

JIHOČESKÁ UNIVERZITA V ČESKÝCH BUDĚJOVICÍCH

PEDAGOGICKÁ FAKULTA

KATEDRA ANGLISTIKY

DIPLOMOVÁ PRÁCE

Výuka angličtiny pro zvláštní účely a příprava kurzů
angličtiny pro studenty výpočetní techniky

Teaching English for Specific Purposes and designing courses
for Information Technology students

Autor: Dipl. um. Anna Carbová (Aj-Nj ZŠ)

Vedoucí práce: PhDr. Lucie Betáková, MA, Ph.D.

2009

Prohlášení

Prohlašuji, že jsem diplomovou práci na téma Výuka angličtiny pro zvláštní účely a příprava kurzů angličtiny pro studenty výpočetní techniky vypracovala samostatně s použitím pramenů uvedených v bibliografii.

V Českých Budějovicích, 29. 4. 2009, Anna Carbová

Poděkování

Děkuji vedoucí mé diplomové práce PhDr. Lucii Betákové, MA, Ph.D. za cenné připomínky, odborné konzultace a rady při psaní této práce i během mého studia.

Děkuji rodičům, sestrám a přátelům za poskytnutí podpory při studiu.

Děkuji mým učitelům za projevenou trpělivost během studia.

Děkuji vyučujícím z katedry informatiky a respondentům z místních firem za poskytnutí rozhovorů a cenných podnětů pro tuto diplomovou práci.

Děkuji všem mým studentům za každodenní poskytování zpětné vazby.

Abstract

The subject of this diploma thesis is to design an ESP course for a group of bachelor Information Technology students in their first year of study at University of South Bohemia in České Budějovice, Pedagogical Faculty. After researching professional literature, creating and processing a needs analysis questionnaire and making interviews with future employers and subject teachers, a synthesis of the needs analysis is carried out and a two-semester course is designed. Every week's material contains a topic and a list of skills, subskills and activities. In the next part, two lessons are presented with step-by-step methodical instructions for the teacher and a handout material for the students.

Anotace

Tématem práce je tvorba kurzu anglického jazyka pro specifické potřeby, který navštěvují studenti prvního ročníku neučitelského oboru Informační technologie na Pedagogické Fakultě Jihočeské Univerzity v Českých Budějovicích. Po prostudování dostupné vědecké literatury je vytvořen dotazník pro zjištění potřeb těchto studentů, jsou dotazováni možní budoucí zaměstnavatelé a současní učitelé odborných předmětů na katedře informačních technologií a po analýze všech informací je vytvořen dvousemestrální syllabus pro tento kurz, kde každá hodina obsahuje název, téma, dovednosti a jazykové nástroje. Následuje popis dvou ukázkových hodin včetně metodického příručky krok za krokem a přílohy s materiálem pro studenty.

Contents

1	Introduction	1
2	ESP as a special discipline in English teaching	3
2.1	What is ESP	3
2.1.1	Specificity and Motivation	5
2.1.2	A peek into the history	6
2.1.3	Classification of ESP	8
2.1.4	EST	9
2.1.5	Role of teacher	10
2.2	Designing a course	11
2.3	Evaluation	12
2.4	Currently available EST materials	13
2.4.1	Oxford English for Computing by Keith Boeckner and P. Charles Brown	13
2.4.2	Basic English for Computing by Eric H. Glendinning and John McEwan	14
2.4.3	Professional English in Use for Computers and the Internet by Santiago Remacha Esteras and Elena Marco Fabré	14
3	Needs analysis	17
3.1	The current state of the EST subject	17
3.2	Creation of the needs analysis questionnaire	18
3.2.1	The knowledge self-assessment part of the questionnaire	19
3.2.1.1	Reading comprehension	19
3.2.1.2	Listening	21
3.2.1.3	Spoken interaction and oral expression	22
3.2.1.4	Writing	23

3.2.2	The motivation and target needs determination part of the questionnaire	24
3.3	The questionnaire evaluation	25
3.3.1	The knowledge self-assessment part of the questionnaire evaluation	25
3.3.2	The motivation and target needs determination part of the questionnaire evaluation	26
3.3.2.1	Answers for previous use of English at work	26
3.3.2.2	Answers for previous use of English for personal interests	27
3.3.2.3	Expectations about future use of English at work	27
3.3.2.4	Expectations about future use of English in the students' personal life	28
3.3.2.5	Answers relating to vocabulary for work and study	28
3.3.2.6	Vocabulary concerning the students' interests	29
3.3.2.7	Answers about what the students need to learn the urgently	30
3.3.2.8	Expectations from the course	30
3.3.2.9	The results in an overview	31
3.4	Needs of students viewed by employers and teachers	32
4	Syllabus design	35
4.1	Designing the two-semester course	35
4.2	The project	36
4.3	Individual lessons design	36
4.4	The weekly plan	37
4.4.1	Table of essential skills	37
4.4.2	Week 1: My Computer	37
4.4.3	Week 2: Fast, Powerful and Quiet	38
4.4.4	Week 3: Why doesn't it work?	39
4.4.5	Week 4: How to do it	40
4.4.6	Week 5: How it all started	41
4.4.7	Week 6: Where are computers used?	41
4.4.8	Week 7: What have you done?	42
4.4.9	Week 8: Computer Crime	43

4.4.10	Week 9: Network topology	44
4.4.11	Week 10: Time management	45
4.4.12	Week 11: I want to know more	45
4.4.13	Week 12: Programming languages	46
4.4.14	Week 13: Protecting your identity	47
4.4.15	Week 14: Evaluation	48
4.4.16	Week 15: May I give you some advice?	48
4.4.17	Week 16: What happened?	49
4.4.18	Week 17: A new job	50
4.4.19	Week 18: Hypothetically	51
4.4.20	Week 19: The main message	51
4.4.21	Week 20: Sell yourself	52
4.4.22	Week 21: Computer slang	53
4.4.23	Week 22: How to read "How-tos"	53
4.4.24	Week 23: A powerful website	54
4.4.25	Week 24: Modding your computer	55
4.4.26	Week 25: Robots	56
4.4.27	Week 26: Computer graphics	56
4.4.28	Week 27: Complementary materials	57
4.4.29	Week 28: Final evaluation	58
5	The first two lessons	59
5.1	Lesson 1: Computers and their functions	59
5.2	Lesson 2: Input and Output Devices	60
6	Conclusion	63
7	Resumé	67
	Bibliography	70

Appendices

A Questionnaire	73
B Interviews with potential future employers	79
C Interviews with teachers at the IT department	81
D Handout No 1: Computers and their functions	83
D.1 Memory	84
E Handout No 2: Input and Output Devices	87
F Recording scripts	93
F.1 Unit 4: Keyboard and mouse	93
F.1.1 Task 4	93
F.2 Unit 7: Output device	95
F.2.1 Task 2	95

List of Figures

2.1	ESP classification by experience	9
2.2	ESP classification by professional area	9
A.1	Questionnaire: Page 1	74
A.2	Questionnaire: Page 2	75
A.3	Questionnaire: Page 3	76
A.4	Questionnaire: Page 4	77
E.1	Handout: Sheet 1	88
E.2	Handout: Sheet 2	89
E.3	Handout: Sheet 3	90
E.4	Handout: Sheet 4	91

List of Tables

3.1	Level ranking results	25
3.2	The most important results concerning occupational needs.	31
3.3	The most important results concerning personal needs	31
3.4	Expectations from the course	32
3.5	The most important needs	32
4.1	Number of weeks devoted to the most important needs	37

Chapter 1

Introduction

The aim of this diploma thesis is to design a two-semester English course for a group of 13 students with special needs. These are students of IT in a non-pedagogical bachelor programme at the University of South Bohemia in České Budějovice, Pedagogical Faculty. The requirement for the English course, given by the head of department (see appendix C) is to adjust the course to meet the needs of their education at university as well as their future professional needs.

In the theoretical part of my thesis based on Robinson (1980); Hutchinson and Waters (1996); Dudley-Evans and St John (2002) I define English for Specific Purposes (further related to as ESP), its subdivisions and specific features that are important for the course designer. I focus on English for Science and Technology from the source literature, write a brief overview of the ESP history discover the role of the teacher and find out how to design a course by carrying out a needs analysis. Afterwards I introduce available materials for English for Science and Technology (further only EST) and estimate the opportunities they provide for my students.

In the practical part I show the application of the theory into the course concerned. These needs are identified by a needs analysis in form of a questionnaire and a controlled dialogue with the teachers.

The needs analysis for students focus on:

1. the current state of their knowledge from the respondent's point of view
2. language skills and subskills they will need for their future occupation
3. suggestions of what the responders would prefer to learn for their personal needs

After evaluating the results and making a synthesis of the students' needs and the teachers' contributions I create a syllabus for both semesters and show two lessons

as examples of a concrete realization. The conclusion offers feedback after the end of the whole course.

Let us look closer on the group of students. According to the graduate profile description on the school websites (Katedra informatiky, 2009), the students are expected to become:

- LMS (Learning Management System) applications and system administrators
- web application programmers and web designers, webmasters
- administrators of information systems used by educational organizations, administrators of PC labs and classrooms
- creators and administrators of distance e-learning courses, advisors to content authors
- technical workers
- workers dealing with IT in educational context
- educational application programmers and developers
- trainers of special IT courses for employees in large international companies

The group consists of technically oriented male students with the age ranging between 19 and 22 years. Either they have just finished high school or have had one or two gap years. I work with one group that has been put together based on a placement test written at the entrance exam. They have already learned English at high school, which suggests that they should be at intermediate level. The course is designed for a 90 minutes workshop two times a week with additional homework of 20 minutes into each class. The classroom has standard equipment available including a CD player and a video recorder.

Chapter 2

ESP as a special discipline in English teaching

2.1 What is ESP

This section provides basic definitions of ESP that are necessary to be understood before proceeding any further into the subject.

There are more views on English for Specific Purposes or ESP Dudley-Evans and St John (2002). In general, it presents an area of teaching English in a way of adjusting the methods, knowledge and skills to be learned and materials to be used to the learner and his needs. It is suggested that these specific needs include the linkage of a foreign language and another field of occupation. Much can be understood from several titles of publications about ESP e.g. "English for Specific Purposes: A multi-disciplinary approach" Dudley-Evans and St John (2002) or "English for Specific Purposes: A learning-centred approach" Hutchinson and Waters (1996).

Robinson (1980) stresses the aim of focusing on the learners and their needs. In a quickly developing world of industry and continuing globalization many people prefer a fast acquisition of foreign languages. For children and students that have already learned general English at some level, later by the time they need to use their knowledge practically, it is essential for them to refresh their knowledge and master specific vocabulary and practice special skills. The first criterion then is to enhance learning efficiency by going through a large amount of subject matter in a relatively short time by choosing only relevant grammar, vocabulary and various skills shown by the needs analysis. The group taught consists of a reasonable number of students with the same needs. Robinson (1980) puts forward two features of ESP: purposefulness and learner-centredness.

Except of this, Strevens (1977, abstract 10) defines ESP as *"related in content (that is in its themes and topics) to particular disciplines, occupations and activities"*

and *"centred on language appropriate to those activities in syntax, lexis, discourse, semantics and so on, and analysis of the discourse"*. Strevens also points to the possibility of restricting general English to skills presently needed by students.

The most exact and most detailed definition of ESP can be found in *Developments in English for Specific Purposes* by Dudley-Evans and St John (2002). They divide their definition into two characteristics: the absolute and variable factors.

The absolute characteristics include:

- meeting the learners specific needs
- applying the underlying methodology and activities of the occupation linked with using English

The variable characteristics include:

- a relation to specific disciplines
- a different methodology from that of general English
- a greater probability of teaching adult learners
- a certain expectation of teaching students at intermediate and advanced levels rather than beginners, although it is not excluded

Dudley-Evans and St John (2002) point out the question of how strongly an ESP course is really specific. On a scale where English for Beginners as a typical General English course would be number one and an Academic course related to a particular subject would be number five there are courses as Intermediate course with focus on specific skills or a Business English course and even more specific courses like Report Writing for Scientists in the middle. For everything is connected in language learning and as there can be no specific needs course without basic knowledge as well as the most professional scientists' need to know the background of a language system everything turns in a spiral.

To sum up this part trying to define what ESP is let us state that except of all definitions and approaches above there exists a simple, pertinent sentence defining the most important approach to ESP: *"Tell me what you need English for and I will tell you the English that you need."* Hutchinson and Waters (1996) Later on we will see that this is a common feature and that the individual authors differ mostly in their methods.

From my point of view, the specificity of English for IT students lies in the activities they need to manage in English. The skills needed will be practised on activities similar to those they would do in the programming classes or in their job. Of

course we will learn subskills relevant for IT and skip the unnecessary ones. The methodology is adjusted to their analytical way of thinking. Other aspects remain the same as in a General English course.

2.1.1 Specificity and Motivation

This section looks into the specific features and bottleneck of ESP and shows how to take advantage of the aspect that can increase motivation.

Strevens (1988) summarizes the main advantages of ESP courses in the following four points:

1. being focused on the learner's needs , it wastes no time
2. it is relevant to the learner
3. it is successful in imparting learning
4. it is more cost-effective than General English courses

The advantage in motivation appears to be very probable for students who learn vocabulary and read texts from their area of interest. Most students appreciate direct help with their needs in English and the individual approach. Though this issue is a little more complicated by the fact that the learners can get tired by reading and discussing the same or very similar topics too often. Here it is good help to focus on more distant texts Dudley-Evans and St John (2002).

Robinson (1980) implies that the older the learners are, the less important is the role of the syllabus in terms of motivation. Adult students appreciate the connection of work life everyday practice and its support by English lessons. Though, however interesting it can be at the beginning for them to learn language relevant to their field of interest, there may occur a gap in the students' knowledge of the subject and their ability to communicate in English, so they must start dealing with basic terms because they would not be able to express complicated content of their train of thoughts. Also they do not feel familiar with doing exercises and learning languages as such. Often they want to say something only when there is a point and they feel that a fact once said does not have to be repeated in other words. This can be helped by arousing co-operation of main subject lecturers and English teachers with advanced students. So the subject teacher would give students some tasks involving English, e.g. searching for some information on the Internet, and in this way the learners carry out real tasks and also see what they still need to learn. With the less advanced students the only way to encourage their motivation is to use their subject knowledge to increase their self-confidence and to accelerate the

speed of learning because the students should faster understand presentations of new vocabulary, given in a logical order and coherence, and/or supported by visual materials. Naturally, a quick progress in learning increases motivation through the feeling of success.

With the concrete group of students I have taught at the pedagogical faculty a slightly different circumstance caused a temporary lack of motivation. The study program takes three years and the first of them is designed to prepare the students for the special programming languages so they attend only preparatory subjects like Mathematics, English, Technical Maintenance of Computers and other. The first semester also includes Programming in Java, which presents a tough start for the learners. That means they face very little connection of theory and practice. The concept gives students theoretical basics in the first year, they learn programming in the second year and the third year focuses on practice and writing the bachelor thesis. Though the gap between the first and the third year causes an obvious motivational slowdown for the students who can not imagine how they will need English in their future jobs. Discovering the needs of a group suggests including needs, demands and also wants in the needs analysis questionnaire.

2.1.2 A peek into the history

This summary of the ESP developmnet gives a better chance to understand the current state of the subject and outlines some ideas that can be used nowadays.

Although the first practicing of ESP goes back to ancient Greeks and Romans its contemporary development started in the 1960s. The mostly explored area became EAP (English for Academic Purposes) and the scientists focused on the skill of understanding a written text Dudley-Evans and St John (2002). According to Hutchinson and Waters (1996), it was EBP (English for Business Purposes) and EST (English for Science and Technology) that "picked up the baton". This was caused by the expansion of technology and commerce in the post-war world. A need for international trading emerged, which brought a demand of an internationally used language. For its flexibility and fast development, as well as America's primacy in economics, it was the English language that became the most commonly used language in business all over the world. Now we have already proceeded to English for Occupational Purposes (EOP). The position of English was proved in the 1970s during the Oil Crises, when many funds flowed and many experts turned their attention to the oil-rich countries. In the meantime English made a progress from a science being learned at school as a tool of literature a system enabling cognition for pupils and means of communication in the English speaking countries to a product like goods that must fulfill certain requirements. The circumstances caused a great

pressure on the English language teaching profession.

A very apt explanation of the origins is also given by Hutchinson and Waters (1996). They assert there were three factors determining the beginning of ESP: "*The expansion of demand for English to suit particular needs and developments in the fields of linguistics and educational psychology*".

At first, teaching ESP was connected with individual projects led by native speakers, who were carrying out their work from a great distance to the end users of their effort and the feedback was reported by local teachers (Dudley-Evans and St John, 2002).

Hutchinson and Waters (1996) describe five stages of development in ESP. The first stadium was characterized by register analysis. On the basis of finding differences between the language use of single branches of scientists' fields of study e.g. Electrical Engineering and Biology. Authors like Peter Strevens, Jack Ewer and John Swales were trying to identify various language features of different registers. Their aim was then to put forward the language issues like the present simple tense, passive voice and nominal compounds that are not so common in general English and therefore are not taught in basic courses.

Rhetorical and discourse analysis focused not on grammatical structure of the sentences but on how the sentences are combined to express the desired meaning. It started with analyzing what the users need to express and through structuring steps included. They ended with simple language units, for example describing a picture or using analogy. These are two of the essential units for giving a presentation about a new product. Hutchinson states that the leaders of this movement were Henry Widdowson, Larry Selinker, Louise Trimble, John Lackstrom and Mary Todd-Trimble.

Another movement in ESP was the so called target situation analysis. One of the innovators, John Mumby, elaborated a model of *needs analysis* that served to find out the learners profile concerning their future communication purposes, communicative setting, the means of communication, language skills, functions, structures, etc. Hutchinson and Waters (1996) themselves found a lack of focus on the learning process in the contemporary ESP methodology. The forerunners were interested in grammar, vocabulary and other differences of the language used. Only the needs analysis (also called target situation analysis) took the learner into view, although the aim of this was just the goal-setting. What was missing was the learning process perspective or what happens during learning and how to teach, they think.

This development still proceeds in gradual progress, so it is clear that each phase originates in the previous step and they do not deny each other. Today's method realizes a synthesis of the previous systems. I use the second approach described above, which is based on finding out the needs and then dividing the target skills

into units focusing on individual subskills.

2.1.3 Classification of ESP

In this section the individual disciplines of ESP are introduced emphasising the various needs of learners.

Mackay and Mountford (1978) state that there are in fact only three areas of ESP. The first area meets occupational requirements. The students of such courses are pilots, international telephone operators etc. The second type of ESP courses are realized in vocational training programmes, like English lessons for hotel and catering staff, technical trades, etc. The last area is presented by students, who are preparing themselves for studying literature of a concrete subject or area of study written in English. These are medicine students, law students, etc. The last type matches the case of the IT English course.

Generally, there are two main ways of dividing ESP. The first of them divides ESP courses according to experience. Robinson (1980) gives some comments on a diagram (Fig. 2.1) from a journal of OMD/BC where ESP consists of EOP (English for Occupational Purposes) and EAP/EEP (English for Academic Purposes and English for Educational Purposes) subcategories. EOP is then divided into pre-experience, simultaneous or in-service language training. English for Academic Purposes is further divided into courses for study in a specific discipline and courses as a school subject. The role of EEP as a school subject is understood as a general English course and English for study in a specific discipline is a special needs training that prepares students for a study in a particular area.

The second method of ESP classification (Fig. 2.2) differs between English for Academic Purposes and English for Occupational Purposes. English for Academic Purposes includes English for (Academic) Science and Technology, English for (Academic) Medical Purposes, English for (Academic) Legal Purposes and English for Management, Finance and Economics. English for Occupational Purposes is divided into English for Professional Purposes (e.g. English for Medical Purposes and English for Business Purposes) and English for Vocational Purposes (Pre-Vocational English and Vocational English) (Dudley-Evans and St John, 2002).

All of these systems note the difference in pre-service learning and in-service language acquisition as this is an important factor in motivation as well as connection to the goal subject, which is being mediated through English.

Figure 2.1: ESP classification by experience

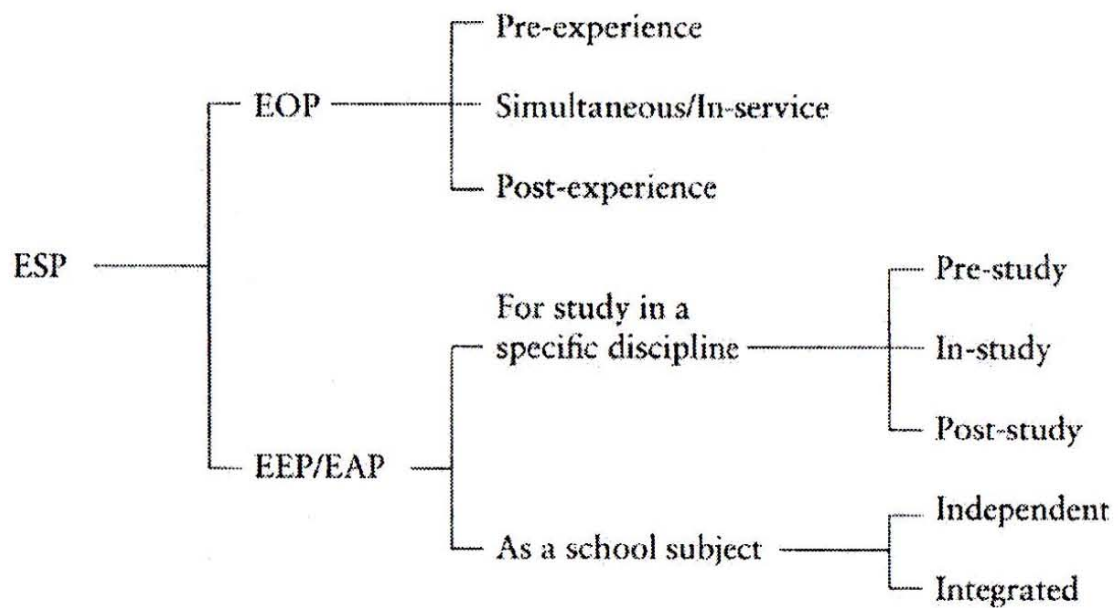
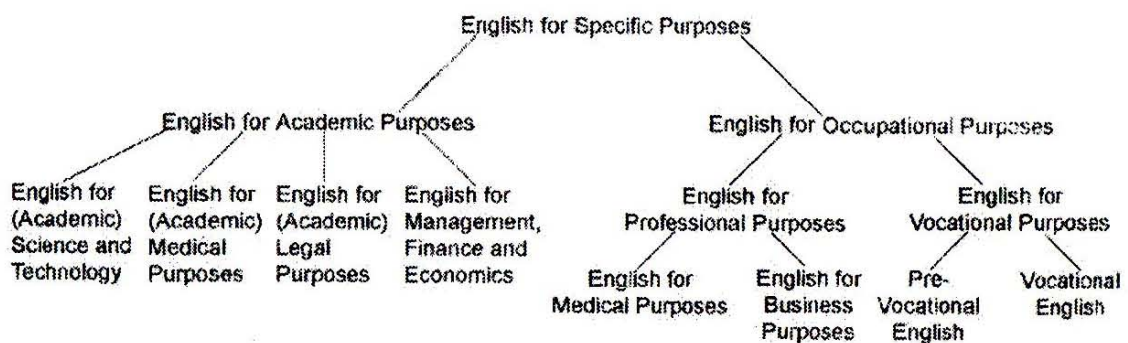


Figure 2.2: ESP classification by professional area



2.1.4 EST

English for Science and Technology was the second most rapidly developing area of ESP right after English for Business Purposes. In the 80s it presented also the most prestigious area of ESP as it still remains a great challenge for teachers not from the language point of view as the grammatical structures are minimally different from common English of science. As Robinson (1980) asserts it is the subject, not the language that is specific.

Another particularity lies in the difficulty to include EST into the EAP or EOP categories. This occurs parallel to the problem of whether such students learn English only to communicate with co-workers and clients or to read new literature about software programmes and to read and write about emerging problems and describe their solution on proper sites on the Internet. Obviously, the students needs will oscillate between these two boundaries but never fully belong into only one of them.

2.1.5 Role of teacher

It is important to learn about the role of teacher to know which expectations lie on the teacher. According to Dudley-Evans and St John (2002), there are four roles of an ESP practitioner:

- Teacher
- Course designer and materials provider
- Collaborator
- Researcher
- Evaluator

The role of the ESP practitioner differs from the role of the GE teacher in that he or she is not the primary knower because the students master the subject better than the teacher, who has to possess a reasonable knowledge of the material being presented. The teacher, in some conditions, can draw the students' attention to the matter by asking questions the other side can answer. This evolves the communication in the direction of a partnership. The students may also as well ask the teacher, who is then in the role of a consultant. The more the course meets the students' needs, the more motivated the students are. In some cases, the classes are realized in a form of one-to-one consultations. This is typical for academical writing courses, where the progress in both communicative skills and linguistic accuracy is observed. The ESP practitioners need to be flexible, listen to the learners, take interest in the subject and be ready to take risks, when the lesson suddenly moves in an unexpected direction due to fulfilling the students' needs. "The willingness to to be flexible and to take risks is one of the keys to success in ESP teaching." (Dudley-Evans and St John, 2002, p. 14)

As the course is always tailor-made, there never exists a textbook suiting the course so the teacher has to provide the materials by taking over materials from other sources, adjusting existing original materials or writing materials where no other exists. However, writing own materials can become dangerous in terms of teaching students to work with authentic texts. It means, the ESP course could become useless because the students would not know how to deal with a real situation, which requires some specific skills.

The ESP practitioner also faces the challenge of being a researcher. Each area of ESP has different means of expression and there is always proceeding some research into the language used. To incorporate these findings is essential in keeping the course effective. In practice this means that the teacher must be looking for new material

including key target events, skills and texts, analyze the discourse and adjust it for the students.

Dudley-Evans and St John (2002, p. 16) believe that "subject-specific work is often best approached through collaboration with subject specialists". They recognise three levels of teamwork with the specialists: cooperation, collaboration and team-teach. Cooperation involves consulting the students' professional field of study syllabus and finding corresponding tasks and topics. Collaboration can mean using authentic texts from the other subjects material so that there is a concrete application of the students' work also in other subjects. This would be prepared by the subject teacher. Both teachers might also prepare the materials together or even teach the lessons together, which is called team-teach classes.

2.2 Designing a course

In this section I explore which criteria to take into consideration when making the first step towards the ESP course realization.

Hutchinson and Waters (1996, p. 21–22) explain the process of designing an ESP course as asking questions to find information on which a course will be built on. This is realized by designing a syllabus, writing, adjusting or only finding materials, teaching in the classroom and evaluation. They suggest six groups of key questions.

1. **Why** does the student need to learn?
2. **Who** is going to be involved in the process? This will need to cover not just the student, but all the people who may have some effect on the process: teachers, sponsors, inspectors etc.
3. **Where** is the learning to take place. What potential does the place provide? What limitations does it impose?
4. **When** is the learning to take place? How much time is available? How will it be distributed?
5. **What** does the student need to learn? What aspect of language will be needed and how will they be described? What level of proficiency must be achieved? What topic areas will be covered?
6. **How** will the course learning be achieved? What learning theory will underline the course? What kind of methodology will be employed?

They further state that the curriculum involves three mutually connected factors: learning theories (How?), needs analysis (Who, why, where, when?) and language descriptions (What?).

Dudley-Evans and St John (2002) point out the teacher's preparation before designing the needs analysis questionnaire. This follows from the statement that each question determines the answer to some extent. Actually, one must know what to ask about to get relevant information. It also saves time, appears more professional and provides information how to analyze the data. So it gives the course designer a great advantage to look for available materials, researches and contact professionals from the subject field.

Another issue is what is meant by needs. We speak about objective needs, e.g. to understand the text accurately, and subjective needs, e.g. to feel confident when giving a presentation. The former relates to the *target situation analysis* and the latter is connected with the *learning situation analysis*. The third factor deals with a *present situation analysis* that means what the learners already know.

2.3 Evaluation

As I discovered from the source literature, the process of evaluation is very important for determining the future course of action and stating the degree of success at the end of the course. Without evaluation, the needs analysis and target situation analysis lacks purpose significantly.

Dudley-Evans and St John (2002) distinguish four stages in ESP: needs analysis, course and syllabus design, materials selection and production, teaching and learning and evaluation. These stages overlap and repeat themselves cyclically. We use two types of evaluation. The first one is called formative. It proceeds during the course and provides information concerning how to carry on, what works well and what does not impose the effect needed. The second type is summative, which sums up the successfulness of the whole event. Dudley Evans and St John support the idea that the focus should be directed rather on the difference between needs analysis and evaluation rather than on the activities going on in the class.

Students should welcome positive evaluation that does not focus mainly on their mistakes and imperfection, because they get involved in the process and it shows their importance in it. It displays whether the course achieves the targets given by the needs analysis results and answers the questions how and why. This suggests that the criteria are chosen carefully with the possibility to measure exactly or give comparison. So the question "What causes you main problems when you give a presentation? Is it insufficient vocabulary, using the same words, not enough

linking phrases, not having enough feedback from the audience, uncertainty about the correct pronunciation or the inability to speak spontaneously without reading off paper?" would be better than: "How do you feel about giving presentations?"

As the ESP courses are designed to meet special needs in an ideal amount of time and other means it is crucial to know how effective the courses are and how to increase the efficiency. Dudley-Evans and St John (2002) note that evaluation during and at the end of the course should be done as a rule as short-term feedback but even more important would be asking the learners for feedback after two or three years to see the long-term impact.

2.4 Currently available EST materials

As a material provider I looked for available materials that are designed for teaching EST courses. None of them can be used as a whole from beginning to the end but I looked for texts, pictures and tasks that meet the needs of the particular group of students. I include these parts into the curriculum and add interactive tasks in the classroom as well as topical and longer texts from the programming textbooks and from the Internet.

2.4.1 Oxford English for Computing by Keith Boeckner and P. Charles Brown

This set of books (Boeckner and Brown, 1997) consists of 15 units basic issues in computing designed for intermediate learners. Each unit starts with a picture description to revise vocabulary or introduce the students into the unit and continues with a well-developed chain of speaking, reading and listening tasks with logical order giving enough space to go deeper into the texts. Each unit ends with a part called Language Focus, each devoted to a different issue like contextual reference, word formation suffixes, classifying, cause and effect etc. There is a number of diagrams giving many opportunities to work with in different ways. The material counts on the learners' previous knowledge of the subject, so it actually combines the same level of English and IT knowledge and when the students are challenged in both ways they do not drop their attention. A certain drawback of this book remains its tendency to become obsolete by the articles about product or technologies that quickly change, which serves as entertainment to the students. Also the extent of the single parts may cause certain tiresomeness, so this textbook can be used in EST classes, though we can use only certain parts, pictures, diagrams, language focus or parts with non-changing data i.e. about history or acronyms.

2.4.2 Basic English for Computing by Eric H. Glendinning and John McEwan

This up-to-date, practical textbook covering 28 units has been designed for students at the A1 level of English knowledge (Glendinning and McEwan, 2003). It relies on a previous course of English or on a parallel general English course for the grammar issues are only shortly revised. Each unit is filled with at least two pictures or diagrams, an audio recording with following tasks, some reading and writing tasks and grammar-oriented work. Each unit takes two or three pages and the curriculum moves on quite briskly. We can also see a certain effort to adjust the style to IT-oriented students as there are short texts followed by box-ticking tasks, information sorting etc. On the other hand, it does not go very deep into the core and if the need for more practise emerges, we must seek for some other material. I very positively assess that the book connects grammatical issues with subject topics very well and that it balances the four skills of speaking, reading, listening and writing carefully. Moreover, the pictures and schemes can be used separately for their universality and lucidity. For advanced classes, chosen extracts of this book represent a start-up material from which they can proceed onto more challenging sources.

2.4.3 Professional English in Use for Computers and the Internet by Santiago Remacha Esteras and Elena Marco Fabré

This textbook (Esteras and Fabré, 2007), focused on presenting vocabulary and its acquisition, was written in the style of *English Vocabulary in Use* (Redman, 2003) where each unit consists of a vocabulary input page, including tables, texts and schemes, and a practise page. It does not deal with grammatical issues at all but the more thoroughly it deals with topical vocabulary in terms of collocations, phrases, explanations, acronyms and neologisms. The vocabulary presentation is based on written texts with highlighted words and phrases to be acquired. The following tasks deal with a correct usage of the new vocabulary, mostly by filling in gap texts and matching exercises. The uniqueness of this material lies in the information input of the texts. This makes them suitable for IT beginners because they can find some new information about how computers work. However, according to my experience, the IT students at university have mastered that kind of knowledge already, so we must use the material in a more innovative way. In other words, this book suits better people who have already learned English and they only want to acquire new vocabulary concerning IT than IT students, who understand IT and its vocabulary, and need to focus on developing communicative skills they will need as IT specialists.

Despite of this, it is possible to use excellent photographs, descriptions, up-to-date texts and definitions from the information giving pages, or exercises from the practice pages can be processed separately according to the learners' specific needs.

Chapter 3

Needs analysis

3.1 The current state of the EST subject

Before designing the needs analysis to find out the students' point of view I offer a few thoughts about my estimation of the students' level and give reasons for preparing a specialized course based on IT English and the professional needs of students.

At this university, all students must take a two-semester foreign language course or at least an in-depth exam stating their sufficient knowledge of a world language. In some specializations, the English course is obligatory. The reason for only a one year course is that the current students have already attended at least two years of English lessons, so this represents only revision and extension of the students' knowledge. Now the level of their English knowledge should be better every year in connection with the prolongation of English classes at basic schools and the duty for each high school to provide English language education for each student. That means we can expect a higher ability of the university students to master English in the next nine years, growing gradually every year. If a student has already undergone ten years of progressive English language courses, it seems superfluous to add another year of GE courses at university. This and one other reason led to designing a special course of English for Computer Science for each group of bachelor students.

As it emerges from the character of IT and consequently for its students, it is essential not only for performing the profession of an IT specialists but also for studying various programming languages and programmes of which manuals are available only in English. Connecting the situation of students with some general English knowledge at different levels and the need of learning English for particular use in a one-year course of limited time reserved, it appeared more than logical to design an ESP course for the first year of study IT bachelor students.

3.2 Creation of the needs analysis questionnaire

Since the way of research predetermines the results as already stated in 2.2 I devoted adequate time and energy to design the questionnaire thoroughly. This section gives a description of the whole process.

Before the first English lesson at the beginning of the first semester, the students are asked to complete an English test proving their knowledge. It is a test to divide students into individual groups according to their level of English focused on grammar due to the time devoted to the testing, their correction and the capacity of English teaching staff. By this we proceed from the assumption that the knowledge of grammar shows better than the knowledge of vocabulary, listening and writing the groups of students at similar levels that are able to form a class for learning English. Obviously, it would be the best to test the students in all four communication skills, or at least in grammar and speaking, although it would be too time consuming and from the practical point of view there could not be too many groups of students, even if it would certainly prove more effective. Additionally, for a student it is easier to catch up learning vocabulary than learning grammar. Reading, speaking and listening skills need to be practiced in any case and, according to my teaching experience, it is not inefficient to do exercises on these skills with students that are of slightly different abilities, though the differences can not be very significant and altogether the learners should be on a similar level when counting all the skills.

As the students have already written an entrance exam to enable the division of students according to their present level of knowledge, it was not the main aim of the questionnaire to validly recognize the individual skills but to show how the students themselves perceive their strengths and weak points and the skills they would like to practice. So the questionnaire focuses half on a self-assessment and half on the students' future needs.

In the first part it was necessary to include all four skills evaluation. There already exists a publication designed for self-evaluation, the European Language Portfolio for adult learners recommended by the Council of Europe (Bohuslavová et al., 2004). It builds on A Common European Framework of Reference for Languages, which places each skill into one of six levels. This division has come into the consciousness of English teachers so it is part of daily used terminology. The European Language Portfolio was made by a group of professionals, it guarantees reliability, validity and they are tried and tested. However, it is aimed on general English which arose the question whether to mention those skills connected with computer usage e.g. professional terminology, understanding texts about IT etc. I decided not to for it would not bring any additional information. Since this portfolio is very thorough, it was necessary to choose only the central questions giving the most information.

In the first place questions that were similar or gave similar information were left out. Due to the reasons mentioned before also questions concerning IT were left out and to keep the best relationship between the length and the information value it appeared to be the best to choose three or four sentences estimating the student's knowledge and put them into one space of the table. The levels were lined up according to the difficulty. Each skill filled up one table and the questionnaire was naturally written in Czech language to let the students focus on the content and make it understandable. The range of skill level ranged from A1 to B2, based on the students' entrance exam result and in attempt not to lower the self-esteem of the individuals. If they saw more unchecked boxes than the ones they have checked it could force them to check some items that they do not respond to and this would make the results even more relative, although we can not exclude this factor.

3.2.1 The knowledge self-assessment part of the questionnaire

Let us read through the individual cells and think about the importance of each item. The students were asked to check each box that, as a whole, fitted their knowledge. The original of this questionnaire is attached in appendix A.

3.2.1.1 Reading comprehension

There are four boxes according to four levels I expected the students to be among. The questionnaire was intended to be as brief as possible so three or four items had to suffice for each level. Each of these items focused on different skill implementation.

- *I can understand newspaper articles about people and animals. I can find information about place and time of social events on posters. I can understand short instructions, e.g. description of the way.* These skills are ranked A1.
- *I understand short stories from everyday life. I can see the most important information from the newspaper articles that contain many numbers, names, pictures and headlines. I can find information about free time activities in leaflets.* These skills meet the A2 level of reading comprehension.
- *I understand the main ideas of comments and interviews in newspapers and magazines, where the author expresses him- or herself to the actual issues. I can skim through short texts and find important facts. I understand simple reports and standard letters.* These items refer to level B1.

- *I understand text from my field of interest in detail. I understand the motives of characters' behaviour and their importance in terms of the plot development. I can understand the content and importance of news and reports on topics that relate to my interests. I can assess whether or not to continue reading.* If the student ticks this box, they are at B2 level.

The first table concerned the students' assessment of their English reading comprehension ability. In the "A1" line the students were asked about understanding articles about people. When a student understands texts about people, can read a poster and follow a written itinerary, their foreign language knowledge accords with the reading comprehension A1 level. Please notice that these three skills are from different areas. Understanding an article gives evidence more about acquired vocabulary, the poster says more about logical deduction and the ability to find the way shows the skillfulness to find relevant information and skip or guess the meaning of words that the learner does not understand.

The A2 level discovers understanding everyday topics. It means that the student has already managed common vocabulary and is able to connect this with extralinguistic knowledge, which is a very important help in learning reading comprehension. The last statement deals with finding relevant information, even if the reader does not understand every word. It suits the purpose well when the students understand uncomplicated texts and can find or look up information that they need. The level for the subject of EST would then correspond to A2 and it would be ideal to start with students that fulfil these requirements.

In the next level, B1, the stress is laid on slow, thorough reading to understand the text in detail but without understanding hidden information and on the contrary skimming the text quickly for finding basic facts. This requires managing vocabulary of currently used discussed topics. It also includes the capability of guessing some unknown vocabulary meaning from the context, although such inquiry was not made. The students are also asked about understanding short, standard letters, for this plays an important role in today's daily work life. Here the question is, whether the student can understand such texts or not and if so, which part they do or do not understand so that it can be worked on in the lessons. However, such detailed information could not be included in a questionnaire in Czech language, there would have to be a sample letter and this would bring other complications, so this must be a part of further investigation and discussion during the lessons.

The level B2 asks for understanding texts from one's field of interest in detail, they can understand the motivation and its meaning for the outcome. The reader should be able to understand news, articles and assessing texts concerning their interest quickly. From the beginning they can predict whether the article is worth reading

or not. The language interference is hidden in the similarity of texts in each language so if the person is used to reading articles of a certain kind in one language there is a big probability that some words, formulations or names will be similar or the same and the extralinguistic part of understanding grounds on the students knowledge of the topic and the more the student knows about the area, the better they can understand such a text. According to Robinson (1980) this is essential for teaching and learning ESP in general. From my point of view, probably this would be the desired level of reading comprehension ability by the students.

3.2.1.2 Listening

In the listening assessment part of questionnaire the students are asked to tick the box that corresponds with their own skills.

- *I understand when a person speaks slowly and with clear pronunciation and sufficient pauses. I understand numbers, information about prices and time. I understand an itinerary.* These skills are ranked A1.
- *I can recognize the main point of news on TV if the words are supported by visual materials. I understand simple dialogues on everyday life topics that are spoken slowly and clearly. I can make myself understood when the speaker offers me help.* These skills are ranked A2.
- *I understand short stories, I can guess the close development of the story. I understand main points of news overview and easy recordings about my interests if their language is slow and clear.* These skills are ranked B1.
- *I understand everything that is said in standard language even if the speech is being interrupted. I understand news report, direct interviews, discussion programmes, TV plays including films if the language used is standard.* These skills are ranked B2.

Most important in the A1 level in connection with EST is understanding numbers, price and time data. The student should be able to follow a spoken description of the way, including instructions like: "go straight, turn left" presuming that the speaker performs slow, clearly pronounced language using basic vocabulary and making pauses in the speech. There was nearly everything borrowed from the European Language Portfolio rewritten in a slightly shortened version (Bohuslavová et al., 2004, p. 9, 10).

The line dedicated to A2 level suggests that the student understands the main idea of the news on television that is typically accompanied by visual illustration of the

topic. The student at this level should also understand a basic subject in everyday life dialogs spoken clearly and slowly. They can make themselves understood when the other speaker offers some help. Again, this would be the desirable level of starting learning EST, provided that the learners are interested in topics connected with IT, so their knowledge of IT vocabulary would help them deduce the meaning of parts they do not understand in the first moment.

The students, who are able to understand short stories, predict the follow-up and understand extracts of spoken texts on IT topics match the B1 level in listening. News headlines and main points of events can be also understood. Still the speech must be slow and clear for listening in detail.

3.2.1.3 Spoken interaction and oral expression

The following points asked about the spoken interaction and oral expression. Again, students ticked the box that presented their level of skills.

- *I can introduce somebody to the others and use simple phrases for greeting somebody and saying goodbye. I can manage in a shop if the speech is supported by gestures. I can give information about myself including the address, phone number, nationality, age and simple sentences about my family and hobbies.* This item corresponds to A1 level.
- *I can ask for simple information about travelling, I can buy a ticket. I can invite somebody over and react to such an invitation. I can excuse for something and express what I like and dislike. I can greet a partner, ask how he is. I can ask about news that I hear during the dialogue.* This item corresponds to level A2.
- *I can tell a story, a film or book plot. I can talk about my experience in detail and describe my feelings and reactions. I can take part in an easy, direct dialogue about topics that I am interested in and that I know.* This item corresponds to level B1.
- *I can express my feelings of varying intensity and emphasize what is important for me about events. In discussions I can give reasons for and defend my opinions using appropriate explanations, arguments and comments.* This item corresponds to B2 levels.

The A1 level of English spoken interaction and display is classified by the ability to introduce a third person to somebody else and use simple phrases and greetings (Bohuslavová et al., 2004, p. 11). The speaker can make himself understood when

shopping with the help of gestures and pointing at things. Giving basic information (e.g. address, phone number, nationality, information about family and hobbies) about oneself is also important for this level.

According to the questionnaire, an A2 level of speaking the student can ask for information when travelling and buy him- or herself a ticket. They can invite somebody over and react to such an invitation. Apologizing, greeting and expressing likes and dislikes is found rather important and reacting to news told by a partner in a dialogue brings a new element to the spoken language skill. Precisely this differs the level A2 from the level A1 the most, and appears important in communicating.

The items in B1 focus on handling stories, film and book plots. Talking about one's experience and describing feelings and reactions to these situations appear typical. According to the reading and listening comprehension at this level, the students understand or can talk about topics that relate to their hobbies or topics interesting for them. They can take part in a direct discussion on these topics. This involves active using of past tenses and an adequate vocabulary of nouns and verbs related to certain topics and adjectives describing feelings as well.

The B2 list of items that the student should manage puts forward talking about their feelings and expressing what is and what is not important for an individual about events or experience. Giving reasons for maintaining positions with suitable explanations, arguments and commentaries also represents sufficient language knowledge. This is the last space in speaking skills. It was not probable that these students would match a higher level according to their English entrance test results.

3.2.1.4 Writing

These items ask about the students' writing skills.

- *I can fill in forms requiring personal information. I can write a simple text on a postcard.* These skills are typical for A1 level.
- *I can write short, simple notes and messages. I can introduce myself and my family in a short letter.* These skills are typical for A2 level.
- *I can write a simple, understandable text on various topics from the area of my interest and express my opinions. I can write a structured CV.* These skills are typical for B1 level.
- *I can discuss an issue in an essay or a letter to the newspaper and I can argue for or against a certain opinion.* These skills are typical for B2 level.

The A1 level of writing requires filling in forms with basic information and writing a simple text on a postcard. These were the more important categories than writing some basic information about oneself or writing a greeting card.

Level A2 is characterized by writing short messages and notes. This is extremely important when writing a message to somebody in English, for example writing to a help desk. The language must be only so fluent that the reader understands the problem and its demonstration.

The form proceeds with the B1 level where students are able to write a simple and comprehensible text concerning various topics from the field of their interests and express their own opinion. Another item in this line focuses on writing a structured CV which certainly should be paid attention to in the course since the students will definitely need when searching a new job.

I would like to emphasize once more that the aim of the survey was to find out students' level of knowledge in the different skills in an appropriate length of the form. As it proceeds with the motivation determining part it did not enable to extend the first part although a more detailed form would provide more exact results, but the question is whether the better accuracy would have counterbalanced the length including sick and tired students falling asleep over it.

3.2.2 The motivation and target needs determination part of the questionnaire

In the second part of the form the main aim was to find out why the students want to learn English and what they will use it for. They were asked about their previous experience with using English and their future outlook of using English at work and in their personal life. The inquiry about history followed from the danger of the students' imperfect notion of their employment in future and the probability that they have already made some experience with using English as part of their work. They were also asked about learning English for their private needs to increase their motivation in case that there was a need for change in the topics (Dudley-Evans and St John, 2002, p. 40, 41). This table was divided into four squares and upon them are written the explanatory questions to encourage the students to write as much information as they can. When the students were writing they were also provided help and given some possibilities when they were indecisive.

The spaces in the questionnaire were determined to following questions:

- *What have you needed English for in your work life?*
- *What have you needed English for in your personal life?*

- *What do you think you will need English for in your work life?*
- *What do you think you will need English for in your private life?*
- *What do you need to learn the most?*
- *Which areas of vocabulary do you need for work?*
- *Which areas of vocabulary are you interested in?*
- *What do you expect from this English course?*

Under the table asking about their history and future there is a special field for answering the question: "What do you need to learn the most?" so that the students write at least one of the skills they need to learn showing their weak point at the same time. The next table asks about vocabulary in two squares: vocabulary needed in connection with IT and professional English and vocabulary of everyday English or special topics that the students do not manage. The last question of the motivation part of the questionnaire focuses on personal expectations of the course. Possible answers could concern much spoken interaction, learning how to write emails, watching parts of films, making presentations and an unlimited amount of topics using the students' imagination. All questions in the second part were formed with respect to the individuality of their needs so the questions did not try to lead them in a certain direction which is the reason for so generally sounding inquiries. All spaces were left rather large and by this encouraged the respondents to answer in detail.

3.3 The questionnaire evaluation

3.3.1 The knowledge self-assessment part of the questionnaire evaluation

Table 3.1: Level ranking results

	A2	B1	B2
reading	2	6	3
listening	5	5	1
speaking	6	3	2
writing	3	6	2

The first part of the form showed to be quite easy to evaluate from the exact character of statements. On the other hand, the results displayed a certain dispersion in

the levels experienced by the students which must be dealt with in the classroom. The students prove stronger in optically-graphomotoric than in acoustic-oral skills. This may be related to their technical way of thinking but more with their encounter with English in the written form. The next part of the questionnaire will show which skills are more important for their future and it will also determinate the assessed outcome of their course.

3.3.2 The motivation and target needs determination part of the questionnaire evaluation

Here is a list of the students' answers as they wrote them to the appropriate gaps. The answers are only rewritten, not modified.

3.3.2.1 Answers for previous use of English at work

The respondents answered the question "Where have you already used English for work?" in the following way.

Activities requiring reading skills:

- reading PC documentation 3×
- reading manuals 3×
- reading advertising system offers

Activities requiring writing skills:

- writing a CV for an international company

Activity requiring speaking and writing skills:

- organizing a music festival

Activities requiring speaking and listening skills:

- communication with foreign customers
- serving foreigners

General activities including all four skills:

- A levels
- school in general

3.3.2.2 Answers for previous use of English for personal interests

The following items are answers to the question: "What have you already needed English for in your personal life?"

Answers combining speaking and listening skills:

- meeting foreigners 7×
- travelling 3×
- working abroad 2×

Answers including reading skills:

- reading news on the Internet

Answers combining listening and reading skills:

- playing PC games

Answers including reading:

- translating lyrics

Answers including listening skills:

- watching films in English

3.3.2.3 Expectations about future use of English at work

The following part gives answers to the question: "What do you expect to need English for in your future occupation?"

Answers including reading skills:

- reading documentation 2×
- reading forums about programming
- understanding texts

Answers including reading and writing skills:

- participating in Internet discussions

Answers including writing skills:

- writing E-mails
- writing texts

Answers including listening skills:

- understanding English conversations

Answers including all four skills:

- working for an international company 2×
- communication with foreign customers
- obtaining a certificate in English
- working abroad
- everywhere

3.3.2.4 Expectations about future use of English in the students' personal life

These are the answers for: "What do you expect to need English for in your personal life?"

- travelling 6×
- communication with friends on the Internet 2×
- living abroad 2×
- understanding news
- communication in the EU
- understanding films

3.3.2.5 Answers relating to vocabulary for work and study

These items answer the question: "Which areas of vocabulary do you need for work and study?"

- PC 5×
- programming 4×

- manuals 3×
- hardware 2×
- electronics
- technical English
- Internet discussions
- IT
- everyday life topics
- writing a CV

3.3.2.6 Vocabulary concerning the students' interests

- PC 3×
- Premiere League 2×
- sport
- programming
- technical vocabulary
- PHP.net
- articles about music
- myspace profiles
- the British history
- software, hardware
- free time
- English speaking countries
- general English
- news on the Internet
- films

3.3.2.7 Answers about what the students need to learn the urgently

- to understand spoken language 5×
- to improve spoken discourse 3×
- to practise grammar 3×
- to enlarge vocabulary 2×
- to improve English in general
- communication on the Internet: usual phrases
- professional vocabulary on the Internet
- to understand professional texts
- to understand texts
- English for work

3.3.2.8 Expectations from the course

These were answers for the question: "What do you expect from this language course?"

- improving the ability to communicate in English 6×
- improving vocabulary 4×
- learning 3×
- practising listening 2×
- grammar 2×
- professional terminology
- understanding native speakers
- learning idioms
- learning phrasal verbs
- understanding written texts
- elevating my level of English
- learning English for school

3.3.2.9 The results in an overview

As we can see from 3.3.2.8, the answers not always accord to the questions. To make the results more understandable, I joined the categories and made an overview of the answers.

Table 3.2: The most important results concerning occupational needs.

skills	target situation
reading	PC documentation and manuals
	forums and the Internet
	professional texts
writing	communication in forums
	writing E-mails
	programming
	writing a CV
speaking	communicating with foreign customers
	communicating with colleagues in a multi-national company
listening	understanding clients and colleagues

The table 3.3 shows the respondents' personal needs that will be taken into account for alternative activities in the curriculum.

Table 3.3: The most important results concerning personal needs

skills	target situation
reading	reading news
	reading IT discussions on the Internet
speaking	travelling
	speaking with foreigners
	communication within the EU
listening	films in English
	understanding foreigners
writing	communicating on the Internet

The table 3.4 shows what the students expect to improve the most. Naturally, the terminology remains a bit unclear due to the lack of professional linguistic terms.

The table 3.5 was provided to show the most important needs perceived by the

students in the questionnaire.

Table 3.4: Expectations from the course

skills or subskills	number of respondents
improving communication (speaking and writing)	4
vocabulary	4
listening	2

Table 3.5: The most important needs

place	skill or subskill
1	listening
2	speaking
3	reading professional texts
4	vocabulary
5	grammar

This part of questionnaire showed that the students will probably need more reading comprehension and writing concerning hardware, software and programming manuals language although their weak point lies in oral-auditive skills, which they may not need so much but must be important with some students at least. This situation probably originated in their previous foreign language experience as they read more than spoke English but can be as well connected with the students mental focus, briefly, IT students tend not to be very communicative in Czech not alone in English.

3.4 Needs of students viewed by future employers and current teachers

Since the needs analysis questionnaire still did not seem to contain all relevant information, it suggested itself to visit future employers and current teachers to ask for their opinions. The question why it is so can be answered that the students in the first year of study have only an indefinite concept of what they will do in their future and if so, which required skills they will need for tasks required.

Interviews with the employers show that the IT specialists need a good passive knowledge to understand programming manuals in any case. In

multi-national companies or in companies dealing with partners abroad they also need well developed audio-oral and writing skills. In other words, the better their level of English is the bigger their chance to get a well paid job.

Surprisingly, the teachers' statements do not differ very much. **All of them demand that the students are able to read and follow programming manuals and some also need students to communicate in English.** The head of department also mentioned a certain lack of motivation which was attempted to be solved by the variety containing curriculum, the long-term project, games and quizzes as well as the complementary topics to each IT issue. A positive aspect of the requirements lies in the easy availability of resource materials. We can notice that almost all of them are accessible on the Internet. This may give space to students in their self-study effort.

The texts of the whole interviews are attached in appendices C and B.

Chapter 4

Syllabus design

4.1 Designing the two-semester course

In the light of the results I continue with designing a syllabus step by step. This section gives an introduction to the course outline.

When we consider that there are twenty-eight weeks in two semesters and leave out two weeks for evaluation there is enough time for twenty-six units. The workshops take place twice a week, each lasting ninety minutes. This offers the chance to devote time for example to conversation, reading and writing, acquiring vocabulary in one lesson and spending time on grammar and language theory in the other, or to organize the unit of each week in a suitable way. Each week is designed to connect one issue, a grammatical feature and a complementary topic, although some weeks may contain more work with reading text and writing and others could be spent on grammar and speaking activities. However, the lessons should be balanced in long-term periods. After all needs analysis I must state that the students need all four skills but their current knowledge level and the need of the four skills differs.

The topics cover basic vocabulary of IT in terms of users, administrators and geeks with special emphasis on reading comprehension and EAP. Naturally the course starts with easier and well-known areas and proceeds with more specialized material although some issues need more time and it would be too tiring for the students to occupy themselves with one problem so the extension of it is integrated into the lesson plan later on. This brings an advantage for weaker students to get acquainted with the topic at the beginning getting enough time to digest new information so when they return to it the chance for them to master the follow-up lesson in a much better way increases.

As there logically is no textbook at our disposal to be used from the beginning to the end of the course, materials from various sources supply for such a textbook. As a result the students can feel somewhat confused, without a sense of coherence. We

can avoid that in three ways: by giving them a semestral lesson plan, supplying them with materials that have a similar layout and accomplishing the whole year with a continuing project. The lesson plan can help the students prepare for the classes and lets them know what to expect. Handouts they get in my lessons contain pictures, texts, exercises and tasks. Ideally, it is one sheet of paper, which the students keep and together with the lesson plan form a book.

4.2 The project

To connect the topics as they follow one after another I invented a long term project that is briefly introduced in this section.

Since the students have no textbook to follow they can easily loose a sence of integrity of the lessons. For this reason there is some time left for a long-term project. This enables the students to practise the material acquired in the class in an entertaining and practical form. At the beginning of the first semester they found their companies and each week they solve some problematic situations in a creative way. Often they role-play situations, make presentations or deal with the other companies.

4.3 Individual lessons design

In the following paragraph I outline the way I design every lesson.

As the students are in average at a good level, although they differ from each other in the four skills, it appears advantageous to base the course on communicative activities and topics, not on grammar. In my experience, the only way to teach students of different knowledge levels is to bring up a topic different for each lesson and connect it to a grammatical issue. At the beginning it is essential to catch the attention by asking a problematic question or stating a fact that rises a little opposition, a picture or an article. These young, mostly male students, who are used to rather static lessons of technically oriented lessons, positively react to challenges of all kinds, so to get their attention at the beginning of the lesson anything counts. After an interesting beginning the lesson can proceed with practicing any of the skills still connected to the topic. In the most of the lessons I do a short grammar review with an extension to bring something new so that all students get new information. Since they should finish the course at the same level in favor of keeping an objective character of university education, the students with lower knowledge are encouraged to devote more time to learning all of what is explained in the lesson. I also prepare some tasks requiring creative work with concrete results produced by the students, which can also be realized in the form of a project that they can finish up outside the

classroom. Each class is a bit different and the productivity depends on more factors including the demands in other subjects, the day of the week and how occupied the students are. As a rule students tend to be more tired at the end of the semester, and their increasing or decreasing motivation in the first place. From this reason I complemented each lesson with a slightly different topic, mostly not containing computers, that has been chosen from the questionnaires. Such a topic must contain the possibility to apply the same grammar or is connected to the lesson in another way and would be used in the second part of the lesson or in the time left at the end of the lesson, maybe as homework or it could substitute for the original topic in an extreme situation when the students show aversion towards topics related to computers.

4.4 The weekly plan

4.4.1 Table of essential skills

The table 4.1 shows how the syllabus mirrors the results of the needs analysis questionnaire and the subject teachers' requirements. The numbers of weeks show only the ones focusing on the skills or subskills from the main part. Otherwise all the lessons contain practice of various skills on many different topics that are not included in this table.

Table 4.1: Number of weeks devoted to the most important needs

skills or vocabulary topics	number of weeks
Communication with colleagues and customers	7
Vocabulary and language of hardware	8
Vocabulary and language of software	5
Reading manuals	3
Reading other professional texts	4

4.4.2 Week 1: My Computer

Topic: a personal computer

Aim: to learn to describe a computer and explain its functions

Skills: reading: finding specific information concerning computer features in a text,

listening: finding specific information in a text about input devices,
 speaking: providing complete information about a PC,
 writing: describing a PC

Subskills: grammar: there is/are, passive voice prepositions of place,
 vocabulary: professional terms of PC components and verbs like process,
 provide, run, print, result and others

Activities: brainstorming for vocabulary,
 completing a chart from reading,
 listening for specific information,
 writing a short description of a computer,
 speaking about my computer,
 describing a room according to a plan,
 founding a company,
 designing business cards

Notes: The topic was chosen from the results of the needs analysis students' results. From my point of view, to be able to describe the computer, its parts and its functions, learn terms like input and output devices and software is essential. This determines the appropriate vocabulary, which the students are already familiar with, they may only be short of some specialized verbs and tend to use mostly the verbs: to be, have do and go, so there will be a need of verbs like: process, produce, recognize, move, input and output, run, display, print out, result and others.

This topic requests reviewing the grammar of there is/there are, that the students must have learned before but still tend to forget to use in the right sentence for there is no equivalent of it in Czech. Another reason for including it in the first week results from the learners' difficulty to understand texts when it contains many grammatical words and they can not distinguish them from content carrying verbs. For example in the sentence: "There is a keyboard connected to the computer" we do not translate the word "there" into Czech. Because of that we should start with this issue from the beginning. Conventionally, the topic of describing something is connected with prepositions of place and for describing functions of a PC we need the grammar of present simple. To start the frame of each lesson, this time the students divided into pairs are asked to found their company and introduce it to the classmates.

4.4.3 Week 2: Fast, Powerful and Quiet

Topic: different types of computers

- Aim:** giving advice about a suitable computer meeting special needs, comparing features
- Skills:** reading: finding specific information in short texts describing different types of computers, skimming texts for identifying whether it could contain information needed,
listening: identifying the main idea of a recording,
writing: producing a short text comparing two objects, speaking about advantages and disadvantages of different computers
- Subskills:** grammar: comparatives and superlatives, zero condition, questions starting with "how", the "ing" form of verbs after "for",
vocabulary: adjectives and adverbs giving parameters,
- Activities:** comparing computers from information given a written text, giving advice about how to choose the best computer in writing, identifying needs and giving advice in a role-playing activity, comparing any other objects, finding a suitable product on the Internet

Notes: This unit meets the students' requirements of PC vocabulary from the needs analysis questionnaire. In this lesson we revise rules for comparing adjectives and adverbs. The home assignment involves finding relevant information on the Internet using websites that enable comparing two products. Since the number of comparable qualities is limited, they are asked to write a short text comparing these two products. Learners can also find a text comparing two products on an Internet forum, underline important information and present the result in the class.

4.4.4 Week 3: Why doesn't it work?

- Topic:** Problems with PCs
- Aim:** Identifying errors
- Skills:** listening for specific information on the phone, giving advice on the phone,
written and spoken inquiries,
reading about user' problems for detailed information
- Subskills:** grammar of questions in present and past simple and continuous, subject and object questions,
vocabulary of verbs and nouns concerning difficulties

Activities: reading inquiries in online discussions and answering with problem identifying questions,
 role-playing a meeting with the aim to determine the company's weak points,
 listening to users queries,
 asking for information in everyday life situations

Notes: According to the graduates profile description, the administrators will need to help users solve problems. It includes a very accurate exchange of questions and answers for each question determines the answer in some way. This week the students will occupy themselves with finding out what can go wrong with a computer or a computer programme. There is much space for listening tasks based on recordings from help desks, where the students could only evaluate the procedure of the IT specialist or they could predict his or her following question.

4.4.5 Week 4: How to do it

Topic: Set up your own PC

Aim: Learn and practise giving instructions

Skills: Reading for understanding the order of instructions,
 Listening for understanding instructions
 Writing short instructions for use
 Making written notes of instructions
 Giving oral instructions on a simple topic

Subskills: Grammar: imperative sentences both positive and negative, modal verbs
 Vocabulary: some phrasal verbs, some new action verbs, vocabulary of small technical components

Activities: playing "the robot game",
 reading manuals of various difficulty levels,
 making notes from manuals,
 writing simple instructions for replacing different parts of computer or connecting a computer to the Internet
 writing rules for new flatmates

Notes: The topic of understanding manuals comes partly from the students' needs analysis and partly from the interview with the teachers. It is an introduction to the topic of understanding and giving instructions. There will be one more week devoted to this topic on a more difficult level.

4.4.6 Week 5: How it all started

- Topic: The history of my computer
- Aim: Learning to speak about obsolete technologies, the history of computers recent changes
- Skills: Reading for detailed information about the history of computers
Reading a text about Fortran programming language for detail information
Listening for general information about the ancient history of computers
Writing a short text on “My first computer”
Speaking about the memories of computers in the last ten years
- Subskills: Grammar: the past simple tense, irregular verbs, there was/ there were, present perfect
Vocabulary: linking expressions of time
- Activities: Reading a text about the history of computers
reading an extract from a Fortran programming manual
reading a text about Bill Gates and his personal history
reading a puzzled up manual and putting it in the right order
finding some new details about the history of computers on the Internet
describing one’s first computer in a written form
role-playing interviews with famous inventors
writing a short article for the newspaper about their company

Notes: This week’s topic was my idea. In the texts students can gain new vocabulary and in speaking and writing tasks they revise the previous week’s material of describing computers and their functions.

4.4.7 Week 6: Where are computers used?

- Topic: Computers are used everywhere
- Aim: Receiving and giving information about types of computers and their functions
- Skills: Reading about different types of computers for detail information
Writing to people on the Internet requiring information about where and how they use computers
Listening about a person buying a PC for detail
Suggesting a suitable computer to a purchaser in a spoken dialogue

Subskills: Grammar: passive voice, making comparisons with comparative and superlative forms of adjectives and adverbs
 Vocabulary: new vocabulary concerning types of computers, their parts and functions

Activities: self-reliant research of various places and ways of using computers
 writing into discussion forums asking for specific uses of computers
 rewriting an extract from text about a certain type of computers in own words
 reading articles from professional magazines and finding information about ways of using computers
 listening to people talking about how they use computers and which special functions they need
 transforming sentences with active voice into passive voice
 writing a short text about how students use their computers in passive voice

Notes: The topic follows from the questionnaire results. It involves special vocabulary, description and gives much space to practise the everyday language of future IT administrators.

4.4.8 Week 7: What have you done?

Topic: Repairing errors

Aim: Understanding and explaining the order of events

Skills: Reading a text about a person asking for help with a malfunctional printer describing their past actions for detail information
 Giving information about past actions orally
 Writing about the development of one's career
 Listening to a text about a person connecting computers into a network for specific information

Subskills: Grammar: present perfect simple, forming questions
 Vocabulary: linking words

Activities: Explaining the steps done in looking for the cause of a problem in given situations
 Asking questions about previous actions using the manuals from previous lessons
 Writing a short text about their state of study and tasks finished so far

Giving advice on the phone
 Listening about a person building a computer network and making notes about the order of their action
 Speaking about previous experience concerning computers
 Reading about a malfunctional printer and taking notes
 Going around the class and asking questions starting with "Have you ever...?" and "Have you already...?"
 Writing a short report about their day hour after hour in sentences like: "18:00 – I have just finished my homework in programming"

Notes: This week's material connects the students' need to describe and understand an action in progress in detail and asking checking questions. The questionnaire results show that they need to understand such information very well and I deduced that they need to revise and practice the present perfect tense to be able to achieve it.

4.4.9 Week 8: Computer Crime

Topic: Computer crime, its dangers and ways to protect ourselves

Aim: Receive and give information about action and counteraction

Skills: Reading texts about new viruses for general and detail understanding
 Writing a short text giving advice about how to protect your computer
 Listening to several people talking about how they found out they have a virus in their PC
 Speaking about ways of protecting a computer, comparing and discussing them

Subskills: Vocabulary: linking words of agreement and contradiction like "Firstly, on the other hand, as well as, although, on the contrary, vice versa"

Activities: Reading texts about *phishing, pharming, spamming and hoaxes* for general and detail understanding
 Complementing a text with linking words
 Organizing a debate in the classroom about the significance of hackers and antiviruses
 Writing a brief overview of antivirus programmes on the market, their advantages and disadvantages
 Writing a short text giving advice about how to protect your computer

Notes: This week's material was not directly determined in the questionnaire but it belongs to the basic subjects in computer administration. Whenever the students advise somebody or administrate their own network they will certainly need the language tools acquainted in this lesson. Also it is perfectly suitable for learning how to argue and defend one's opinions.

4.4.10 Week 9: Network topology

Topic: Ways of connecting a network

Aim: Describing and understanding descriptions of diagrams and schemes

Skills: Reading one of the texts about network topology from www.msdn.com for detail information
 Describing a scheme of a concrete network topology application example
 Listening to a person talking about network topology schemes for details
 Writing a short text about where to apply which topology scheme in practice

Subskills: Grammar: revision of present simple active and passive phrases: "This is used for..." and "This is used when..."
 Vocabulary: expressions determining directions and places to describe a picture and directions of information flow
 Rules for building up a text in a logical and understandable way

Activities: Listening to a recording about network topology and discussing relevant vocabulary from it
 Reading texts about networks accompanied by pictures and then covering the attendant text and describing the pictures using our own words
 Making presentations including a scheme or picture description
 Drawing schemes of and talking about the university employees structure
 Writing a short text about where to apply which topology scheme in practice with their own experience with them or with some concrete examples

Notes: Connecting computers into networks and supervising them becomes the daily bread of every IT administrator. It follows from the questionnaire and it goes toward the subject Technical Maintenance of Computers that is taught in the first year of study which offers enough material on the topic.

4.4.11 Week 10: Time management

Topic: My plan for the next month

Aim: Talking about order of activities and time distribution

Skills: Speaking: giving information about a time plan
 Reading: skimming texts about a week plan and about time management
 Writing a short text about a one-day programme
 Listening: processing a text about a student's timetable for detailed information

Subskills: Vocabulary: days of the week, months, seasons, prepositions with time expressions, vocabulary of school subjects
 Grammar: revision of expressing future with "going to" and "will" as well as the future perfect tense, present continuous and simple for expressing future

Activities: Speaking: role-playing a business meeting with the aim of dividing work and setting a time schedule
 Reading a text describing a manager's week
 Reading a text similar to texts from www.mindtools.com about time management
 Discussing tips on time management improvement
 Making presentation about tips for improving time management
 Writing a short text about their next week
 Writing a text about a usual day in their job of dreams
 Listening to a text with a student speaking about their timetable

Notes: In the questionnaire the students stated that they want to work for international companies or work abroad. This requires their ability to express and receive information about the time plan.

4.4.12 Week 11: I want to know more

Topic: What exactly does not work?

Aim: Asking questions for more information

Skills: Speaking: asking for further information, giving options
 Reading: scanning texts to identify the main topic, skimming texts about computer malfunctions to find detailed information about causes of problems

Listening: finding detailed information in phone calls from users with more complicated problems

Writing: creating short instructions for users with specific problems in online discussions, writing clarifying questions in direct communication

Subskills: Vocabulary: adjectives (e.g. malfunctional, slow, incorrect, visible), adverbs (e.g. daily, currently, fast, well), intensifiers, verbs of activities used in connection of computers (e.g. install, link, enable, provide, open, execute)

Grammar: making comparison with adjectives and adverbs, forming questions in all tenses, use of intensifiers

Activities: Reading texts describing unusual behaviour of computers

Reading texts on how somebody solved a concrete problem with a PC and forming questions from positive sentences that could have been asked by an observer of the process

Listening to users' phone calls, making notes and forming specifying questions to ask

Role-playing a professional consultation of a user with a malfunctional computer

Creating and solving quizzes

Notes: The ability to ask specifying questions follows from the graduate profile description on the official IT department websites (Katedra informatiky, 2009)).

4.4.13 Week 12: Programming languages

Topic: Understanding programming languages

Aim: Going deeper into texts about programming languages

Skills: Reading: reading texts about programming for detailed information

Writing: making notes and writing a short summary of a text explaining programming procedures

Subskills: Recognizing language tools in written texts: distinguishing the voice, linking phrases, the role of "to" in sentences,

Grammar: learning to recognize the number of clauses and their dependence on each other in a compound or complex sentence, verbs followed by the infinitive with "to" form and by verbs with the "ing" ending

Vocabulary: special focus on verbs, commands and linking phrases used in professional texts

Activities: Reading: reading texts about different programming languages from various sources
 Writing: writing a summary of the main points in a text using only short sentences
 Reading: translating parts of texts into Czech
 Discussing frequent commands and finding what they are derived from
 Discussing types of programming languages and comparing them

Notes: This week's material goes towards the teachers' requirements of students to understand programming manuals.

4.4.14 Week 13: Protecting your identity

Topic: Social engineering

Aim: Enabling the students to find out the trustworthiness of an Internet system and give advice on this topic to users

Skills: Speaking: discussing the opportunities of Internet services and their dangers
 Reading: skimming texts about Internet crime for information in detail
 Listening: recordings about how people use the services on the Internet
 Writing: expressing the basics of Internet security in points

Subskills: Grammar: modality for giving opinion or stating argument and modality for stating certainty
 Vocabulary: words expressing forms and gravity of Internet crime

Activities: Discussing the advantages and disadvantages of communication systems like hi5.com or facebook.com
 Reading texts about Internet security and finding related information on the Internet
 Writing a short text advising users whether or not to trust an Internet system
 Listening to people talking about their reasons why they do or do not use Internet communication systems for general information

Notes: The topic was chosen from the needs analysis results and I regard it as important and actual. It is necessary that students understand the English terms related to this topic.

4.4.15 Week 14: Evaluation

This week is the last of the first semester so it remains for revision, writing tests, evaluating the ending semester and correcting the mistakes and unclearnesses. The perfect time for mid-semester formative evaluation comes. The learners should express whether the course is fulfilling their expectations, what helped them the most and what causes them trouble. They could also give suggestions concerning what to devote more time to.

4.4.16 Week 15: May I give you some advice?

Topic: Expressing opinion and making suggestions

Aim: Practise giving advice

Skills: Reading for detail: finding specific information in a text giving advice on computer maintenance and cleaning

Writing: writing a short manual on how to manipulate with files

Listening: listening to a recording giving advice on what not to do at a computer for detail

Speaking: testing a classmate orally and giving them advice what to improve and where to find relevant data

Subskills: Grammar: modals, positive and negative sentences in active and passive voice

Vocabulary: phrases for giving advice in a polite way

Activities: Speaking: testing each other's knowledge on a given topic

Role-playing a coaching session

Reading a text on computer maintenance and stating whether the students know these rules and follow them

Writing a short recommendation on how to buy a PC

Listening: listening to a recording about what you should never do at computer and extending the text with own ideas

Notes: The material of the second semester copies the curriculum of the first semester in certain points. This comes out from the need to firm the crucial skills. Now we are trying to deepen the approach using a variation of some previously discussed topics. As always, a masterful knowledge of a reasonable extent that is quickly at one's disposal is of a better use than a seemingly wider passive knowledge that stays on the surface and can not be used in real life.

4.4.17 Week 16: What happened?

Topic: Past events

Aim: Speak, write, understand written texts and audion recordings about actions in the past,
stating and tracking the cause and effect

Skills: Speaking: asking questions in past simple, present perfect simple and present simple in order to get more information
Listening: listening to a recording about an error description where the speaker explains what and how happened for detail information
Reading: scanning and skimming a text about how famous inventors came to their inventions
Writing: writing down notes about how the student has solved a problem with focus on individual stages

Subskills: Grammar: past simple and continuous, present perfect simple and present simple
Vocabulary: adverbs of time

Activities: Discussing our own PC tricks and how we created them
Practising sentences with two actions happening at the same time in the past
Listening to a recording about an error description where the speaker explains what and how happend for detail information, taking notes and reconstructing the story in other words
Reading a text about the origin of inventions and finding the cause-effect scheme
Role-playing an IT support team making conversations between them and the users in short conversations
Designing a trouble-shooting scheme for asking questions and solving problems

Notes: The topic deals with giving and receiving information about problem origins. It enables the students to connect asking questions with giving a longer description of what happened. The topics that are processed in the activities vary. They all were chosen from the students suggestions in the needs analysis. In the previous semester we devoted one week to revising the past simple tense in connection with the history of computers. This semester we will extend it by adding the past continuous tense. We describe activities in past leading to a certain result.

A model situation could look like this.

"How can I help you?"

"My monitor isn't working."

"How did it happen?"

"I was just watching a film when the image suddenly fell out."

"How long have you had it?"

"I have had it for one year."

"OK, so let's see what can be done."

This grammar goes also very well with telling stories. We can look for some biographies of famous inventors and retell their stories using past continuous as often as possible. Example: "Albert Einstein was just looking out of the window when he saw a bird flying in the sky and this inspired him to invent this theory."

4.4.18 Week 17: A new job

Topic: Applying for a new job

Aim: Succeeding at a job interview, writing a CV

Skills: Speaking: talking about education and work experience at a job interview
 Writing a CV
 Listening to a job interview for detail
 Reading personal stories and CVs
 Reading rules for writing an effective CV

Subskills: Grammar: Past simple, present perfect and present simple for talking about experience, present continuous for talking about the current situation, verbs of expressing ability in all tenses
 Vocabulary: adjectives of personal qualities

Activities: Role-playing a job interview
 Analyzing several CVs and writing an own one in a structured form
 Discussing our future in a five-years perspective
 Writing, comparing, correcting and improving CVs
 Discussing texts containing personal experience of people working in IT
 Listening to a job interview and analyzing individual steps

Notes: The need to write an effective structured CV and succeed at a job interview came directly from the respondents' answers in the needs analysis questionnaire.

4.4.19 Week 18: Hypothetically

Topic: Understanding and expressing hypothesis

Aim: Being able to suggest and react to hypothesis

Skills: Expressing hypothesis on a given programming task in spoken word
 Writing: giving options and outlining the their effects
 Listening: listening to a manager talking about the complex IT solution in their company for detail
 Reading: finding detail information in a text focusing on advantages and disadvantages of having an outsourcing IT support

Subskills: Grammar: conditional sentences of the zero, first and second type

Activities: Listening to a recording about a complex IT solution and suggesting improvements
 Reading a text giving advantages and disadvantages of outsourcing companies and making hypothesis of the consequence
 Discussing hypothesis of solving a concrete programming task
 Writing a short giving options of choosing an internal communication system in a company

Notes: This week's material enables students to discuss possible solutions of problems. This will be useful for them in workshops led by foreigners at university and in their future work provided that they co-operate with foreign colleagues or clients. The first situation was suggested by one of the teachers C, the second was given by several students in the needs analysis questionnaire.

The topic of making hypothesis and suggestions calls for some concrete programming tasks designed by the subject's teachers. This needs a closer co-operation with them with the lesson's designment.

4.4.20 Week 19: The main message

Topic: Dealing with English texts

Aim: Analyzing, shortening and extending texts

Skills: Reading: skimming and scanning IT texts from various sources
 Writing: providing shortened and extended versions of various texts
 Speaking: giving oral summaries of the main points in a text

Subskills: Grammar: understanding internal reference in texts

Activities: Breaking down texts from various sources including manuals, school textbooks, Internet articles and others, analyzing and translating parts of them, looking for language tools and expressions building the framework in a text
Summing up text orally and in writing

Notes: The topic serves English for Academic Purposes and these skills are required by the teachers (see appendix C).

Now it is the high time the learners acquired the skill to shorten and extend a text. Although they may not need to extend a text in their job they should learn the principle from both sides. Numerous texts will be analyzed and the most important information will be extracted. We will go further into reading for general understanding and for detailed information. Much attention should be paid to recognizing grammatical forms, linking words and reference inside the text as well as phrasal verbs and basic sentence analysis. Students obtain various texts from various sources and can process them in small groups. Then they should go through it and execute one of the following tasks: answer questions to the text, summarize them in Czech and in English or create their own questions from information in the text. They may also put paragraphs into the right order or create an appropriate heading for the whole text or for each part of it.

4.4.21 Week 20: Sell yourself

Topic: Making presentations

Aim: Preparing and giving presentations

Skills: Reading: scanning and skimming a text on how to prepare and give presentations

Writing: preparing a presentation in Powerpoint

Speaking: practising giving presentations

Listening: finding specific information in a video presentation

Subskills: Vocabulary: acquiring special phrases of drawing attention, stating opinion and managing discussion when giving a presentation

Activities: Reading a text about effective presentation designment and discussing its suggestions

Watching a presentation on TV, finding some information in it and giving possible feedback to the presenter in a dialogue where the teacher plays the role of the presenter

Preparing presentations and executing them in the class

Notes: In the questionnaire students stated that they need to improve their communicative skills in general and making presentations serves as well to this aim as it helps them at school and in their future work with international companies. It is a perfect occasion to revise linking expressions, passive voice, present perfect and acquire new phrases used when giving a presentation.

4.4.22 Week 21: Computer slang

Topic: Specific computer language

Aim: Understanding and using abbreviations, acronyms, neologisms and spelling

Skills: Reading texts about abbreviations, acronyms and neologisms for detail

Subskills: Phonetics: acquiring the International Phonetic Alphabet

Revision of the alphabet and spelling

Vocabulary: verbs like “mean”, “stand for”

Activities: Finding acronyms, abbreviations and neologisms on the Internet and explaining their meaning to the classmates

Show the students some blended words and let them create their own ones

Activities requiring spelling: dialogues giving information about names, web pages, E-mail addresses etc.

Finding and matching pictures of emoticons with their explanations

Creating and solving quizzes

Notes: Many students expressed their need to participate in Internet discussions in the needs analysis questionnaire and understanding abbreviations, acronyms and neologisms gives them the needed tools. Spelling is important for communication with business partners and clients on the phone.

4.4.23 Week 22: How to read “How-tos”

Topic: Understanding and providing manuals quickly

Aim: Revision and extension of reading and writing manuals

Skills: Reading: getting more practice in understanding instructions for updating your operation system in general and in detail

Writing: creating short summaries of manuals and writing self-invented instructions for use about output devices

Listening: finding detailed information in a recording of a person giving advice about effective ways of studying

Speaking: discussing topics like “how to install Microsoft programmes” or “how to retouch photos” in groups and giving a presentation on the topic to the class afterwards

Subskills: Learning strategies: understanding a text in steps going from understanding the gist to finding details including finding key words and taking notes

Activities: Doing all kinds of tasks of processing a text, e.g. inventing headings, filling in key words, translating, finding specific information etc.

Brainstorming for actions needed in smaller tasks like “how to create a table in Word” or “how to create an E-mail account”, putting the activities in the correct order and writing a short manual

Competing in the speed of finding the paragraph containing relevant information in a text

Other activities are as described above

Notes: This week offers more space to understanding technical texts and manuals to improve the ability of finding materials containing the information quickly and then focusing on details.

4.4.24 Week 23: A powerful website

Topic: Designing and assessing websites

Aim: Reading, speaking, listening and writing about websites and their aspects

Skills: Reading: comprehension of very long texts about website’s ranking for general information

Speaking: comparing two website appearances

Writing: giving advice in points

Listening: listening to a recording where a person speaks about their websites and taking notes

Subskills: Grammar: making comparisons of adjectives and adverbs, linking a text with specifying and comparing expressions, e.g. “vice versa”, “on the other hand”, “comparing to”, “furthermore” etc.

Vocabulary concerning websites, e.g. “a roll-down menu”, “a title bar”, “toolbar”, “links” etc.

Activities: Talking about previous experience with web designing and sharing opinions on different web pages
 Reading and summing up parts of texts dealing with website's ranking
 Writing a short text giving advice on how to improve concrete websites
 Taking notes about what a user likes and dislikes on a certain website

Notes: In my opinion, wherever the students work in future they will be involved in designing websites. It gives an opportunity to describe an image, compare products and suggest improvements. Some of the students have certainly designed websites already so it presents an attractive subject to discuss. Many issues arouse different opinions: software tools, appearance, webhosting opportunities, maintenance and the website's rating according to the searching engines ranking.

4.4.25 Week 24: Modding your computer

Topic: Improving the hardware and software on a PC

Aim: Understanding and giving information about making changes in order to improve the design or functionality of a PC

Skills: Reading: discussing a text with suggestions on how to improve PC hardware after finding relevant detailed information
 Writing: writing a short summary on how to improve a PC and which changes the author prefers and which not
 Speaking: sharing opinions and giving advice on the topic
 Listening: watching a ten minutes long video of a computer geek showing how he improved his computer

Subskills: Grammar: the infinitive and "ing" forms of verbs following other verbs, especially "try doing" and "try to do"

Activities: After finding and reading through some topical materials the students write a short text on how they would improve their computer if they had means for it and stating their reasons for it in sentences like: *"I would not add a light emitting cable around the tower because a hate things distracting my attention when I need to concentrate on work."*
 In pairs students talk about their computers and suggest computer hardware and software improvements to each other
 Answering questions about facts from a video concerning computer modding

Notes: The topic of computer modding is very popular and gives space to revise and improve vocabulary of hardware components, verbs of actions connected with computers, describing diagrams and language tools for giving advice. It meets the requirements to deal with the computer hardware language given by students.

4.4.26 Week 25: Robots

Topic: Constructing a robot

Aim: Communicating about artificial intelligence devices

Skills: Reading: dealing with texts about robots for understanding in detail
 Listening: finding detailed information in a text about the history of robots
 Speaking: making a presentation about a robot, inventing slogans
 Writing: designing an advertisement for the newspaper

Subskills: Vocabulary: nouns and verbs related to constructing an electronic device, common phrases used in advertisements and commercials
 Grammar: expressing ability

Activities: Listening to a recording about the history of robots and making an overview of the stages
 Reading a text describing a robot and its functions in detail
 Inventing a new robot, drawing a picture of it and presenting it to the class
 Writing an advertisement for the robot

Notes: This topic and the way it is handled meets the students' requirements of practising technical vocabulary and enables practising all four skills, especially speaking.

4.4.27 Week 26: Computer graphics

Topic: PC games

Aim: Explaining types of graphics software, reading and explaining the rules of computer games

Skills: Listening: following a recording giving instructions for Paintbrush software use, it requires listening for detailed information
 Reading: skimming a text about types of computer graphics, skimming a text explaining game rules

Writing: summing up rules of a favourite PC game

Speaking: giving information about a favourite PC game, explaining the goal, process and rules

Subskills: Grammar: zero condition, relative clauses

Vocabulary: words related to explaining rules and the process of games

Rhetoric: building a speech proceeding from basic general information to detail information for specific situations in a game

Activities: Listening to a recording giving instructions on how to use some of its functions. The students are asked to take note the names of the functions the speaker talks about and the actions they perform.

Reading a text about computer graphics and completing some of the attached exercises (Esteras and Fabré, 2007, p. 38, 39)

Students form groups of fans of the same game. Their task is to compose a text describing the game and its rules. Afterwards they give a presentation in the class.

Notes: PC graphics is one of the basic topics in computer software, which the students called for in the questionnaires, and it also involves discussing their free time activities because many of them are passionate players.

4.4.28 Week 27: Complementary materials

Topics: E-mail communication
Computers and a balanced lifestyle
Conversations on the phone
Netiquette

Aim: Practising writing emails and communicating on the phone
Improving speaking about a balanced lifestyle
Learning to express what is netiquette and explain its main points

Skills: Reading: scanning and skimming texts about a balanced lifestyle and basic hygiene rules at the computer
Listening: watching a news report about protecting children from the negative influence of computers
Reading: finding detailed information in a text about netiquette
Speaking: sharing thoughts about netiquette
Writing: answering an E-mail asking about how to furnish a work station
Speaking: giving advice on the phone

Subskills: Vocabulary: phrases used in E-mails, phrases used on the phone
Grammar: modal verbs for expressing rules

Activities: Practising phone calls with different topics
Analyzing an E-mail offering IT complements and parts of furniture and writing an E-mail recommending how to furnish a work station
Reading an incorrect text about netiquette and correcting the mistakes
Reading a text about a healthy lifestyle focused on free time activities and comparing it with the students' reality
Reading a text about computer hygiene and making a survey in the class to find out whether the students keep the rules

Notes: For the last but one week of the semester easier topics remained as the students are in significant stress before the exams and it can not be counted on them to learn new important knowledge for there would be no time left for additional practise. I am aware that there are many different, not connected topics but it is necessary to update the syllabus a little as we regularly evaluate the process going on in the classroom. So basically, this week's curriculum should be adjusted and devoted to the problematic skills or subskills or its topic could be chosen by the students in the previous week.

4.4.29 Week 28: Final evaluation

In the last week of the second semester we write the final exam and the students also hold short speeches for evaluating their speaking skills. In the second workshop we go through the most common mistakes and correct them and also have a short feedback session on the two-semesteral course and their improvement in English.

Chapter 5

The first two lessons

5.1 Lesson 1: Computers and their functions

Part 1: making definitions .It includes: skimming, revising vocabulary of verbs and a short writing task.

1. In pairs, students are asked to make their definitions of "what is a computer".
2. We look at definitions in the handout. Students are given a few minutes to carefully look through them and choose the best one.
3. Together we try to figure out what the other definitions are talking about.
4. We write out all verbs from the definitions and add a few more, so in the end there is a list of verbs describing actions a computer performs.
5. The students are asked to improve their definitions.

Part 2: describing a computer. We focus mainly on present simple active and passive and the theory of articles.

1. I ask the students to draw a picture of a typical PC. Then they write names of the single components into the picture.
2. A few students tell the rest of the class the words they have found and together we make two lists of nouns belonging to a computer. As I copy them on the black board I ask the students about the articles and the difference between countable and uncountable nouns.
3. Next to the list we create a list of verbs describing actions of the individual components or devices.

4. Time for revising the grammatical structure "there is/are". After recapitulating the basic rules and way of translation, we quickly do the exercises No 36.1 and 36.2 on page 81 from Murphy (1998).
5. Now the students get a few minutes for scanning the text and finding the main topic of each paragraph.
6. In the text we look for vocabulary of nouns and verbs that are not written on the black board.
7. The students find sentences with "there is/are" in the text and we translate them into Czech.
8. We comment on the sentences with modal verbs.
9. We go through the first paragraph together looking at each sentence and finding out its voice and the subject and predicate. The aim is to simplify each sentence into the subject + predicate + object version. The students continue to process another paragraph alone.
10. In groups, the students are asked to find the articles in different paragraph. They are asked to explain the reason for using the concrete article. Together we revise the grammar of articles.
11. Now the students start writing their own text of max. 150 words describing their own PC and its functions. They probably do not have enough time to finish it but they can consult the procedure with me and finish the task at home.

5.2 Lesson 2: Input and Output Devices

This lesson follows the previous one in topics as well as in grammar.

1. For all handouts designed for this lesson see appendix E. Students get a copy of page 15 from Esteras and Fabré (2007). In pairs they find out the missing words in diagram 2.3. Then we write a text, describing the picture in four sentences.
2. The students are asked to think of some other input, output and storage devices. We make a list of them on the black board. In exercise 2.1 we guess which device each sentence defines.

3. We proceed with exercise 2.2 on the same page, where we match different devices with their definition. We translate these definitions and occupy ourselves with the phrases used to express the functions and ways to use them.
4. Now it is time to revise the verbs from last time. Each student says one verb expressing a function of computers. We add new verbs for this lesson, e.g. "display", "show", "indicate" and "double-click". When a verb is said we think of a sentence in passive voice to put it in some context.
5. We proceed to exercise 2.4 and complete the missing information into the gaps.
6. We return to the input, output and storage devices. One half of students are asked to make definitions for the devices that were not described in the copy by using the phrase "... is used to...", the other one does the same thing using the present simple tense and a modal verb like in exercise 2.2.
7. Listening 1 – keyboard. The copies of page 18 from Glendinning and McEwan (2003) is handed out (see appendix E). It deals with keyboard description and names of individual keys.
 - Together we go through Task 1, discussing where we use those keys and translate their names into Czech.
 - Pre-listening tasks 2 and 3 help us get oriented in the upcoming listening task.
 - Now we listen to the recording once and, in task 4, label the sections on the diagram as explained in the assignment. Since the students manage listening tasks in English between levels A2 and B1, the second time they listen, they are asked to answer the following question: "*What are the names of each keys in the individual parts?*" If any difficulties occur we can go through the listening and identify the key words together.
8. Listening 2 – printers. The material was taken from Glendinning and McEwan (2003, p. 30) and deals with printer parameters.
 - Firstly, we recall all types of printers that we already know and write them on the black board. Next to the names we note the advantages and disadvantages of them.
 - Now the students look at the copy of a task 2 and 3. I make sure they understand the parameters they will listen for in the recording.
 - We listen to the recording, check the answers and discuss whether the parameters have changed since the time of the recording was produced.

- The students practise forming questions in the following exercise according to the example. They ask and answer questions concerning printers.
9. The students are asked to go around the class and test each other asking questions about parts of computers. They form questions with “which”, “what” and “how many”. For example: “Which output devices does your PC have?”, “How many discs are there in your PC?” and “What does a CPU do?”
 10. The last 15 minutes of every second lesson are devoted to the long-term project. Today, the students found their companies consisting of 2, 3 or 4 people. We quickly check the vocabulary they need. It includes types of companies (Ltd., Inc., joint stock company etc.) and items on the business card. They invent the name of their company, the subject of their business, which has to involve IT in some way and their business cards. At the end of the lesson they introduce their company in a 20-second shot.
 11. Reading. This task can be done in the class if enough time remains or it can be done as a home assignment. The material is from Glendinning and McEwan (2003, p. 31). The readers first go through the advertisement and the text about monitors below and then they decide whether the statements at the top of the page are true or false. After they have done this they go through the text once more and translate all professional terms into Czech.

Chapter 6

Conclusion

This diploma thesis is a recording of a course design project. The course meets specific needs of a group with thirteen students, whose main subject is Information Technology. This is a non-pedagogical specialization that educates future technical support administrators and E-learning system creators. Basically, their future job will focus on providing support to other computer users.

The reason for designing a specialized course was that the students:

1. already had an intermediate knowledge of English to build on
2. needed to understand professional texts for educational purposes
3. needed to acquire specific skills in English for their future occupation

Before designing a course I collected professional literature dealing with the theory of ESP and summarized the points which concern the case of my course in the theoretical part of this diploma thesis. After defining the term of ESP from different points of view I outlined the history of the subject and classified individual branches of ESP. The next paragraph was devoted to EST (English for Science and Technology), which represents the area of IT English. The interesting piece of information in this part is that EST is specific only referring to the subject, which changes very quickly, not in relation to the language used. The language means and the character of texts are the same as in professional English in other fields. This proved to be true.

In the next section I discussed the issue of specificity and motivation in ESP classes. The advantage of a tailor-made course lies in the topics that agree with the learners' area of interest. On the other hand, they can get tired from dealing with the same topics as in other subjects, which can be eased by bringing up not so closely related topics and practicing the skills on them. Another difficulty appears to be the lack of motivation caused by the big distance between the English course in the first year

and the real need to use the language that comes mostly in the third year of study or in the future occupation. The English classes also suffer because, to the students, other subjects seem more important. The third factor is that in the beginning of their study, the learners seem to be very enthusiastic. However, their excitement slows down as soon as they discover that, in the first year, they have no "real" programming subjects and instead they attend lots of preparatory seminars, mainly Mathematic. This subconsciously classifies English among other unpopular subjects that need to be acquired before moving on to other "real, important and exciting" subjects. The way to avoid this is lies in presenting attractive topics and activities and involving the students into the process and thus increasing their influence on one hand and responsibility on the other.

The section about the role of teacher shows the difference between General English and ESP courses. The former require the teacher to choose the main textbook, prepare individual lessons and provide evaluation afterwards whereas the latter set the teacher also in the role of a course designer and materials provider, collaborator, researcher and evaluator. These roles actually copy the process of organizing an ESP course. Another important point shows the necessity of the teacher to be prepared to learn new data, consult with the subjects' teachers and show willingness to adjust to unexpected situations.

In the sections "Designing a course" and "Evaluation" I firstly state the topics to think about before starting the needs analysis, including the number, age and specialization of students, the time devoted, means available, the reason why they learn English and what they need it for and the methods for acquiring the language material. The evaluation plays an important role in course design as well. The formative evaluation helps adjusting the curriculum regularly and the summative gives the final statement about the successfulness of the whole event. I did the formative evaluation once a month in a form of a dialogue and it mostly showed what the students were feeling sure about and where they needed some more practice.

From the EST textbooks I found all of them useful but each of them in a different way. I find the style of Glendinning and McEwan (2003) very inspiring although the level did not accord with the English level of the students. Esteras and Fabré (2007) contains in-debt, up-to-date texts and related tasks. However, it does not work with any other subskills than grammar. So it is perfect only for vocabulary acquisition. The last textbook Boeckner and Brown (1997) builds on the current level of the class considered within an admirable depth, yet it became quite obsolete in the facts contained.

The practical part of this diploma thesis begins with a thorough description of needs analysis questionnaire creation. The first part asked about the responders' subjective

knowledge self-assessment. The chosen items determining individual stages separate for each skill were borrowed from Bohuslavová et al. (2004). Each level of language knowledge in each skill was characterized by several items together in one box and the students were asked to tick the box that matched their level. The motivation and target needs part of the survey focused on the students' professional and personal needs in the past as well as at present, target vocabulary for occupational and personal needs, the area skills they need to improve the most and their expectation from the course.

The knowledge assessment part of questionnaire showed a rough average around the B1 level. For exact data see 3.3. As expected, the students proved better in reading and writing than in listening and speaking. This probably originates from their bigger experience with reading texts from the Internet, writing short messages into forums and writing commands. On the other hand, the probably did not get so many chances to practise their listening and speaking skills. Logically, they stated that they most need to improve their audio-oral skills than their optically-graphomotoric skills. In my opinion, some students overestimated their knowledge a little but this does not harm the results as I took this possibility into account. The motivation and target needs analysis brought many valuable topics and showed certain prioritizing of activities and topics. However, there still remained some empty space for other ideas as the answers were rather general. What made the results processing a bit difficult was the confusion among the individual items so the respondents exchanged skills for subskills, topics for skills and their answers included "improving communication" which I understood as improving listening and speaking. In professional terms it would mean the same as "improving everything". Naturally, this follows from the fact that the students are not professional linguists. From this reason I had to produce the tables 3.2, 3.3, 3.4, 3.5 giving the most important results from the motivation and target needs part of the questionnaire.

After processing the results described above I spoke to three potential employers, which brought information that the degrees of English use in various companies differ. On the contrary, the interviews with the subject teachers at the Information Technology department contained much interesting and concrete information because they dispose of a very accurate concept of what the students need concerning English and where to find relevant materials for the English classes.

From a synthesis of all information I designed a syllabus for twenty eight weeks of seminars, where I linked the topics from the questionnaire and interviews with teachers with the skills and subskills that I thought they would need for fulfilling the goals. I also complemented other topics according to the bigger picture of the previously gained results. I tried to balance all four skills equally. Some weeks focused more on topics and the skills were deduced from them and other focused

more on practicing certain skills and the topic was found afterwards. To make the curriculum more complex, we worked on a long-term project, where the students in groups founded their fictional companies and every week they got a task and role-played the situation or solved problems in other ways.

In the next part I provided a concrete example of two lessons with step-by-step methodical materials and a handout for students.

After ending the two-semester course I can say that the individual lesson preparation with all the technical difficulties proved to be very time consuming. According to their feedback, the students appreciated the tailor-made approach very much. Because of a certain lack of motivation that sometimes occurred, the lessons containing practical tasks e.g. "Robots" (see 4.4.26), attractive or controversial topics and competition games proved the best. Time showed that the students had problems with the correct pronunciation as they learned a lot of vocabulary themselves. Even more time should be spent on work with professional texts as it was extremely difficult for weaker students and it proved not possible to lower the level of texts as the programming subjects are dependent on the skill of understanding written manuals. However, that would need more home assignments for the time in the classroom is limited.

Finally, I must say that the ESP course offered many benefits to the students and that it is certainly an effective way to design language courses at university. To see the long-term effect we would have to wait and ask the graduates for further feedback.

Chapter 7

Resumé

Tato diplomová práce se zabývá tvorbou kurzu anglického jazyka pro zvláštní účely, navrhovaného pro studenty prvního ročníku studia neučitelského bakalářského oboru Informační technologie.

K návrhu speciálního kurzu pro studenty výpočetní techniky vedly následující důvody:

1. Studenti již absolvovali několik let výuky obecné angličtiny
2. Jejich obor studia vyžaduje znalost speciální slovní zásoby a schopnost rychlé orientace v odborném textu
3. Tito studenti budou pravděpodobně potřebovat anglický jazyk pro pracovní účely

Zmiňovaná skupina se skládá ze třinácti studentů ve věkovém rozmezí devatenácti až dvaceti dvou let se zaměřením na počítače a techniku obecně.

Na začátku práce autorka prošla dostupnou odbornou vědeckou literaturu a v teoretické části definovala pojem „Angličtina pro zvláštní účely“ (anglický pojem English for Specific Purposes se zkracuje na ESP) včetně rozdílných přístupů k tomuto tématu. Dále provedla klasifikaci jednotlivých podskupin a poukázala na význam tohoto dělení. V následujících podkapitolách teoretické části zpracovává pojem specifity a motivace, zaměřuje se na angličtinu pro počítačovou vědu a podává přehled vývoje ESP. Z praktického hlediska nazírá na roli učitele, co se tvorby kurzu týče (učitel, autor sylabu, poskytovatel výukových materiálů, spolupracovník, vědec a evaluátor) a řeší otázku návrhu dotazníku a problematiku následné evaluace. Pro tvorbu dotazníku je zásadní zamyslet se nad věkem a složením účastníků kurzu, jejich zájmy, časovou dotací a možnostmi, které poskytuje učebna, co potřebují studenti, podle odhadu učitele, znát pro studium a budoucí kariéru a jakými metodami

postupovat při osvojování si látky. Poslední sekcí v této části se autorka věnuje dostupným učebnicím a vyjadřuje se k tomu, do jaké míry by materiály byly použitelné k výuce této konkrétní skupiny studentů.

Praktická část této diplomové práce začíná popisem procesu tvorby dotazníku, který má dvě části. První část se věnuje hodnocení úrovní jednotlivých dovedností v angličtině. To probíhá tak, že je studentům nabídnut rámeček s několika položkami určujícími, co student na té konkrétní úrovni dokáže. Pakliže má student dojem, že všechny dané položky odpovídají jeho znalostem, označí rámeček a přejde k dalšímu. Vzhledem k tomu, že již dříve byli studenti rozřazeni do skupin podle úrovně jejich znalostí, a tudíž měli být na podobné jazykové úrovni, je tato subjektivní metoda dostačující pro poskytnutí údajů pro učitele, tedy autora sylabu. Výsledkem tohoto hodnocení byl průměr znalostí studentů kolem úrovně B1. Úroveň se pochopitelně lišila u jednotlivých studentů a schopností i s ohledem na to, že někteří pravděpodobně své dovednosti nadhodnotili. Druhá část dotazníku se zabývá otázkou motivace studentů ke studiu angličtiny a zjištěním účelu tohoto kurzu pro jejich budoucí kariéru. Dotazník se ptá také na minulé zkušenosti s angličtinou, k čemu jí potřebovali, na budoucí využití angličtiny v pracovním a osobním životě a na okruhy slovní zásoby, které budou respondenti potřebovat. Poslední dvě otázky se týkají toho, co se studenti potřebují naučit nejvíce a co očekávají od kurzů angličtiny. Výsledky přinesly mnoho zajímavých námětů, týkajících se slovní zásoby. V ostatních tématech se velmi často opakovala základní témata výpočetní techniky: hardware a software, čtení odborných textů, rozhovory se zahraničními spolupracovníky a klienty, ale také například „psaní životopisu“ nebo „jak uspět u přijímacího pohovoru v angličtině“. Vzhledem k tomu, že studenti nejsou profesionální jazykovědci, příležitostně se příslušné odpovědi nacházely na jiném místě anebo inklinovaly k jisté nepřesnosti. Přestože dotazníky od studentů přinesly mnoho nových informací, mnoho odpovědí bylo obecných a svědčilo o tom, že studenti vlastně netuší, čím se chtějí v budoucnu pracovně zabývat.

Dále autorka realizovala řízené rozhovory s možnými budoucími zaměstnavateli, což prokázalo velkou různorodost v používání angličtiny pro pracovní účely. Následovaly rozhovory s učiteli na katedře informačních technologií, které přinesly jak konkrétní představy o tom, co by měli studenti umět, ale i zdroje pro případné materiály na úrovni, kterou studenti potřebují pro porozumění odborných textů. Po syntéze všech informací o úrovních, zkušenostech a budoucích potřebách, které byly zpracovány v několika tabulkách pro větší přehlednost, byl navržen dvousemestrální kurz anglického jazyka s různými tématy pro každý týden. Tyto hodiny vždy spojovaly název, téma, dovednosti k procvičení a konkrétní aktivity v hodině. Kromě toho se studenti také účastnili dlouhodobého projektu v rámci výuky, při kterém si studenti založili fiktivní společnosti a každý týden řešili nějaký úkol, týkající se této firmy,

takže celý projekt tvořil doplňkový rámec k celému kurzu a tak pomáhal k jisté kontinuitě hodin.

Dalším krokem diplomové práce se stalo předvedení dvou ukázkových hodin včetně metodických návodů, popsaných krok za krokem a materiálu pro studenty.

Po odučení celého kurzu a závěrečné evaluace je možné zhodnotit následující klady celého projektu. Nejefektivněji probíhali hodiny se zajímavým, problémovým nebo kontroverzním tématem nebo soutěží. Jedním takovým příkladem je týden tématicky zaměřený na roboty. Cílem studentů je načrtnout, popsat, vysvětlit jak funguje a navrhnout pro výrobek reklamu. Takto připravený kurz je sice náročný pro učitele, ale pro studenty přináší nesporné výhody v ušetřeném čase a prostředcích.

Samozřejmě se průběhu roku vyskytly i jisté problémy, které se musely odstraňovat za běhu, ale pro příště poskytují cennou informaci. Jednalo se o jisté problémy s výslovností a porozumění textům, kterému by bylo dobré příště věnovat ještě více času. Další překážkou se ukázal být jistý nedostatek motivace, který se u studentů projevoval v průběhu roku a který pravděpodobně vznikl zařazením anglického jazyka do prvního roku studia, kde je pro studenty ještě zdánlivě malé spojení s praxí. Studenti však kurz hodnotili kladně a teprve za dva až tři roky by bylo možné znovu zhodnotit, jaký vliv měl kurz angličtiny na jejich studijní i kariérní výsledky.

Bibliography

Keith Boeckner and P. Charles Brown. *Oxford English for Computing*. Oxford University, 1997. ISBN 0-19-457387-7.

Libuše Bohuslavová, Věra Janíková, Jana Táborská, et al. *European Language Portfolio*. Scientia, 2004. ISBN 80-7183-313-4.

Tony Dudley-Evans and Maggie St John. *Developments in ESP: A multi-disciplinary approach*. Cambridge University, 2002. ISBN 0-521-59675-0.

Santiago Remacha Esteras and Elena Marco Fabr . *For Computers and the Internet. Professional English in Use*. Cambridge University, 2007. ISBN 978-0-521-68543-6.

Eric H. Glendinning and John McEwan. *Basic English for Computing*. Oxford University, 2003. ISBN 978-0-19-457470-9.

Tom Hutchinson and Alan Waters. *English for Specific Purposes: A learning-centred approach*. Cambridge University, 1996. ISBN 0-521-31837-8.

Katedra informatiky. Katedra informatiky: studijn  obory. [online], [cited 2009/04/22] 2009. URL <<http://wvc.pf.jcu.cz/ki/?article=/uchazec/studijni-obory.html>>.

Ronald Mackay and Arnold Mountford. *English for Specific Purposes*. Longman, 1978.

Raymond Murphy. *Essential Grammar in Use*. Cambridge University, 1998. ISBN 0-521-52932-8.

Stuart Redman. *English Vocabulary in Use: pre-intermediate & intermediate*. Cambridge University, 2003. ISBN 0-521-01171-X.

Pauline Robinson. *ESP (English for specific purposes): the present position*. Pergamon, 1980. ISBN 0-08-024585-4.

Peter Strevens. Special-purpose language learning: a perspective, survey article. *Language Teaching & Linguistics*, July 1977.

Peter Strevens. ESP after twenty years: a re-appraisal. In M. Tickoo, editor, *ESP: State of the Art*. SEAMEO, Regional Language Centre, 1988.

Appendix A

Questionnaire

Analýza potřeb

1. Zjištění stávající úrovně znalostí jazyka

Porozumění psanému textu. Zaškrtněte položky, se kterými souhlasíte.

<ul style="list-style-type: none"> ▪ V novinách rozumím článkům o lidech. Na plakátech o kulturních akcích dokážu nalézt informace o jejich konání. Rozumím krátkým psaným pokynům (např. popis cesty). 	ANO <input type="checkbox"/>
<ul style="list-style-type: none"> ▪ Rozumím krátkým vyprávěním na témata z každodenního života. Vyrozumím nejdůležitější informace z novinových článků, v nichž se ve vysoké míře objevují čísla, jména, obrázky a nadpisy. Dokážu najít v informačních letáčích informace o aktivitách pro volný čas. 	ANO <input type="checkbox"/>
<ul style="list-style-type: none"> ▪ Rozumím hlavním myšlenkám komentářů a rozhovorů v novinách a časopisech, v nichž pisatel zaujímá postoje k současným událostem. Umím „přelést“ krátké texty a zjistit důležitá fakta a informace. Rozumím jednoduchým sdělením a standardním dopisům. 	ANO <input type="checkbox"/>
<ul style="list-style-type: none"> ▪ Podrobně rozumím textům ze svého oboru z okruhu svých zájmů. Rozumím ve vyprávění motivům jednání postav a jejich význam pro vývoj děje. Umím rychle pochopit obsah a význam zpráv, článků a hodnotících zpráv k tématům, které souvisí s mými zájmy; umím posoudit, zda se vyplatí jejich podrobnější četba. 	ANO <input type="checkbox"/>

Porozumění mluvenému slovu. Zaškrtněte položky, s nimiž souhlasíte.

<ul style="list-style-type: none"> ▪ Rozumím, jestliže mluvčí hovoří pomalu se zřetelnou výslovností a dostatečně dlouhými pauzami. Rozumím číslům, údajům o cenách a čase. Rozumím jednoduchému popisu cesty. 	ANO <input type="checkbox"/>
<ul style="list-style-type: none"> ▪ Dokážu rozpoznat hlavní myšlenku televizních zprávách, pokud je komentář podpořen obrazovým materiálem. Rozumím jednoduchým dialogům s tematikou každodenního života, které jsou pronášeny pomalu a zřetelně. Dorozumím se, pokud mi mluvčí poskytne pomoc. 	ANO <input type="checkbox"/>
<ul style="list-style-type: none"> ▪ Rozumím krátkému vyprávění, umím předvídat, co bude následovat. Rozumím hlavním bodům přehledů nedůležitějších zpráv a jednodušším nahrávkám na témata mých zájmů, pokud jsou nahrány relativně pomalu a zřetelně. 	ANO <input type="checkbox"/>
<ul style="list-style-type: none"> ▪ Detailně rozumím všemu, co mluvčí pronáší spisovnou formou cizího jazyka, i když je poslechnu. V televizi rozumím reportážím, přímým rozhovorům, diskusním pořadům, televizním hrám a většině hraných filmů, pokud se v nich hovoří spisovným jazykem. 	ANO <input type="checkbox"/>

Figure A.1: Questionnaire: Page 1

Ústní interakce a projev. Zaškrtněte položky, s nimiž souhlasíte.

<ul style="list-style-type: none"> ▪ Umím někoho představit a použít jednoduché fráze při setkání a loučení. Umím se dorozumět v obchodě, pokud projev podpořím gesty a ukazováním. Dokážu podat informace o své osobě (adresa, telefonní číslo, národnost, věk, o své rodině a svých zájmech) 	ANO <input type="checkbox"/>
<ul style="list-style-type: none"> ▪ Umím požádat o jednoduché informace ohledně cestování, koupit si jízdenku. Umím někoho pozvat a na pozvání reagovat, omluvit se, vyjádřit, co mám a co nemám rád. Umím partnera pozdravit, zeptat se ho, jak se mu daří. Zeptat se ho na novinky, které během rozhovoru uslyším. 	ANO <input type="checkbox"/>
<ul style="list-style-type: none"> ▪ Umím vyprávět příběh, děj filmu nebo knihy. Umím podrobně vyprávět o svých zkušenostech a popsat přitom své pocity a reakce. Mohu se zúčastnit jednoduchého přímého rozhovoru o tématech, které mě zajímají a jsou mi známá. 	ANO <input type="checkbox"/>
<ul style="list-style-type: none"> ▪ Umím vyjádřit své pocity nejrůznější intenzity a zdůraznit, co je pro mne na událostech a zkušenostech významné. V diskusích umím odůvodnit a obhájit své názory použitím vhodných vysvětlení, argumentů a komentářů. 	ANO <input type="checkbox"/>

Písemný projev. Zaškrtněte položky, s nimiž souhlasíte.

<ul style="list-style-type: none"> ▪ Umím ve formulářích vyplnit základní údaje o sobě. Umím napsat jednoduchý text na pohlednici. 	ANO <input type="checkbox"/>
<ul style="list-style-type: none"> ▪ Umím napsat krátké, jednoduché poznámky a vzkazy. Umím se v krátkém dopise jednoduchými větami představit (rodina, škola, zájmy). 	ANO <input type="checkbox"/>
<ul style="list-style-type: none"> ▪ Umím napsat jednoduchý a srozumitelný text k různým tématům z okruhu svých zájmů a vyjádřit své osobní mínění a názory. Umím napsat strukturovaný životopis. 	ANO <input type="checkbox"/>
<ul style="list-style-type: none"> ▪ Umím diskutovat o tématu ve slohové práci nebo v dopise do novin a umím argumentovat pro určitý názor či proti němu. 	ANO <input type="checkbox"/>

Figure A.2: Questionnaire: Page 2

2. Zjištění cílového užití jazyka.

Odpovězte podrobněji na následující otázky.

V jakých situacích a k čemu jsem anglický jazyk již potřeboval?

K čemu budu jazyk potřebovat v pracovním i osobním životě?

	Pracovní život	Osobní život
Mínoost		
Budoucnost		

Co se nejvíce potřebuji naučit?

Figure A.3: Questionnaire: Page 3

3. Zjištění okruhu témat slovní zásoby.

Poskytněte, prosím, co nejkonkrétnější návrhy.

Jaká témata v angličtině už potřebuji nebo budu určitě potřebovat?

Jaká témata by mě zajímala?

Potřebuji	Zajímají mě

4. Zjištění osobního očekávání.

Odpovězte, prosím, co nejpodrobněji.

Co od toho kurzu anglického jazyka očekávám?

--

Figure A.4: Questionnaire: Page 4

Appendix B

Interviews with potential future employers of current IT students

I have interviewed three directors of companies residing in České Budějovice to obtain information about their companies' requirements for the job applicants who would like to work in their IT departments. In favour of keeping the interview as objective and short as possible, I asked each chief three identical questions:

1. What do your IT specialists need English for?
2. How would you test the job applicant's English level?
3. How could you use IT employees with an advanced level of English communicative skills?

Ing. Libor Křížka, the subsidiary director of VEMA company

The VEMA company designs accounting software for Czech firms.

This interview took place on 6th of June 2008 in České Budějovice.

1. "Since we are a Czech company, English is not needed in every day communication. The only use of English is for programmers to understand their manuals and other materials available only in English."
2. "We do not test English language at the job interview. To become a good computer programmer we suppose that the applicant masters the language sufficiently."
3. "It is improbable for us to expand abroad so there will be no other use of English."

Ing. Jiří Pejšek, the economic manager of Bupak Cartonage

The Bupak Cartonage company produces cardboard boxes from corrugated board. Special software is used for making models of future products and for communicating within the company and their affiliates.

The interview took place on 30th of May 2008 in České Budějovice.

1. "Yes, our employees certainly need English."
2. "We test the job applicant's English knowledge in a short interview."
3. "As we are a member of the Duropak group with headquarters in Vienna, we must communicate with our colleagues in English at business meetings. Also written communication goes on in English. The Kiwi Plan software manuals exist only in English."

Ing. Ladislav Reisner, the director of Datapartner

The Datapartner company implements industrial software and hardware and administers controlling systems.

The interview took place on 4th of September 2008 in České Budějovice.

1. "Yes, our employees need English necessarily. That is why we provide English courses in our offices. A significant part of our employees are software developers, who read many English materials. We work for customers in Europe and in Asia those with good knowledge also travel to customers abroad."
2. "We examine future employees in an oral examination about their previous career."
3. "Since our company belongs to the smaller ones, we prefer a certain substitutability among the co-workers. Concerning English, they need to be able to talk on the phone, execute orders, write reports, make presentations and deal with the customer's requests abroad."

Appendix C

Interviews with teachers at the IT department at the Pedagogical Faculty in České Budějovice

This time the teachers were asked only two questions.

1. What do you need the students to manage in English in your classes?
2. Could you give me an example of materials for your class?

RNDr. Jaroslav Icha

”Our students need English for being able to understand educational materials in electronic form. There are many solved and unsolved problems in electronic form. The students can learn from video channels, presentations and conferences on the Internet. Furthermore, the documentation to the program libraries on local computers and the integrated development environment are also offered in English, which requires wide passive knowledge. My powerpoint slides can be found on the local university computers.”

Mgr. Jiří Pech, Ph.D.

”I agree that the students need English very much for reading professional literature and materials on the Internet. Some useful websites are:

- www.opensource.org/docs/osd
- www.gnu.org/licenses/gpl.html

- www.gnu.org/philosophy/free-sw.html
- www.distrowatch.com”

PhDr. Milan Novák, Ph.D.

”I am a teacher at this department as well as an owner of a company designing websites. I require students to read materials from their professional field. In my classes we deal with PHP, Java, C# programming languages. Such texts can be found on www.msdn.com. When I accept a new co-worker, I always test their oral communicative ability at the interview and also their passive knowledge in asking them to summarize an English text in Czech language. I arrange English courses in my firm.”

Ing. Václav Novák, CSc.

”I always say students do not need Czech language in my classes, they can deal with programming only in English. They need to read so called ”helps”, communicate with colleagues, they can attend lectures in English and they need a placement abroad. For my class there is an official CD with study material and for Visual Studio there are no Czech instructions for use. The students must adapt themselves to this.”

PaedDr. Jiří Vaníček, Ph.D., head of the IT department

”Our students need primarily to study instructions for use from user manuals. To understand and be able to sum up the important facts from a text. They must be able to read professional texts as well as blogs. In vocabulary they should learn special idioms and terms. Naturally, they need to understand simple instructions or commands in spoken language. Ideally they would possess a wide horizon including English. In future we will teach all subjects in English. As I see the problem, our students lack motivation, they want to ”dodge out” of responsibility and after a few years they realize that it is too late already. This happens when they start working on their bachelor thesis. This shows a necessity to increase their motivation by all means.”

Appendix D

Handout No 1: Computers and their functions

Look at the following definitions of the word "computer". Choose the most suitable one and explain the context of the others.

- a machine for performing calculations automatically.
- calculator: an expert at calculation (or at operating calculating machines)
- Before electronic computers became commercially available, the term "computer", in use from the mid 17th century, literally meant "one who computes": a person performing mathematical calculations. Teams of people were frequently used to undertake long and often tedious calculations; the work was divided so that this could be done in parallel.
- Computer is an IEEE Computer Society practitioner-oriented magazine issued to all members of the society.
- A programmable device that performs mathematical calculations and logical operations, especially one that can process, store and retrieve large amounts of data very quickly.
- A person employed to perform computations.
- Electronic device that receives, processes, and stores data, and produces a result (output).
- A device that monitors nitrogen in the body during a dive though mathematical algorithms. The device allows divers to multilevel dive and extend bottom time beyond what a dive table allows.

Look through the following text about computer memory quickly. Define in one sentence, what each paragraph deals with.

D.1 Memory

A computer's memory can be viewed as a list of cells into which numbers can be placed or read. Each cell has a numbered "address" and can store a single number. The computer can be instructed to "put the number 123 into the cell numbered 1357" or to "add the number that is in cell 1357 to the number that is in cell 2468 and put the answer into cell 1595". The information stored in memory may represent practically anything. Letters, numbers, even computer instructions can be placed into memory with equal ease. Since the CPU does not differentiate between different types of information, it is the software's responsibility to give significance to what the memory sees as nothing but a series of numbers.

In almost all modern computers, each memory cell is set up to store binary numbers in groups of eight bits (called a byte). Each byte is able to represent 256 different numbers ($2^8 = 256$); either from 0 to 255 or -128 to $+127$. To store larger numbers, several consecutive bytes may be used (typically, two, four or eight). When negative numbers are required, they are usually stored in two's complement notation. Other arrangements are possible, but are usually not seen outside of specialized applications or historical contexts. A computer can store any kind of information in memory if it can be represented numerically. Modern computers have billions or even trillions of bytes of memory.

The CPU contains a special set of memory cells called registers that can be read and written to much more rapidly than the main memory area. There are typically between two and one hundred registers depending on the type of CPU. Registers are used for the most frequently needed data items to avoid having to access main memory every time data is needed. As data is constantly being worked on, reducing the need to access main memory (which is often slow compared to the ALU and control units) greatly increases the computer's speed.

Computer main memory comes in two principal varieties: random access memory or RAM and read-only memory or ROM. RAM can be read and written to anytime the CPU commands it, but ROM is pre-loaded with data and software that never changes, so the CPU can only read from it. ROM is typically used to store the computer's initial start-up instructions. In general, the contents of RAM are erased when the power to the computer is turned off, but ROM retains its data indefinitely. In a PC, the ROM contains a specialized program called the BIOS that orchestrates loading the computer's operating system from the hard disk drive into RAM when-

ever the computer is turned on or reset. In embedded computers, which frequently do not have disk drives, all of the required software may be stored in ROM. Software stored in ROM is often called firmware, because it is notionally more like hardware than software. Flash memory blurs the distinction between ROM and RAM, as it retains its data when turned off but is also rewritable. It is typically much slower than conventional ROM and RAM however, so its use is restricted to applications where high speed is unnecessary.

In more sophisticated computers there may be one or more RAM cache memories which are slower than registers but faster than main memory. Generally computers with this sort of cache are designed to move frequently needed data into the cache automatically, often without the need for any intervention on the programmer's part.

Is there a sentence containing the structure "there is/there are" in the text?

Find all sentences with can and may. Translate the verb forms into Czech.

In pairs, choose one paragraph and simplify its sentences.

Appendix E

Handout No 2: Input and Output Devices

Listening: Printers**Task 1**

Work in groups of three: A, B, and C. You are going to hear about three kinds of printer. Note down what the speaker says about one type only as your teacher directs. Use the table below.

Type	Print quality	Speed	Running costs	Noise level	Price	Colour
Inkjet	lowest	slower than laser				
Mono laser	high			quiet		
Dye sublimation		slow				yes

Task 2

Now exchange information with other students in your group to complete the table for all three kinds of printer. Ask questions like these.

What's the print quality like?

How fast is it?

Does it cost a lot to run?

How noisy is it?

Is it expensive?

Listening: Printers**Task 1**

Work in groups of three: A, B, and C. You are going to hear about three kinds of printer. Note down what the speaker says about one type only as your teacher directs. Use the table below.

Type	Print quality	Speed	Running costs	Noise level	Price	Colour
Inkjet	lowest	slower than laser				
Mono laser	high			quiet		
Dye sublimation		slow				yes

Task 2

Now exchange information with other students in your group to complete the table for all three kinds of printer. Ask questions like these.

What's the print quality like?

How fast is it?

Does it cost a lot to run?

How noisy is it?

Is it expensive?

Figure E.1: Handout: Sheet 1

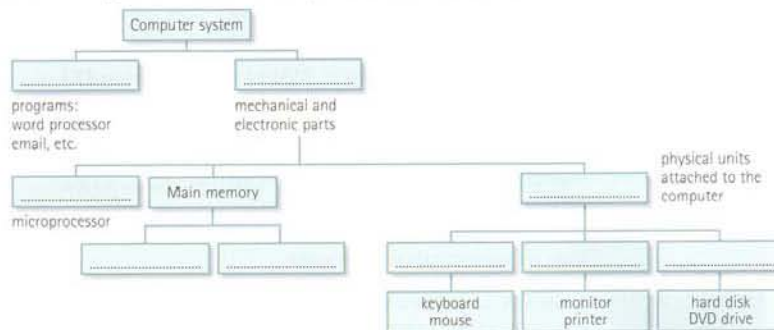
2.1 Look at A opposite. Read these quotations and say which computer essential they refer to.

- 1 'Accelerate your digital lifestyle by choosing a Pentium at 4.3 GHz.'
- 2 'Right-click to display a context-sensitive menu.'
- 3 'You will see vivid, detailed images on a 17" display.'
- 4 'This will produce high-quality output, with sharp text and impressive graphics.'
- 5 'Use it when you want to let the grandparents watch the new baby sleeping.'
- 6 'Press any key to continue.'

2.2 Match the terms with their definitions.

- | | |
|----------------|---|
| 1 CD/DVD drive | a any socket into which a peripheral device may be connected |
| 2 speaker | b device used to produce voice output and play back music |
| 3 modem | c mechanism that reads and/or writes to optical discs |
| 4 port | d device that converts data so that it can travel over the Internet |

2.3 Look at B opposite and label this diagram with the correct terms.



2.4 Complete the diagram and sentences below with words from C opposite.



- 1 Computer is the visible or audible result of data processing – information that can be read, printed or heard by the user.
- 2 The CPU will process data as instructed by the programs you're running. includes functions like calculating, sorting, editing, drawing and searching.
- 3 DVDs are expected to replace CDs as devices.
- 4 As a scanner, the Sigma-100 can be used to photographs as well as documents into the computer.

You and computers

Access the *Professional English in Use ICT* website at www.cambridge.org/elt/ict. Then do the activity [Computer history](#).

Figure E.2: Handout: Sheet 2

4 Keyboard and mouse

Tuning-in

Task 1 Match these key abbreviations with their full names.

- | | |
|--------|-------------|
| 1 Esc | a Alternate |
| 2 Alt | b Page Up |
| 3 Ctrl | c Delete |
| 4 Pgdn | d Insert |
| 5 Pgup | e Escape |
| 6 Ins | f Page Down |
| 7 Del | g Control |

Listening: The keyboard

Task 2 Study this keyboard. The keys are in four sections. Can you name any of the sections?



Task 3 Locate these keys on the keyboard as quickly as you can. Number them 1 to 8.

- | | | | |
|---------------------------------|--------------------------------|---------------------------------------|---------------------------------|
| <input type="checkbox"/> Insert | <input type="checkbox"/> minus | <input type="checkbox"/> plus | <input type="checkbox"/> Delete |
| <input type="checkbox"/> comma | <input type="checkbox"/> F1 | <input type="checkbox"/> Print Screen | <input type="checkbox"/> Escape |

Task 4 Listen to this description of the keyboard in Task 2. Label each section of the diagram.

Reading: How to read a monitor ad

Task 4

Study this text about monitors. Then decide if each statement is true or false. Give reasons for your answers.

- 1 Twenty-two inches is a common monitor size.
- 2 A dot pitch of 0.31mm is better than one of 0.25mm.
- 3 A maximum resolution of 1600×1200 is better than 1280×1024 .
- 4 A refresh rate of 85Hz is better than one of 75Hz.
- 5 A 17-inch monitor is 17 inches wide.
- 6 You can change the picture using controls on the screen.
- 7 The price of a monitor depends only on the size.
- 8 The monitor uses less power because of the Power-Saver feature.

£210

- 17-inch (43.2cm) Trinitron monitor
- 0.25mm aperture grill pitch
- Maximum resolution: 1280 x 1024, 85Hz
- TCO-99, MPR-II, TUV Ergonomics approved
- Power-Saver™
- On-screen menu



Price

The price mainly depends on the screen size. Common monitor sizes are 15-inch, 17-inch, 19-inch, and 21-inch. The price also depends on aperture grill pitch, resolution, and the number of controls.

Screen size

The size of the screen is the diagonal distance from one corner to another. The actual area for images is smaller than this. 5

Aperture grill pitch

This controls the space between the dots which make up the image. The less space between the dots, the better the display. Most monitors offer 0.25mm dot pitch but some go as high as 0.31mm or as low as 0.22mm.

Maximum resolution

The quality of the display depends on the number of dots which make up the image. The more dots, the better the display. 10

Refresh rate

The monitor refreshes the image on the screen all the time. The faster this happens, the less the screen flickers. You should have a refresh rate of at least 72Hz.

Safety standards

These are international standards to control harmful signals. 15

Power-saving feature

The power the monitor uses automatically reduces when it is not in use.

On-screen menu

Digital controls on the screen allow you to adjust the image.

31

Figure E.4: Handout: Sheet 4

Appendix F

Recording scripts

This is the recording script from page 129 in Glendinning and McEwan (2003). It accords with unit 4, page 18 used for step 7 in the second lesson.

F.1 Unit 4: Keyboard and mouse

F.1.1 Task 4

The keys on a computer keyboard can be arranged in many different ways. The most common way on a desktop PC is called the extended keyboard. The diagram shows an extended keyboard. The keys are in four main sections.

(pause)

The section known as the main keyboard has a key for each letter of the alphabet. It also has keys for the digits 0 to 9. punctuation marks like commas and full stops, and other common symbols.

(pause)

Above the main keyboard is a row of keys known as the function keys. This section includes the Escape key to the left and the Print Screen. Scroll Lock. and Break keys to the right. The function keys labelled F1 to F12 don't have fixed functions. You can program them to perform different functions such as saving and printing.

(pause)

To the right of the main keyboard is a section known as the editing keys. This group includes keys which insert and delete data. It also includes the cursor keys, also called the arrow keys. These keys move the cursor around the screen.

(pause)

To the far right of the main keyboard is the numeric keypad. This section has keys for the digits 0 to 9 and for common mathematical symbols like plus and minus.

The keys are arranged like the keys on an electronic calculator. You use these keys to input numerical data.

This is the recording script from page 130 in Glendinning and McEwan (2003). It accords with unit 7, page 30 used for step 8 in the second lesson.

F.2 Unit 7: Output device

F.2.1 Task 2

There are many different types of printer. These include inkjet, mono laser, and dye sublimation printers. Basically, you get what you pay for. The more you pay. the better the printer.

(pause)

Inkjet printers are the cheapest, but their print quality is not as good as the other two types of printer. They are expensive to run compared to mono laser printers, but are able to print in colour. Inkjets are the noisiest of the three types of printer.

(pause)

Mono laser printers are more expensive than inkjet printers but give you a better quality of black and white output. They cannot print in colour. but are the fastest type of printer and cost the least to run.

(pause)

Dye sublimation printers are the most expensive type of printer, but their print quality is extremely high. They are quiet in operation, but are relatively slow and very expensive to run.