# ELFE-ESL
## CASE STUDY VISIT REPORT

## PORTUGAL 5th-7th March 2013

*The panel received incredible hospitality from the Institutions and Schools visited. All meetings were conducted in an extremely open and friendly manner. It was clear, and indeed openly stated that the respondents enjoyed the discussions indicating that they had little opportunity or time to discuss these crucial issues in their normal practice. They are eager to receive the report and to hear the eventual recommendations from the project.*

*The Portuguese education system clearly produces graduates with a good balance of socialisation and advanced education. Whilst the ESL rate is high for an advanced European country, around 20%, it has only recently extended the compulsory education to grade 12, i.e. to include 'post-16' senior secondary school. This is a major change for a significant number of students, especially from poor or disadvantaged backgrounds. This in itself will inflate the ESL rate and take time to adjust. Similarly the current financial situation is impacting on resources and morale but does not seem to have dampened the natural enthusiasm of teachers and students. The Government is in the process of creating school 'clusters', by merging existing schools to provide an integrated range from kindergarten until senior secondary. These are also taking time to settle and have some good outcomes but unfortunately resources are affected by the financial situation.*

*The results from the interviews are both confirmatory, of previous visits, but new interesting themes emerged across all of the meetings.*

*The confirmatory themes in ICT in Education included evidence that Portugal like other case study countries is still in the experimental phase of the pedagogical use of ICT. Most of their examples are initiatives of individual teachers usually inspired by a piece of technology e.g. Facebook and are not sustained and evaluated. So it is difficult to learn what works and what does not. Similarly, there is little appreciation of pedagogy, although a more consistent view of the need for student centered education was apparent there was little real development in this regard. Activity is still limited to a significant minority of teachers and classes.*

*The confirmatory themes in the use if ICT in reducing ESL confirmed the view that social and family background, including some students having to work to earn income, was the predominant cause of students being at risk from ESL. Very strong confirmation that a lack of motivation, either from background or from school experience, was the main factor in ESL but also that the school experience could be significantly enhanced through the use of ICT based methods increasing motivation and improving retention. Similarly, early detection was seen as*

*fundamental and that alternative ICT based approaches would release more staff time to interact with students directly and detect decreasing performance or demotivation.*

*The distinctive new themes to emerge in ICT in Education concerned teachers' training and employment. In general the teachers felt that they were not adequately trained for potential uses of ICT in learning and that there was a considerable gap between the esoteric description of pedagogy, called didactics in Portugal, and no guidance on the choice of practical approaches that they could adopt for particular situations. This was compounded by staff at Education Institutions not using ICT based methods but delivered their own courses through extensive PowerPoint presentations. As one teacher remarked: "teachers teach as they were taught". Further, many graduating students are unable to find permanent jobs and have to take temporary jobs filling in for staff on leave. Obviously, this situation militates against innovation by new teachers who simply adopt the same method as the teacher they are replacing. Finally, some teachers and students suggested that team teaching would enable teachers to share their ideas and the development of resources for new methods. Specific experience of this was rare but very positive. Clearly these issues are fundamental.*

*The distinctive new themes in ICT in reducing ESL to emerge from the visit concerned the perceived relevance of the national curriculum and examinations for secondary school education. In general this was considered to be too academic and unrelated to real life and professional and vocational practice. The view was that it was entirely based on knowledge and gave little attention to understanding and key skills and competences. Similarly, national examinations based on final summative examinations consisting of 'memorising' knowledge determined the pedagogical approach and reinforced traditional didactic methods. This was perceived to be a significant barrier to developing student centered methods, based on ICT. However, there is considerable evidence that interactive resources based on student centered methods significantly increase attainment even in national examinations, although the competency development remains un-assessed. Nevertheless a review of the national curricula, and the introduction of combined final and continuous assessments would be very welcome and could make a vital contribution to the reduction of ESL.*

# 1  Country Background

## 1.1  Senior Secondary Structure

Compulsory education begins at the age of 6 and lasts for 12 years.

Upper secondary education is organised into diversified forms according to different aims, namely either focusing on access to further studies or preparation for active life. This level of education and training corresponds to three academic years and comprises different types of courses:

- The scientific-humanistic courses are mainly focused on access to higher education;

- Specialised artistic courses - provide artistic education and training, oriented both to give access to further studies in the specific area and to active life (e.g. visual arts, music, dance)
- Professional and vocational courses are oriented to students' professional qualification towards active life, also allowing access to further studies;
- Recurrent education – addressed to adults who have not completed this level of education at the regular age.

The permeability between courses oriented to working life and courses geared to continue studies is guaranteed. Compulsory education is provided in public schools, private and cooperative schools. State-run schools are free of charge, but families have to pay for books and materials

## 1.2   ICT Policies

Schools are themselves responsible for the implementation of ICT in education. National political decisions have been set up to integrate ICT into the curriculum. These activities consist of projects, programmes conducted by the Ministry of Education that provide the necessary support to meet the existing needs of schools. High investments have been made on the renovation of school infrastructures and equipment to meet the requirements of the knowledge society , namely through the Education Technological Plan and the School Network Modernisation Programme. These programmes have resulted in deep transformations in the school premises and organisation and above all in teacher training, enabling them to integrate ICT in teaching practices.. There are many schools in Portugal wherethe student-computer ratio is 2:1. The Ministry of Education and Science includes the Educational Resources and Technology Unit. Its mission is the conception, development and evaluation of initiatives concerned with computers, networks and the internet use in schools and in the learning process in general. The schools' support is made through 9 ICT Competence Centres, mostly universities, which in close cooperation with the Educational Resources and Technology Unit, promote actions leading to best teaching and learning practices.

## 1.3   Teacher Training Processes

Initial teacher training is carried out in higher education institutions – polytechnics and universities – with the Master's degree being the minimum academic qualification for the teaching profession, according to the changes introduced within the Bologna Process.

Pre-primary teachers and teachers in the 1st and 2nd cycles of compulsory education are trained in teacher training colleges which are integrated into polytechnics or universities; teachers in the 3rd cycle of compulsory education and upper secondary are trained at universities.

Specialised training takes place in higher education institutions and aims at the qualification of staff for particular specialised educational positions, duties or activities of a pedagogical or administrative nature, which are directly applicable to the function of the educational system and schools.

For admission to initial teacher education, there are no specific requisites concerning the education of those students with special education needs. The entrance into initial teacher education courses depends on the classification of the 12th year of education, together with proof of admission in a specific content (Portuguese or Mathematics) for the first years of teaching and in the discipline of the main subject of the course in education for further degrees (Biology, History etc.).

For the development of practical classroom supervised activity that includes academic practice, protocols are established between academic institutions and cooperating schools. The first need is to make sure that they have got the human and material resources needed for quality education.

The selected teachers from cooperating schools, who collaborate in the training as mentors, are required to have appropriate skills and teaching practice in their subject areas or disciplines, for no less than five years. The programme has given preference to teachers with specialised training in educational supervision and training of trainers and/or supervisory experience.

## 1.4  Early School Leaving Status

Early School Leaving in Portugal is an economic, social, and individual problem. Portugal has got one of the highest rates of ESL in the European Union – 20.8%.This refers to the people aged 18 to 24 years who are not attending school and who have not achieved basic education, a senior secondary certification nor a vocational diploma. Tackling the problem of pupils leaving school early is one of the priorities of the Portuguese government and several measures to fight it have been implemented in the last twenty years. ESL remains a huge challenge in Portugal, but the evolution in the last years can be considered very positively with the reduction of the ESL rate from 50% in 1992 to 20.8% in 2013.

# 2  Institutional Visits

The members of the visiting panel were:

> Prof Roy Leitch, External Expert (Scotland)

> Susan Flocken, Project Manager, ETUCE, Brussels

> Bert Imminga, AOb, Tthe Netherlands

> Maria Arminda Bragança, FNE, Portugal (organiser)

The panel visited three institutions: 1 higher education institution responsible for the pedagogical training of general upper secondary school teachers and 2 upper secondary schools.

## 2.1  Instituto de Educação da Universidade de Lisboa

The Institute of Education is a new organic unit of the University of Lisbon, designed to research, train and intervene in specific problems of Education and Training in Portugal. It is a higher education institution that offers among other study programmes also teacher education (the post graduate) initial pedagogical teacher education (Bachelor and Master degrees) and continuing professional development post-graduate courses for all teachers in secondary education. Research is a central and dynamic activity of this Institute and is developed in close connection with the post-graduate courses and the community intervention activities and support to the public policies. The total number of students is 1235, of which 351 are studying for a Ph. D. Students in regular teacher training: 238 (this course takes 3 years) and students in master of education 459 (this course takes 2 years) and 171 students are following a pre-service master course (2 years). The institution has a policy on ICT use for pedagogical goals: Teaching staff is encouraged to use ICT in teaching activities

and have a virtual dimension of each course on the Moodle platform. The E-learning Lab provides workshops and local support to teachers.

The panel had a meeting with the Director of the Institute and with head of the pedagogical programme of the Institute. The panel also interviewed two teachers and two students – teachers.

## 2.2 Escola Secundária Eça de Queirós

This is an upper secondary school, situated in a very populated neighborhood in Lisbon and occupies a big area with six buildings. The school has 876 students, roughly equal male and female, of mixed socio-economic background, 41 classes and 131 teachers, partially funded by state and by local government. It is a very well equipped school and has a specific policy on ICT use for pedagogical goals. It offers scientific-humanistic courses, professional courses and courses for adult qualification. There are also courses offered in the evening. The school has benefited from an initiative of the government to provide computers in schools on the basis of 1 computer for every two students. This initiative has had to be terminated due to the financial crisis..

There is no specific policy to prevent early school leaving because the school has got a very low rate of early school leavers. The panel had a first meeting with the Principal and Deputy Director, who gave a detailed presentation of the school. The panel had a guided visit of the school and interviewed two teachers and four students.

## 2.3 Escola Secundária D.Dinis

This is an upper secondary school, situated in a very populated neighborhood in the outskirts of Lisbon. The school has 960 students – 496 male, 464 female) of low (majority)/medium socio-economic background, 42 classes and 85 teachers, fully funded by state. There are VET courses on Child Support, Multimedia, Informatics, Sports and Health. The school is a very well equipped school and has a specific policy on ICT use for pedagogical goals. Teachers are truly interested in developing methods that effectively involve students in the learning environment. The school offers scientific-humanistic courses, professional courses and courses for adult qualification. It has a formal policy to address early school leaving. In the last 3 years 9.9% of undergraduate students have left school and 8.3% transferred to another track.

The panel had a first meeting with the Principal, who gave a detailed presentation of the school. The panel had a guided visit of the school and interviewed 5 teachers (Geography, English, Science, History, ICT) and four students, who all took the science and technology course.

# 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. 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.

The interviews were conducted in English, with the occasional requirement for interpretation by the Portuguese member of the panel. As with previous study visits terminology was sometimes ambiguous. However, in general the panel coped with this through clarifying and confirming responses and comments.

The discussions were held within the context of difficult financial conditions within the country, which clearly were impacting on staffing and resources and effecting moral. However, the panel was impressed by the general lively ambiance within the schools and the very clear dedication of the teachers and enthusiasm of the students.

## 3.2 Emergent Themes by Institution

| Institution | Institute of Education, University of Lisbon |
|---|---|
| Category | Teachers |

| ICT in Education |
|---|

1. ICT to promote **communications** and access to knowledge
2. Promoting **active citizenship**, empowerment of citizens
3. **Student** needs to be the **center** of education promoting project work and problem solving
4. Bridge between schools and the **real world**, robotics
5. Teacher should be a **co-learner**, more responsibility for the teacher
6. Nothing to do with age, teachers would **like to change** but need training
7. Outcomes using ICT methods **not assessed** using existing assessment methods
8. Difference between outcomes e.g. **skills and knowledge**
9. Education Institutes should lead and **promote change**
10. Flexible learning methods **improve outcomes**, empirical evidence only
11. Distance Learning students are much **better organised**
12. ICT supports **collaborative and contextual learning**
13. Teacher should **direct the student's earning**
14. Not many students can **work alone**
15. Social Media chat can **develop skills**

| Early School Leaving |
|---|

1. ICT **not enough** to prevent ESL
2. **Student social background** is fundamental to preventing ESL
3. Lack of connection of subject to **real life**
4. School should have a **consistent vision** and implement it
5. **Family support essential**
6. Traditionally taught classes **not motivational**
7. Strong **pressure** from colleagues **not to change**

8. **Temporary contracts** impeding development
9. Assessment should be based on the **desired outcomes**, skills and knowledge

| Institution | Institute of Education, University of Lisbon |
|---|---|
| Category | Student Teachers |

### ICT in Education

16. **Sharing teaching** through use of podcasts and wickies
17. ICT can make education **more interesting**
18. Still reluctance of teachers to use the ICT infrastructure, because of the **lack of training**
19. Teacher should **not** be the **center of knowledge**
20. Teacher should **be the guide**
21. Education Institutes **provide good background**
22. Education Institutes **do not practise what they preach**
23. Teacher **feel insecure**, afraid that students can use ICT more effectively
24. **Training** should include **pedagogical use of ICT** for specific subjects
25. Use of technology can be a **lazy approach** to teaching
26. Computers are in the schools but are **often not used**
27. Some schools do not have **enough computers**

### Early School Leaving

10. Every class should have a **'tutor'** to monitor attendance and performance
11. Remove **bureaucracy** in schools
12. Need for **social media** required in classroom to help **motivate** the students
13. Use ICT based **games** for education
14. Pedagogical use of ICT takes a lot of **time to develop and prepare**
15. Pupils **do not use email**
16. Basic problem is a **lack of motivation**
17. Causes of ESL are **60%** environmental and **40%** education methods
18. Preventing ESL is **not the role of the school**
19. **Team teaching** would promote and support change
20. **Collaboration between schools** would promote and support change
21. **Lack of communication** between teachers or schools
22. Two teachers for one larger class to **overcome isolation**

| Institution | Esa de Queiros, School Cluster in Lisbon |
|---|---|
| Category | Teachers |

### ICT in Education

28. **100%** for ICT

29. Internet allows **access** to students after hours and at the weekend
30. Good **motivation** for students
31. Facebook as an **informal Learning Management System**
32. ICT can be used as tool to **improve the relationship** between teachers and pupils
33. Teacher as a **Mediator**
34. Teachers **teach as they were taught**
35. Teachers are no longer the **owners of knowledge**
36. Role of teacher to point out **good on-line resources**
37. Very little strategy and direction for **ICT development**
38. Lack of **evaluation** of ICT projects and innovations
39. **Too early** for proper evaluation
40. ICT provides **better contact** with the pupils
41. Teachers should use the methods which they are **most at ease**
42. Students are more **confident** if the teacher is at ease
43. **Diversity of approaches** better
44. New teachers are **not well prepared** for the use of ICT

| Early School Leaving |
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23. **Weak students** from previous grades and with gaps are **potentially at risk**
24. We have **no system** to identify students at risk
25. Teachers **inform other teachers** about students potentially at risk
26. Teachers do not have **enough time** to identify students at risk
27. School system does not **support students** at risk
28. Lack of **motivation** responsible for ESL
29. National Team for **Intervention and Health was set up in 2012. It was** not compulsory and did not work in the first year
30. Elearning courses as **compensation** policy to allow students to recover
31. **Early detection** is crucial
32. Need to **monitor attendance**
33. Teacher training to use ICT and improve **student contact** and **coaching**

| Institution | Esa de Queiros, School Cluster in Lisbon |
| --- | --- |
| Category | Pupils |
| **ICT in Education** | |

45. We study using **books** and they are not free
46. We also use **Social Media** to discuss with my friends
47. If I am stuck I ask the teacher for help because I do not **trust** internet resources
48. Contact by **email** is possible all the time
49. Still **prefer the teacher for explanation**
50. Teachers still use **traditional** methods
51. Pupils are **more informed** about ICT than teachers
52. Internet resources are **normally in English** rather than in Portuguese
53. **Memorising** is necessary for exams, particularly for Science subjects
54. We enjoy using **games and internet resources**, especially if recommended by the

teacher
55. Formal assessments do not **measure skills** e.g ICT or communication skills
56. Most classes are still taught **traditionally**

| Early School Leaving |
| --- |

34. Ensure subjects are more **relevant and practical**
35. **Gap** between what you learn and what is needed
36. Some students need to **help at home** and to generate income
37. We are **not allowed laptops** into the classroom
38. **Motivation** is very important
39. We like **team teaching** as long as the teachers are not contradictory
40. **Motivation** is the responsibility of students and parents
41. **Relevance** good for motivation

| Institution | Escola Secundria D.Dinis |
| --- | --- |
| Category | Teachers |
| ICT in Education | |

57. ICT should be used to enable students to **think**
58. The teacher should be a **guide or tutor**
59. Teachers need to accept that some students will **know more** about ICT
60. ICT allows teachers to **work with** the students
61. Teachers are afraid of their **low knowledge** of ICT
62. Fear of **losing control** of the class
63. Building **relationships** between teachers and students crucial
64. Internal survey found that most teachers **did not want** to use ICT
65. There is not enough **staff training**
66. Teaching methods chosen through **intuition**
67. Teachers need more time to **create resources**
68. **The curriculum is too intense** in Portugal
69. Each school should have a **resource development team**
70. Difficult to develop resources for the full **curriculum**
71.  Difficult to **assess outcomes** of ICT learning
72. Pupils need **challenges**, e.g. problem based methods
73. Lessons are **dull**
74. The national **curriculum** is not supported by resources

| Early School Leaving | |
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42. School is **boring**
43. Teachers have **little time** to discuss important subjects

44. Students become **detached and demotivated**
45. Continuous lowering of **self esteem**
46. **Vocational** track is considered to be easier but it is not
47. ESL risk **seems to grow** in some students
48. Curriculum seen as **irrelevant** to daily life
49. No **continuity** between tutors across grades
50. Teachers are submerged by **bureaucracy**
51. **Curriculum** redesign is crucial
52. **Methods** used in vocational track is better for retaining students
53. It is important to have **various learning styles**
54. It is better to **interview students** entering the vocational strand
55. It is better for teachers to **work in teams**
56. **Professional development** important and **curriculum design**

| Institution | Escola Secundria D.Dinis |
|---|---|
| Category | Pupils |

| **ICT in Education** |
|---|

75. ICT is okay but it depends on **how it is used**
76. ICT use is interesting as long as it is **different**
77. Teachers did not use Moodle (**LMS**) and said it was not working
78. Internet gives access to powerful **knowledge resources**
79. Most teachers used a **little ICT**
80. ICT use **Depends** on the teacher
81. A lot of **PPT presentations**, available on Moodle
82. Access to some internet sites **blocked** by school
83. Would like to work with the **latest resources**
84. Use internet to access **past exam papers**

| **Early School Leaving** |
|---|

57. **Limited knowledge** of drop outs
58. **Growing risk** of failing
59. Keeping **bad company**
60. **Remote access** to school would help student recover
61. ICT help to **study at home**
62. **Facebook** can be very useful
63. **Mathematics** too difficult
64. Using **animations** would be a good way to learn

# 4  Analysis of Outcomes

## 4.1  Discussion on Emergent Themes

All 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 experiences and views, including current students. This resulted in 84 themes on ICT in Education and 61 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. 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 as possible.

## 4.2  Identification of Master Themes for ICT in Education

1.  **COMMUNICATION:** ICT can enhance communication between teachers and students and between students; Social and Participatory Media allow sharing of knowledge, stimulate motivation and build relationships.
    ICT Themes: (1,15,29,31,32,40,46,48,78)

2.  **COMPETENCES:** The pedagogical use of ICT can develop basic skills and key competences in students, and teachers.
    ICT Themes: (2,8,10,51,53,55,57,72,61)

3.  **STUDENT CENTRED:** The students should be in control of their learning and able to use methods and resources most suitable to their individual learning style. The teachers' role is to create the environment for learning and to advise facilitate and tutor students to achieve successful outcomes.
    ICT Themes: (3,5,13,19,20,33,35,36,47, 49,58,60)

4.  **RELEVANCE:** The curriculum, resources and technology should be relevant to daily life. Project work, problem solving and investigations should be used to allow the student to appreciate the relevance of the subject matter. ICT can be very useful in providing animations, simulations and games to enhance relevance
    ICT Themes: (4,68)

5.  **CHANGE:** ICT offers different pedagogic approaches impacting on the role and perceived status of the teacher. Most teaching remains traditional based on didactic teacher centered methods. Teacher training is considered central to overcome resistance to change and supporting the teacher in adopting new methods
    ICT Themes: (6,9,18,21,22,23,24,34,41,42,44,50,56,61.62,64,65,66,79,80,)

6.  **ASSESSMENT:** Traditional (National) assessments emphasise mainly knowledge outcomes and memorisation of knowledge, facts and procedures. ICT approaches develop key skills and competences, and if visualisations, animations and simulations are used, can lead to greater understanding. Assessing understanding and skills development needs utilisation of

project work, problem solving and design led approaches as well as testing skills and competences.
ICT Themes: (7,53,55,71)

7. **TEAM TEACHING:** Traditional teaching is done in isolation with little contact with other teachers and managers. Discussion of methods or sharing of resources is encouraged. Most teachers simply adopt the same methods as the previous teacher. The changing roles provided by ICT based methods offer opportunity for shared developments and common resources.
ICT Themes: (5,12,16,60,66)

8. **DIVERSITY:** Teachers should utilise a range of approaches to support different student learning styles. Guidelines on what pedagogical methods to use in a given situation should be developed.
ICT Themes: (3,21,24,41,42,43,66,76)

9. **RESOURCES:** Development of educational resources is still at an experimental stage with few strategic developments and most teachers relying on external internet resources
ICT Themes: (16,19,35,36,37,45,52,54,67,69,70,81,82,83

10. **TRAINING**: Teacher training is essential. However there is little evidence that existing teacher training provision is effective or appreciated. Education Institutions make little use of the methods they teach. As a result teachers tend to teach in the way they are taught not what they were taught.
ICT Themes: (6,9,18,24,34,44,65,66)

11. **INFRASTRUCTURE:** The ICT infrastructure was generally accepted as being good although variable. The Portuguese Government has made significant investment in technology and classroom technology prior to the financial and economic crisis. Currently little or no investment.
ICT Themes: (26,27,37,75,77)

## 4.3   Identification of Master Themes for Early School Leaving

1. **BACKGROUND:** A student's family and social background is the most important contributor to ESL. Whilst outside the scope of this study its importance should be recognised and addressed through other non-ICT methods.
ESL Themes: (1,2,5,17,18,36,40,59)

2. **MOTIVATION:** Student's personal motivation is considered fundamental to ESL. Motivation can be generated or enhanced through the use of ICT through the use of various pedagogies to support different learning styles and to use interactive resources based on animations and simulations to develop understanding and competence.
ESL Theme: (6,16,28,32,338,40)

3. **RELEVANCE:** The curriculum, resources and technology should be relevant to daily life. Project work, problem solving and investigations should be used to allow the student to appreciate the relevance of the subject matter. Thereby stimulating interest and attainment and reducing risk to ESL
ESL Themes: (3,13,34,35,41,48,51,63)

4. **COMMUNICATION:** ICT can enhance communication between teachers and students and between students; Social and Participatory Media allow sharing of knowledge, stimulate motivation and build relationships and hence reduce the risk of ESL.
ESL Themes: (12,20,21,59)

5. **ASSESSMENT:** Traditional (National) assessments emphasise mainly knowledge outcomes and memorisation of knowledge, facts and procedures. Similarly final examinations based on a single summative assessment can be demoralising for many students. Continuous assessments can be more encouraging and contribute to early detection of those at risk of ESL
ESL Themes: (9,23,31,32,44,45,47,57)

6. **WORKLOAD:** Teachers complain of overwork and bureaucracy in schools not allowing them time to focus on students at risk or develop alternative methods. Transforming to student centered methods would allow teachers to have more direct interaction with students and hence able to detect difficulties or risk of ESL.
ESL Themes: (9,14,26,31,32,43,50)

7. **TEAM TEACHING:** Traditional teaching is done in isolation with little contact with other teachers and managers. Team teaching can allow teachers to focus on supporting weaker students and hence reducing ESL.
ESL Themes: (19,22,39,55)

8. **EARLY DETECTION:** Weak students tend to progressively fall behind until recovery appears hopeless and they elect to leave school. Early detection through ICT systems for monitoring of attendance; continuous assessments, regular tutorial classes with the teacher and participation in social media groups, all help to detect progressive deterioration in performance and motivation.
ESL Themes: (24,25,27,31,49,54,57,61,62)

# 5 Conclusion

The panel received incredible hospitality from the Institutions and Schools visited. All meetings were conducted in an extremely open and friendly manner. It was clear, and indeed openly stated that the respondents enjoyed the discussions indicating that they had little opportunity or time to discuss these crucial issues in their normal practice. They are eager to receive the report and to hear the eventual recommendations from the project.

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kindergarten until senior secondary. These are also taking time to settle and have some good outcomes but unfortunately resources are affected by the financial situation.

The results from the interviews are both confirmatory, of previous visits, but new interesting themes emerged across all of the meetings.

The confirmatory themes in ICT in Education included evidence that Portugal like other case study countries is still in the experimental phase of the pedagogical use of ICT. Most of their examples are initiatives of individual teachers usually inspired by a piece of technology e.g. Facebook and are not sustained and evaluated. So it is difficult to learn what works and what does not. Similarly, there is little appreciation of pedagogy, although a more consistent view of the need for student centered education was apparent there was little real development in this regard. Activity is still limited to a significant minority of teachers and classes.

The confirmatory themes in the use if ICT in reducing ESL confirmed the view that social and family background, including some students having to work to earn income, was the predominant cause of students being at risk from ESL. Very strong confirmation that a lack of motivation, either from background or from school experience, was the main factor in ESL but also that the school experience could be significantly enhanced through the use of ICT based methods increasing motivation and improving retention. Similarly, early detection was seen as fundamental and that alternative ICT based approaches would release more staff time to interact with students directly and detect decreasing performance or demotivation.

The distinctive new themes to emerge in ICT in Education concerned teachers' training and employment. In general the teachers felt that they were not adequately trained for potential uses of ICT in learning and that there was a considerable gap between the esoteric description of pedagogy, called didactics in Portugal, and no guidance on the choice of practical approaches that they could adopt for particular situations. This was compounded by staff at Education Institutions not using ICT based methods but delivered their own courses through extensive PowerPoint presentations. As one teacher remarked: "teachers teach as they were taught". Further, many graduating students are unable to find permanent jobs and have to take temporary jobs filling in for staff on leave. Obviously, this situation militates against innovation by new teachers who simply adopt the same method as the teacher they are replacing. Finally, some teachers and students suggested that team teaching would enable teachers to share their ideas and the development of resources for new methods. Specific experience of this was rare but very positive. Clearly these issues are fundamental.

The distinctive new themes in ICT in reducing ESL to emerge from the visit concerned the perceived relevance of the national curriculum and examinations for secondary school education. In general this was considered to be too academic and unrelated to real life and professional and vocational practice. The view was that it was entirely based on knowledge and gave little attention to understanding and key skills and competences. Similarly, national examinations based on final summative examinations consisting of 'memorising' knowledge determined the pedagogical approach and reinforced traditional didactic methods. This was perceived to be a significant barrier to developing student centered methods, based on ICT. However, there is considerable evidence that interactive resources based on student centered methods significantly increase attainment even in national examinations, although the competency development remains un-assessed. Nevertheless a review of the national curricula, and the introduction of combined final and continuous assessments would be very welcome and could make a vital contribution to the reduction of ESL.