Transferable skills in ESP

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Abstract: The demand for transferable skills as an integral part of English for Specific Purposes (ESP) courses taught to science students has been expanding for at least the last decade due to the increasing interdisciplinary and international cooperation within various fields. The need for the linguistic competence of science graduates not only in their area of expertise, but also within the broader context of their professional and social activities, has provided the educators with the opportunity to enhance the educational impact of ESP courses. For the purposes of this paper, transferable skills may be operationally defined as a set of oral and written communication skills based on the content knowledge of specific science disciplines which ESP learners acquire and practise in various semi-authentic situations.

The paper will discuss the role of transferable skills in higher education and the design of ESP courses, with a special emphasis on three specific areas: skills related to providing peer-feedback, skills needed for mediating meaning, and finally the ability to verbalize evidence of one's achievements. These competencies are not only transferable, but also soft or communication skills that may be especially challenging to our science students since they require not only logical and analytical thinking but also adaptability and awareness of the role of emotions in human interaction. Sample activities will be described as useful for promoting and practising these skills.

Key words: ESP, higher education institutions, science students, transferability, employability

Introduction: Defining transferable skills

"Every skill you acquire doubles your odds of success", claimed a well-knows cartoonist Scott Adams (Gallo, 2013). This may be even more valid for skills that can be applied in multiple areas or situations. Their added value is the possibility of transition between various environments, projects or roles – simply put, these skills can be seen as transferable.

There is no agreement on the definition of transferable skills as different authors have different views of the problem. Christof Nägele and Barbara E. Stalder see transferable skills as skills "that can be used to act efficiently in different real-life situations" (739), i.e. skills that are acquired in one context and then applied and reused in a new context. Transferable skills are often referred to by various alternative labels, such as basic skills, generic skills, key skills or life skills. A common name given to transferable skills is employability skills because they enhance a job applicant's chances of being hired and are important in recruiting new employees – they guarantee that an individual becomes quickly competent in new situations (Rarrek and Werner, 2012, quoted in Nägele and Stalder, 2017, p. 740). According to the Recommendation of the European Parliament and of the Council of 18 De-

cember 2006 on key competencies for lifelong learning (2006, quoted in Nägele and Stalder, 2017, p. 740), these skills comprise, for example, communication in a foreign language, digital competence, and social and civic competence.

We have no single or definitive list of transferable skills or skills in general in that matter. A good working model of skills was developed by Ruth Bridgstock who, apart from discipline-specific skills, that are traditionally included in university curricula (37), discusses also the aforementioned employability skills, underpinning traits and dispositions, such as openness to experience, initiative or sociability, generic skills including working in teams and written and verbal communication, self-management skills related to the individual's perception of themselves in terms of values, interests and goals, and, finally, career building skills connected to the ability of finding and using information about careers and world of work (35–38). All these technical and non-technical skills can be seen as necessary building blocks leading to a success in launching and maintaining fulfilling careers, establishing satisfying cooperation across fields and disciplines, also internationally, and generally promising a happy personal life.

Transferable skills in higher education

As of lately, transferable skills have started to play a marked role in the education at universities. Isabella Stefanutti in her unpublished dissertation traces the evolution of this institution as, firstly, an ideology-based nest of dominant elites, later a research-focused centre, and finally, in the last fifty years, the entrepreneurial establishment promoting human capital, innovation and commercial applications contributing to the knowledge society (4–5). Nowadays, there seems to be a consensus that universities should provide not only subject-specific knowledge, but also develop further skills useful for the student's future life and employment. Universities, therefore, have started to focus on a broader career management competence in students (Bridgstock, 2009, p. 32). The question is, however, how these skills should be transmitted and taught. As Stefanutti suggests, they could be included within the discipline-specific courses belonging to the curriculum or structured as a part of the extracurricular training. Frequently, universities establish special counselling or advisory units called Professional Services (11) or Career Centres that help students launch successful careers and provide training and workshops. Last but not least, we believe that transferable skills should be included in university language courses.

Just to illustrate the point that the universities' managements are aware of the importance of these transferable skills, we mention a local example giving a short quote from the document adopted by our home institution, the Faculty of Science of Masaryk University, in 2021, called the Long-term Development Strategy. The aims comprise, among others, "providing excellent science education at all levels

of study, enabling the relevant employment of graduates in all spheres" (9), which includes both developing the key competencies for future employability and establishing contacts with prospective employers, thus preparing the graduates for the requirements of practice.

The second point is directly connected to the importance of foreign languages and interpersonal skills as prominent competencies that help "strengthen the internalisation of study, student mobility and teaching cooperation" (10). Students should obtain the international experience crucial for their future chances of employment in the international environment.

Transferable skills in ESP courses

We believe that transferable skills should form an important part of language teaching and our ESP courses. Learning and using a foreign language is not only a practical and analytical process focused on understanding and interpretation of ideas and concepts, which our students practise enough in their discipline-specific courses, but mainly a communicative and cooperative activity. This, as most students nowadays realize, will form the crucial part of their occupational tasks in their prospective jobs. They will probably be working in multi-disciplinary and international teams and find it necessary to explain and communicate the key concepts and targets also to people outside their fields – grant providers, investors or the general public – in a comprehensive and persuasive way. They can learn how to manage this in their ESP classes.

Therefore, in our ESP courses for science students, we practise some concrete tasks building up the employability skills, such as writing a CV, cover letter, conducting job interview simulations and presenting a research project. But, in a broader sense, we aim at transferability while training more general communication skills, typically argumentation, negotiation, and planning. These are often categorized as soft skills and as such, they are undoubtedly the desirable attributes of a successful job applicant. In their language classes, students become aware of their soft skills and learn how to verbalize and exemplify them. Later, in a communication with a potential employer, they should be able to explain what skills they can contribute to the company or institution.

In the next part of our paper, we are going to discuss these three specific areas: skills related to providing peer-feedback, skills needed for mediating meaning, or, in other words, the comprehensible transfer of discipline-specific information, and finally the ability to verbalize evidence of one's achievements. We have chosen these areas because the encompassed communication skills might be challenging for STEM (science, technology, engineering and mathematics) students, who often possess strong logical thinking abilities and like to base communication on facts

and reason but, on the other hand, seem to underestimate the role of emotions, changeability, and simply the interferences of human factors.

Peer-feedback skills

In an article addressed to students, psychology professor Drew Appleby demonstrates that the classroom skills related to adaptability, overcoming obstacles or having productive relationships with the others are overlapping with the skills which will help students thrive in the workplace after they graduate (Appleby, 2017). We can consider peer-feedback skills as part of these because peer-feedback is valuable in the progress towards achieving one's goals both in academic and professional areas. In an academic setting, peer-feedback is provided, for example, to writing essays, or team-work on student projects or class presentations. Similar processes are useful at workplaces where strong writing, presenting and team-work related skills are required and the feedback to them is understood as a component of life-long learning.

When working with students of undergraduate courses, we often encounter difficulties in implementing peer-feedback. These students may be reluctant to engage in the activity because they may be unaware of its value and may lack evaluative competences. They simply offer comments such as "The presentation was good," or "It was okay." Sometimes they seem unwilling to comment on the work of the others and to accept the evaluation of their own work from someone other than the teacher. The reasons for constraints are probably related to the adaptation process when moving from secondary to tertiary education. As suggested in the study by Harvard psychologists, the cognitive and psychosocial abilities in this age category are still influenced by higher sensitivity to social evaluation while understanding the emotions and thoughts of other people gradually deepens, which is proved by measurements of responses in brain areas reacting to socio-affective information (Somerville, 2013).

Another factor might be the students' strong interest in their science discipline contrary to little concern for the development of interpersonal skills. They expect working with facts and discussing the discipline-related knowledge, not discussing the development of their classmates' skills on top of counting with emotions. They are not yet able to see the links of their interpersonal skills to the achievement of their academic goals. As teachers of language courses, we therefore have an ideal opportunity to introduce undergraduate students to the potential of peer-feedback for their studies and their soft skills development.

Thus, beneficial feedback should be specific and should describe what the observer can see in the performance of a certain task. Can the observer recognize a strong point, or a weak point? These questions might present a cognitive chal-

lenge but if a student can say: “It was good,” we should elicit a reason and some evidence for this claim. The description of the observations can be guided by some evaluative questions, as suggested by Catlin Tucker:

What is the strongest aspect of this work? Why do you think this is well done?
What is surprising for you? Why is it thought-provoking?
What is one thing that you are not clear about? Where will more explanation help?
Where would you make a small change? How would you re-do this part? (Tucker, 2021).

Alternatively, we can scaffold the peer-feedback to a certain performance with the method of “Start, Stop, Continue” which is suitable for gathering anonymous written suggestions. Each individual in the class recommends something under the three verbs and the feedback recipient can see if any points tend to be recommended repeatedly; these would be worth dealing with. To illustrate, let us mention several examples: “using a spellchecker” for Start, “writing informally” for Stop, and “clear structuring” for Continue. These recommendations should be supplied with a brief description of how the item will help, or an example of how the item is manifested in the text, e.g. “clear structuring; the idea is easy to follow.”

Another tool for peer-feedback is the use of checklists which include items required for completing the task successfully. These are largely the items already described in the task instruction, but they might be misunderstood or overlooked. We consider checklists very practical, if kept simple, because they help prevent failure due to the non-fulfilment of the task instruction. A student can work with a checklist individually; however, with a peer, the author receives confirmation and reassurance, or another perspective on the evaluated element.

Besides this “recognition” level which relates to strengths and weaknesses, we work with a “referential” level characterizing the concept. Students should arrive at answers to certain questions about the principles: Who/What is the object of peer-feedback? What is the purpose? What makes good peer-feedback? Here we can show some examples of feedback in situations relevant to the students’ experience. These examples, either in the form of a video or a text, show the characteristics which make up effective feedback and also point out the elements which are not desirable. We strive to show students that feedback is bound to the goals which we set at the beginning of the learning period. Specific steps leading to these goals are reflected in the assessment criteria and students can make use of them if the teacher shares and explains them. Students can simply be given a rubric, or its modified version, with a scale aligned to the expected standards and refer to this tool while giving their feedback. These steps help create the prerequisites for concrete and targeted peer-feedback.

Finally, it is useful to show that the emotional aspects of feedback play an important role for the recipient to be able to accept it at all. Should the feedback provider fail to maintain a respectful atmosphere, hardly will the recipient want to make any improvements. The respect for the feedback recipient can be demonstrated in seemingly less significant things such as the sitting arrangement, starting the communication with a positive point and encouraging the form of a dialogue.

Mediating meaning

Current methodology moves away from real-life remote approaches that teach language as a list of items. Language is now understood as a means that enables mental activity in which participants react to each other, interpret each other's meanings and utilize them. In this approach, it is not very useful to deal with extensive explanations of theoretical rules and then carry out exercises. It is much better to proceed by working with the relationships between the individual parts of the syllabus aiming to achieve a functioning whole. For these reasons, we build our syllabi around tasks, simulations or projects where there is always a need for the transfer and application of information.

One type of task where our students gain practice in facilitating the information transfer is playing the role of a chair in simulations of various social events such as student conferences or round-table debates. Being in this role makes students aware of a range of responsibilities put on a chairperson from preparing, knowing the participants' professional background and their main ideas, to understanding a basic etiquette for the situation and, above all, working with the meanings of the participants' words. This means managing the flow of the communication, linking individual points to one another, and summarizing or reformulating different utterances. The purpose of such communication management is to enable all participants to comprehend the speakers' ideas. It is quite demanding but the connection of the task to a real-life social role makes it highly engaging.

Difficulties emerge when students speak about their research and describe a discipline-specific concept unfamiliar to their audience. Here we can follow the CEFR recommendations (Council of Europe, 2020, pp. 117–122) and focus on developing mediation strategies which may be further supported by discussing extracts from authentic speeches in the particular scientific discipline. Classroom activities to develop mediation strategies include asking questions about what the classmates already know; formulating definitions of terms with the use of general category words and descriptions of, for instance, a structure, a function, or an application; paraphrasing a sentence using different grammar pattern; deconstructing a concept into parts; comparing a new idea into something well-known;

and possibly many other procedures which relate new information to existing knowledge.

When the audience are non-experts, mediating meaning in STEM areas brings challenges. Some students are not even motivated to clarify their topics to lay people. However, in reality, they might encounter this necessity when communicating, for example, with a grant provider. In the classroom, we can help students prepare for these situations by trying a variety of more creative and less prioritized exercises. For instance, would it be possible to compare an element form their research to a type of food that most people like? Usually, if the new information relates to the structure of a material or the shape of an object, such comparisons are effective. One example comes from mathematics: a topological object called a "torus" is often compared to a doughnut. It is commonly mentioned in lectures on topology given by experts being referred to as a doughnut shape because this analogy nicely illustrates the properties of this object. Therefore, the implied connection between food and topology is by no means inappropriate.

Let us now describe an activity for working with definitions in ESP classes called Taboo Words. This activity is good for pairs or groups of three to four students. They get an envelope with four cards containing words to define and three or four words they are not allowed to use in their definitions. One card contains both terms to define and Taboo Words. One of the students chooses a card; their neighbour(s) should not see it. The first student tries to define the word so that other students can guess what the word is. Then they switch. The teacher monitors the groups, helps weaker students, and may write down the best definitions.

This activity includes speaking, definitions, and subject-specific vocabulary, and can be applied in lessons based on ESP or in general English classes. We use Taboo Words in courses attended by students of all branches of science whose level of English is usually between B1 and B2. As we teach both Academic English and subject-specific terminology, this activity is ideal as it nicely combines both of these approaches. The lesson is theoretical – making Ss aware of the patterns employed in definitions – and practical – Ss create their own definitions using the method of Taboo Words. The aim of the exercise is to practice definitions and defining in a creative and engaging way. Students learn to be more flexible and substitute words in a definition. It is also a good communication group activity that can be done online but the card form is preferable as it involves the manipulation with real cards as objects, thus making the activity more enjoyable.

Verbalizing one's skills

The last competence we would like to mention is the ability to verbalise one's skills. The importance of this has been described by numerous authors. Jocelyn

Wyburd (2017, quoted in Stefanutti, p. 10) or Elspeth Jones (2013, quoted in Stefanutti, p. 12), for example, claim that students should recognize and realize when learning occurs to be able to consciously "own" these newly obtained skills and be able to describe them adequately as that increases their chance of acquiring roles they are applying for – a specific work position, membership in a research team, and so on. Appelby (2017) adds that students should ask themselves how their professors would describe them in a letter of reference, whether the professors could verify that the students possess certain skills. These questions can increase realistic awareness of what strategies and skills students use.

In our language courses, we work on several tasks where students need to verbalize their skills and achievements. Such tasks are, for instance, personal documents written for a job interview or written inquiry about a position in a research team. In some cases, the completed tasks do not have the desired effect because the language in them is not sufficiently convincing. For example, in a CV and cover letter which students prepare for their mock job interviews, they are supposed to define their subject-specific skills and personal qualities. However, quite often, they write something rather general and vague, i.e.

"I finished my MA in Mathematics at MU last year. I can use SAS, C, R, or Matlab."
"I am reliable, hardworking and a team-player."
"I like programming in Python."

which does not sound confident or persuasive even if our students are well-trained, capable professionals. The key is to think of concrete tasks they completed using these skills (what I have already done with SAS, C, R or Matlab, and which problems I can solve in the future), specific situations in which they employed these skills (when I worked successfully as a team-member, on which project) or reasons why they prefer something (why is Python better for me than a different programming language).

The "ownership" of a skill or knowledge is the essential prerequisite for the ability to verbalize the skill or knowledge. The sense of ownership arises when students are aware of what they have learned and how they reacted to learning this thing. These insights might be sometimes very clear and explicit but other times they will be implicit, and some additional effort would be needed to bring them to light. By implementing different reflection activities in which students rethink what happened and process their experience again, they become capable of making links between ideas and realize the importance of the new information.

This additional effort on reflection enables learners to reveal new ideas, express them in words and thus extend the learning experience. The examples of reflective questions might be: What is one thing you did well in today's class? Did anything surprise you? When were you the most creative? What is one area where you

could improve? If some of the comments on these questions can be shared with the peers, then students also get peer-feedback with which they can compare their thoughts and move even a step further.

Conclusion

In our paper, we tried to discuss the variety and significance of the so-called transferable skills and their newly gained role in the university education. In recent decades, university managements, teachers and students have understood the importance of these skills and, consequently, they have started to be included in university strategic documents and form a part of discipline-specific courses and language courses. Obtaining these competencies is greatly beneficial for students as organizations are interested in recruiting applicants with strong communication, writing and presentation skills. Mastering transferable skills, often referred to as employability skills, enhances the chances of students of acquiring desired work positions, research teams memberships and is also instrumental in establishing a successful international cooperation.

Apart from specific tasks and activities, such as writing a CV, cover letter or conducting job interview simulations, we believe that transferable skills especially useful for our STEM students include skills related to providing peer-feedback, skills needed for mediating meaning, and also the ability to verbalize evidence of one's achievements. These three areas were given a special attention in the second part of our paper as we commented not only on educational, but mainly interpersonal, emotional and communicative aspects of obtaining and employing these skills. We also included sample tasks and activities successfully implemented in our courses aiming at promoting and developing these skills.

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