td>
<td>13 %</td>
<td>3 %</td>
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As seen in the next figure, the Personal Recounts are used several times during the lessons:

The students draw upon their own experiences, and try to produce Recounts, but in doing so they use an everyday and concrete vocabulary. In response, the teacher uses language from different domains more fitting the genre, and thereby mediates between the domains. This phenomenon was described by Ross Collin in the Journal of Literacy Research. He called it “making genres function as contact zones between Discourses” (Collin, 2012: 77)

I find that the Personal Recount works as a contact zone between the specialized, the everyday and the in-school domain, and help students understand the heavily specialized texts they are meant to read for their course. The heavily specialized texts bring the specialized domain into the classroom, and the Recounts allow the students to draw upon their personal experiences, both from their everyday and specialized domains.

Since my study is still in progress, my conclusions are preliminary:
1: The written VP texts are very dense and are dominated by concrete specialized entities (nouns), with just a few abstract entities here and there. Processes are predominantly relational and material.
2: the VP teacher try to ‘connect’ the specialized domains with the everyday domain by using a language with expressions from both domains, whereas students tend to use a more everyday domain vocabulary.
3: VP teachers can use different genres, e.g. ‘Personal Recounts’, to ‘drag’ the specialized domain into the school domain, or to make a contact zone between the specialized and the everyday domain. In this way, they try to hold on to what these educations are supposed to be, i.e. based on practical training in specialized domains.

My study shows that the analytical tool was useful for distinguishing between vocabulary from different domains.
The educational importance of this small-scale qualitative study is that it shows that teaching supposed to connect the specialized domains with the everyday domain in a school domain should use language from both domains.

This study concerns literacy in an arena which is rarely considered a literate area, but rather as a ‘practical’ area. My interpretation of literacies as constituting domains shows that
literacies are also important in this arena where the specialized domain exists in the students’ awareness per se, and that further study is required to determine how primary education can support these advanced literacies.

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