

Employability of Swedish Teacher Student Alumni

ABSTRACT

In recent years, “employability” has become an increasingly central concept in higher education, in no small part since it constitutes an important aspect of the Bologna Process. The project “Teachers’ employability” is a project carried out on behalf of the Faculty of Teacher Education at Umeå University – one of the major providers of teacher education in Sweden – and is a part of a broader university effort to evaluate and increase employability. The aim of the project is to examine the situation of the university’s teacher students after graduation, as well as to find out how the former students and their employers view their education.

The study is based on the longitudinal individual database ASTRID, questionnaires and interviews. This paper reports findings from the project, focusing on 1) employment situation, income development and mobility patterns of recent alumni (class of 2000) and 2) primary employers’ (school leaders) view of the quality and usefulness of the present teacher education curriculum. While employability is generally high, there are significant differences in career paths and income development, depending on for instance type of degree and place of residence. The interviews with school leaders reveal that although the present curriculum is perceived to have certain general limitations, it is viewed as more suited for pre-school rather than comprehensive school and gymnasium teacher education.

Keywords: Employability, Curricula, Databases, Interviews, School leaders, Sweden

INTRODUCTION

In the early 2000s, “employability” has become an increasingly central concept in higher education. In Europe it constitutes an important aspect of the Bologna Process, which Sweden joined the 1st of July 2007. This paper is based on a project on “Teachers’ employability” carried out at Umeå University, one of the major providers of teacher education in Sweden (Figure 1). The aim of the project, carried out in 2007 and which will be finally reported in April 2008, is to examine the situation of graduated teacher students of this university and the perceptions of the primary employers – school leaders – on their employability.

For this purpose, quantitative and qualitative data were collected from national statistics, questionnaires and interviews. Broad and deep data, organized in an individual longitudinal database, ASTRID, were used to examine the relationships between education, mobility, and position in the labour market for former students graduated in 1990, 1995, 2000 and 2001.



Figure 1. Umeå University's geographical location.

Perceived effects of the new national 2001 teacher education programme, and the employability of recently graduated teachers, were studied by questionnaires and interviews directed to school leaders. Further, and with the aim to explore and distinguish between perceived effects on the employability of different categories of graduated teachers, and who conducted their studies within former and current teacher education programmes, questionnaires were directed to former students, graduated in 2001 and 2006. These two sets of studies were carried out between April and September 2007.

This paper reports findings from the ongoing project, focusing on 1) employment situation, income development and mobility patterns of recent alumni, graduated in 2000 and 2) the views of school leaders of the quality and usefulness of the current 2001 teacher education curriculum, i.e., its impact on the employability of graduated students.

LONGITUDINAL FOLLOW-UP OF 2000 TEACHER STUDENT GRADUATES

In this section, graduated teacher students' employment status, income development and mobility patterns after graduation is presented. Using the longitudinal individual database ASTRID, the situation for teacher students that graduated from Umeå University 2000 was followed until 2005, as long as the ASTRID database presently allows. The database ASTRID is maintained by the Department of Social and Economic Geography at Umeå University. Its main asset is individual register data from Statistics Sweden (SCB). The database covers the Swedish population 1985–2005 in considerable detail, e.g., with respect to geographical location, education level, employment status and incomes.

Using the ASTRID database, 555 teacher students that graduated 2000 were identified. This constitutes most, if not exactly all, teacher students that graduated from Umeå University that particular year. The majority, 79%, were women. Average age at graduation was 32 years, while the median age was slightly lower, 28 years. Concerning place of origin, 68% were born in Northern Sweden (of which 32% in Västerbotten, the county where Umeå University is located) (cf. Figure 1). Of the remaining 32%, 4% were born in a country other than Sweden.

In using the ASTRID database to examine graduated teacher students' subsequent employability, three different definitions of the concept has been utilized. In the first, most general definition, employability is defined as having a work income that exceeds social benefits and other non-work related income. However, such employment may consist of tasks that to varying degrees are related to the occupation the concerned graduated student is educated for. Therefore, a second definition is employed based the first definition, but limited to teaching duties of some kind. The third, most precise definition also requires employment according the first definition, but with teaching duties more closely matching the education. The evaluation of employability according to the second and third definition is based on the Swedish Standard Classification of Occupations (SSYK). The lack of highly detailed work descriptions in this classification means that the third definition should be understood as for instance a gymnasium teacher that works as gymnasium teacher, even if he or she wholly or partly is teaching the “wrong” subjects. In addition to the occupational group classification, a modified version of the Swedish Standard Industrial Classification (SNI) has been utilized to examine at what kind of workplaces the alumni are employed.

Mobility, employability and incomes after graduation

Higher education and employment are related to migration in many different ways. Compared to other groups, individuals with a university education exhibit a comparatively high rate of migration (Malmberg, Sandberg & Westin, 2005). In many cases, graduation from a university college or university is more or less directly followed by migration from the place of study. Although recent studies (e.g., Lundholm, 2007) have shown that considerations other than employment are increasingly important for migration, migration decisions are still largely made for labour market reasons. Hence, soon after graduation, it can be expected that many teacher students move from the place of study.

Figure 2 shows the registered place of residence at the end of the years 2000–2005. It may seem surprising that so many are registered in places outside of the Umeå local labour market region the year of graduation. On the one hand, this reflects that many examined students actually moved during that particular year. On the other hand, in some cases the explanation may be commuting students or simply a neglect to register at the place of study. Nevertheless, a clear tendency is that, over time, more and more graduated teacher students move from the Umeå local labour market region to the rest of Northern Sweden and other parts of Sweden. The other graduated teacher students cohorts examined in the project (the classes of 1990, 1995 and 2001) exhibit similar migration patterns (Mattsson & Strömgren, forthcoming). The graduated teacher students' geographical origin plays an important part for their subsequent migration patterns. Of the 2000 graduates born in Northern Sweden, 88% are located there five years after graduation compared to 25% for those born in other parts of the country.

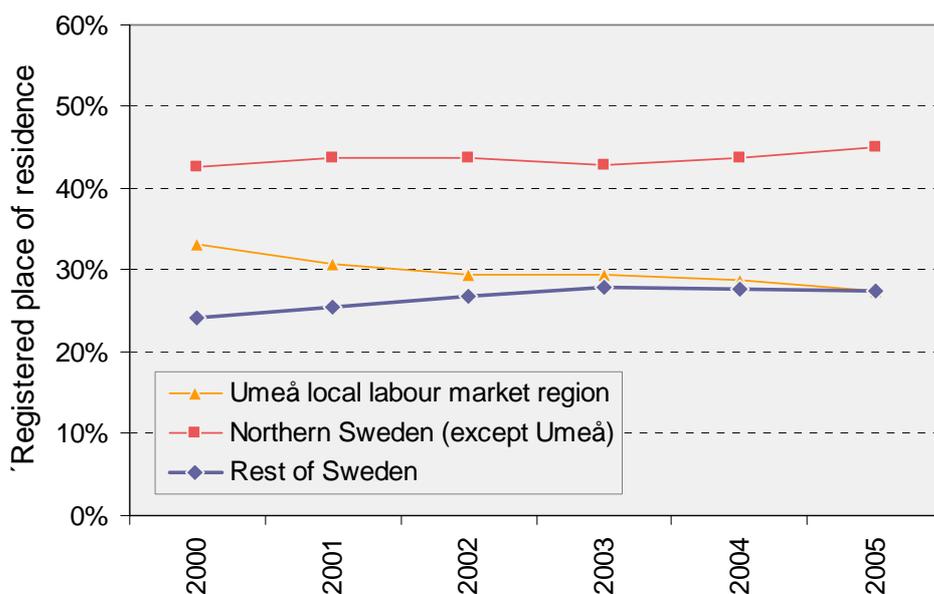


Figure 2. Registered place of residence 2000–2005.

Not surprisingly, the “employability” of the graduated teacher students depends on how the concept is defined and measured. Utilizing the first definition of employability, i.e., a work income exceeding non-work related income, employability is 95% 2005, five years after graduation. Among those teacher student graduates, 80% were working as teachers of some kind (i.e., employability according to the second definition). In certain parts of Sweden, particularly in the south and among others the counties containing the two largest metropolitan areas of Stockholm and Gothenburg (see Figure 1), a particularly high degree of the alumni are employed in non-teaching related professions. For those teacher student alumni where the type of education can be determined with a high degree of certainty, it is possible to also examine whether they work in the teaching profession they are specifically educated for (i.e., employability according to the third definition). As Table I reveals, graduated pre-school teachers are most likely to work in a teaching profession matching their education. Although pre-school teacher students thus are especially likely to find work within their particular field of study, other teacher education students exhibit a wider range of teaching employment. Graduated gymnasium teachers, which are least likely to have an occupation matching their education, instead largely work as some other form of teacher, primarily comprehensive school teacher or teacher at an institute for higher education (university college or university). It should be noted that the category “other occupation” includes employment in a school, but as school leader rather than teacher. In 2005, there were eight school leaders (five in a comprehensive school and three in a gymnasium) with varying educational background, primarily special education teacher education background.

Table I. Teacher education direction by occupation 2005.

Education	Teaching occupation		Other occupation
	<i>Matches education</i>	<i>Other teaching</i>	
Pre-school teacher	85%	0%	15%
Comprehensive school teacher	73%	16%	11%
Gymnasium school teacher	60%	26%	14%
Special education teacher	72%	12%	16%

According to the first definition of employability (i.e., a work income greater than non-work related income), as many as 87% of the teacher students are already employed the year of graduation, compared to 36% the year before. The corresponding figure for 1999 is 97%. Although these figures may seem surprisingly high, it should be kept in mind that they just represent a work income from any occupation, small or large, exceeding social transfers and other non-work related income. Not surprisingly, actual work income also exhibits a substantial increase the years around time of graduation: an increase with 113% between 1999 and 2000 and a 45% increase between 2000 and 2001.

There are differences in work income depending on gender, line of work and place of residence. In 2003, average yearly salary was 11% higher for the male teacher student graduates, while in 2005 the wage gap had increased to 17%. Figure 3, which displays the average yearly salary by workplace type between 2000 and 2005, shows that for all years, alumni not working in learning institutions have higher average salaries. There are some notable geographical differences as well. For instance, the county of Västerbotten exhibit lower teacher wages than the rest of Northern Sweden. Certain counties in Southern Sweden, for instance Stockholm, exhibit particularly high wages in non-teaching professions (cf. Figure 1).

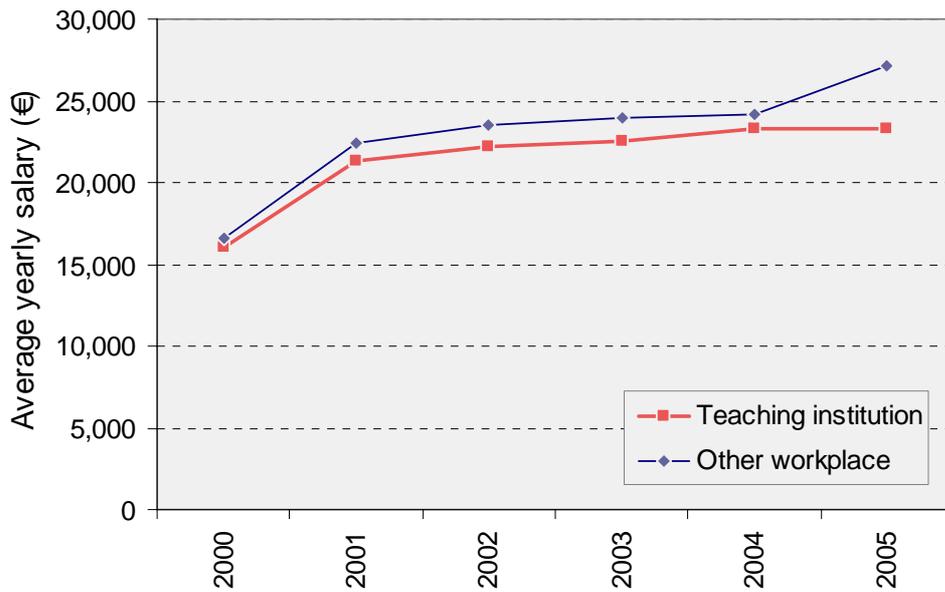


Figure 3. Average yearly salary (€) 2000–2005 by workplace type.

The remaining part of this section looks at alumni employment in 2005 in more detail. Using the workplace type and occupational group classifications, alumni statistics for the ten most common workplaces (Table II) and occupations (Table III) are presented. For each workplace/occupation, the tables present the number of alumni employed, their mean age and the share of women as well as average yearly salary (€) and the corresponding standard deviation. Workplaces and occupations related to teaching are highlighted in grey.

Among the teaching occupations (Table III), women are especially predominant among pre-school and special education teachers. The highest average wages can be found among special education, higher education and other teaching professionals. In this context, it should be noted that special teacher education is a further higher education programme directed to previously graduated teachers. Thus, such graduates tend to be comparatively old and are likely to have previous working experience as teachers.

Table II. Alumni statistics for the ten most common workplace types 2005. (Workplaces related to teaching are highlighted in grey.)

Workplace type	Number	Mean age	Women	Average yearly salary (€)	Standard deviation
Comprehensive school	282	38	82%	23,336	8,578
Gymnasium	73	36	74%	24,318	8,991
Pre-school	44	32	91%	16,692	8,716
University college or university	23	44	70%	27,706	8,154
Other teaching institution	19	40	74%	28,306	10,403
Administration	16	44	81%	29,160	8,953
Care service	15	36	73%	21,478	9,113
Health care	11	46	100%	28,083	13,638
Interest organization	5	31	100%	23,644	8,364
Retail	5	30	60%	16,228	6,784

Table III. Alumni statistics for the ten most common occupational groups 2005. (Occupations related to teaching are highlighted in grey.)

Occupational group	Number	Mean age	Women	Average yearly salary (€)	Standard deviation
Primary education teaching professionals	158	34	75%	22,200	8,533
Secondary education teaching professionals (i.e., gymnasium teachers)	102	36	76%	22,083	8,339
Pre-primary education teaching professionals	79	33	82%	18,771	8,141
Special education teaching professionals	78	49	95%	28,496	6,198
College, university and higher education teaching professionals	23	43	74%	26,602	8,874
Personal care and related workers	10	32	80%	17,133	9,758
Production and operations managers	9	49	89%	42,195	5,894
Other teaching professionals	8	42	63%	27,365	9,665
Public service administrative professionals	8	36	88%	28,078	9,177
Business professionals	6	36	50%	29,760	17,911

Graduated teacher students not working in teaching institutions are most commonly employed in workplaces concerned with administration, care service and health care (Table II). The most common non-teaching occupations (Table III) are personal care and related workers, public service administrative professionals, production and operations managers and business professionals. The occupational group production and operations managers includes the already mentioned eight alumni working as school leaders. The wage difference between the non-teaching related workplace types and occupations is larger than between the teaching-related ones. However, this would not have been the case for occupations, had school leader been considered a teaching-related profession. On the other hand, there are some other non-teaching related workplaces and occupations where average salaries are particularly high, such as the occupations computing professionals and physical and engineering science technicians.

In the following section, the paper reports on the questionnaire and interview study directed to school leaders. For this purpose, the current Swedish teacher education policy, its structures, and student recruitment patterns are first clarified.

PERSPECTIVES ON THE EFFECTS OF THE 2001 TEACHER EDUCATION REFORM

Since 2001 “teacher education” is used to refer to all teacher education and pedagogical professional pathways aimed at work in comprehensive school, gymnasium, pre-school, and youth and day-care centres (Governmental bill 1999/2000: 135). A key policy aim of the 2001 teacher education programme is to increase the employability of graduated students, on the basis of wider and general competencies for all, in combination with a high degree of individually chosen contents of studies. Based on the national framework, local structures for teacher education are outlined and implemented at 26 universities and university colleges in the country. According to the idea of goal-steering, the curriculum and the contents of courses thus vary between the establishments.

The view on knowledge which underpins the 2001 teacher education reform is clarified in detail in the preceding state report (SOU 1999:63, p. 57–59). It is for example argued that knowledge is created and related to a particular time and place, or culture. Within this socio-cultural perspective, which can further be related to Vygotsky (Vygotsky, 1978; Kozulin, 1996), the construction of knowledge is seen to be related to individuals’ previous experiences, and collectively constructed in meetings between individuals (see also Bourdieu, 1991; Lave & Wenger, 1991; Säljö, 2000).

The 2001 national structures include the creation of a new teacher education programme for undergraduate studies to be closely linked to research and postgraduate studies, and the establishment of a new research area for teacher education. All tracks of teacher education qualify graduated students for entrance to a PhD programme, which prior to the reform was not generally accessible for teacher students directed to teaching in comprehensive school and pre-school. In order to provide a common knowledge base for future teachers of various school stages, and to bridge traditional gaps between different teacher groups, a general field of studies (GFS), of 18 months full time studies is directed to all students. This professionally based field covers for example curriculum studies, democratic values including gender equity, special needs education, teaching as reflective practice, theories on learning, and child/youth development, perspectives on class, gender, ethnicity and information technology. At the time of data collection for this study, the 2001 teacher education programme followed the structures shown in Table IV.

Table IV. National structure of the 2001 teacher education undergraduate programme.

Teaching orientation	Time of study
Pre-school (ages 1–5), pre-school class (6 year olds)	210 ETCS (including GFS); 3½ years
Youth leisure centre (ages 7–12)	210 ETCS (including GFS); 3½ years
Early years of comprehensive school (ages approximately 7–12)*	210 ETCS (including GFS); 3½ years
Late years of comprehensive school (ages approximately 13–15)**	270–330 ETCS (including GFS); 4½ years
Gymnasium (ages 16–19)	270–330 ETCS (including GFS); 4½ years
Vocational subjects	180 ETCS (including GFS); 3 years

* Local municipality and/or school leader decision on the age level of teaching for teachers oriented to early years.

** Similarly, local decisions on the age level of teaching for teachers oriented to late years.

Further, and to attract more students, a flexible system of tracks for different teacher orientations is provided, which also differs between the local teacher education providers. Thus, the individual student chooses the contents of studies to a large extent. Moreover, the reform includes the introduction of one teacher exam, which replaces previous eight exams for teachers specializing in different school subjects, or areas of knowledge. In the exam document, locally designed by each university, the teaching orientation in terms of school level and the courses of studies of the individual student shall be clarified.

The first students of the 2001 programme graduated in 2005 and 2006, and were about 8,500 students each year (National Agency for Higher Education, 2007). At Umeå University, about 500 teacher students graduated each of those years. The majority of teacher students are women who nationally make up for over 80% of the graduated students (National Agency for Higher Education, 2007). This gender division also applies for Umeå University. Large proportions of women go for teaching directed to the young, but also for the older school pupils at gymnasium level. In 2005 women constituted 96% of graduated students with pre-school orientation, and 88% with orientation to teaching in the early years of comprehensive school. Among teachers for gymnasium level, women constituted 63% of the graduated students. The highest proportion of men, 37%, graduated with a double exam for teaching in the late years of comprehensive school and the gymnasium.

Evaluations of the 2001 teacher education programme

National evaluations and reports on the 2001 teacher education reform have pointed to various problems connected to the new structures. What is particularly noticed by the Swedish National Agency of Higher Education (2005, 2006a, 2006b, 2006c) and the two major teacher unions (National Union of Teachers in Sweden & Swedish Teachers' Union, 2006; National Union of Teachers in Sweden, 2004, 2007a, 2007b), and also by a major teacher student union (Student Union of the

National Union of Swedish Teachers, 2007), is that equal standards of teacher education are not obtained from the different higher education establishments. This is considered to be due to the high degree of decentralisation of teacher education, and the following differences in the interpretations of the national framework by the local institutions. An example of this effect is that the exam diplomas vary a lot between the institutions. The policy of one exam for all teachers proved in fact to be constituted by 379 different types of diplomas for 3,479 graduated students (National Union of Teachers in Sweden, 2007b). Further, different exam diplomas are provided for similar educational tracks for studies carried out at different establishments. What has also been noticed as a weakness, and which applies for graduated teachers directed to teaching the young, is a general lack of substantial knowledge for teaching the basic skills of reading and writing, and Mathematics. Moreover, and contrary to the suggestions of policy makers, the freedom of choice of the students, have not lead to an increase of qualifications to teach Mathematics and Science, nor foreign languages (French, German and Spanish) for higher school levels. To sum up the critique delivered, it focuses on the apparent lack of national comparability of teacher education, which in turn is seen to eliminate equal opportunities for employment of graduated teachers of the 2001 teacher education programme. On the basis of the weak points identified, a committee set up by the new liberal-conservative government, will present national guidelines for new teacher education structures in September 2008.

School leaders' perspectives on employability

As previously mentioned, primary employers' perspectives on the employability of teachers, graduated from Umeå University within the 2001 teacher education programme, were gained through questionnaires and interviews to school leaders, in and around Umeå (see also Figure 2). Questionnaires were used to find school leaders in this geographical area who were likely to have experience of recruitment of more recently graduated teachers, and to whom interviews later could be directed (Mattsson & Strömngren, forthcoming). The questionnaires were distributed by e-mail to about 225–250 school leaders in 16 municipalities, through a teacher education and school network, headed by Umeå University. Questionnaire answers were received from 55 school leaders, and 26 of these reported recruitment of one to six “new” teachers, respectively. In total, the questionnaire answers reported 64 “new” teachers (8 men, 58 women), spread in different school levels, including pre-school, pre-school class, comprehensive school, grades 1–9 and gymnasium. The vast majority, 84% (42 individuals), had teaching orientation to the early years of comprehensive school. The others were spread in pre-school, gymnasium and the late years of comprehensive school.

Interviews were conducted with 13 school leaders (1 man, 12 women) of 17 individuals (4 men, 13 women) approached by e-mail. Interviewees were chosen on the

basis of being heads of different school levels, and thus assumed to have experiences of recruitment of specific categories of teachers. The interviewees were geographically distributed in eight municipalities. The interviews focussed on the interviewees' experiences of school leadership, perceived qualifications of "a good" teacher, the importance of graduated teachers, and views on the 2001 teacher education programme. The interviewees were also invited to reflect on any subject that was considered to add important information to the study. Further, the professional and educational backgrounds of the interviewees were covered. An interview guide with open questions was used for the thirty minute long interviews that were conducted on the telephone, recorded on mini-disc and fully transcribed. Transcripts were sent to the interviewees who were asked to clarify any information that was found to be missing.

The responsibilities of the interviewed school leaders covered schooling and education from early childhood to the late teen years. Twelve interviewees were educated teachers, with different teaching orientation which included pre-school level, primary school level, upper secondary school level and gymnasium level. All had longer experience from teaching or care-taking in school, pre-school or day-care centres. One interviewee had a social work and education background. The average time of leadership position was nine years.

The interviewed school leaders reported 39 "new" teachers (5 men, 34 women) recruited, of whom the majority, 27 individuals (4 men, 23 women), were orientated to teaching in the early years of comprehensive school. Six were oriented to education and teaching in pre-school, and four to teaching at gymnasium level, all women. Two individuals, a man and a woman, were oriented to the late years of comprehensive school. The majority of the "new" teachers reported were employed in an area of teaching which broadly corresponded to the individual's exam orientation. However, nine employed taught at other school levels. Among seven graduated for teaching in the early years, three were staff in youth leisure centres, two taught in the late years of comprehensive school, one in pre-school and one in the gymnasium. Two individuals with exams for late years in comprehensive school were teaching at gymnasium level and in grade six, respectively.

The school leaders' views on teacher qualities, including a "good" teacher, the importance of graduated teachers and their experiences of the 2001 teacher education programme, are reported in the following section.

Demand and supply of teacher qualifications

The school leaders' response to what they perceived as essential qualifications for a "good" teacher varied. Good leadership and theoretical and practical knowledge

(“social competence”) to handle individuals and groups were generally seen as fundamental knowledge by school leaders of all school stages.

Another general requirement of a “good” teacher was solid knowledge of the national school policy, including the democratic and fundamental values nationally agreed upon (see National Agency for Education, 2005). Other qualifications, particularly demanded by school leaders in comprehensive school and the gymnasium, included higher education exam.

Graduated teachers are required, and I find this very important. [...] [As a school leader] you then have the right to demand certain things. (Eva, school leader, early years of comprehensive school)

Good subject knowledge and pedagogical or “teaching” skills and knowledges, were also highly estimated by these school leaders:

[...] in order to raise and “lift” the pupils [...] the starting point is that the teacher has subject knowledge, and also knowledge in methods and pedagogy. (Gunnar, school leader, pre-school & early years of comprehensive school)

[...] there will always be individuals who have good knowledge in a subject, and who do not have a pedagogical exam, but who have a natural talent for teaching. But [as a school leader] you can’t build the school’s educational programme on these individuals. (Charlotte, gymnasium school leader)

It was also suggested that a good, qualified teacher would have “the right” personality, and “should like to be with children [...] and like to be in the classroom” (Åsa, school leader, pre-school class & early years of comprehensive school).

According to the interviewees, the official requirement of an exam diploma meant that teachers who were not graduated, could not be hired permanently. However, it was also recognised that the officially demanded qualifications were hard to live up to, when it concerned certain school subjects. The lack of qualified teachers in foreign languages, and in Mathematics and science education for older pupils in comprehensive school and in the gymnasium, was thus seen as problematic.

There’s a lack of language teachers in French, German and also in Spanish, which we will now start to give. Though, only one individual has applied for the post as a teacher in Spanish. [...] We have a teacher in German [a mother tongue speaker], who has no teacher exam, but who has been re-employed for almost 30 years. (Åsa, school leader, pre-school class & early years of comprehensive school)

We have very few teachers with qualifications in Mathematics and Science, and that is real problem. (Eva, school leader, early years of comprehensive school)

Though generally positive to the individual “new” teachers, who at the time of the interviews were employed, the interviewees pointed to a number of weaknesses, or lack of competencies, which the interviewees found were effects of the 2001 teacher education programme. School leaders for the lower level of comprehensive school, found that recently graduated teachers for this teaching area, generally lacked needed qualifications in many subject areas:

[...] the question is whether the teachers orientated to early years, should teach in areas in which they lack qualifications. (Eva, school leader, early years of comprehensive school)

[...] a teacher often teaches subjects that she has not taken in her exam, for example maths, which yet is taught. (Carina, school leader pre-school & comprehensive school)

A general need concerning teachers in lower levels of comprehensive school was broader and deeper subject competencies. This group of teachers should be prepared to teach a broad variety of subjects within the national curriculum, according to the interviewees. A wide subject knowledge of the individual teacher was also seen particularly important for school areas located in the countryside.

[...] the new teachers in grades 3–5 teach all subjects in class; Maths, Science, Swedish etc, irrespective of their own teaching orientation. They have the responsibility for the whole class in all subjects. (Ann-Marie, school leader of youth leisure centre, pre-school class & early years of comprehensive school)

Particular demands of the interviewees included qualifications for teaching the basic knowledges of reading, writing, and Mathematics, and also English came from school leaders responsible for the early years of comprehensive school.

I find it self-evident that teachers must have basic knowledge in Maths and Swedish. It feels strange to have to ask: “Do you have knowledge for teaching reading?” and to get to know that these qualifications are far from being general knowledges. (Britt-Marie, school leader of pre- school class & early years of comprehensive school)

The lack of knowledge in teaching reading and writing is really a bad effect of the new teacher education programme. I usually tell students who come to this school that they should concentrate on Swedish, and the reading and writing skills if they want to be employed. (Sofie, school leader of pre-school class & early years of comprehensive school)

We have had teachers who thought that “maybe I will manage to teach English in grade six” but who didn’t! English has therefore become one of the subjects we have to look more closely on. (Berit, school leader of pre-school class & early years of comprehensive school)

However, some school leaders with responsibility for pre-school had other perspectives, concerning subject knowledge. It was suggested though, that a good teacher should be able to guide the pupil's learning process, in any area of knowledge, and with no specific knowledge for this.

Nowadays, subject knowledge has become too emphasised, as if the teacher should be an encyclopaedia. [...] a teacher should be able to guide children in how to find knowledge. (Gun, pre-school & early years of comprehensive school)

For me subjects are not important as such. I find that subject knowledge is something the teacher can acquire [...] The learning aspect is important. Some teachers can make the pupils listen, and others can't. (Carina, school leader, pre-school & early years of comprehensive school)

One thing considered as an improvement for those student teachers oriented to pre-school, was a stronger focus on writing, and analysis of documents.

In pre-school of today we have to write reports which are to be read by others. This new part in teacher education of written analysis – I find it just excellent that students are trained to do this! (Lovisa, school leader, pre-school)

Another important improvement pointed to by the same school leader, Lovisa, was that teachers oriented to pre-school were able to graduate with two exams, which included teaching competencies for pre-school, and/or pre-school class and/or the early years of comprehensive school, and/or youth leisure centres.

I think it is an advantage that you can have teacher competence for both areas [pre-school and early years of comprehensive school]. I find it possible that teachers graduated for the early years, may meet the children at the age of three, to follow them later on. (Lovisa, school leader, pre-school)

One interviewed school leader, a former primary teacher who had 14 years experience of school leadership, and longer teaching experience from teaching in grades 4–6, meant that the demands of the schools rarely corresponded to the supply, in terms of subject orientation of the “new” teachers. To his views, the policy of large freedom of choice for the individual clearly reduced the opportunities for employment.

Many students make tricky choices in subjects and teaching orientations. It actually happens that students call me, and ask my advice as a school leader for what [subjects and teaching orientations]. I think they should choose. It can be difficult for students to be employed with all this freedom to choose. (Gunnar, school leader, early years of comprehensive school)

As a result of the weaknesses, particularly considered to be due to little input in basic knowledge fields for teachers oriented to the early years, tutorial or “mentorship” was generally organized in school districts.

In 2007 we will organize a mentorship programme for teachers who teach reading and writing. Four teachers of the municipality, with long and specific experience, will be given 20% employment for in-service training of colleagues. (Ann-Marie, school leader youth leisure centre, pre-school & early years of comprehensive school)

One of the older, more experienced teachers, with former primary teacher education have extra time for helping colleagues [in teaching reading and writing] and also for teaching pupils. Another teacher has taught history in the class of a new colleague. (Carina, school leader, pre-school, pre-school class & early years of comprehensive school)

Other kinds of support school leaders for the improvement of teaching knowledges of the new teachers took place in organized “work teams”.

We have a sort of mentorship since we have “work teams”. We always try to integrate new teachers in teams where there are both younger and older staff members. (Sofie, school leader, pre-school & early years of comprehensive school)

School leaders of the gymnasium found that the new teachers at this level were not sufficiently equipped with knowledge in the special needs field, nor prepared to handle conflicts and other difficult issues. Another weakness, according to one interviewee, was lack of curriculum knowledge.

I think they have very thin knowledge! They do not know the teacher contract! How do you read and analyse school curriculum in teacher education? When I meet new teachers I often find that this [lack of knowledge] is chocking! (Charlotte, gymnasium school leader)

DISCUSSION AND CONCLUDING REMARKS

In this study, the employability of recently graduated teacher students from Umeå University, from 2000 onwards, is explored from various perspectives. The study of mobility, employability and incomes for the 2000 teacher student graduates shows that, over time, more and more graduated teacher students move from the Umeå local labour market region. The geographical origin of the alumni plays an important part for their subsequent migration patterns. Almost the entire class of 2000 has some kind of employment five years after graduation; four out of five is working as some kind of teacher. Graduated pre-school teachers are most likely to work in a teaching profession matching their education, while gymnasium teachers are more likely to be involved in other forms of teaching. In certain of southern Sweden a particularly high degree of the alumni are employed in non-teaching re-

lated professions. Among those employed as teachers, the highest average wages can be found among special education, higher education and other teaching professionals. In non-teaching professions, there are large wage differences depending on occupation and workplace type.

Results of the school leader study pointed to a number of weaknesses of the 2001 teacher education programme. An apparent lack of teaching skills in the basic knowledge areas of reading, writing and Mathematics for teaching young pupils was noticed. Also, students' individual choices of subject orientation were generally seen to mismatch the needs of the comprehensive school. School leaders for the higher level of comprehensive school would like to see a more specific knowledge base in foreign languages, including English, and also in Mathematics and Science. The gymnasium school leaders, in particular, wanted "new" teachers to be better prepared for special needs education, and for handling conflicts and other difficult issues. Further, it was considered that the general knowledge of school curriculum was too "thin".

However, school leaders responsible for pre-school, and with educational and professional background in the area, were more positive to the 2001 programme. It was considered an advantage that pre-school teachers could widen their exam and approach school. Further, the broader theoretical approach in teacher education was considered to raise the quality of the graduated pre-school teachers. Moreover, the views on knowledge differed. School leaders for comprehensive school lacked broader and deeper knowledge for teaching in the compulsory subject areas. In contrast, school leaders with pre-school background found that the importance of knowledge was over-emphasized, and that the role of the teachers rather was to provide support to the individual pupil. Finally, the school leader study shows that the employability of the "new" graduated teachers in many respects was questioned by comprehensive and gymnasium school leaders.

In measuring employability by use of register data, evaluation has to be carried out using available database variables. Due to lack of highly detailed descriptions of occupations in the ASTRID database, it is impossible to see whether or not a teacher teaches the "wrong" subjects at the "right" level. In any case, "employability" is not a straightforward concept. Indeed, the possibility for a graduated teacher student to teach subjects not within the exam, or have an entirely other occupation, can represent either a strength or a weakness from the individual's point of view. On the one hand, it may indicate a lack of labour market demand for the occupation they are educated for and prefer. On the other hand, it may signify an opportunity and desire of the individual to take on other kinds of jobs, which their education give them access to. From the employer's point of view, it is highly relevant to know whether or not the prospective employed teacher has the qualifications needed. In this context, the construction of teacher education, as well as its contents, is of great importance for all concerned.

The 2001 teacher education reform aims at decentralization and deregulation, and thereby increased local autonomy (Governmental bill 1999/2000: 135). This is in line with Swedish education policy trends, particularly noted since the 1990s (Rönnerberg, 2007). Another aim, pointed out in this study, was to increase the employability of all teacher students by widening the teacher education programme to include a range of general, professionally based teacher competencies. Flexible study orientation and opportunities for professional development were in this respect considered to enhance the employability of those graduated, and to reduce traditional gaps between different teacher categories. Increased recruitment of student to specific subject areas (particularly Mathematics and Science), was another policy aim.

However, a major conclusion that can be drawn from the school leader study, also underpinned by a wide range of national reports, is that stronger national steering of teacher education is needed. It is obvious that the qualifications of a vast majority of the “new” teachers, in particular those orientated to comprehensive school, generally do not satisfy the needs of the primary employers, i.e., school leaders. The lack of needed competencies might thus have negative implications for the employability of the graduated teachers in school settings. Another conclusion, related to the lack of knowledge in teaching basic skills for the young, is that these weaknesses might have undesirable effects for Swedish pupils’ learning in a shorter and also a longer perspective.

Interestingly, a common misinterpretation of socio-cultural perspectives on knowledge construction, according to Säljö (2000), follows from the disregard of school as an institutionalized setting, where the knowledge construction of the pupil is dependent of the knowledge and pedagogical skills of a more knowledgeable adult, the teacher. As indicated in this study, school leaders with little experience in the field they manage, in this case individuals with pre-school teacher background, tended to neglect the need of teaching knowledges for the actual school level and distanced themselves from demands of more “school subject” related knowledge. However, this view on knowledge is contrary to the key idea of Vygotsky (1978), of a close connection between adult reasoning and children’s development of logical, more abstract thoughts and problem solving (Kozulin, 1996). Following this, another conclusion drawn is that school leaders, irrespective of school level, must understand that the academic qualifications of hired teachers should correspond to the subject area being taught.

Finally, in times of increased international pressure for professionalism in teaching and teacher education (Council of the European Union, 2001; see also Erixon Arreman & Weiner, 2007), it is difficult to understand why Swedish policy makers of the 2001 teacher education reform seem to have chosen to neglect both practitioners’ experience and research, international and Swedish (see Myrberg, 2003),

which clearly emphasise the need of professional teaching in the early years. However, the failed policy intentions to attract more students to teaching Mathematics and Science, and also foreign languages, should probably be related to a larger context of wider employment opportunities for student who choose to go for other, new directions of study programmes in higher education, set up from the 1990s onwards.

Hopefully, the next teacher education reform in September 2008 will seriously take into account the 2000 Lisbon declaration on teaching and teacher education, the meaning of which is that the priority of teacher education is to produce “good” teachers that are able to enhance life-long learning of their pupils:

The most important of these competencies is the ability to learn – maintaining curiosity and interest in new developments and skills – without which lifelong learning cannot exist. For many teachers, however, this ability is difficult to stimulate; and its development should therefore be a focus both of teacher training and of educational research in the coming years (Council of the European Union, 2001, p. 9).

REFERENCES

- Bourdieu, P. (1992) *The Logic of Practice*. Cambridge: Polity Press.
- Council of the European Union (2001) *Report from the Education Council to the European Council: "The concrete future objectives of education and training systems"*. Brussels: Council of the European Union. http://ec.europa.eu/education/policies/2010/doc/rep_fut_obj_en.pdf
- Erixon Arreman, I. & Erixon, P-O. (2007) Izobrazevanje učiteljev in raziskovanje: sodobne svedske perspektive v mednarodnem kontekstu. [Teacher Education and Research: recent Swedish perspectives in an international context.], in T. Devjak & P. Zgaga (Eds) *Prispevki k posodobitvi pedagoških študijskih programov II*. Ljubljana: Pedagoška fakulteta.
- Erixon Arreman, I. & Weiner, G. (2007) Gender, Research and Change in Teacher Education: a Swedish dimension, *Gender and Education*, 19(3), 317–337.
- Governmental bill 1999/2000: 135 *En förnyad lärarutbildning. [A New Teacher Education.]* Stockholm: Ministry of Education.
- Kozulin, A. (1996) Vygotsky in Context, preface in L. Vygotsky *Thought and Language*. Cambridge, Mass.: MIT Press.
- Lave, J. & Wenger, E. (1991) *Situated Learning: legitimate peripheral participation*. Cambridge: Cambridge University Press.
- Lundholm, E. (2007) *New Motives for Migration? On Interregional Mobility in the Nordic Context*. Umeå: Umeå University.
- Malmberg, G., Sandberg, L. & Westin, K. (2005) *Den goda platsen. Platsanknytning och flyttningsbeslut bland unga vuxna i Sverige*. Umeå: Umeå University.
- Mattsson, P. & Strömberg, M. (forthcoming) *Vad händer efter examen? Lärarstudenters situation efter avslutad utbildning vid Umeå universitet. [After Graduation: the situation of graduated teacher students from Umeå University.]* Umeå: Umeå University.
- Myrberg, M. (Ed) (2003) *Att skapa konsensus om skolans insatser för att förebygga läs- och skrivsvårigheter. [To Create Consensus in School Prevention of Writing and Reading Difficulties.]* Stockholm: Teacher Education College. http://www.sit.se/download/PDF/Dyslexi/skapa_konsensus.pdf
- National Agency for Education (2005) *Democracy and Fundamental Values*. <http://www.skolverket.se/sb/d/374/a/1288#paragraphAnchor1>.
- National Agency for Education (2007) *Universitet och högskolor. Högskoleverkets årsrapport. [Year Report.]* Stockholm: Swedish Agency for Higher Education.
- National Union of Swedish Teachers & Swedish Teachers' Union (2006) *Alla har rätt till utbildade lärare! En rapport om andelen lärare i skolår 7–9 som har rätt*

- lärarutbildning*. Stockholm: National Union of Swedish Teachers & Swedish Teachers' Union.
- National Union of Teachers in Sweden (2004) *En undersökning om den nya lärarutbildningens kvalitet*. Stockholm: National Union of Swedish Teachers.
- National Union of Teachers in Sweden (2007a) *Lärarnas Riksförbund kräver totalöversyn av lärarutbildningen*. Stockholm: National Union of Swedish Teachers.
- National Union of Teachers in Sweden (2007b) *Lärarröster om den nya lärarutbildningen. En rapport med utgångspunkt i tio intervjuer med nyexaminerade lärare*. Stockholm: National Union of Swedish Teachers.
- Rönnerberg, L. (2007) *Tid för reformering. Försöksverksamheten med slopad timplan i grundskolan*. Umeå: Umeå University.
- SOU 1999:63. *Att lära och leda. En lärarutbildning för samverkan och utveckling. [To Teach and to Guide: teacher education for collaboration and development.]* Stockholm: Ministry of Education.
- Student Union of the National Union of Swedish Teachers (2007) *Dimensionering av lärarutbildningen – för ökad kvalitet och likvärdighet*. Stockholm: National Union of Swedish Teachers.
- Swedish National Agency for Higher Education (2005) *Utvärdering av den nya lärarutbildningen vid svenska universitet och högskolor. [Evaluation of the New Swedish Teacher Education.]* Stockholm: Swedish National Agency for Higher Education.
- Swedish National Agency for Higher Education (2006a) *Examination med kvalitet – en undersökning av examinationsförfarandet vid några svenska högskolor. [Evaluation of the Examination Process at Some Swedish Higher Education Establishments.]* Stockholm: Swedish National Agency for Higher Education.
- Swedish National Agency for Higher Education (2006b) *Utbildning på vetenskaplig grund. Röster från fältet. [Education on scientific basis. Voices from the field.]* Stockholm: Swedish National Agency for Higher Education.
- Swedish National Agency for Higher Education (2006c) *Examensarbetet inom den nya lärarutbildningen. [The Thesis within the New Teacher Education Programme.]* Stockholm: Swedish National Agency for Higher Education.
- Säljö, R. (2000) *Lärande i praktiken. Ett sociokulturellt perspektiv*. Stockholm: Prisma.
- Vygotsky, L. (1978) Interaction between Learning and Development, in M. Cole, V. John-Steiner, S. Scribner & E. Soubreman (Eds) *Mind in Society: the development of higher psychological processes*. Cambridge, Mass.: Harvard University Press.