

BRNO UNIVERSITY OF TECHNOLOGY

VYSOKÉ UČENÍ TECHNICKÉ V BRNĚ

FACULTY OF ELECTRICAL ENGINEERING AND COMMUNICATION

FAKULTA ELEKTROTECHNIKY A KOMUNIKAČNÍCH TECHNOLOGIÍ

DEPARTMENT OF FOREIGN LANGUAGES

ÚSTAV JAZYKŮ

ESP SPEAKING ACTIVITIES FOR STUDENTS OF INFORMATION TECHNOLOGY

AKTIVITY ZAMĚŘENÉ NA MLUVENÝ PROJEV V ODBORNÉM ANGLICKÉM JAZYCE STUDENTŮ INFORMAČNÍCH TECHNOLOGIÍ

BACHELOR'S THESIS

BAKALÁŘSKÁ PRÁCE

AUTHOR AUTOR PRÁCE Ondřej Pospíšil

SUPERVISOR

Mgr. Ing. Eva Ellederová, Ph.D.

VEDOUCÍ PRÁCE

BRNO 2023

Bakalářská práce

bakalářský studijní program Angličtina v elektrotechnice a informatice

obor Angličtina v elektrotechnice a informatice Ústav jazyků

 Student:
 Ondřej Pospíšil
 ID: 222950

 Ročník:
 3
 Akademický rok: 2022/23

NÁZEV TÉMATU:

Aktivity zaměřené na mluvený projev v odborném anglickém jazyce studentů informačních technologií

POKYNY PRO VYPRACOVÁNÍ:

Vymezte koncepci mluveného anglického jazyka, metod pro výuku řečové dovednosti mluvení a navrhněte vhodné aktivity zaměřené na mluvený projev v odborném anglickém jazyce pro studenty informačních technologií.

DOPORUČENÁ LITERATURA:

- 1) Bygate, M. (2010). Speaking. Oxford: Oxford University Press.
- 2) Goh, C. C. M., & Burns, A. (2012). Teaching speaking: A holistic approach. Cambridge: Cambridge University Press.
- 3) Harmer, J. (2001). The practice of English language teaching. Harlow: England
- 4) Thornbury, S. (2005). How to teach speaking. Harlow: Longman.
- 5) Tomlinson, B. (2005). English language learning materials. A critical review. London: Continuum.
- 6) Ur, P. (1996). A course in language teaching. Practice and theory. Cambridge: Cambridge University Press.

Termín zadání: 9. 2. 2023 **Termín odevzdání:** 30. 5. 2023

Vedoucí práce: Mgr. Ing. Eva Ellederová, Ph.D.

doc. PhDr. Milena Krhutová, Ph.D. předseda oborové rady

UPOZORNĚNÍ:

Autor závěrečné práce nesmí při vytváření práce porušit autorská práva třetích osob, zejména nesmí zasahovat nedovoleným způsobem do cizích autorských práv osobnostních a musí si být plně vědom následků porušení ustanovení § 11 a následujících autorského zákona č.121/2000 Sb., včetně možných trestněprávních důsledků vyplývajících z ustanovení části druhé, hlavy VI. díl 4 Trestního zákoníku č. 40/2009 Sb.

Fakulta elektrotechniky a komunikačních technologií, Vysoké učení technické v Bmě / Technická 3058/10 / 616 00 / Bmo

Abstract

The term spoken language is used extensively to consult each vocally produced language and hand sign language. Spoken language production includes retrieval of information from memory, making plans for an articulatory program, executive control, and self-monitoring. These strategies can be associated with the domain names of long-term memory, motor control, and executive control. Spoken language production is logically divided into three fundamental steps: deciding what to express, determining how to express it, and expressing it. Although accomplishing conversational goals, structuring narratives, and modulating the ebb and flow of dialogue are inherently critical to know how people speak, psycholinguistic research of language production has mostly focused on the formulation of individual isolated utterances. Because of this, the evaluation of spoken classroom discourse performs an important role in providing vital insights into the complex nature of classroom structures, interactions, and relationships. This bachelor's thesis shows how speech develops, what important principles from a grammatical and linguistic point of view must be followed, and lastly, it focuses on speech development considering that it is not a mother tongue. Speech activities must be developed in the right way, which is very important for a successful speaker. What an appropriate activity for the development of speaking should look like is described in the last chapter of the theoretical part of the bachelor's thesis and in its practical part. The activities were designed with respect to the questionnaire distributed to 69 students of Brno University of Technology. The activities focus on the development of speaking skills in the information technology field of study.

Key words

speaking, development, spoken discourse, interactions, speaking competence, teaching speaking, active learning, questionnaire survey, speaking activities

Abstrakt

Pojem mluvený jazyk se hojně používá pro označení každého hlasově produkovaného jazyka i neverbální řeči. Produkce mluveného jazyka zahrnuje vyhledávání informací z paměti, vytváření plánů artikulačního programu, exekutivní kontrolu a sebekontrolu. Tyto strategie lze spojit s názvy domén dlouhodobé paměti, motorické kontroly a exekutivní kontroly. Produkce mluveného jazyka se logicky dělí na tři základní kroky: rozhodnutí, co vyjádřit, určení způsobu vyjádření a samotné výsledné vyjádření. Ačkoli dosažení cílů rozhovoru, strukturování vyprávění a modulace průběhu dialogu jsou ze své podstaty rozhodující pro pochopení toho, jak lidé mluví, psycholingvistický výzkum jazykové produkce je většinou zaměřen na formulaci jednotlivých výroků. Z tohoto důvodu hraje vyhodnocení mluveného diskurzu ve třídě důležitou roli při vytváření zásadních poznatků o komplexní povaze třídních struktur, interakcí a vztahů. Tato práce uvádí, jakým způsobem se řeč vyvíjí, jaké důležité principy z gramatického a lingvistického hlediska je nutné dodržovat a v poslední řadě se zaměřuje na rozvoj řeči s ohledem na to, že se nejedná o mateřský jazyk. Pro úspěšného mluvčího je nutné řečové aktivity rozvíjet správným způsobem. Jak má vypadat vhodná aktivita pro rozvoj řečové dovednosti mluvení popisuje poslední kapitola teoretické části této bakalářské práce a její praktická část. Všechny aktivity byly navrženy na základě dotazníkového šetření, které bylo uskutečněno mezi 69 studenty Vysokého učení technického v Brně. Aktivity jsou zaměřeny na rozvoj řečové dovednosti mluvení v oboru informačních technologií.

Klíčová slova

mluvení, vývoj, mluvený projev, interakce, kompetence mluvit, výuka mluvení, aktivní učení, dotazníkové šetření, aktivity zavěřené na mluvní projev

Rozšířený abstrakt

S rozvíjejícími se moderními multimediálními technologiemi a současnými možnostmi vědy a techniky je znalost anglického jazyka nepsanou povinností. Bez znalosti anglického jazyka již v dnešní době prakticky není možné samostatně vyřešit libovolný úkol, který se týká jakéhokoliv přístroje, stroje nebo v dnešní době naprosto samozřejmých elektronických zařízení, jako jsou počítače, mobilní telefony nebo domácí elektronika. Nejen pro tyto účely je však anglický jazyk nezbytný. Pro nerodilé mluvčí angličtiny je řečová dovednost mluvení zásadní pro kulturní integraci. Zapojení do konverzací s rodilými mluvčími umožňuje jednotlivcům nahlédnout do jazyka, kultury a zvyků anglicky mluvících zemí. Podporuje mezikulturní porozumění a podporuje sociální vazby. Vzhledem k tomu, že v mnoha profesionálních prostředích je angličtina hlavním dorozumívacím jazykem, schopnost efektivně verbálně komunikovat otevírá širokou škálu kariérních příležitostí, zejména v nadnárodních společnostech nebo odvětvích, která vyžadují mezinárodní komunikaci. Tato bakalářská práce je zaměřena na koncepci řečové dovednosti mluvení, která z hlediska komunikace patří mezi nejdůležitější řečové dovednosti.

Práce je z hlediska struktury rozdělena na tři základní části: teoretickou, empirickou a praktickou část. Teoretická část se z psycholingvistického hlediska zabývá procesem produkce řeči od neverbální úrovně mentální reprezentace věcných znalostí a záměru mluvčího až po tvorbu slov a vět. Vychází především z modelu řečové produkce holandského psycholingvisty Willema Johanese Marii (Pim) Levelta (1989), který vymezuje tři dílčí procesy: 1) na úrovni konceptualizace, kdy mluvčí rozhoduje o tom, co řekne, 2) na úrovni formulace, tzn. jakým způsobem to řekne, a 3) na úrovni artikulace, který je vlastním vyslovením výpovědi mluvčího. Tento model je důležitý pro pochopení základních operací při myšlenkové tvorbě slovních výpovědí. V první kapitole je také popsána teorie formulování řeči u malých dětí od první fáze vyhledávání slov (lexical selection) až po druhou fázi kódování jejich formy (form encoding). Levelt zdůrazňuje, že jeho model je sériový (serial two-system architecture), protože do druhé fáze vstupuje pouze jedno definitivně vybrané heslo. Cílem kapitoly je co nejjednodušeji popsat systém výběru slov z lexikální paměti, který je na jednu stranu naprosto jasný, ovšem ne každý si je toho vědom, a dále vysvětlit všechny klíčové pojmy související s jednotlivými fázemi procesu řečové produkce.

Rešerše literatury ve třetí a čtvrté kapitole teoretické části práce vychází převážně z odborných knih Jeremy Harmera, Scotta Thornburyho, Christine Chuen Meng Gohové

a Anne Burnsové, Penny Urové, Gillian Brownové a George Yulea. Z hlediska kompletní struktury samotných textových nebo slovních reprezentací jazyka je nutné brát v potaz nauku o jazyce zvanou diskurz. Diskurz je mnohovýznamový termín, který shrnuje veškeré jazykové aspekty. Nauka o diskurzu je dalším teoretickým konceptem této práce, která vysvětluje nejen různé pojmy, jakými jsou text, kontext a charakteristické rysy mluveného jazyka (např. párové sekvence, střídání replik, zpětná vazba, zahájení a ukončení konverzace), ale pro tuto práci také důležitý rozdíl mezi psanou a mluvenou jazykovou formou. Mezi hlavní rozdíly je z logického pohledu možné zařadit nemožnost opravy při mluvení, chybné pochopení mluvčího, nebo také předpoklad toho, že se jedná o vzájemnou výměnu informací mezi vícero lidmi. Nic z výše zmíněného nelze od běžné monologické struktury psané podoby očekávat. Další aspekty, týkající se rozdílu mezi psaným a mluveným způsobem vyjádření jazyka jsou popsány v kapitole nazvané "Relationship between Speaking and Writing". Teorie mluvení a slovních výměn v běžné komunikaci je důležité nastínit pro pochopení celé problematiky jazykovědy. Poslední podkapitola druhé kapitoly vysvětluje model funkční motivace k mluvené interakci od Gohové a Burnsové (2012) a charakterizuje dva hlavní typy mluvené produkce: transakční a interakční.

Poslední kapitola teoretické části je zaměřena na výuku řečové dovednosti mluvení v cizím jazyce a v podkapitolách postupně popisuje jednotlivé komponenty kompetence k mluvení (speaking competence), mezi které patří znalost samotného jazyka a jeho diskurzu (knowledge of language and discourse), klíčové řečové dovednosti (core speaking skills) a komunikační strategie (communication strategies).

Znalost jazyka spočívá ve znalosti gramatiky, fonologických aspektů jazyka a lexikální znalosti, která se týká aktivní a pasivní slovní zásoby. Na druhé straně znalost diskurzu zahrnuje použití vhodných slov v konkrétních situacích. Mezi klíčové řečové dovednosti patří výslovnost, komunikační funkce neboli řečové akty (např. žádost, vysvětlování, podávání instrukcí, popisování), interakční management (usměrňování konverzace při interakci mezi mluvčími) a organizace diskurzu (koherence, koheze, diskurzní markery). Komunikační strategie se týkají správného stylu komunikace a způsobů, jak se vyhnout nežádoucím problémům v porozumění významu v konkrétní situaci. Patří mezi ně kognitivní strategie, techniky používané ke kompenzaci nedostatečné znalosti slovní zásoby a jazykových prostředků (např. parafrázování, přibližné odhadování, používání konvenčních výrazů), metakognitivní strategie, mentální operace pro usměrňování myšlení a jazyka během mluvení (plánování, sebekontrola, sebehodnocení) a interakční strategie, týkající se

společenského chování při vyjednávání významu (např. uvádění příkladů, žádání o vysvětlení, opakování slov nebo výrazů).

V poslední podkapitole teoretické části jsou uvedeny a popsány příklady aktivit zaměřených na rozvoj řečové dovednosti mluvení, např. debaty a hraní rolí. Při debatách jde o diskuzi několika účastníků na určité téma. Ve případě hraní rolí se vytvoří dvou až vícečlenné skupiny studentů, kteří obdrží popis konkrétní situace a své role a před třídou sehrají nacvičenou scénku. Tyto dvě aktivity byly navrženy i v praktické části bakalářské práce.

Na teoretickou část navazuje část empirická. Na základě teoretických koncepcí vznikl dotazník týkající se řečových potřeb studentů informačních technologií Fakulty informačních technologií Vysokého učení technického (FIT VUT) v Brně, který byl těmto studentům předložen k vyplnění. Skládá se ze tří okruhů, ve kterých následně zkoumá několik aspektů. První okruh je zaměřen na problémy studentů ve chvíli, kdy s někým anglicky hovoří mimo školu, např. zda častěji mluví anglicky s přáteli nebo rodilými mluvčími, a co je z těchto dvou variant pro ně složitější. Druhý okruh řeší situaci týkající se mluvení v hodinách angličtiny. Zde je kladen důraz na to, jak velká část hodiny by měla být věnována procvičování mluvení a jaké aktivity zaměřené na mluvení studenti upřednostňují vzhledem k jejich oboru studia. Poslední okruh se zabývá problémy, se kterými se studenti při mluvení setkávají a tím, jak obtížné jsou pro ně jednotlivé aktivity zaměřené rozvoj řečové dovednosti mluvení v hodinách.

Cílem této bakalářské práce je na základě shrnutí výsledků z dotazníkového šetření a teoretických koncepcí vymezených v kapitolách teoretické části práce navrhnout pro studenty FIT VUT v Brně vhodné aktivity na mluvení. S využitím odborných knih od Thornburyho (2005), Bygatea (2010) a Urové (1996) byly navrženy různé druhy aktivit. Koncepčně bylo nutné všechny aktivity upravit a navrhnout tak, aby splňovaly odpovídající účel v oblasti informačních technologií, a tak praktická část nabízí přehled sedmi různých aktivit zaměřených na 1) osvojování odborné slovní zásoby, 2) přípravu na reálnou komunikaci v kontextu IT a 3) rozvoj plynulosti v mluvení prostřednictvím debatování na různá témata z oblasti IT.

Pospíšil O. (2023). Aktivity zaměřené na mluvený projev v odborném anglickém jazyce
studentů informačních technologií. Brno: Vysoké učení technické v Brně, Fakulta elektrotechniky a komunikačních technologií. 61 s.
Vedoucí bakalářské práce: Mgr. Ing. Eva Ellederová, Ph.D.
0

Prohlášení

Prohlašuji, že bakalářská práci na téma *Aktivity zaměřené na mluvený projev v odborném anglickém jazyce studentů informačních technologií* jsem vypracoval samostatně pod vedením vedoucí bakalářská práce a s použitím odborné literatury a dalších informačních zdrojů, které jsou všechny citovány v práci a uvedeny v seznamu literatury na konci práce.

Jako autor uvedené bakalářské práce dále prohlašuji, že v souvislosti s vytvořením této práce jsem neporušil autorská práva třetích osob, zejména jsem nezasáhl nedovoleným způsobem do cizích autorských práv osobnostních a/nebo majetkových a jsem si plně vědom následků porušení ustanovení § 11 a následujících zákona č. 121/2000 Sb., o právu autorském, o právech souvisejících s právem autorským a o změně některých zákonů (autorský zákon), ve znění pozdějších předpisů, včetně možných trestněprávních důsledků vyplývajících z ustanovení části druhé, hlavy VI. díl 4 Trestního zákoníku č. 40/2009 Sb.

V Brně dne 30. 5. 2023	
	Ondřej Pospíšil

Acknowledgments
I would like to express huge thanks to the thesis supervisor Mgr. Ing. Eva Ellederová, Ph.D. for her endless patience, human and individual approach, and excellent consultations. Thanks to her approach, I was much more motivated, and writing the thesis was not an unpleasant part of the end of my studies.
10

Table of Contents

1	Inti	oduction	12
T	heoret	ical part	14
2	Spo	ken Language Production	14
	2.1	Model of Speech Production	14
	2.2	Steps of Word Production	15
	2.2.	1 A Serial Two-System Architecture	16
3	Spo	ken Discourse	20
	3.1	Text and Context	21
	3.1.	1 Text Analysis	21
	3.2	Relationship between Speaking and Writing	22
	3.3	Discourse Features in Speech	23
	3.4	Transaction and Interaction	25
4	Tea	ching Speaking	27
	4.1	Speaking Competence	27
	4.2	Approaches to Teaching Speaking and Communication Activities	31
E	mpirio	eal part	34
5	Res	earch on IT Students' Speaking Needs	34
	5.1	Speaking Outside the English Classroom	34
	5.2	Speaking in English Lessons	38
	5.3	Speaking Difficulties	40
P	ractica	al part	45
6	Des	sign of Speaking Activities	45
	6.1	Active Technical Vocabulary Development	45
	6.2	Simulating a Real-Life Encounter	47
	6.3	Fluency Training	50
7	Co	nclusion	54
L	ist of l	Figures	55
		References	
٨	nnend	liv	59

1 Introduction

Being able to speak is undoubtedly the biggest challenge for any beginning foreign language learner. Since it is not their mother tongue and learners face problems such as shame, language barrier, and lack of knowledge, these and many other criteria lead to the following conclusion: a foreign language learner does not speak because they are often afraid or demotivated. This is why foreign language teachers should teach speaking effectively and use different methods and approaches. Teaching a foreign language does not mean just setting assignments from a textbook or making students look up words and copy their definitions from a dictionary. It entails a very deep study of the language itself. The stages of spoken language are extremely complex. To understand the whole subject, it is necessary to know certain linguistic and psycholinguistic principles, which are regarded as the basic building blocks. Therefore, this thesis aims to frame the concept of spoken production, examine students' speaking needs, and consequently design suitable speaking activities.

This thesis is divided into three parts: theoretical, empirical, and practical. The first chapter of this bachelor's thesis discusses psycholinguistic concepts described in scholarly works, especially by Willem Johannes Maria (Pim) Levelt, a Dutch psycholinguist who has been involved in human language acquisition and speech production all his life. The chapter, based on Levelt's research and findings, describes the process of forming words, phrases, and sentences from the speaker's intention to their articulation. This chapter is crucial for clarifying all the principles. If anybody wants to learn a foreign language, it is these principles that they need to know because, without them, learning can be rather difficult and unsuccessful. Chapter 3 focuses on spoken discourse. It defines the concept of text analysis, explains basic differences between writing and speaking, characterizes discourse features in speech and examines aspects of verbal exchanges. The last chapter of the theoretical part provides an insight into the issues of teaching speaking, and it can be seen as a brief introduction to the practical part of this thesis which focuses on the design of activities for practising speaking.

The empirical part discusses the results of the questionnaire survey examining information technology (IT) students' speaking needs. The questionnaire was distributed to the students of the Faculty of Information Technology at Brno University of Technology (BUT) and its results served as the basis for the practical part. In the practical part, suitable activities for the development of students' speaking skills are designed. They focus on the development of technical vocabulary, preparation for real-life communication and the

improvement of fluency.

I chose this topic because I experienced many difficulties when I tried to speak English with someone or when I had to give a presentation. Furthermore, I consider the theoretical concepts framed in this thesis important for improving my own speaking skills and I hope that the speaking activities I designed will be useful for both teachers and students.

Theoretical part

2 Spoken Language Production

When the word *speaking* is discussed, one may consider it the inverse of listening. However, *speaking* requires far more than verbal communication. The nature of the message to be conveyed might vary. It might be just informative, or it can be designed to have an effect. The effects might differ – trying to impress, attempting to show irony, and others.

In terms of utterance, three major stages are involved in language production (Levelt, 1989, 2001; Thornbury, 2005; Griffin & Ferreira, 2006): 1) selecting what to convey (*conceptualization*), 2) determining how to convey it (*formulation*), and 3) expressing it (*articulation*). An utterance is a single word or a collection of words that has a certain intonation or expresses an idea. Most theories of multi-word utterance or sentence production ultimately boil down to an account of how sentences acquire their word orders and structures, how the dependencies between words are accommodated (e.g., subject-verb agreement), and a functionally independent account of how individual content words are generated (cf. Kempen & Hoenkamp, 1987; Ferreira, 2000; Chang, Dell, & Bock, 2006).

2.1 Model of Speech Production

As was already mentioned, Levelt (1989) designed a model comprised of three fundamental processes: a) *conceptual preparation*, b) *formulation*, and c) *articulation* (see Figure 1).

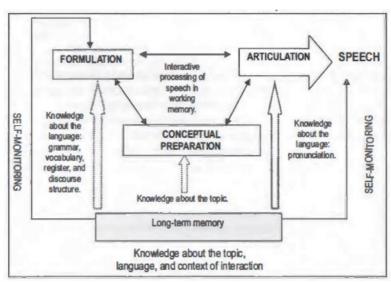


Figure 1. Cognitive demands on language learners when producing speech (drawing from Levelt's model of speech processing). Reprinted form Goh & Burns (2012, p. 36).

Conceptual preparation, or "conceptualisation" is based on a process in which speakers select the topic or information they wish to communicate while simultaneously relying on long-term memory knowledge. Griffin and Ferreira (2006) explain that one word is the basic unit of utterance. Depending on the objective of the expression, one must decide how to "encode" the word (politeness, informal speech, etc.) (p.22).

On the other hand, *formulation* is the process of forming the words in a syntactically appropriate format. To create the statement correctly, it is required to understand the correct grammar of the language. The process of word selection and intonation is considered to be pre-linguistic and language neutral. As Griffin and Ferreira (2006) note, "sound processing, in contrast, involves constructing the phonological form of a selected word by retrieving its individual sounds and organizing them into stressed and unstressed syllables (phonological encoding) and then specifying the motor programs to realize those syllables (phonetic encoding)" (p. 22).

Lastly, *articulation*, according to Levelt (1989), refers to the creation of the resulting sound – the message's utterance. Knowing the right pronunciation of words at this level and which part of the word to emphasize or accent is vital.

2.2 Steps of Word Production

When speakers produce a word, they do so first through the word's mental representation, then through the selection of the semantically and syntactically appropriate word (the syntactic properties are called the word's 'lemma'), the retrieval of the word's phonological properties, and finally, through its articulation (Levelt, 2001). This is supported by a variety of data. The earliest and most compelling evidence comes from investigations of errors produced during a spontaneous speech, which show that speech errors most commonly include units that may be conservatively thought to correspond to full words, morphemes, or individual speech sounds (Fromkin, 1971; Garrett, 1975).

Levelt (2001) describes children's speech production. Normal children learn the language of their surroundings at a young age. They begin to be talkative at seven months, produce a few meaningful words around their first birthday, reach a fifty-word vocabulary six months later, produce their first multiword utterances by the end of their second year, and begin expressing syntactic relations through prepositions, auxiliaries, inflections, and word order in their third year. The fundamental infrastructure of this innate skill is largely in place by the age of five or six. Furthermore, he suggests that an average-vocabulary adult

can create two to four words per second. However, given that an adult's vocabulary ranges between fifty and one hundred thousand words, the production might be incorrect. But despite that, he also claims that an adult makes no more than two errors per thousand words on average. Levelt (2001) points out that "we retrieve these words with their syntactic properties; these features play a crucial role in the incremental construction of the syntax of our utterance" (p. 13464).

Finally, as Levelt (2001) notes, each of these words must be given articulatory form in the context of the wider speech. This necessitates remembering a word's form qualities, or *phonological codes*. The speaker uses them to compute or access the articulatory motions for subsequent syllables. Syllables are important units of articulation, moving at a pace of 3–6 per second (Levelt, 2001, p. 13464). In terms of word generation, Levelt then divides the formulation into several systems that are elaborated further in the following chapter.

2.2.1 A Serial Two-System Architecture

A speaker will first choose the relevant object from their mental vocabulary before uttering a word. Levelt (2001) names this process as a *lexical selection*. The specified item's articulatory form will subsequently be prepared. This is referred to as *form encoding*. Figure 2 demonstrates Levelt's serial two-system architecture.

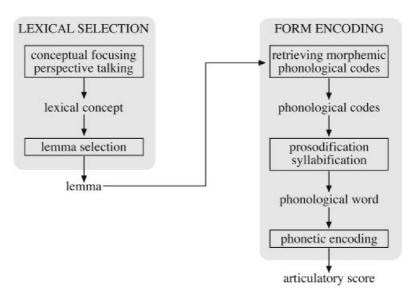


Figure 2. The serial two-system architecture of the theory: two stages of lexical selection followed by three stages of form encoding. Reprinted from Levelt (2001, p. 13465).

In his experimental example illustrated in Figure 3, Levelt (2001) gives an example with animals. He states that if a subject who is asked to name a shown or displayed object,

for example, "a cat", may name this object as "cat", but also, as "feline", or more generally as "animal". His example is represented by a different animal, but the principle of the procedure for achieving the resulting options is the same. Levelt (2001) calls the process *perspective taking* and explains that "the subject judges how much detail the experimenter would appreciate," therefore "the first step in preparing a content word is to focus on a concept whose expression will serve a particular communicative goal." (p. 13464).

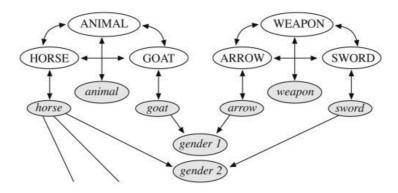


Figure 3. Fragment of the WEAVER++ lexical selection network. Upper stratum: Lexical concept nodes. Lower stratum: Lemma and gender nodes. Reprinted from Levelt (2001, p. 13465).

Levelt (2001) assumes that "each active lexical concept spreads activation to the corresponding lexical item in the speaker's mental lexicon", calls this item a "lemma" and defines it "the lexical item's syntactic description" (p. 13464). According to Cambridge Dictionary (2022), the word *lemma* is "a form of a word that appears as an entry in a dictionary and is used to represent all the other possible forms." For example, the lemma "build" represents "builds", "building", "built", etc."

For better understanding, the term *lemma* can be defined in the following ways (Cambridge Dictionary, 2002):

- The lemma and form together make up the information associated with the lexical entry for each word in the lexicon.
- The lemmatised form is simply a convenient representation of the headword lemma.
- During the lemma selection process, semantically and syntactically appropriate lexical items are selected from the mental lexicon.

Thus, based on this analysis, the previous claim that the lemma for the word "cat" determines that it is a countable noun and has a different diacritical structure when the singular or plural form of the word is used is now clearly established. The different lemmas

have a unique *phonological code*, although they may be syntactically identical, compared, for example, to Levelt's original example of the word "horse". Levelt (2001) explains that

a phonological code is retrieved for each of the morphemes, e.g., <horse> and <iz>, respectively. Phonological codes are "spelled out" as ordered sets of phonological segments, for instance, \mathfrak{I} , \mathfrak{I} , s/and /I,Z/.† This forms the input to the operation of "prosodification," which is largely syllabification. The ordered segments are incrementally strung together to form legal syllables. In the example, a first syllable (\mathfrak{I}) is created out of /h/, / \mathfrak{I} /, and /r/:/hor/ \mathfrak{I} and then a second one out of /s/, /I/ and /z/:/SIZ/ \mathfrak{I} . This completes the syllabification of the phonological word (\mathfrak{I}): /hor.SIZ/ \mathfrak{I} 0. Syllabification is context dependent: /hor/ \mathfrak{I} 0 is a syllable of "horses" but is not one of "horse," whereas /hors/ \mathfrak{I} 0 is a syllable of "horse," but not of "horses." An item's syllabification is not stored in the mental lexicon but created on the fly, dependent on the current context. (p. 13465)

Figure 4 shows the sequence of syllable construction and subsequent input to the final phonetic coding. Following the seamless linking of these syllables, the phonological word is formed, which is the final stage of the precondition to produce the target word. Finally, the overt speech is in the total produced by using the glottal, supraglottal apparatus, and subsequent articulation.

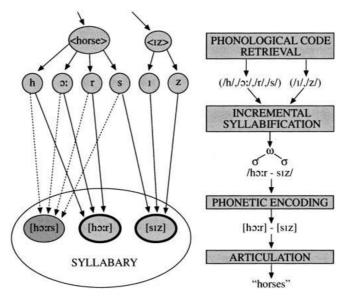


Figure 4. Fragment of the WEAVER++ form encoding network (left) with corresponding form-processing stages (right). Upper stratum: Nodes representing morphemic phonological codes and their phonemic "spellouts". Lower stratum: Nodes representing syllabic articulatory scores. Reprinted from Levelt (2001, p. 13465).

Summary of Chapter 2

Chapter 2 described how speech is generated, including Levelt's psycholinguistic analysis. Thus, it can be said that the first stage of speech generation is the conception of the word, followed by its formulation, and the last step is the actual articulation. Besides, Levelt's model of the serial structure architecture was explained, dealing with the selection of an appropriate word from a lemma - the basic form of a set of word forms. The next chapter will focus on spoken discourse, the differences between speaking and writing, and types of spoken interaction.

3 Spoken Discourse

In language studies, the term *discourse* often refers to "the speech patterns and usage of language, dialects, and acceptable statements, within a community" (Christensen, 2022, October 23). Crosley (2021) further defines discourse as

verbal or written communication between people that goes beyond a single sentence. Importantly, discourse is more than just language. The term "language" can include all forms of linguistic and symbolic units (even things such as road signs), and language studies can focus on the individual meanings of words. Discourse goes beyond this and looks at the overall meanings conveyed by language in context. "Context" here refers to the social, cultural, political, and historical background of the discourse, and it is important to take this into account to understand underlying meanings expressed through language.

The term *discourse* encompasses all elements linked to the text. Figure 5 demonstrates that it is at the very top of the entire spectrum of text structure in preparation and subsequent utterance. It describes interactions in all contexts, social domains, and conditions. Under various circumstances, different words and phrases may have diverse meanings. Discourse reflects on philosophical, psychological, sociological, and linguistic studies and applies them to contemporary domains, concerns, and subjects.

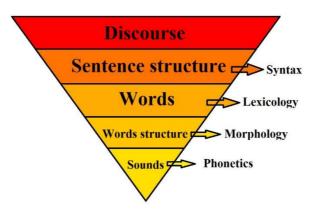


Figure 5. Discourse. Adapted from the University of Sheffield (2012).

Spoken discourse refers to the dynamic, situational interpretation of a speaker's main goals, which includes the addressee's anticipated and actual replies. As a result, discourse development is a collaborative effort requiring active participation from all participants. The

textual record on which this creative activity is based is largely composed of both verbal and nonverbal indications in conjunction with the evocation of a fitting environment. Clark (1996) divides the text flow into two parallel tracks: one for "formal business" and one for discourse management. Two radio broadcast arguments demonstrate these two tracks' existence and specialization.

To comprehend the entire problematics of discourse, at first is necessary to understand the definitions of *text* and *context*, therefore the following chapter focuses on these two terms.

3.1 Text and Context

A text is a form of discourse – everything written and spoken is considered a text, regardless of background and intonation, mode of speech, etc. A single word, a single sentence, a single SMS, but also a more complex document and a thick written book can be called a text. A text is a coherent sequence of words and sentences that build on each other and give logic. Nordquist (2019, July 3) defines the text as follows:

Traditionally, a text is understood to be a piece of written or spoken material in its primary form (as opposed to a paraphrase or summary). A text is any stretch of language that can be understood in context. It may be as simple as 1-2 words (such as a stop sign) or as complex as a novel. Any sequence of sentences that belong together can be considered a text.

3.1.1 Text Analysis

Perry (2022, November 2) categorizes from the linguistic point of view *text types* as external or internal, and these distinctions are evolving. Internal characteristics are evaluated in terms of the overall cohesiveness of the text. Conjunctions, ellipses, and replacements are examples of internal functions. Last but not least, internal functions include coherence, which is a crucial component. It focuses on how the individual phrases, paragraphs, and the whole text are put together so that the reader can understand them – continuity, temporal sequence, and so forth.

Intertextuality, for example, is according to Zmrzlá (2022), an external function of the text that is explored further below. If discourse is included in the analysis of text types, the text may be distinguished as mainstream, or colony in terms of structure. In a simplified way, we can deduce that mainstream texts are coherent, while colons are, for example,

various manuals, dictionaries, shopping lists, and others. In discourse terms, we can also classify persuasive, instructive, informative, and descriptive texts.

As Brown and Yule (1983) outline, the *structure of the text* deals with its staging, topicalization, and sequencing. It is important to hold the text on the topic, and in the correct order – introduction, main body, and conclusion.

Intertextuality, according to Literary Terms (2015, December 16), "is not a literary or rhetorical device, but rather a fact about literary texts – the fact that they are all intimately interconnected. This applies to all texts: novels, works of philosophy, newspaper articles, films, songs, paintings, etc. Every text is affected by the texts that preceded it because the author's ideas and aesthetic choices were influenced by earlier texts.

It is also worth mentioning some additional types of text that have a certain function. According to Müllerová (n.d.), there are three additional types of texts:

Paratexts: (so-called secondary texts) are accessories of the book and non-book space in which the process of literary or book communication takes place. According to their place of existence, paratexts can be distinguished into external (epitexts) and internal (peritexts).

Peritexts (also known as internal paratexts, book paratexts, secondary book texts, and book non-texts) surround or fill the principal text in its immediate surroundings (e.g., title, author's name, bookmark text, prologue and afterword, remark, table of contents, promotional and advertising texts).

Epitexts (also known as exterior paratexts, extra-book paratexts, secondary extra-book texts, and extra-book non-texts) are secondary texts that exist in the neighborhood of a book and participate in the literary communication process between the author and the recipient of the text.

3.2 Relationship between Speaking and Writing

Bygate (2010) states that it is worth mentioning that a text is not a spoken word and explains that people tend to be critical of those who "speak like a book" because it is evident that books are never directed to specific individuals but rather to everyone; therefore, the style of written language may sound odd when spoken (p. 10). In the case of a spoken word, the factor of time and situation, or the discourse discussed above, should be considered. When a sentence is spoken, less information is used, as the writer has much more time to formulate a sentence, and therefore much more information can be included in the text.

The distinctions between spoken and written communication are presented in

Table 1. Of course, there are exceptions. Goh and Burns (2012) mention political speeches and television news, for illustration. The speech is planned in this case, and so it resembles written rather than spoken text.

Table 1. Typical features of spoken and written text production.

Spoken language	Written language
Dialogic / interactional.	Monologic / non-interactional.
Co-constructed spontaneously by more than one speaker.	Constructed over time by individual writers / readers.
Shared knowledge of context.	Assumed knowledge of context.
Unplanned and negotiated.	Planned and redrafted.
Impermanent (produced for "real time").	Permanent (produced for the "long-term").
Close to action in time and space (context-embedded).	Distant from action in time and space (context-removed).
Uses more informal language.	Uses more formal language.

Note: Reprinted from Goh and Burns (2012, p. 79).

In summary, there are no obvious boundaries; spoken and written communication overlap in a variety of ways, such as vocabulary or structure. However, significant indications of the general difference between the two speeches are already clear.

3.3 Discourse Features in Speech

According to Goh and Burns (2012), discourse features in speech are based on sociological and linguistic principles. A large degree of pragmatics is included, not least sociolinguistics. Various examples of discourse features are given below.

Adjacency Pairs

Adjacency pairs are automatic sequences of utterances that consist of a first part and a second part (response to the first part), produced by different speakers (Yule, 1996). They usually consist of a question/answer, offer/accept, and greeting/greeting. Responses are either preferred or non-preferred, for example in an offer to meet – preferred response is acceptance, non-preferred is refusal.

Turn Taking

The principle of turn taking is to regularly rotate speakers in the conversation (Yule, 1996). The point of a sentence is to lead the other person to continue. Non-verbal communication is also included in this practice – for example, looking into the eyes, nodding the head, lifting the eyes, etc. Goh and Burns (2012) also claim that "a key aspect of turn taking is that speakers have a finely tuned ability to recognize points where a new speaker can take the next turn" (p. 107).

Topic and Interaction Management

Without a doubt, the goal of any successful conversation is mutual understanding of the participants. Goh and Burns (2012, pp. 108–109) explain that it is necessary to be knowledgeable about the topic and to agree on it, based on knowledge and interest in discussing it. Interaction consists of discovering each other's interest or possibility to communicate in the topic and through the principle of *turn taking* the conversation is developed.

Goh and Burns (2012, pp. 110–113) also describe several *discourse strategies* that are important for English language learners, such as opening interactions, closing interactions, and giving feedback during interactions.

Openings and Closings

Opening and closing a conversation has an important effect on how it will evolve overall. According to Goh and Burns (2012, pp. 110–111), an example from everyday life in formal situations is the fact that the person with more social credit starts the conversation. However, this is not just a greeting but, for example, a follow-up question "...How are you?". When the conversation closes, familiar phrases are used to signal that the exchange is about to end. For example, "I will have to go now..."

Feedback

Feedback is an important part of communication. Goh and Burns (2012, pp. 111–113) stating feedback to be an indicator that people are listening to each other, perceiving each other, and are interested in discussing the chosen topic. An example of feedbacks in discourse are responses that are further developed by another speaker. According to Goh and Burns (2012, p.112), lets simulate a comparable conversational situation:

Person 1: "We were on holiday in Egypt, with a travel agency."

Person 2: "That's great, and did you like it there? We haven't travelled with a travel agency yet. How was it?"

Person 2 obviously expresses interest in the chosen topic and asks for more information. The problem would arise if person 2 only responded with answers of the kind: "I know. /Cool./ Mmmm."

3.4 Transaction and Interaction

Goh and Burns (2012) distinguish two basic types of spoken interactions: *interactional* and *transactional*. Figure 6 illustrates a model of different functions for interactional and transactional spoken language.

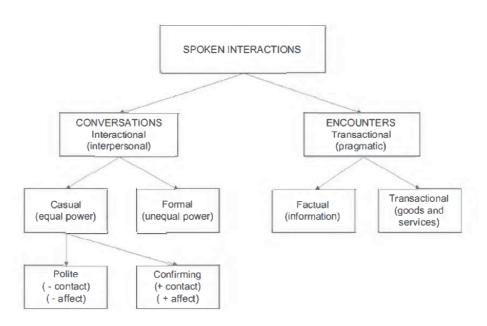


Figure 6. Functional motivation for spoken interactions. Reprinted from Goh and Burns (2012, p. 115).

An *interactional* (also called *interpersonal*) *function* refers to conversations that have the purpose of developing human relationships. It may be conducted on two levels. Goh and Burns (2012) distinguish conversations according to social weight into casual and formal. A *casual* conversation refers to a conversation between two friends talking in a pub drinking beer, while a *formal* conversation is, for example, between a teacher and a student. Casual conversations can further be divided into polite and confirming. *Polite* conversations are those where persons meet randomly and do not have any extreme feelings for each other. On the other hand, *confirming* conversations are those where the conversation is between family

members, for example. Psychological feelings are maintained and strengthened in the confirming case of interpersonal function.

Goh and Burns (2012) define a *transactional* or *pragmatic function* of a conversation that is purpose-based, such as giving or seeking information, negotiating for services, agreeing to do business, etc. The purpose of such a conversation is not just simply conversing. In terms of formality, the function uses official turns of phrase and is conducted on a professional level.

It is nowhere clearly written that the details of buying a house cannot be arranged with a family, and a professor at the university or a manager at work cannot ask an employee how he or she is doing. Thus, it can be suggested that spoken interactions may be peripherally related to each other.

Summary of Chapter 3

The concept of spoken discourse and text criteria were explained in Chapter 3. The information in the chapter allows for a clear differentiation between text and speech. Text is defined as written, prepared, and structured cohesive statements and paragraphs, while speech is defined as unplanned, timed, and themed utterances. The typical features of the spoken language were discussed and distinguished from written language, and the discourse features in the speech were described. Finally, interactional and transactional aspects of spoken language were examined and contrasted with the distinctions between a formal conversation and a discussion with friends.

4 Teaching Speaking

Of all the four skills (listening, speaking, reading and writing), speaking seems intuitively the most important. (Ur, 1996, p. 120).

Teaching students to speak properly and developing their speaking skills is not easy. First of all, it is necessary to know what second language speaking competence involves. Then, suitable approaches to teaching speaking must be chosen and, finally, engaging speaking tasks and activities must be designed. The following chapters will attempt to frame the fundamental concepts of teaching speaking.

4.1 Speaking Competence

Drawing from Hymes (1979), Canale and Swain (1980), and Canale (1983), Goh and Burns (2012, p. 51) classify the communication competence into four components: *grammatical, discourse, sociolinguistic,* and *strategic*.

The *grammatical competence* refers to knowledge of grammar, vocabulary, and phonology. The *discourse competence* involves the ability to form a coherent unit. The *sociolinguistic competence* consists of the ability to utilize correct language in relation to sociocultural norms and actual discourse, and the *strategic competence* works with verbal and non-verbal utterances in the way of avoiding communication failures.

The competences were further described by Johnson (1981) who summarizes the characteristics of a successful second language speaker:

Apart from being grammatical, the utterance must also be appropriate on very many levels at the same time; it must conform to the speaker's aim; the role relationships between the interactants; to the setting, topic, linguistic context, etc. The speaker must also produce his utterance within severe constraints; he does not know in advance what will be said to him (and hence what his utterance will be a response to); yet, if the conversation is not to flag, he must respond quickly. The rapid formulation of utterances which are simultaneously "right" on several levels is central to the communicative skill. (p. 11)

Based on Johnson's (1981) expertise, Goh and Burns (2012) assume that grammatical accuracy by itself is not enough. It is necessary not only to be familiar with how to dialogue

with students, especially in terms of context and discourse but also the relationship between the interlocutors.

Summarizing the findings, Goh and Burns (2012) show a logic map, depicted in Figure 7. It includes the necessary aspects to have a successful conversation in a foreign language - basic speaking skills, discourse strategies within the constraints of cognitive processing.

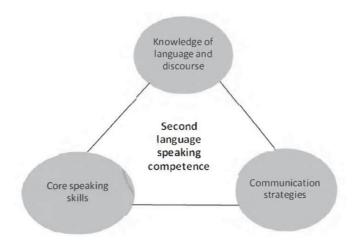


Figure 7. Aspects of second language speaking competence. Reprinted from Goh & Burns (2012, p. 53)

Knowledge of Language and Discourse

Canale and Swain (1980) describe that the concept of "being able to speak" includes sufficient knowledge of the language. They list the following four main one knowledges – grammatical, phonological, lexical and discourse knowledge.

According to Goh and Burns (2012, pp. 54–57), the *grammatical knowledge* is crucial to represent basic language knowledge. It is, for example, the knowledge of how to inflect verbs in tenses and string together words to express particular grammatical structures and meanings. The *phonological knowledge*, on the other hand, is a field dealing with pronunciation. It is necessary to know how the different syllables in a given language are pronounced and what are the ways of distinguishing them from the same syllables in the mother tongue – they are often pronounced far differently. This knowledge also involves issues of speech rhythm, intonation, and stress. Next, the term *lexical knowledge* refers to vocabulary, which may be further divided into two levels – passive and active. The passive vocabulary is that which is understood in ordinary written text and the active vocabulary is the lexical range that the utterer may be able to pronounce without preparation. The *discourse knowledge*, finally, deals with the knowledge of discourse, i.e., the orientation in

time, the appropriateness of using a certain word, sentence, or expression in relation to the environment, social sphere, or the utterer's social rank.

Core Speaking Skills

The core speaking skills with a more detailed list of qualifications are depicted in Table 2. According to Goh and Burns (2012), it may be concluded that the *pronunciation skill* focuses on producing the sound at segmental levels, the *speech function* deals with the exact speech act, in terms of its preciseness, the *interaction skill* regulates the verbal exchange in terms of speaker alternation, and the *discourse skill* creates the right environment.

Table 2. Core speaking skills.

Core skill	Specific skills
a. Pronunciation Produce the sounds of the target language at the segmental and suprasegmental levels.	 Articulate the vowels and consonants and blended sounds of English clearly. Assign word stress in prominent words to indicate meaning. Use different intonation patterns to communicate new and old information.
b. Speech function Perform a precise communicative function or speech act.	 Request: permission, help, clarification, assistance, etc. Express: encouragement, agreement, thanks, regret, good wishes, disagreement, disapproval, complaints, tentativeness, etc. Explain: reasons, purposes, procedures, processes, cause and effect, etc. Give: instructions, directions, commands, orders, opinions, etc. Offer: advice, condolences, suggestions, alternatives, etc. Describe: events, people, objects, settings, moods, etc. Others.
c. Interaction management" Regulate conversations and discussions during interactions.	 Initiate, maintain, and end conversations. Offer turns. Direct conversations. Clarify meaning. Change topics. Recognize and use verbal and non-verbal cues.
d. Discourse organization Create extended discourse in various spoken genres, according to socioculturally appropriate conventions of language.	 Establish coherence and cohesion in extended discourse through lexical and grammatical choices. Use discourse markers and intonation to signpost changes in the discourse, such as a change of topic. Use linguistic conventions to structure spoken texts for various communicative purposes, e.g., recounts and narratives.

Note: Reprinted from Goh and Burns (2012, p. 59).

Communication Strategies

According to Goh and Burns (2012), communication strategies explain the constraints in processing speech, how the meaning of a sentence is understood by the mind and indicate the proper style of communication so that it does not go unanswered or uncomprehend. The strategies describe how it is possible to avoid exactly these unwanted issues. *Cognitive strategy* means describing things or objects that need to be named. This strategy involves creating new words, finding appropriate words to describe the object, or paraphrasing. The *metacognitive strategy* is very similar to the cognitive strategy, with the difference that some expressions or individual words can be prepared in advance, for example on paper, to avoid misunderstandings or unintentional interruptions during the conversation. *Interactional strategy* refers to affirming the correct meaning of what the other meant. Goh and Burns (2012) also notes that "It is important to note that, in the oral interaction, listening is as important as speaking, and problems can arise in either of these processes." (p. 65).

Table 3 lists some strategies that are suitable for extending the speaking ability of foreign language learners. For some, the strategies may not be very natural or comfortable, as there is always a difference between learners, and everyone processes new information and knowledge in a different way.

Table 3. Communication strategies for second language speaking.

Communication strategies	Specific strategies
a. Cognitive strategies Techniques to compensate for gaps in lexical knowledge and related linguistic problems.	 Paraphrase: Circumlocuting or describing an object, person, or event to get the meaning of a specific word across. Approximation: Using an alternative term, e.g., squirrel for chipmunk Formulaic expressions: Using language chunks, e.g., What I'm trying to say is to buy processing time. Message frames: Setting the global context for what is being described before attempting to describe it.
b. Metacognitive strategies Mental operations to regulate thinking and language during speaking.	 Planning: Preparing the contents and the form of the message. Self-monitoring: Noticing one's language and message during message production. Self-evaluation: Noticing one's language and message after message production.
c. Interactional strategies Social behaviors for negotiating meaning during interaction.	 Exemplification: Offering an example to make one's point clear. Confirmation checks: Asking listeners whether they have understood the message. Comprehension checks: Paraphrasing what is heard to confirm one's understanding. Repetition: Repeating all or part of what is said to check one's own understanding. Clarification requests: Asking the speaker to explain a point further. Repetition requests: Asking the speaker to say something again. Exemplification requests: Asking the speaker to give an example. Assistance appeal: Asking the listener for help with difficult words.

Note: Reprinted from Goh & Burns (2012, p. 66).

4.2 Approaches to Teaching Speaking and Communication Activities

According to Ur (1996), speaking is perhaps the most difficult but most important language skill. Successful speaking activities should have certain characteristics that are listed below:

- 1) Students should talk a lot. In the classroom, it is necessary to provide a lot of time for students to express themselves, since a lot of time is taken up by the teacher's explanation.
- 2) Participation to be even. Participation needs to be equal, therefore everybody should get a chance to talk.
- 3) *High motivation*. It is desirable to choose the topics for speaking that students find interesting.

4) Language at an acceptable level. Students' expressions must be relevant, comprehensible, and of an acceptable level of language accuracy.

There may be a wide range of speaking activities that can be designed, such as games, puzzles, quizzes, descriptions and debates. However, it is necessary to follow the rules mentioned above. Moreover, good teachers should be able to invent their own activities. Examples of such activities are given and described below.

Harmer (1996) lists several speaking activities:

1) Acting from a script. The activity is based on rehearsing a skit or theatre performance. Students can prepare the script themselves or choose an existing play. By rehearsing, students can learn new words and grammar structures, improve their intonation and stress, and therefore a successful spoken language output can be produced. It is desirable for the teacher to acquaint the student in advance with the possible problems and to go through the whole script with them, like a director. It is also important that the students do not start out too shy and that there is a certain amount of support in the classroom. Ur (1996, p. 125) mentions very similar activity. Students are given a picture to find the differences or to describe them directly, as illustrated in Figure 8. It is always necessary to consider the playfulness of a particular group of students and decide which option is better.

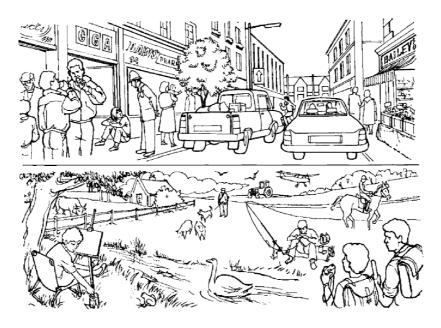


Figure 8. Describing pictures. Reprinted from Ur (1996, p. 125).

2) *Communication games*. Communication games are based on the principle of lack of information, for example one student describes a picture, and the others are supposed to draw it. Another option is that students can play a popular game "Twenty Questions". A student

thinks of an object (thing, animal, etc.), and the others must guess what the object is by asking the questions that must be answered "yes" or "no".

- 3) *Discussions*. In an activity called "buzz groups", students can be given an excerpt from the text to describe what could precede it, how it could continue, or they can summarize its content. In addition, an "instant comment" can be incorporated into a lesson when, at any moment of the lesson, students are shown a photograph and their task is to say the first thing that comes to their mind as quickly as possible, which can develop their ability to respond immediately. Unplanned debates are another great way to improve students' speaking skills. For example, some topics for discussion may arise completely unplanned by the student asking the teacher a question. If the teacher encourages the debate, students are given a great opportunity to start a discussion on a topic they are genuinely interested in.
- 4) Role plays and simulation. Students can gain self-confidence and improve their communication skills in potentially more stressful and formal situations by simulating a real-life conversation. They can develop their speaking skills and are then prepared to speak in a real situation based on this activity. Role plays and simulations also help students develop their speaking fluency. It is worth giving students some preparation time in more socially complex situations, such as business meetings or perhaps television programs. Any situation can be simulated, for example, business meetings, job interviews, brainstorming and problem-solving sessions.

Summary of Chapter 4

Chapter 4 described aspects of second language speaking competence, such as knowledge of language and discourse, core speaking skills and communication strategies. Besides, the chapter focused on the implications second language speaking competence has for the way teachers conceptualize speaking lessons and design speaking activities. The speaking activities listed in this chapter prove the fact that the most important thing is to broaden the world of the classroom by including the world outside. There can be many types of speaking activities and outlining the principles for their design is necessary. For this reason, the practical part of this bachelor's thesis will deal with the detailed design of different speaking activities based on IT students' speaking needs.

Empirical part

5 Research on IT Students' Speaking Needs

In order to find out the needs of IT students in the area of speaking skills, a questionnaire was developed in order to subsequently design appropriate speaking development tasks based on the research findings (of course also in combination with the findings and concepts addressed in the theoretical part of the thesis).

With the help of the thesis supervisor Mgr. Ing. Eva Ellederová, Ph.D., the questionnaire (see Appendix) was prepared and distributed to a total of 69 students of the Faculty of Information Technology (FIT) at Brno University of Technology (BUT). The questionnaire, based on Thornbury (2005), Goh and Burns (2012) and my own ideas, is divided into three sections: speaking outside the English classroom, speaking in English lessons and speaking difficulties. Each section deals with the issue of IT students' speaking needs. The students' answers were obtained anonymously and analysed using standard mathematical calculations. The results of the questionnaire survey are presented in the form of graphs and tables and commented on. Since some students omitted answers to some questions, the tables show the total number of answers to the given question, and the calculations were adjusted accordingly. The graphs do not show a percentage of non-responses.

5.1 Speaking Outside the English Classroom

As the chapter title suggests, the questions in this section are mainly about the spoken English language that IT students use to communicate with each other outside school. This question is directed at communication between classmates and others, whether native or non-native speakers, in a personal or professional context. The following analysis indicates that the students' answers confirmed the concepts from the theoretical part of this thesis.

Question 1: How much of your school English (except for English lessons) or workplace English is spoken rather than written?

Figure 9 shows the status of the use of English in subjects other than English itself. It indicates that in most cases students (almost 87%) use either some or most spoken English more often than written English, which indicates that outside the English classroom, they prefer oral to written communication. One of the reasons might be that spoken language is

less formal and more flexible than written language because it enables students to discuss different aspects of an issue and make decisions more quickly than in writing.

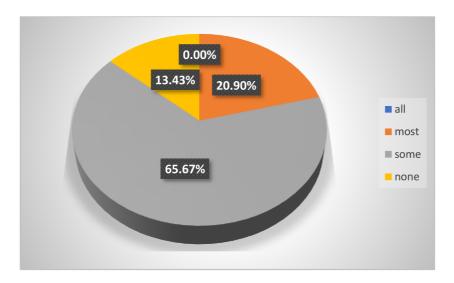


Figure 9. Amount of spoken English.

Question 2: Your spoken English is mainly...

As Figure 10 illustrates, the majority of students (64.71%) use social English rather than technical English since it is the language of everyday communication. However, almost 30% of students use both social and technical English, which suggests that mastering technical English is important for developing the content knowledge of the specialized subjects and interacting effectively and assertively with experts from their field of study.

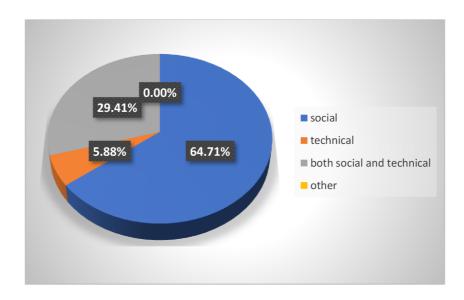


Figure 10. Social vs. technical English of IT students.

Question 3: Your spoken English is mainly...

Answers to the question related to the formal and informal style of speech reveal that 57.35% of students use both formal and informal English (see Figure 11). The formal style is taught separately in academic English courses, and so the predictable result is that the combination of both formal and informal English is predominant. Only a very small number of students answered that they use mainly formal English.

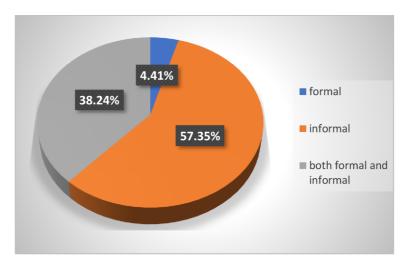


Figure 11. Formal vs. informal English of IT students.

Question 4: You speak English mainly...

As Figure 12 indicates, the frequency of answers is almost evenly divided between one person and a group conversation (50.75% vs. 44.78%), which is to be expected since English is a global language that is widely used. If a group meets in a restaurant, a bar, or a school corridor, for example, with representatives of different nationalities, they all converse in English.

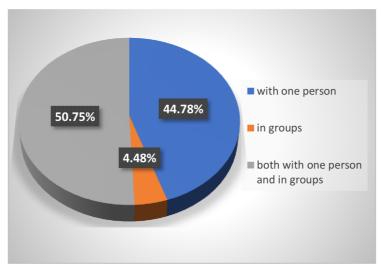


Figure 12. Speaking English in pairs or groups.

Question 5: You speak English mainly...?

Figure 13 shows that most students agreed that they speak English with one or more people (46.27%). This is probably because they meet the same people in school, but also others outside the school.

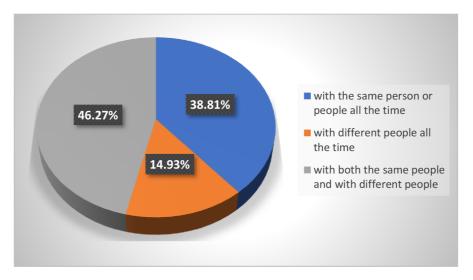


Figure 13. Speaking English with the same or different people all the time.

Question 6: You speak English mainly with...?

The answers about the mother tongue were expected. Neither are university courses often taught by native speakers nor is the opportunity to communicate with them beyond the academic level. Most students (86.36%) answered that they speak English with non-native speakers (see Figure 14).

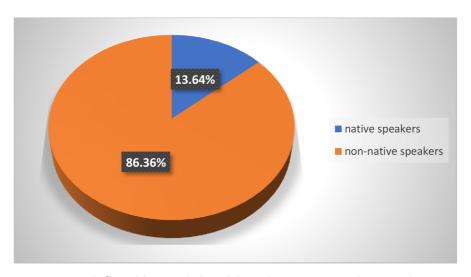


Figure 14. Speaking mainly with native or non-native speakers.

5.2 Speaking in English Lessons

This chapter focuses on the need for further development and active use in the academic field, using assignments to practice the speaking activity itself.

Question 7: How much time should be devoted to speaking tasks and activities in English for lessons in comparison to the other tasks (listening, reading, writing)?

Table 4 clearly illustrates the diversity of opinions regarding the need for assignments and activities aimed at developing oral communication compared to others. Each student had different needs related to the development of their speaking skills. At the same time, the factor of the disfavour of speaking in the English language, due to fear or shame, might influence the students' opinions.

Table 4. Students' need for speaking tasks and activities in English lessons

Speaking tasks and activities	Absolute frequency	Relative frequency
10-20%	13	18.84%
20–30%	10	14.49%
30–40%	14	20.29%
40–50%	17	24.64%
50-60%	11	15.94%
60–70%	9	13.04%
70–80%	4	5.80%
More than 80%	1	1.45%
Total	69	100.00%

Question 8: Rate each speaking activity according to the level of importance in English for IT lessons.

According to Table 5, students almost agreed that any speaking activity is important, no matter what it is. Debates in pairs or groups are more comfortable and less stressful for students because they talk with others and do not have to speak in front of the whole class. This may explain why they considered debating in groups and speaking in pairs important (52.17%), while only 11.59% of students considered giving presentations to the class very important.

Table 5. Likert scale of importance of speaking activities in English for IT lessons

Type of a speaking activity	Not important	Slightly important	Neutral	Important	Very important	Total
Giving presentations to	8.70%	18.84%	33.33%	27.54%	11.59%	69
the class	6	13	23	19	8	09
2 Speaking in a pair	0.00%	4.35%	23.19%	52.17%	20.29%	69
2 Speaking in a pair	0	3	16	36	14	09
2 Debating in a group	1.45%	8.70%	8.70%	52.17%	28.99%	60
3 Debating in a group	1	6	6	36	20	69
4. Doing relanlaria	17.39%	34.78%	27.54%	11.59%	8.70%	60
4 Doing roleplays	12	24	19	8	6	69
Total number of answers	19	46	64	99	48	276
Average	5	12	16	25	12	270

Question 9: Rate each task according to the level of importance for improving your speaking skills.

As Table 6 demonstrates, students were rather hesitant to answer Question 9. This could be due to their embarrassment and anxiety of making a mistake in front of the others. Even though most students are interested in improving their English, they were mostly neutral regarding these specific activities. The results show that the most important for students is to practise vocabulary (52.94%), and on the other hand, as only slightly important they consider video tasks (27.54%).

Table 6. Likert scale of types of tasks for improving speaking skills

Type of a task	Not important	Slightly important	Neutral	Important	Very important	Total
1 C	4.35%	17.39%	24.64%	40.58%	13.04%	60
1 Grammar practice	3	12	17	28	9	69
2 Vacabulany practice	0.00%	8.82%	11.76%	52.94%	26.47%	60
2 Vocabulary practice	0	6	8	36	18	68
2. Draman sisting musting	2.90%	14.49%	31.88%	27.54%	23.19%	60
3 Pronunciation practice	2	10	22	19	16	69
4 Audia taalra	4.35%	15.94%	33.33%	34.78%	11.59%	60
4 Audio tasks	3	11	23	24	8	69
5 Video tasks	8.70%	27.54%	37.68%	17.39%	8.70%	69
5 Video tasks	6	19	26	12	6	09
6 Danding tools	7.35%	16.18%	42.65%	26.47%	7.35%	68
6 Reading tasks	5	11	29	18	5	08
7 Whiting to the	8.82%	13.24%	50.00%	19.12%	8.82%	60
7 Writing tasks	6	9	34	13	6	68
Total number of answers	11	37	81	96	49	400
Average	3	9	20	24	12	480

5.3 Speaking Difficulties

This part of the survey focuses on the problems and weaknesses that students face while speaking, especially in the IT environment.

Question 10: You find it more difficult when speaking with...?

Very surprisingly, the results related to the issue of interviewing native vs. non-native speakers were absolutely equal (see Table 7). This is interesting from a psychological point of view, as it is always more of a problem to play with a stronger player, figuratively speaking, and so it would be more likely that the majority would have a problem talking to a native speaker.

Table 7. Speaking with native speakers vs. non-native speakers of English

Speaking with	Absolute frequency	Relative frequency
native speakers of English	33	50.00%
non-native speakers of English	33	50.00%
Total	66	100.00%

Question 11: What do you find more difficult when communicating with other people about IT topics?

The topic of speaking has already been discussed in the previous chapters. It has been stated that it is not so difficult to understand a written text or other people's utterances as it is to answer or express one's own thoughts or opinions. In this respect, the answers in Table 8 are entirely predictable, with most students (83.58%) agreeing that it is much more difficult to express oneself than to understand others.

Table 8. Difficulties with communication with other people about IT topics

Difficulty to	Absolute frequency	Relative frequency
express and communicate own thoughts and ideas	56	83.58%
understand what they are trying to communicate	11	16.42%
Total	67	100.00%

Question 12: Rate each activity according to the level of difficulty when speaking about IT topics.

According to Table 9, it can be stated that the biggest problem students have with speaking in front of the whole class (44.93%). This is most likely due to shame, which is a serious criterion when speaking in front of a large audience. Since this concerns speaking in a foreign language on top of everything else, fear and shame are understandably increased. The results below confirm what has been mentioned so far; if the conversation is in smaller groups or even just pairs, it is not such a big problem for the students as when they are giving a presentation. The answers "neither easy nor difficult" were agreed upon by most students.

Table 9. Different activities difficulty when speaking about IT topics

Speaking task difficulty	Very easy	Easy	Neither easy nor difficult	Difficult	Very difficult	Total
Giving presentations to the	0.00%	11.59%	27.54%	44.93%	15.94%	69
class	0	8	19	31	11	09
2. Speaking in a pair	11.59%	44.93%	30.43%	11.59%	1.45%	60
2 Speaking in a pair	8	31	21	8	1	69
2. Dahating in a group	4.35%	26.09%	42.03%	20.29%	7.25%	60
3 Debating in a group	3	18	29	14	5	69
4. Daina nala nlava	1.45%	20.29%	42.03%	24.64%	11.59%	60
4 Doing role plays	1	14	29	17	8	69
Total number of answers	12	71	98	70	25	276
Average	3	18	25	18	6	276

Question 13: Rate each of these features according to the level of difficulty when speaking about IT topics.

A positive aspect, as indicated in Table 10, is that students seem to have few difficulties with pronunciation (40.58% – "easy"). In terms of developing their speech and then being able to improve it, this reflects the fact that they are not afraid of making mistakes in pronunciation or imprecise grammar. However, insufficient vocabulary or problems with fluent utterances seems to be a bigger problem when students speak about IT topics in English.

Table 10. Language difficulties when speaking about IT topics

Language (accuracy and fluency) difficulty	Very easy	Easy	Neither easy nor difficult	Difficult	Very difficult	Total
Not speaking fluently and	0.00%	15.94%	43.48%	31.88%	8.70%	69
coherently	0	11	30	22	6	09
2 Limited range of specialized	0.00%	8.70%	36.23%	44.93%	10.14%	60
vocabulary	0	6	25	31	7	69
2. Limited anomaratical names	10.14%	39.13%	37.68%	8.70%	2.90%	68
3 Limited grammatical range	7	27	26	6	2	08
4. Commentical annuals	5.80%	39.13%	42.03%	10.14%	2.90%	60
4 Grammatical errors	4	27	29	7	2	69
5. Duanas siatian anno 11.	1.45%	40.58%	34.78%	17.39%	5.80%	60
5 Pronunciation errors	1	28	24	12	4	69
Total number of answers	12	99	134	78	21	244
Average	2	20	27	16	4	344

Question 14: Rate each of these language functions according to the level of difficulty when speaking about IT topics.

According to the Likert scale shown in Table 11, students' English seems to be at a fairly good level. The only issue here seems to be persuading, which may be due to a lack of students' business skills (39.13%). However, this questionnaire was filled in by IT students, not by business academy representatives who are supposed to have persuasive skills. Using the other language functions did not seem to be too difficult, but there should still be some scope for improvement.

Table 11. Language functions difficulties when speaking about IT topics

I	Language functions difficulty	Very easy	Easy	Neither easy nor difficult	Difficult	Very difficult	Total
1	Describing and comparing	5.80%	27.54%	40.58%	23.19%	2.90%	69
1	features	4	19	28	16	2	09
2.	Describing processes and	0.00%	27.94%	42.65%	29.41%	1.47%	69
2	trends	0	19	29	20	1	09
3	Giving advice and	1.45%	31.88%	44.93%	17.39%	4.35%	69
3	instructions	1	22	31	12	3	09
1	Draviding avalenations	0.00%	18.84%	34.78%	37.68%	8.70%	69
4	Providing explanations	0	13	24	26	6	09
5	Civing paranal aniniana	15.94%	42.03%	33.33%	4.35%	4.35%	69
5	Giving personal opinions	11	29	23	3	3	
6	Giving reasons and	5.88%	17.65%	45.59%	26.47%	5.88%	60
6	justifying	4	12	31	18	4	69
7	Asking for information or	23.53%	48.53%	23.53%	5.88%	0.00%	60
/	explanation	16	33	16	4	0	69
0	E	8.70%	34.78%	37.68%	17.39%	1.45%	60
8	Expressing disagreement	6	24	26	12	1	69
0	Danna din a	0.00%	7.25%	36.23%	39.13%	17.39%	60
9	Persuading	0	5	25	27	12	69
T	otal number of answers	42	93	104	52	6	492
Α	verage	5	20	26	15	3	483

Summary of the Empirical Part

Based on a detailed analysis of sixty-nine questionnaires, it is possible to summarize the results of the three research areas. The results of the first section, which dealt with issues of speaking English outside the English classrooms, indicate that to acquire accurate and fluent spoken English, teachers should delve deeper into formal and technical English and continue to practice it with students. The second section addressed the issue of speaking in English classes. There was a wide variety of responses to the questions, so it is difficult to draw a definite conclusion from the results of the survey. However, the aim was to find out what are the biggest problems the students face when speaking in the English language. In conclusion, it is possible to deduce that there is a need to practice spoken English so that students feel more confident when speaking to different people in different situations. The form of the last section was similar to the second section, but the questions were directed at what the students find most difficult when speaking in English. Thus, the answers are intertwined and interrelated, and almost the same conclusion can be drawn from this section of the survey as well. There is still a need to practice accurate English with a focus on developing fluent speech delivery. Concerning the results of the survey, the last chapter of this thesis will focus on the design of appropriate activities to practice speaking and acquire active technical vocabulary.

Practical part

6 Design of Speaking Activities

Based on the concepts framed in the theoretical part and the questionnaire survey results in the empirical part of this thesis, I decided to design the speaking activities focused on the development of IT students' speaking skills.

The results of the first, second and third parts of the questionnaire survey revealed that IT students are interested in developing their active vocabulary, practising speaking in front of an audience, and finally, they are interested in improving their fluency.

The number of activities that can be devised is almost endless. I designed three types of activities, including seven illustrative examples, focused on active vocabulary development, simulations of a real-life encounter, and fluency improvement that can be easily adapted, either to the theme of the topic being discussed, to the general quality factor of the class, or structurally modified to achieve the desired result. The language output, vocabulary requirements, and useful tips for the teachers are given for each activity.

6.1 Active Technical Vocabulary Development

The results of the first part of the analysis in Chapter 5 revealed that it is important for IT students to improve and develop their active vocabulary of technical concepts. There is a big difference between being able to understand what another person is trying to say or explain, whether in writing or in speech, and being able to express oneself. The following activity is a combination of revising passive vocabulary, i.e. words that have long since been taught at the primary or secondary school, and learning words that others know. According to Ur (1996), who describes a vocabulary activity called "brainstorming round an idea" (p. 68), this group task is ideal for expanding vocabulary. With a very simple modification, not only expansion but also revision of vocabulary from any topic can be achieved. Examples 1 and 2 illustrate how active IT vocabulary can be developed.

Example 1: The teacher writes a word from an IT field in the centre of the whiteboard. For example, the word "computer". By adding the words that come to mind one by one, students will create a word map in the shape of rays of the sun. Each word that comes to mind in connection with the word "computer" can be developed by the students in the same way. For example, "keyboard" – here students will add in turn "keyboard flaps, backlight,

characters, space bar, numeric keyboard, etc. An illustration of such an activity is provided in Figure 15.

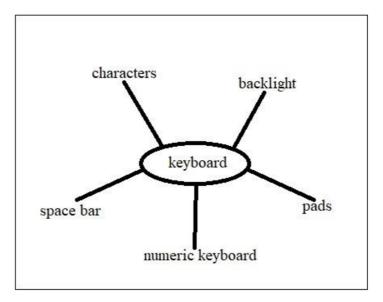


Figure 15. Brainstorming.

Example 2: With a very simple rule modification, the brainstorm map can be changed from an association map to a collocation map. The example in Figure 16 shows a collocation map for the word "internet". Active vocabulary is practised in the same way as in the previous example. It is always recommended to learn vocabulary in the form of phrases or collocations, which allows students to better remember them.

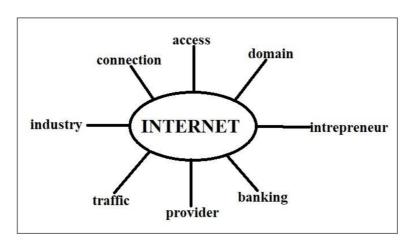


Figure 16. Collocation map.

Preparation

The speaking activities in Example 1 and Example 2 do not require any preparation. They can be used as a warm-up activity in class, focusing on a particular topic. Afterwards,

the students can be shown the free websites to find out about other collocations and words that are related to the term. This will also help students to know where to look for appropriate words to use when writing essays, projects, theses and dissertations.

Vocabulary Requirements

The word to which the collocation search is to be applied should be more general. It may be very difficult to make collocations with many technical words. Of course, more collocation maps can be developed, and subsequently new collocations can be searched. However, the quality of the activity depends on the teacher's instructions.

Output

Students will review familiar passive vocabulary words, find new words, and see what terms the word can be used with and what meaning is achieved. They will be introduced to the use of collocation maps and websites to find related words.

Ur (1996) mentions that "this kind of association exercise is useful when introducing a poem or other literature: a key concept can be placed in the centre, and the brainstorm used as a 'warm-up' to the theme, as well as a framework for the introduction of some of the new vocabulary" (p.69).

6.2 Simulating a Real-Life Encounter

To minimize the fear of speaking with different people in different contexts, simulating real-life situations is necessary. Shame might result in many students avoiding speaking in front of large groups of people. Although the results of the questionnaire survey presented in Chapter 5 did not reveal this fact, it is easy to deduce that students are not very keen on interacting with people they do not know or speaking in front of an audience. Having the courage to speak and not being afraid of making mistakes is the only key to developing students' fearlessness.

If a teacher does not want to embarrass the students who are most afraid of speaking in front of others with the most dreaded form of speaking in front of a large group of people (e.g., giving presentations to the class), they can offer students a toned-down version of a similar performance in the form *role plays*. The principle is very simple. A group of two or three students is given the task of rehearing a short theatrical sketch on any topic for other classmates. Examples 3 and 4 illustrate how to develop the speaking skills of IT students.

Example 3: In pairs, read the role-play card in Figure 17, imagine a corresponding situation, and do a three-minute role-play.

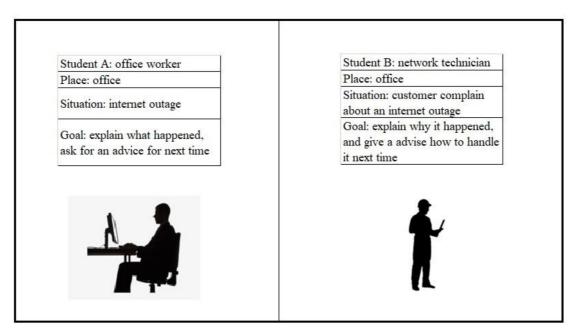


Figure 17. Role play "The Internet outage".

Example 4: In pairs, read the role-play card in Figure 18, imagine a corresponding situation, and do a three-minute role-play.

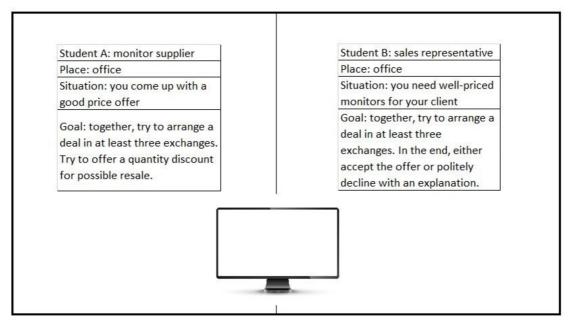


Figure 18. Role play "Negotiating a deal".

Example 5: In pairs, read the role-play card in Figure 19, imagine a corresponding situation, and do a five-minute role-play.

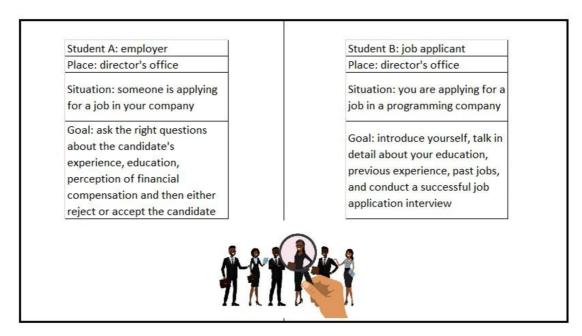


Figure 19. Role play "A job application".

Preparation

To prepare, it is necessary to consider the general level of English of the students. To gain confidence, students can be given time to prepare at home until the next class. For a more experienced English-speaking class, it will not be a problem to prepare the role play within ten minutes in class.

Vocabulary Requirements

In order to achieve the positive effect in developing speaking skills, it is desirable that students are instructed to use different synonyms for technical terms in their imitations. In the preparatory process, especially at home, students can practice speaking accurately and fluently, thus gaining the desired confidence in front of their audience, i.e. their classmates. Besides, attention should be paid to correct pronunciation.

Output

The conversation between each pair must flow smoothly. Having achieved the desired result, the student is now more proficient in their own language. In addition, they have heard other people's conversations. Indeed, when asked to repeat in their own words what they

have just heard, the student will be much more fluent and accurate than when asked to speak spontaneously on a particular topic. Ur (1996) points out that

This is virtually the only way we can give our learners the opportunity to practise improvising a range of real-life spoken language in the classroom and is an extremely effective technique if the students are confident and cooperative; but more inhibited or anxious people find role play difficult and sometimes even embarrassing. Factors that can contribute to a role play's success are: making sure that the language demanded is well within the learners' capacity; your own enthusiasm; careful and clear presentation and instructions. A preliminary demonstration or rehearsal by you together with a student volunteer can be very helpful. (p.133)

6.3 Fluency Training

There is no better way to practice speaking than to do speaking. The results of the questionnaire survey showed that students wanted to improve their speaking fluency. Students' answers to questions 12 and 13 (see Chapter 5.2) suggest that the easiest and most popular activity for students to improve their speaking skills is *debates* on a particular topic.

The choice of the topic should, of course, be academically focused and should ideally include current debates related to the students' field of study. The main advantage of this activity is that, unlike role-playing, there is no limit to the topics that can be discussed and the whole class can be involved at the same time. Examples 6 and 7 show debate cards for two different topics.

Example 6: In pairs, discuss the topic (see Figure 20).

Desktops should replace laptops. At the same time, they should be as powerful as possible in as small a form factor as possible.

- Explain the difference between a computer and a laptop.
- What makes a computer fast?
- · What makes a computer slow?
- · How can computer performance be improved?
- · Can a computer be small?
- Can the same performance characteristics be achieved in a laptop as in a computer?
- Is it possible to demand such a design?

Discuss and justify why yes, why not.



Figure 20. Debate card "Desktops vs. laptops".

Example 7: In groups of three or four, discuss the topic (see Figure 21).

The Internet should become more sophisticated. It should collect more and more information about the user and then offer suitable products. Within ten years, it should be able to set up, order and pay for groceries, order a new pair of shoes on time, and suggest a suitable film every evening.

- Is the Internet capable of gathering information on its own?
- · Is it right for the Internet to collect information?
- Is it possible for an internet-connected device to replace a human?
- How would it be possible to link the internet to a person's mood?
- Is it possible to achieve such a result within ten years?

Discuss and justify why yes, why not.



Figure 21. Debate card "The Internet possibilities."

Preparation

This type of task does not require any preparation. However, the topic should, of course, correspond to the topic that is discussed during the whole lesson to maximise its effectiveness. Subsequent discussion and additional knowledge will relate to the whole topic and students will have the opportunity to remember as many word connections as possible, thus achieving more fluent future speech.

Vocabulary Requirements

Given the purpose of the debate, there are no special requirements for technical or general English. The challenge is to keep the students talking; the more they talk, the more their fluency will develop.

Output

The result, as outlined in the *Preparation* and *Vocabulary Requirements* sections above, will be to help develop and improve speech fluency. The memorization of spoken concepts is the best way to improve one's active vocabulary, which automatically leads to a much higher level of fluency.

Summary of the Practical Part:

According to Ur (1996), "people who know a language are referred to as 'speakers' of that language, as if speaking included all other kinds of knowing, and many if not most foreign language learners are primarily interested in learning to speak" (p.120). As can be deduced from the questionnaire surveys in the empirical part of this bachelor's thesis, students are really interested in developing their speaking skills. As mentioned in Chapter 5, several factors contribute to the ability to learn to speak. One of them is meaningful speaking practice. The speaking activities, as may be seen, build on each other, although each is designed for a different purpose, i.e. to build up active vocabulary, develop fluency, and gain confidence when speaking in different situations. The outcome of all the activities designed is supposed to be the same – the development of speaking skills.

7 Conclusion

The goal of teaching speaking is to enable the learner to grow to be a critical and competent communicator. The objective of teaching and learning a spoken language is to analyse the other language and at the same time help the preservation of the mother tongue and cultural heritage. Learners will find out about exceptional spelling styles of the speech components, and they will learn techniques for understanding the vocabulary in the text.

Spoken language production and comprehension are complex cognitive skills that should not be considered in isolation in assessment procedures. The relationship between language and different cognitive functions must be explored, especially with regard to the possible influence of attention, working memory and executive functions on language ability. From a psycholinguistic point of view, the production of spoken language is a key issue in how speakers use their knowledge of the language together with their perception, intentional, conceptual, and motor skills to adequately convey specific meanings in specific places and times for specific audiences. Knowing a language and the rules of grammar is only one piece of this complex puzzle. Grammar should be dynamic and configured in a manner that seamlessly connects with the speaker's perceptions (auditory, visual, and kinaesthetic), thoughts, and other actions, especially gestures to support effective communication.

The theoretical part of this bachelor's thesis, based on the literature review of various studies and scholarly books, helped frame the concepts of speech production and spoken discourse, outlined approaches to teaching speaking and described selected types of activities for the development of speaking skills. The empirical part of the thesis, focusing on the analysis of IT students' speaking needs, revealed that students were interested in developing active vocabulary, improving their output in front of the audience and achieving a better level of fluency in speaking. The practical part of the thesis dealt with the design of speaking activities based on the results of the questionnaire survey. Although each activity has a different objective and form, they complement each other and share similar features.

I would recommend focusing on other aspects of English language teaching, not just speaking. Although speaking is the most important component of overall language proficiency, listening, reading, and writing skills are also important and should not be neglected. Again, there is much to explore in these areas, and the results of what a listening or reading activity should be like might also be interesting.

List of Figures

Figure 1.	Cognitive demands on language learners when producing speech (drawing
	from Levelt's model of speech processing). Reprinted from Goh and Burns
	(2012, p. 36)
Figure 2.	Serial two-system architecture of the theory: two stages of lexical selection
	followed by three stages of form encoding. Reprinted from Levelt (2001,
	p. 13465)
Figure 3.	Fragment of the WEAVER++ lexical selection network. (Upper stratum)
	Lexical concept nodes. (Lower stratum) Lemma and gender nodes. Reprinted
	from Levelt (2001, p. 13465)
Figure 4.	Fragment of the WEAVER++ form encoding network (Left) with
	corresponding form-processing stages (Right). Upper stratum: Nodes
	representing morphemic phonological codes and their phonemic "spellouts".
	Lower stratum: Nodes representing syllabic articulatory scores. Reprinted
	from Levelt (2001, p. 13465) p. 18
Figure 5.	Discourse. Adapted from the University of Sheffield (2012) p. 20
Figure 6.	Functional motivation for spoken interactions. Reprinted from Goh & Burns
	(2012, p.115) p. 25
Figure 7.	Aspects of second language speaking competence.
	Reprinted from Goh & Burns (2012, p. 53)
Figure 8.	Describing pictures. Reprinted from Ur (1996, p. 125) p. 32
Figure 9.	Amount of spoken English. p. 35
Figure 10.	Social vs. technical English of IT students
Figure 11.	Formal vs. informal English of IT students
Figure 12.	Speaking English in pairs or groups p. 36
Figure 13.	Speaking English with the same or different people all the time p. 37
Figure 14.	Speaking mainly with native or non-native speakers p. 37
Figure 15.	Brainstorming. p. 46
Figure 16.	Colocation mapp. 46
Figure 17.	Role play "The Internet outage" p. 48
Figure 18.	Role play "Negotiating a deal" p. 48
Figure 19.	Role play "A job application" p. 49
Figure 20.	Debate card "Desktops vs. laptops" p. 51
Figure 21.	Debate card "The Internet possibilities"

List of Tables

Table 1.	Typical features of spoken and written text production. Reprinted from Goh
	and Burns (2012, p. 79) p. 23
Table 2.	Core speaking skills. Reprinted from Goh and Burns (2012, p. 59) p. 29
Table 3.	Communication strategies for second language speaking. Reprinted from
	Goh and Burns (2012, p. 66)
Table 4.	Students' need for speaking tasks and activities in English lessonsp. 38
Table 5.	Likert scale of importance of speaking activities in English for II
	lessons
Table 6.	Likert scale of types of tasks for improving speaking skills p. 39
Table 7.	Speaking with native speakers vs. non-native speakers of English p. 40
Table 8.	Difficulties with communication with other people about IT
	topicsp. 40
Table 9.	Different activities difficulty when speaking about IT topics p. 41
Table 10.	Language difficulties when speaking about IT topics
Table 11.	Language functions difficulties when speaking about IT topics p. 43

List of References

- Brown, G., & Yule, G. (1983). Discourse Analysis. Cambridge: Cambridge University Press.
- Bygate, M. (2010). Speaking. Oxford: Oxford University Press.
- Cambridge Dictionary. (2022, October 12). Lemma. Retrieved from https://dictionary.cambridge.org/dictionary/english/lemma
- Canale, M. (1983). *On some dimensions of language proficiency*, In J. W. Oller Jr. (ed.) Issues in Language Testing Research, Rowley, MA: Newbury House, 333-342.
- Canale, M. and Swain, M. (1980). *Theoretical bases of communicative approaches to second language teaching and testing*, Applied Linguistics, 1, 1-47.
- Chang, F., Dell, G. S., & Bock, K. (2006). Becoming syntactic. *Psychological review*, 113(2), 234–272.
- Christensen, T. (2022, October 23). What is discourse? Retrieved from http://www.languagehumanities.org/what-is-discourse.htm
- Clark, H. H. (1996). *Using language*. Cambridge: Cambridge University Press.
- Crosley, J. (2021). What (exactly) is discourse analysis? A plain-language explanation & definition (with examples). Retrieved from https://gradcoach.com/discourse-analysis-101/
- Ferreira, F. (2000). Syntax in language production: An approach using tree-adjoining grammars. In L. Wheeldon (Ed.), *Aspects of language production* (pp. 291–330). London: Psychology Press.
- Fromkin, V. A. (1971). The non-anomalous nature of anomalous utterances. *Language*, 47, 27–52.
- Garrett, M. F. (1975). The analysis of sentence production. In G. H. Bower (Ed.), *The Psychology of learning and motivation* (pp. 133–177). New York: Academic Press.
- Goh, C. C. M., & Burns, A. (2012). *Teaching speaking: A holistic approach*. Cambridge: Cambridge University Press.
- Griffin, Z. M., & Ferreira, V. S. (2006). Properties of spoken language production. In M. J. Traxler & M. A. Gernsbacher (Eds.), *Handbook of psycholinguistics* (pp. 21–59). Cambridge: Academic Press.
- Harmer, J. (2001). The practice of English language teaching. Harlow: England
- Hymes, D. H. (1979). On communicative competence. In J. B. Pride & J. Holmes (Eds.), *Sociolinguistics: Selected reading* (pp. 269–293). London: Penguin Books.

- Johnson, Keith (1981). Interaction: Some Background, Some key terms, and some definitions, in: Keith Johnson-K. Morrow (ed.), *Communication in Classroom*. London Longman, 1-12.
- Kempen, G., & Hoenkamp, E. (1987). An incremental procedural grammar for sentence formulation. *Cognitive Science*, 11, 201–258.
- Literary Terms (2015, December 16). Intertextuality | Definition & Examples. Retrieved from https://literaryterms.net/intertextuality/
- Levelt, W. J. M. (1989). Speaking: From intention to articulation. Cambridge: MIT Press
- Levelt, W. J. M. (2001). Spoken word production: A theory of lexical access. *Proceedings* of the National Academy of Sciences, 98(23), 13464–13471.
- Nordquist, R. (2019, July 3). What is a text in linguistics? Retrieved from https://www.thoughtco.com/text-language-studies-1692537
- Müllerová, L. (n.d.). *Co je to paratext?* Retrieved from https:///litterae.mypage.cz/menu/paratexty/co-je-to-paratext
- Perry, M. (2022, November 2). Language humanities. Retrieved from http://www.languagehumanities.org/what-is-text-linguistics.htm
- The University of Sheffield. (2012). What is Discourse? Retrieved from https://sites.google.com/a/sheffield.ac.uk/aal2013/branches/discourse-analysis/what-is-discourse
- Thornbury, S. (2005). *How to teach speaking*. Harlow: Longman.
- Ur, P. (1996). A course in language teaching. *Practice and theory*. Cambridge: Cambridge University Press.
- Yule, G. (1996). Pragmatics. Oxford: Oxford University Press.
- Zmrzlá, P. (2022). Discourse under Investigation: A brief summary of theoretical background and concepts. Brno: Vysoké učení technické v Brně.

Appendix

QUESTIONNAIRE - Students' Speaking Needs

Speaking outside the English classroom

- 1) How much of your school English (except for English lessons) or workplace English is spoken rather than written?
 - a) all
 - b) most
 - c) some
 - d) none
- 2) Your spoken English is mainly
 - a) social
 - b) technical
 - c) both social and technical
 - d) other; please specify

.....

- 3) Your spoken English is mainly
 - a) formal
 - b) informal
 - c) both formal and informal
- 4) You speak English mainly
 - a) with one person
 - b) in groups
 - c) both with one person and in groups
- 5) You speak English mainly
 - a) with the same person or people all the time
 - b) with different people all the time
 - c) with both the same people and with different people
- 6) You speak English mainly with
 - a) native speakers of English
 - b) non-native speakers of English

Speaking in English lessons

7)	How much time should be devoted to for IT lessons in comparison to the ot Circle one option.					_	
	a) 10–20 %						
	b) 20–30 %						
	c) 30-40 %						
	d) 40-50 %						
	e) 50-60 %						
	f) 60–70 %						
	g) 70–80 %						
	h) more than 80 %						
8)	Rate each speaking activity according IT lessons. (1 - not important, 2 - slightly important, 3			-			
		4	0	0	4	-	
	a) giving presentations to the class	1	2			5	
	b) speaking in a pair	1		3			
	c) debating in a group	1		3		_	
	d) doing role plays	1	2	3	4	5	
	e) other; please specify						
9)	Rate each task according to the level speaking skills. (1 - not important, 2 - slightly important, 3	-		-)
	a) grammar practice	1	2	3	4	5	
	b) vocabulary practice	1	2	3	4	5	
	c) pronunciation practice	1	2	3	4	5	
	d) audio tasks	1	2	3	4	5	
	e) video tasks	1	2	3	4	5	
	f) reading tasks	1	2	3	4	5	
	g) writing tasks	1	2	3	4	5	
	h) other; please specify						

Speaking difficulties

10) You find it more difficult when speaking wi	10)	You find	it more	difficult	when	speaking	with
---	-----	----------	---------	-----------	------	----------	------

- a) native speakers of English
- b) non-native speakers of English

11) What do you find more difficult when communicating with other people about IT topics?

- a) To express and communicate my own thoughts and ideas.
- b) To understand what they are trying to communicate (to say or explain).

12) Rate each activity according to the level of difficulty when speaking about IT topics.

(1 - very easy, 2 - easy, 3 - neither easy nor difficult, 4 - difficult, 5 - very difficult)

a) giving presentation to the class	1	2	3	4	5
b) speaking in a pair	1	2	3	4	5
c) debating in a group	1	2	3	4	5
d) doing role plays	1	2	3	4	5

13) Rate each of these features according to the level of difficulty when speaking about IT topics.

(1 - very easy, 2 - easy, 3 - neither easy nor difficult, 4 - difficult, 5 - very difficult)

a) not speaking fluently and coherently	1	2	3	4	5
b) limited range of specialized vocabulary	1	2	3	4	5
c) limited grammatical range	1	2	3	4	5
d) grammatical errors	1	2	3	4	5
e) pronunciation errors	1	2	3	4	5

14) Rate each of these language functions according to the level of difficulty when speaking about IT topics.

(1 - very easy, 2 - easy, 3 - neither easy nor difficult, 4 - difficult, 5 - very difficult)

a) describing and comparing features	1	2	3	4	5
b) describing processes and trends	1	2	3	4	5
c) giving advice and instructions	1	2	3	4	5
d) providing explanations	1	2	3	4	5
e) giving personal opinions	1	2	3	4	5
f) giving reasons and justifying	1	2	3	4	5
g) asking for information or explanation	1	2	3	4	5
h) expressing disagreement	1	2	3	4	5
i) persuading	1	2	3	4	5