Developing a mobile and employable graduate through LSP education in Life Sciences

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Purpose

• to provide a comprehensive view of the current situation of foreign language teaching with special reference to the Life Science higher education institutions (HEIs) in Croatia

• to reflect upon the role and value of these languages within the general life science education system

• to make a proposal of possible measures to improve foreign language teaching in the Life Sciences
Outline

• Role of languages for specific purposes (LSPs) in the development of mobile and employable graduates in life science institutions

• Current state, position and function of LSP at 9 Croatian life science HEIs (universities, polytechnics and colleges delivering agriculture, food technology and forestry courses)

• Evaluation of the questionnaire on LSP

• Conclusion
Globalisation - the most often mentioned phenomenon at the turn of the millennia

- It affects the whole economy and society, labour market and the tasks of the education system

- HE institutions have to prepare an efficient and successful employee for the labour market

- Successful employability of today’s HE graduates depends on how well they are prepared linguistically and interculturally to enter the labour market
The first decade of the new millennium - considerable changes in the European higher education

Establishing European and national frameworks

Moving towards student-centred, outcomes based learning

There is a shift from teaching to learning

from a focus on course input - “what do we want to teach”
to course output - “what have the students learned”
“what competences are needed in the world of work”
The concept of LSP today

English for Specific Purposes (ESP) or English for Special Purposes arose as a term in the 1960’s. General English courses frequently did not meet learner or employers wants.

LSP is an umbrella term encapsulating a range of subdivisions:
• Language for Academic Purposes (LAP)
• Language for Business Purposes (LBP)
• Language for Occupational Purposes (LOP)
• Language for Professional Purposes (LPP)
Dudley-Evans and St. John (1998) applied a series of characteristics to resolve arguments about what ESP is.

**Absolute Characteristics** (3)

- LSP is defined to meet specific needs of the learners
- LSP makes use of underlying methodology and activities of the discipline it serves
- LSP is centered on the language appropriate to these activities in terms of grammar, lexis, register, study skills, discourse and genre
Variable Characteristics (5)

- LSP may be related to or designed for specific disciplines
- LSP may use a different methodology
- LSP is likely to be designed for adult learners, either at a tertiary level institution or in a professional work situation.
- LSP is designed for intermediate or advanced students
- Most LSP courses assume some basic knowledge of the language systems
Aspects of LSP

- LSP courses should be learner-centred
- Materials play a significant role in LSP teaching
- Course material and teaching methodology should be based on the specific professional or academic needs of learners
- Materials should be authentic, up-to-date and relevant for the students’ specializations
- Needs analysis is and always will be an important and fundamental part of ESP (Gatehouse, 2001, Graves, 2000)
The high rate of unemployment among public university graduates and the competitive marketplace call for high quality industry-ready graduates.

**What general skills are required by employers?**

- language skills
- general and current knowledge
- ability to give presentation to clients
- basic knowledge in ICT
- work exposure/experience
Foreign language skills expected by employers

- high level of general language proficiency
- high level of vocational language knowledge
- the combination of general and vocational language
- good negotiating skills
- intercultural communication competency
- confidence and initiative in using a foreign language

Results of the empirical research indicate intermediate level of LSP knowledge is the most common requirement of employers.
A Conceptual framework of employability in terms of pluriliteracy (Koo 2006)

8 literacies:
- linguistic proficiency
- communicative literacy
- culture awareness
- content literacy
- sustainable citizenship
- attitudes and mindset
- vocational literacy
- critical literacy
Linguistic proficiency

Language proficiency in foreign languages is one of the important attributes for student’s employability (Kubler and Forbes (2004))

It refers to

• abilities and skills in the use of particular languages
• the ability to apply these in appropriate contexts
• the ability to present sustained and persuasive written and oral arguments cogently and coherently
Communicative literacy involves

• face-to-face communication
• internet
• iPod and mobile phone
• multimodal and multimedia literacy
• communication literacy
European Commission stimulates cooperation through well-funded programmes

• to promote the mobility of students and scholars within Europe
• to advance the study of European languages
• to foster university-industry links

**Communicative competences and active language skills**
- essential tools for mobility and Europe-wide employability
In the past two decades, tertiary education in Croatia has undergone a period of remarkable change and growth.

Croatian government has set the following objective concerning mobility of students:

1800 university and polytechnic students will study part of their degrees abroad each year by the end of 2020.
Survey

9 HE institutions:
- Faculty of Forestry, University of Zagreb
- Faculty of Agriculture, University of Osijek
- Faculty of Food Technology, University of Osijek
- Department of Agriculture, University of Dubrovnik
- Polytechnic Marko Marulić in Knin
- Polytechnic in Požega
- Polytechnic in Rijeka
- Polytechnic in Slavonski Brod
- Križevci College of Agriculture
Questionnaire

72 multiple choice and open questions covering

• basic information about teaching staff
• position of LSP within the overall curricula
• syllabus design and materials
• teaching methodology
• assessment criteria
• learning outcomes that develop desired competences
• students’ participation in the EU programmes
• teachers’ attitudes toward LSP
Results

• 12 teachers (M 1, F 11)
• Average age: 44
• Work experience in LSP: 5 to 32 years
• Majority of teachers teach English, some teach German, some both English and German
• Lecturers (5), Senior lecturers (5), Assistant (2)
• Degrees: BA (6), MA (4), Ph.D. students (2)
• All HE institutions offer courses in English and German.
  Two offer additional courses: Italian, French and Spanish.
• Number of LSP contact lessons: 90 to 240.
• All institutions participate in EU international programmes (Erasmus, Tempus).
• English - a dominant language at all HE institutions:
  2454 students learn English, 614 German.
• Number of students in a group: 20 to 50
• Groups are formed based on the study course, language background knowledge
• Written and oral exam required
• Not all HE institutions require from their students to pass the LSP exam in order to enroll in next semester
• A huge discrepancy in the number of ECTS: 0 - 6
• Most LSP teachers expect the knowledge of their students to meet the criteria for B2 level (CEFRL)
• LSP syllabus is made on the students needs analysis (8)

• LSP syllabus is made in cooperation with subject specialists

• The traditional “staff-centered” and “knowledge-oriented” approach is slowly giving way to student-centred approach

• Case studies are still a relatively rare method in LSP teaching
Teachers’ attitudes toward LSP

All teachers agree that basic objectives of LSP courses in the Life Sciences should focus on:

• mastering basic professional vocabulary
• communication in professional environment
• independent use of scientific papers and other materials
• development of presentation skills
• mastering writing of abstracts and scientific papers
• developing speaking skills related to specific professional area
• LSP should be taught in all 6 semesters

• The total number of contact lessons inadequate to achieve the objectives of the LSP course

• All 4 skills (reading, writing, speaking and listening) are equally important

• Optimal number of students in a group: 10 – 20

• Groups should be formed according to the background language knowledge
• The starting level of LSP course needs to be (at least close to) B2 for English and B1 for the other languages

• Both adapted and authentic texts should be used

• Students’ receptive and productive vocabularies are generally inadequate

• Academic listening presents students with fewer difficulties than writing, speaking and reading
Most teachers agree that LSP education should be harmonized
- number of contact lessons
- number of ECTS credits
- learning outcomes

Teachers disagree whether the LSP course adequately prepares students for EU programmes (LLL)
- Most of them are not satisfied with the level and intensity of international cooperation
- It is not realistic to expect that a second LSP course will be offered to their students in the near future
Proposals for language programmes for the Life Sciences

- to further develop the language knowledge and competences which students gained during their studies in secondary education
- to develop LSP courses on the basis of students’ linguistic needs
- to integrate language learning and subject matters
- Students need to become aware of the possibility and usefulness of individual language learning during their studies and after graduation
- Evaluation and assessment of LSP course need to be standardised
Conclusion

Life science graduates should possess:

• high levels of communicative competence in at least 1 - 2 foreign languages

• intercultural competences

• an ability to learn languages in an autonomous way

• LSP courses need to be skill-oriented and learner-centred
Should we go on with LSP in the Life Sciences?

• All Life Science institutions should offer/require all of their students to study a foreign language

• This requirement should be a condition for the receipt of public funds for education