

ELFE-ESL

CASE STUDY VISIT REPORT

DENMARK, 4th-6th September 2012

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With respect to Early School Leaving it was not seen as a major local problem but more of a reasonable national objective. Therefore, comments and suggestions were less considered than for other discussions. However, in agreement with the above recommendations, it was believed that utilising an integrated student centred approach was the best way to enhance attainment and therefore reduce ESL rates. This combined with strict enforcement of sanctions was considered to be the most viable approach to preventing students from early drop out.

The approach adopted during the study visit to Denmark in terms of focused or semi- structured interviewing was considered to be very successful and resulted in an extremely constructive, if often intense, dialogue with the representatives of the students. Strange to say it is not often that teachers are asked what pedagogy they are using in their teaching.

The panel anticipates that this approach will be 'tuned' and utilised in the forthcoming visits to Holland, Portugal and Azerbaijan. This will allow further themes to emerge and master themes extracted and compared and contrasted with those emerging from the Danish interviews. Ultimately the combined Master Themes will form the basis of policy recommendations to be made to the education stakeholders in Europe in form of practical guidelines on the innovative use of ICT in education to support the prevention of early school leaving.

The ELFE-ESL project advisory group wishes to thank the host institutions in Denmark for their time and hospitality and hope that they found the discussions as useful as the panel did and that this report is useful for their subsequent developments.

1 Country Background

In Denmark children start at school in a compulsory preschool class 0 at age 6. They follow the integrated primary and lower secondary school until end of class 9 at age 15-16.

1.1 Upper Secondary Structure

After class 9, pupils can choose one of three general upper secondary school tracks all called gymnasium, *stx*, *hhx*, and *htx* – all three years long -preparing for further studies, or vocational education. *Stx* is the traditional general upper secondary school, le lycée, *hhx* is the commerce gymnasium, and *htx* is the technical gymnasium. If they are not mature enough for general upper secondary schools they can continue and complete class 10, before they choose their upper secondary education. After class 10 they can also choose a two-year higher preparatory program (*hf*) which also qualifies for further studies. It is a ‘second chance school’ that is also offered as single subject courses for adults.

1.2 National Assessment System

At the end of each year of upper secondary school students receive a summative evaluation. Throughout the year teachers are required to perform continuous evaluation of students and together with the students evaluate the different parts of the teaching process. In the Danish gymnasium students have nine final exams and a larger written home assignment over a two-week period. The exams consist of 3-4 national written exams evaluated by two external assessors, and the rest are oral exams examined by the teacher plus an external assessor. *Hf* students have similar exams but in all subjects. The final result of the gymnasium is the average of exam marks and the average of teachers’ summative evaluation in all subjects at the end of the year. Only *hf* exam mark is included in the average. The final exam result decides the order in which students are admitted into further studies.

There is no inspectorate system where teachers or schools are evaluated. Final exams are used to control the quality level. The ministerial subject inspectors are used as a bridge between schools and the ministry in a dialogue with subject teachers at the schools. In addition, subject inspectors are involved if there are complaints from students over exam results.

1.3 Teacher Training Processes

Teachers in general upper secondary school all have a five-year university degree with 3½ years study in a major subject and at least 1½ years in a minor subject. The initial education is purely academic subject based. Pedagogical training is provided once employed through a programme called *pædagogikum*. Within the first year (normally) of a permanent employment as a teacher you must, as part of your employment, participate and pass theoretical courses in didactics and pedagogics only offered by the Institute for the Study of Cultures (formerly known as IFPR) at Southern Danish University. In addition you have some classes on your own and some classes with supervision. To be more precise, out of an annual workload (with full salary) of 1680hours the theoretical part accounts for 522hours. The practical part accounts for 565hours teaching in own classes and 485hours teaching under supervision. Finally, 100hours is spent on general pedagogical duties at the school. The senior teachers works as supervisors or mentors will together with an external assessor decide is you pass the practical part.

1.4 Early School Leaving Status

As a member of the EU, Denmark is committed to the goals of the EU2020 Strategy to bring down the rate of early school leaving to below 10% by 2020. On top of this Denmark has a national goal to reduce the ESL rate to 5% by 2015. There has been a remarkable increase in the number of students applying to one of the four tracks of the general upper secondary schools. In 2008 68.5% students took up upper secondary school compared to 80% in 2012. Most of the other students will start on a vocational education programme. In 2011, 47% enrolled in htx, 11% in hf, 12% in hhx and 7% in htx , giving 77% in total.

However, not all students who start upper secondary school complete their education. Of the 68.5% who began general upper secondary education in 2008, 57.1% of the generation had completed their general upper secondary education three years later in 2011: 34% from stx, 8% from hf, 11% from hhx and 5 % from htx. Nearly every third student in vocational education drops out of school. The major reason is that it is difficult to obtain the educational contract with a company, necessary for the dual education model combining school periods and practical work periods.

2 Institutional Visits

The members of the visiting panel were:

Hans Laugesen, GL (Denmark) and project coordinator

Maria Arminda Bragança, FNE (Portugal)

Nigar Mustafazade, AITUCEW (Azerbaijan)

Prof Roy Leitch, External Expert (Scotland)

The panel visited three institutions: 2 upper secondary schools and representatives of the institute responsible for the pedagogical training of general upper secondary school teachers:

2.1 Institute for the Study of Cultures, South Denmark University – 4th September 2012 (meetings held at Katedralskolen in Aarhus)

This is a teacher education institution that offers (the post graduate) initial pedagogical teacher education and continuing professional development post-graduate courses for all teachers in upper secondary education in Denmark. The school is part of the Institute for the Study of Cultures at South Denmark University. There is a policy on ICT use for pedagogical goals and the pedagogical teacher education programme has a special component on ICT for pedagogical use – one day session based on a didactic reflection about the possibilities of the use of ICT in the process of teaching/learning. The programme does not include any specific training on the use of ICT to reduce early school leaving.

The panel had a meeting with the head of the pedagogical programme of the Institute for the Study of Cultures, Eric Damberg, with an associated professor and lecturer of the Institute, Nikolai Elf , and with an external lecturer, Jan Foged. The panel also interviewed two teachers from Aarhus Business School, Ibner Poulsen and Dorthe Semmelhack. Both of them completed the pedagogical education in 2011.

2.2 International Business Centre – IBC, in Kolding – 5th September 2012

This is an upper secondary school, situated in a town with 56.000 inhabitants. The school has 650 students (350 male and 300 female) of mixed socio-economic background, 23 classes and 53 teachers, fully funded by state. The school has a specific policy on ICT use for pedagogical goals, with teachers who have received special training on ICT and continuing professional development for instrumental and pedagogical use of ICT. In 2011, the school completed a pilot project where all students were given an iPhone. This project was supported by Nikolaj Elf.

The school has a formal policy on early school leaving with some special projects. To address the early school leaving issue the school has four counselors and a special teacher in each class who is responsible for creating a good working environment. There is a very low rate of early school leavers.

The panel had a first meeting with the principal, Jesper Kjølhed, who gave a detailed presentation of the school. The panel attended a 32 students media class to see how ICT was used in the context of the classroom. The panel had a guided visit of the school and noticed that every student had his/her own PC and that the school was very well equipped and with excellent conditions fostering a very good school environment. The panel interviewed two teachers and four students.

2.3 Randers HF & VUC, in Randers – 6th September 2012

Randers HF and VUC is an adult education centre which is also a provider of the 2-year HF course (Higher Preparatory Exam). The students' age range is from 16 years to 80 years or more, although with a majority of students between the ages of 16 and 25. Students at Randers HF and VUC are set together in classes, according to age, social background and course aims. There are about 1520 students. About 750 are full time students and the maximum of students per class is 30. The completion rate depending on the courses varies between 75% and 85%. Students at risk of ESL and given access to a personal tutor.

ICT is a natural and effective part of the educational work. The school is developing a three-year project (2012-2014) about the pedagogical use of ICT. This project includes basic training for all teachers in the use of electronic whiteboards, the use of platforms and social media followed by the use of mobile operating systems. The school has had a school development programme supported by researchers from the University of Southern Denmark. This construction was much appreciated and the school has decided to extend the contact to the researcher in support of their new initiatives. The panel had a guided visit of the school.

There were three different meetings: with the principal Bertel Pedersen and the vice-principal Bent Vinther Sørensen, three teachers, Pia Sigh, Ulla Rasmussen, Anders Bloch and three students, Sisser Willadsen, Sebastian Torst Iversen, Allan Nielsen.

3 Outcomes of Meetings

3.1 Brief Description of Interview Process

The interviews were conducted using an informal semi-structured interview technique. The interview schedule was distributed prior to the meeting. All respondents indicated that they had seen the schedule. This approach was adopted to ensure that the views and experiences of the respondents were encouraged and captured in an objective manner. The panel took care not to influence the responses from the respondents.

The following section lists the major themes to emerge from open discussions held within the various interviews. All discussions were held in a very open and constructive manner. The following themes emerged from points, statements and responses made by the participants during the meetings. These were audio recorded for all meetings. The themes were extracted from notes made by the panel members, the audio recordings and subsequent discussions of the panel, usually in the evening following the interviews.

Natural language was not an issue during the interviews. However, the absence of agreed educational terminology sometimes made understanding a bit difficult: the same term would often be used to express different concepts and vice versa. The panel tried to cope with this through clarifying and confirming responses and comments but still some ambiguity remains.

Most of the discussion consisted of approaches and experiences of ICT in Education, however the panel did try to ensure that ample time for comments related to Early School Leaving was available. The panel obtained very few comments on the use of ICT in reducing ESL as this seemed to be implied in the prior discussions on education and ESL. Therefore, the panel has not reported ICT and ESL as a distinct topic.

3.2 Emergent Themes by Institution

Institution	Institute for Cultural Studies, South Denmark University
Category	Management and Staff
ICT in Education	
<ol style="list-style-type: none"> 1. Keep it simple, introduce a few ICT tools at a time 2. Support within the schools management essential 3. Gap between education and learning theory, as presented in teacher training courses and school practice 4. Awareness of the need for personalisation of education 5. Scope for considerable improvement in the learning process 6. Utilisation of familiar tools to build confidence in students from different backgrounds 7. The use of ICT methods supports greater diversity of students to be included in the same class 8. Ensure better integration between subject learning, teacher training and practice 9. Dichotomy between individual teacher empowerment and experimentation and potential strategic government led approaches 10. The development of ICT tools and applications is very time consuming 11. Encourage the development of interactivities and visualisations within on-line course materials. 12. Teacher centered education methods still widespread in Denmark 13. Teachers need to collaborate more and to work in groups 14. Some students prefer the structure provided by traditional teacher centered approaches 15. Student centered approached, based on ICT tools, still need inspiration for the teacher or expert 16. Not forcing anybody to use ICT 17. Agreement on definitions and terminology 	
Early School Leaving	

1. Traditional methods do not encourage teachers to **understand the background** of students and therefore their risk of ESL
2. Students at risk should be identified early and interviewed and given a personal **counselor** to reduce the risk of ESL
3. **Cost** of counseling can be covered by retaining funding for 5 students at risk of ESL
4. Need to introduce more **curiosity** driven methods to develop supportive learning environment for ESL students
5. Students at risk of ESL have different **learning styles** and react negatively to traditional methods
6. ICT tools for administration of students increases **efficiency** and helps reduce ESL
7. Schools receive **income** per graduating student and therefore encouraged to retain students

Institution	Institute for Cultural Studies, South Denmark University
Category	Recently Qualified Teachers
ICT in Education	
18.	Need for pedagogic support and structured induction activities within the schools
19.	Inspiration from Pedagogic course in training but not used in practice, methods based on intuition
20.	Best parts of the pedagogic course are those direct related to teaching practice in subjects, but ICT workshop was also ok.
21.	Significant gap between education theory and teaching practice
22.	Recognised benefits of student centered methods but unable to find time or support to introduce these in school
23.	Teachers still work in isolation with very little coordination or sharing
24.	Significant issue with the misuse of social media during class
25.	Teachers need to assert more authority in the classroom
Early School Leaving	
8.	Main reason for ESL is disadvantaged background of students
9.	Too many students studying at senior secondary level, should be transferred to vocational schools earlier
10.	Promote collaboration within pedagogical work in schools
11.	Lack of management support for innovation
12.	Need for management to reinforce sanctions for absence and non submission of course work
13.	Lack pedagogical tools to handle still more diffuse group of students in class. Call for in-service training on this
14.	Subject teachers not trained to deal with background social or health issues
15.	Need a greater focus on achievements to build confidence
16.	Transfer failing students to other tracks or courses to retain their interest
17.	Consider segregation of classes into ability levels for each subject for part of the course
18.	Question whether the government targets of 5% ESL is realistic it would require that

vocational education should take a larger share
 19. Consider the school context within the policy of **national goals**

Institution	International Business College, Kolding
Category	Management and Staff
ICT in Education	
26. Significant use of ICT within taught courses now considering how these should be integrated with more traditional methods 27. Students and staff require more structure within class 28. Need to understand successful pedagogies for the use of ICT 29. Very limited use of external courseware , ibooks and ebooks not interactive enough 30. External resources do not match the curricula of the courses 31. Control the use of ICT during class (close the lid) 32. Unlimited access to global internet resources not always useful, but not in favor of limiting access 33. ICT methods need clear instructions and deadlines 34. ICT provides focus on skills and less on formal knowledge 35. ICT promotes Organic teaching where students learn by experimentation and through collaboration with others 36. Misuse of social media during class is a real issue 37. Teacher needs to reclaim control and authority of the class 38. Mobile learning project based on iphones successful, through motivation of new technology but limited impact educationally 39. Need better integration of traditional teaching and the use of ICT methods 40. How do we avoid the temptation of new technology? 41. Teachers important for interactivity and good student relationships	
Early School Leaving	
20. Build a student community at the beginning of term, through camps or group activities 21. Main reason is that students are lazy 22. Need more discipline in the classroom 23. ICT methods need more structure 24. School's LMS help students at risk of ESL to structure homework and has disciplinary effect on attendance 25. Providing breakfast at school to encourage attendance 26. Develop more segregated classes to allow focus on weaker students 27. Sanctions need to be enforced 28. Little scope for impact through extended administration 29. Significant scope for improvement through the use of different learning methods 30. Teachers spending too much time on technology development	

Institution	International Business College, Kolding
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Category	Students
ICT in Education	
	<p>42. Most students prefer learning from teachers</p> <p>43. However most students like to combine both</p> <p>44. Students like to search for knowledge on the internet and use modern tools</p> <p>45. Prefer teaching methods for more formal subjects, e.g. mathematics</p> <p>46. Mismatch between examination standards and workplace requirements</p> <p>47. Prefer to search the web if having difficulty understanding and then consult the teacher if necessary</p> <p>48. Enjoy using on-line courseware ibooks and ebooks</p> <p>49. Class room management is important</p>
Early School Leaving	
	<p>31. Main reason is that some students are lazy</p> <p>32. Sanctions are not always enforced</p> <p>33. Too much use of social media during class</p> <p>34. Segregated courses for a shorter period could build up confidence, then when integrated again all benefits from each other</p> <p>34. Chosen the wrong course</p> <p>35. Examinations not related to course work</p> <p>36. Teacher/student relationship is essential</p>

Institution	Randers HF and VUC
Category	Management and Staff
ICT in Education	
	<p>50. ICT can be a more creative environment for learning</p> <p>51. Hardware is not an issue; it's how to use it. All students bring own laptop every day</p> <p>52. Misuse of Social Media in class a real problem</p> <p>53. Would like to have a common approach across similar classes/subjects</p> <p>54. Only individual use so far, little collaboration amongst teachers</p> <p>55. Opportunity to increase student skills and hence employability</p> <p>56. More group working to increase students communication and collaboration skills</p> <p>57. The use of ICT allows more variation in approach and learning styles</p> <p>58. Lack of knowledge of successful ICT based pedagogical approaches</p> <p>59. Stimulus came from the teachers themselves</p> <p>60. External researcher to provide guidance and inspiration and pilot projects and help to reflect on pedagogical methods</p> <p>61. ICT can provide different tools for different students</p> <p>62. Teachers are essential for the motivation of the students</p> <p>63. Good use of teacher super users to help and inspire colleagues</p> <p>64. Use of technology allows more people to 'speak', e.g. participate in social media whereas might be more reluctant in tutorial classes</p> <p>65. Estimates that traditional methods are less than 50% effective when compared to</p>

- the ideal; ICT has the potential to increase this significantly
66. ICT methods can lead to **greater consistency** in teaching and hence more opportunity to students
 67. Communities of **best practice** essential for sharing knowledge
 68. Opportunities for **group working** and team building
 69. The role of the teacher as a leader

Early School Leaving

37. ESL is a **problem** in HF (second chance) programmes
38. School has **strategy plan** to reduce ESL
39. Such students need more **visualisations and interactions** to improve motivation and performance, so school tries to emphasize **motivation**
40. Students at risk are given a **personal mentor**
41. Planning to introduce a **tutorial system** to reinforce the learning
42. **Technology push** is still very common
43. Teacher is still the **most important** in the class
44. **Sanctions** not enforced
45. Awareness of ESL **effect on funding**
46. Focus more on **teacher leadership and authority**
47. Group working and **community building** essential

Institution	Randers HF and VUC
Category	Students
ICT in Education	
70.	Students enjoy using and participating in modern technology
71.	ICT allows students a direct involvement in learning rather than passive involvement in traditional teaching methods
72.	ICT allows students to keep a good record of their studies
73.	Students make extensive use of external internet resources e.g. ibooks and ebooks
74.	Some teachers cannot use ICT
75.	Subject related use of facebook , - would motivate students
76.	Most students would be happy to use external courseware e.g. ibooks or ebooks
77.	Google used first and then consult a teacher if having a study problem
Early School Leaving	
48.	Some students just need time out from classes
49.	Difficulty with formal written exam situations
50.	Many students go through a difficult time during senior secondary education
51.	Sanctions for absenteeism and non or late submission of course work is not enforced
52.	Social environment may not be conducive to working hard
53.	ICT is more fun and we learn more from experimenting
54.	ICT prepares us for work
55.	Employers are always looking for good ICT skills

56. Social climate is very important

4 Analysis of Outcomes

4.1 Discussion on Emergent Themes

All of the meetings were held in a very open and friendly manner. Many views and attitudes were clearly very firmly held and expressed; there was no reluctance to communicate and share their experiences and views, including current students. This resulted in 77 themes on ICT in Education and 56 themes in ESL. Although these are not all independent, and contain some terminological ambiguity, they do represent a considerable depth of first hand experience views on the topics.

There is considerable commonality between the interviews, although perhaps expressed differently. There is in fact very little conflict in the themes although there was considerable uncertainty about how to move forward. The following section extracts Master Themes on the basis of their emergence as a theme but also in the intensity of their expression during the interview. Again care has been taken in trying to be as faithful and objective in extracting the Master Themes.

4.2 Identification of Master Themes for ICT in Education

1. **EMBEDDED:** ICT is now embedded within senior secondary schools in Denmark. Most schools appear to have more than adequate technology infrastructure and now have a policy of requiring every pupil to bring their own laptop.
Themes: ICT in Education 1,26,32,38,44,48,49,51,64,69,76
2. **EXPERIMENTAL:** It appears that most schools have had extensive experience of using a number of ICT Tools and on-line resources. These appear to be used in an experimental or intuitive approach to using ICT in the classroom
Themes: ICT in Education: 1,6,10,24,26,29,31,36,38,47,52,61,69,77
3. **INTEGRATED:** many staff reported a need to understand how to integrate traditional teaching methods with ICT based approaches
Themes: ICT in Education 8,15,22,26,39,43,
4. **PEDAGOGIC:** stated desire for guidance on what methods to use for particular situations and students. Many teachers still working in isolation
Themes: ICT in Education 18,26,28,53,58
5. **PERSONALISED:** methods to support different learning styles and student's background offer great potential to improve educational outcomes
Themes: ICT in Education 4,7,45,57,61,
6. **GAP:** between theoretic research on learning and teaching practice. Teacher training provides some advice but not followed up in the school and classroom.
Themes: ICT in Education 3,9,18,21,48,60

7. **COURSEWARE:** Need for high quality interactive courseware customised to meet the needs of specific national curricula. Very time consuming and not sustainable for teachers to develop ICT on their own
Themes: ICT in Education 10,11,29,30,53,66
8. **LEADERSHIP:** Need for the teacher to assert leadership and authority over the education process and to limit the use of social media during classwork
Themes: ICT in Education 14,15,25,27,31,33,37
9. **COMMUNITIES:** create networks and communities of best practice for the selection and support of new methods
Themes: ICT in Education 13,19,23,53,54,63,67
10. **ENHANCEMENT:** opportunity to considerably enhance and improve education outcomes through use of new educational methods based on integrated teacher and ICT based approaches
Themes: ICT in Education 5,22,65,66,70

4.3 Identification of Master Themes for Early School Leaving

1. **DIVERSITY:** Use student centered education methods that support different learning styles
Themes: Early School Leaving 4, 5,13,17,29,55
2. **MOTIVATION:** increase the motivational aspects of teacher interaction
Themes: Early School Leaving 4,43,46
3. **SANCTIONS:** Ensure that sanctions available for absenteeism and late or non submission of course work are enforced
Themes: Early School Leaving 27,32,44,52
4. **COMMUNITY:** Try to build an active social community within the class or year to develop supportive relationships with classmates and teachers
Themes: Early School Leaving 10, 20, 47
5. **COUNSELING:** Provide adequate counseling and mentoring services to students at risk of ESL to build up their resilience to negative experiences or failures
Themes: Early School Leaving 2,3,40,41,47
6. **TUTORING:** develop on-line tutorial support and mentoring systems, perhaps based on social media, to provide a voice for shy or not confident students an opportunity to express themselves
Themes: Early School Leaving 5,15, 29, 33,39, 41, 53
7. **RELATIONSHIPS:** good constructive relationships with teachers are crucial to maintaining motivation
Themes: Early School Leaving 1,20, 46,47
8. **EARLY DETECTION:** use ICT to monitor performance, attendance and compliance of students proactively to detect students at risk as early as possible

Themes: Early School Leaving 2, 6, 18, 40, 41, 48

5 Conclusion

Denmark is an advanced country in the use of ICT within education. It can be considered to be entering a 'post-experimental phase' of incorporating ICT into the educational process. This is evidenced by numerous references to the need to integrate ICT approaches with traditional methods and to reassert the teacher as the 'leader' of the education process, but not necessarily the deliverer. More knowledge and associated staff training is needed to provide guidance on what methods are best for a particular situation; it is clear that there is no panacea. More methodological work is required to develop a classification of approaches and a specification of situations and positive relationships between them. This would be important to progress beyond the ICT experimentation phase.

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