

**Pronunciation learning strategies, word stress and vowel
reduction**
A quantitative case study in the Hungarian secondary school context

**Kiejtés-tanulási stratégiák, szóhangsúly és magánhangzó-
redukció**
Egy kvantitatív esettanulmány magyar középiskolai kontextusban

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Abstract

This study is concerned with the effects of pronunciation learning strategies on the effectiveness of pronunciation learning, especially in terms of word stress placement and vowel reduction in the Hungarian context. The study aims to identify the intelligibility-inhibiting features of Hungarian-accented English in general and find the most frequently used pronunciation learning strategies and most commonly mispronounced items in two production tests. The study also intends to explore the effects of the utilized strategies and certain background variables on the effectiveness of the acquisition of native-like and intelligible primary word stress placement and vowel reduction in the examined language group. Since the present paper intends to gain deeper understanding of a single language group consisting of 12 students it can be classified as a case study. Despite this aspect of the present paper, quantitative analysis methods were used on the production tests and the questionnaire in order to better understand the examined phenomena and not for the sake of any generalisations of this sample to a larger population. The research could be repeated on a larger sample in the sake of generalisability, therefore this paper could also be classified as a pilot study.

In order to ensure the triangulation required for a case study, the research employed two data collection instruments. The first set of instruments consists of three production tests which were taken after pronunciation teaching sessions utilizing different strategies. Before the first teaching session, cognitive and memory-related strategies were utilized. Social and cognitive strategies were facilitated before the second test, while social, cognitive and memory-related strategies before the third test. The main difference between strategy-use, therefore, is the utilization of social strategies. Due to constraints of time and resources only the first and third tests were analysed as pre- and post-tests respectively for any possible development between the two tests using Wilcoxon's signed-rank test. The change in means of the test score could be the result of the facilitation of social strategies prior to the first test. A questionnaire which measures the pronunciation learning strategy-use of the participants was also employed. Means of the different constructs representing strategy-types were compared and the same constructs were used to conduct correlation analyses between the production test scores, strategy-use and other background variables.

The study discovered the following results. Firstly, the study found, through desk-research, that a list of intelligibility-inhibiting features of Hungarian-accented English can be compiled based on existing literature, however, further research is needed to confirm the

findings. Secondly, it was found that cognitive strategies are favoured against other strategies, which seems to be in line with earlier studies. Thirdly, the effect of certain suffixes and prefixes on word stress is not well-understood in the examined language group, and therefore explicit instruction on pre-stressed suffixes and implicit practice terms of the prefixes *con-* and *com-* might be beneficial. Lastly, it was identified through the mean-comparison of the production tests and the correlation analysis between the test scores and strategy-use that social strategies can be effective in the case of examined phenomena, therefore their facilitation in teaching practice could be advisable.

Magyar nyelvű összefoglaló

1. Bevezetés

Jelen dolgozat témája a kiejtés-tanulási stratégiák használata, s hatása a főhangsúly-elhelyezés és magánhangzó-redukció elsajátítására. A kiejtés-tanítás napjainkban meglehetősen népszerű ágnak számít a nyelvpedagógián belül (vö. Celce-Murcia, 2010; Couper, 2015; Thomson and Derwing 2015), bár az újabb empirikus tanulmányokat magába foglaló szakirodalom kevésbé gyakori (Levis, 2015, pp. 2-3). A tanulási stratégiák vizsgálata szintén gyakran kutatott terület az 1990-es évektől kezdve (O'Malley & Chamot, 1990; Wenden, 1991; Oxford, 1995; Oxford et al. 2004). Ezenkívül nemzetközi kontextusban a kiejtés-tanulási stratégiákat vizsgáló kutatások is egyre nagyobb figyelemnek örvendenek (Peterson, 2000; Eckstein, 2007; Campos, 2015; Szyszka, 2017), az érthetőség-alapú kiejtéstanítást népszerűsítik. Magyar kontextusban bár a kiejtés-tanítás egyre nagyobb közkedveltégnek örvend (Piukovics 2021, Gyurka 2022), s a tanulási stratégiák kutatása is kezd megjelenni (Doró & Habók, 2013; Habók & Magyar, 2018), a kiejtés-tanulási stratégiák vizsgálata és az érthetőségre való koncentráció az anyanyelvihez hasonló kiejtéssel szemben még nem, vagy csupán kevésbé jelentek meg a hazai szakirodalomban. Így a jelen dolgozat ezt a rést célozza meg a következő kérdésekre keresve a választ:

(1) A magyar akcentussal beszélt angol mely jellemzői zavarhatják a megértést?

(2) Milyen ismétlődő hibák vannak egy budapesti gimnázium nyelvi csoportjába tartozó magyar diákok beszédében a szóhangsúly-elhelyezés és a magánhangzó-redukció tekintetében?

(3) Milyen tanulási stratégiákat alkalmaznak egy budapesti gimnázium nyelvi csoportjába tartozó magyar diákok az angol kiejtés tanulásához

(4) Milyen tanulási stratégiák lehetnek hasznosak egy budapesti gimnázium nyelvi csoportjába tartozó magyar diákok számára az érthető szóhangsúly-elhelyezés és magánhangzó-redukció elsajátításában az angol nyelvben?

Mivel a dolgozat egy 12 fős nyelvi csoport nyelvhasználatát és tanulási folyamatait kívánja felmérni, esettanulmányként is kategorizálható. Bár a tanulmány kvantitatív mérési eszközöket alkalmaz, az általánosíthatóság igénye nem merül fel; az említett eszközök csupán azért kerülnek alkalmazásra, hogy közelebbi betekintést nyújtsanak a célcsoport beszédjegyeire szóhangsúly-elhelyezés és magánhangzó-redukció szempontjából, valamint a csoport stratégia-használatába.

2. A szakirodalom áttekintése

A fejezet első felében az érthetőségi-elv áttekintése után Jenkins (2000) LFC modellje és Levis (2018) érthetőség-alapú kiejtés-tanítási modellje, illetve Piukovics (2021) magyar akcentussal beszélt angol jellemzőket összefoglaló fejezete alapján összeállításra került egy olyan lista, mely a magyar akcentussal beszélt angol azon jelenségeit foglalja magába, amelyek zavarhatják az érthetőséget. Ezzel az első kutatási kérdés kerül megválaszolásra. A lista a következő standard változattól eltérő jellemzőket tartalmazza:

- az aspiráció teljes hiánya a zöngétlen zárhangokban [p, t, k]
- különbség a magas funkcionális terhelésű magánhangzó-párok eloszlásában (például /ʌ/-/a:/ vagy /ɛ-æ/)
- néma betűk ejtése némely szóeleji mássalhangzó-torlódásokban (pl. *psychology* /psaɪ'kɒlədʒi/)
- a zöngésségen alapuló rövidülés vagy nyúlás teljes hiányának lehetősége (pl. *cheese* és *cheat* szavak azonos hosszúságú /i:/ hanggal való ejtése)
- az *-ed* és *-s* toldalékok *-[id]* és *-[iz]*-ként való ejtése a fonotaktikai kontextustól függetlenül
- a szóhangsúly-elhelyezés alapvető szabályainak teljes hiánya, mely folyamatos első szótagra csúszó hangsúlyt eredményez (pl. *based* /beɪst/)
- magánhangzó-változások az első szótagra csúszó hangsúly következtében (pl. *personality* /'pɜː(r)sənələri/)
- jobbra tolódó szóhangsúly hiperkorrekció következtében (pl. *personality* /'pɜː(r)sənələri/)
- kevésbé élénk intonáció

A fejezet második felében a kiejtés-tanulási stratégiák kutatásával kapcsolatos szakirodalom kerül áttekintésre. A tanulási stratégiák meghatározásával és taxonómiájával kapcsolatos irodalom áttekintése után specifikusan kiejtés-tanulási stratégiákkal foglalkozó empirikus kutatások kerülnek bemutatásra (Peterson, 2000; Vitanova & Miller, 2002; Osburne, 2003; Eckstein, 2007; Campos, 2015; Szyszka, 2017).

3. Kutatási módszerek

A kutatásnak 12 résztvevője van, egy 9. osztályos középiskolai nyelvi csoport tanulói B1-B2 nyelvi szinten. A résztvevők egy kiemelten jó háttérrel rendelkező iskolában tanulnak, így valószínűleg motiváltabbak az átlagos magyar nyelvtanulónál.

A kutatás során két kutatási eszköz került alkalmazásra: három produkciós teszt, melyből kettő elemzésre került sor, illetve egy, a kiejtés-tanulási stratégiákat vizsgáló kérdőív. A produkciós tesztek az éppen aktuális témához igazodtak, s különböző kiejtés-tanulási stratégiákat támogató kiejtéssel kapcsolatos tevékenységek után lettek elvégezve. A tesztek körülbelül 100 szavas, az éppen aktuális témából kapcsolódó szövegek felolvasásából álltak. Az első teszt, amely elemzésre került 2022. november 10-én volt kiadva, kognitív és

memóriával kapcsolatos stratégiákat hasznosító instrukciót követően az *o* betű különböző kiejtésbeli realizációval kapcsolatosan. A két teszt között egy kognitív és szociális stratégiákat támogató kiejtés-tanulási tevékenység került megtartásra. A harmadik (második elemzett) teszt 2023. január 23-án került felvételre kognitív, szociális és memóriával kapcsolatos stratégiákat támogató instrukciót követően, a redukált schwa hang és a határozott névelő kiejtésének témakörében. A két teszt közötti fő különbség, hogy míg az első teszt előtt szociális stratégiák nem kerültek hasznosításra, addig a harmadik teszt előtt két szociális stratégiákat támogató tanítási ciklus is megtartásra került. Így lehetséges, hogy a két teszt közötti átlagbeli különbség a szociális stratégiák használatából ered.

A tesztekben szóhangsúly szempontjából három különböző pontszámot különíthetünk el: főhangsúly-elhelyezés minden tagmondat-hangsúlyos szóban, főhangsúly elhelyezés azon tagmondat-hangsúlyos szavakban, melyekben nem az első szótagra esne a szóhangsúly jobbra tolódó hangsúlyokkal együtt és jobbra tolódó hangsúlyok nélkül. Magánhangzó redukció tekintetében két pontszám került kiszámításra. Az egyik magánhangzó-redukció a standard változat (RP) szerint. A másik pontszámban csak a hangsúlyeltolódás által kiváltott redukcióbeli változások számítottak hibának (hiszen ez jobban fenyegeti az érthetőséget). A produktív tesztek így a második és a negyedik kutatási kérdésre irányulnak, hiszen a résztvevők beszédében visszatérő hangsúlyelhelyezési és redukciós hibák mérésére, illetve a szociális stratégiák hatékonyságának mérésére is alkalmas lehet.

A kérdőív Oxford (1990) stratégia-bankján alapul, ám a kérdőív elemei saját megfogalmazásúak, így nem egy standardizált mérőeszköz alkalmazásáról beszélhetünk. A kérdőív összesen hat konstruktumból áll, melyek Oxford hat stratégia-típusának felelnek meg (zárójelben az elemek száma látható és a Cronbach-alfa arányok láthatók): memóriával kapcsolatos stratégiák (4; 0.606), kognitív stratégiák (6; 0.705), kompenzációs stratégiák (4; 0.637), metakognitív stratégiák (6; 0.709); affektív stratégiák (2; 0.779); és szociális stratégiák (6; 0.711). Érdemes megemlíteni, hogy a kérdőívet korábban, 2020-ban, egy pilot felmérés keretében 34 résztvevőn teszteltem (Csizmazia, 2020), mely során megbízhatósági teszteket és dimenzió-analízist végeztem a konstruktumokon, hogy meggyőződjem azok megbízhatóságáról, illetve arról, hogy egyetlen dimenziót vizsgálnak. A kérdőív a harmadik és negyedik kutatási kérdésre fókuszál, a különböző stratégiák csoporton belüli népszerűségét és az egyes stratégiák hatékonyságát vizsgálva átlagok összehasonlításával és a teszt-pontszámok és stratégia-használat közötti korrelációs analízissel.

4. Eredmények

Az 1. kutatási kérdés a 2. fejezetben lett megválaszolva a szakirodalom áttekintése révén. A 2. kutatási kérdés tekintetében elmondható, hogy szóhangsúly tekintetében legnagyobb arányban (60%) az előhangsúlyos toldalékok felelősek a hangsúlyelhelyezéssel kapcsolatos hibákért (pl. personality helyett). Ezenkívül nagy arányban találhatók hibák a *con-* és *com-* prefixumokat tartalmazó szavakban, bár legtöbb esetben más tényezőkkel (leggyakrabban szintén az előhangsúlyos toldalékokkal) magyarázhatók a hibák. Fontos még megjegyezni, hogy jóval több balra, az első hangsúlyra, tolódó hiba szerepelt a tesztekben. Ez ellentmondásban van Levis (2018) modellével, melyben a jobbra tolódó hibákat sokkal fenyegetőbbnek titulálja az érthetőségre. Magánhangzó-redukció tekintetében elmondható, hogy (mivel két egymással közös kapcsolatban álló jelenség került vizsgálatra) hasonló elemekben volt felfedezhető nagyszámú hiba. Egyrészt szintén gyakoriak a hibák előhangsúlyos toldalékokkal rendelkező szavakban, illetve a *con-* és *com-* kezdetű szavakban. Ezenkívül megfigyelhető, hogy az *e* és *o* betűvel jelölt hangok gyakran nem redukálódnak, s ezek magyar /o/ és /e/ hangként ejtődnek.

A 3. kutatási kérdés tekintetében elmondható, hogy a résztvevők egyértelműen a kognitív stratégiákat részesítik előnyben ($\bar{x}=3,2$), melyet a szociális stratégiák követnek ($\bar{x}=2,6$). A memóriával kapcsolatos stratégiák a negyedik helyre kerültek ($\bar{x}=2,4$). Ezekről az eredményekről elmondható, hogy részben összhangban állnak a szakirodalommal. Oxford (1990) is megjegyzi, hogy a kognitív stratégiák a legnépszerűbbek között vannak, bár ő egymást támogató alrendszerekként tekint a stratégiákra. Campos (2015) kutatásában szintén a kognitív illetve a kompenzációs stratégiák bizonyultak a legnépszerűbbnek. Ezzel ellenben Szyszka (2017) felmérésében a az affektív stratégiák voltak a legnépszerűbbek, a kognitív stratégiák pedig csak a harmadik helyet foglalták el. Magyar kontextusban Hanók és Magyar (2018) folytatott felmérést, bár ennek középpontjában általánosan a tanulási stratégiák álltak, s nem a kiejtés-tanulási stratégiák.

A 4. kutatási kérdéshez két különböző kutatási eszköz vizsgálata is köthető: a produkciós tesztek átlagának összehasonlítása és a kérdőív korrelációs elemzése. A tesztek pontszáma mind a két vizsgált jelenség esetében magasabb volt a harmadik tesztben, mint az első tesztben. Szóhangsúly-elhelyezés tekintetében 1,2%-os fejlődés tapasztalhat minden tagmondat-hangsúlyos szóban, 2,2% fejlődés azokban a szavakban, amelyekben nem az első szótagra esne a szóhangsúly jobbra tolódó szóhangsúlyokkal együtt és 3,4%-os fejlődés azokban a szavakban, amelyekben nem az első szótagra esne a szóhangsúly jobbra tolódó szóhangsúlyok nélkül. Azonban az átlagpontszámokon elvégzett Wilcoxon-teszt alapján ezen különbségek

nem szignifikánsak ($p=0.754$). Magánhangzó-redukció szempontjából 3,8%-os javulás látható a standard szempontjából, illetve 11,1%-kal kevesebb szóhangsúly-eltolódás által kiváltott magánhangzó-változás található a harmadik tesztben. Ez arra enged következtetni, hogy a szociális stratégiák hatékonyak lehetnek a helyes és érthető magánhangzó-redukció elsajátításában.

A kérdőív vizsgálata nem talált szignifikáns korrelációt a fő tesztpontszámok (az alpontszámok átlaga) és a különböző stratégia-típusok használata között. Azonban közepes erősségű ($r=0,629$) található a szociális stratégiák és a nem első szótagon hangsúlyozandó szavakban a harmadik tesztben jobbra tolódó hangsúlyok nélkül. Mivel a magyar tanulónak a nem első szótagon hangsúlyozandó szavak jóval problémásabbak, arra következtethetünk, hogy a szociális stratégiák használata segíthetett a problémás szavak szóhangsúlyának elsajátításában a csoporton belül.

5. Konklúzió

A tanításra való gyakorlat tekintetében mindenképpen elmondható, hogy érdemes nagyobb hangsúlyt fektetni az előhangsúlyos toldalékok szerepére, hiszen viszonylag kevés van belőlük, ám nagy hatást tudnak gyakorolni a szóhangsúly-elhelyezésre. A *con-* és *com-* prefixumokkal azonban érdekesebb lehet lexikális szinten foglalkozni, hiszen gyakran nehezen felfedezhetők ezek a toldalékok a szóban. Érdemes még megjegyezni, hogy a szociális stratégiák pozitív hatást gyakorolhatnak mind a problémás szavak szóhangsúly-elhelyezésére (a kérdőív elemzése szerint) és a magánhangzó-redukcióra (a tesztek átlag pontszámainak összehasonlítása alapján). Ezenkívül a kérdőív elemzéséből szintén kiderül, hogy a vizsgált csoportban az önbizalom és motiváció összefüggésben a magánhangzó-redukció elsajátításában.

A jelen dolgozatnak természetesen komoly limitációi vannak, melyek közül a legszembetűnőbb a vizsgált csoport kis létszáma, hiszen statisztikai eljárásokat (pl. korreláció-analízist) nagyobb létszámú csoportokon érdemes végrehajtani. Ezenkívül a kutatási tervben is vannak hiányosságok. Például a vizsgált produkciós tesztek szövege teljesen eltérő, így a tesztek pontszáma közötti különbséget könnyedén okozhatja a tesztek szövegének eltérése. Emellett a kérdőív két konstruktuma 0,6 és 0,7 közötti Cronbach-alpha pontszámmal rendelkezik, amely elfogadható, ám nem ideális, és az egyik konstruktum csupán két elemet tartalmaz.

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1. Introduction

1.1 The topic of the study and its place among existing literature

The attention of the present study is directed towards the effects of different pronunciation learning strategies – and their implementation into language classrooms – on two robust and interrelated pronunciation features – word stress placement and vowel reduction – in the Hungarian context. Although pronunciation teaching and learning is a fairly popular field of analysis today, literature that applies the findings of modern research into the field is fairly scarce, although not nonexistent (cf. Levis, 2016, pp. 2-3). Research into the strategy-use of L2 learners of English became relatively popular at the end of the 20th century. The effectiveness of different types of strategies and the effectiveness of language learning strategies in general, the popularity of different strategies and the effects of background phenomena on strategy usage was examined by many researchers in the 1990s and the early 2000s (O'Malley & Chamot, 1990; Wenden, 1991; Oxford, 1995; Oxford et al. 2004). Studies on pronunciation learning strategies and the effect of language learning strategies on pronunciation learning also became relevant in TESL-literature by the beginning of the century, and empirical studies were also conducted in the field (Peterson, 2000; Eckstein, 2007; Campos, 2015; Szyszka, 2017). In the Hungarian context, studies have been conducted on pronunciation teaching in general (Piukovics, 2021; Gyurka, 2022), as well as on language learning strategies (Doró & Habók, 2013; Habók & Magyar, 2018). Literature and empirical research on pronunciation learning strategies and their effects on pronunciation performance, though, are close to nonexistent in the Hungarian context. The present study intends to fill this gap in the existing literature.

The participants of the study are learners of a language group in a secondary school in Budapest. The present paper only intends to examine and discuss the recurring pronunciation features in connection with primary word stress placement and vowel reduction as well as the effects of learning strategies on these features in the examined language group. The results are in no way generalizable to the population of Hungarian language learners despite the qualitative analysis methods employed in the study. These analyses were merely used in the hope of better understanding regarding the target group's primary word stress placement, vowel reduction and strategy-use. In fact, since the main objective of this study is to discover features and processes inside this single language group, and gain a deeper understanding of their pronunciation learning strategies and their effects on word stress placement and vowel reduction, it can be classified as a case study into pronunciation learning strategies and their effects on word stress

placement and vowel reduction of a language group in a secondary school in Budapest. This claim is also supported by the fact that multiple research methods were employed to serve the adequate triangulation of this study: the analysis of audio recordings from a qualitative point of view, the quantification of these recordings and a questionnaire into the pronunciation learning strategies were all part of the data collection procedure and their analysis. The main profile of the study is quantitative, though, since most of the research questions will be answered through quantitative and statistical analysis. The research design utilized in the present study could be repeated on a larger sample for generalizable results, therefore this paper could also be labelled as a pilot study.

1.2 Aims, research questions and hypotheses

The present paper aims to discover the learning strategies that might be effective for facilitating the acquisition of accurate and intelligible word stress placement and vowel reduction for Hungarian learners of English in a language group of a secondary school in Budapest and find the answers to the following four questions:

- (1) Which features of Hungarian-accented English could disturb intelligibility?
- (2) What recurring mistakes are there in the speech of Hungarian students of a language group of a secondary school in Budapest in terms of primary word stress placement and vowel reduction?
- (3) Which learning strategies do Hungarian students of English in a language group of a secondary school in Budapest use for learning pronunciation?
- (4) Which learning strategies might prove useful in the acquisition of intelligible primary word stress placement and vowel reduction for Hungarian students of English in a language group of a secondary school in Budapest?

1.3 Structure

In the following chapter of this study, I will give an overview of previous literature in the field of pronunciation teaching and learning strategies, with a special attention on research into pronunciation learning strategies, which should provide answers to Research Question 1 through desk research. Following that, an empirical study will be presented, which aims to provide answers to Research Questions 2, 3 and 4. The research presented has two main data collection instruments. The first one is a production test consisting of three data collection points, two out of which will be analysed qualitatively in order to answer Research Question 2, and quantitatively in order to explore Research Question 2 and Research Hypothesis 1. The

other data collection instrument is a questionnaire examining the pronunciation learning strategies of the participants. Mean-comparison of the main constructs of the questionnaire will be conducted to answer Research Question 3 and. Research Question 4 and. After giving information on the research design, the data collected by these instruments will be presented and discussed. At the end of the paper, I will draw conclusions listing the answers to the Research Questions and as to how the data provided can be used in the classroom.

2. Literature review

In the following sections, I would like to discuss the literature on the topics of the intelligibility principle and language learning strategies. In the first part of this literature review the main principles of the intelligibility are highlighted, as well as some key information on pronunciation teaching in the Hungarian context. By contrasting frameworks into focusing on intelligibility with literature into Hungarian-accented English a list of intelligibility-inhibiting features of Hungarian-accented English will be compiled, thus answering Research Question 1.

In the second part of the literature review, I will turn my attention towards language learning strategies. I will explore the meaning of the term and the different taxonomies in connection with learning strategies. Finally, empirical research into pronunciation learning strategies will be discussed and evaluated. The present chapter only discusses the literature and main theories closely connected to the objectives and aims of the research paper. Therefore, more thorough research into the definition and components of pronunciation, literature on the effectiveness of explicit pronunciation teaching and a discussion on pronunciation teaching methods and practices are beyond the scope of this literature review.

2.1 The intelligibility principle

2.1.1 *Setting priorities*

One of the most crucial points of study in pronunciation teaching today is connected to the debate between selection and inclusion, that is whether to try to teach all the pronunciation features of a native dialect, or rather try to focus on those features that might obstruct understanding. In the following chapter, I will review the main schools that developed in the process of attempting to identify what pronunciation features should be taught in a language classroom.

2.1.2 *Main ideas and concepts of the intelligibility principle*

According to the advocates of the intelligibility-principle, students do not need to be native-like, only understandable (Levis, 2005), which is a much more realistic goal, especially for adult learners. Therefore, the *intelligibility vs. nativeness debate* is rather a question of selection as opposed to inclusion. A speaker with a native-like pronunciation is likely to be understandable, since a native dialect is an organically developed variation that evolved to be mutually understandable by speakers. A syllabus based on the native-like approach contains

more features, therefore it is a wider range of items than containing features of one or more varieties. In other words, the set of intelligibility-features are a subset of nativeness-features.

Before we move any further, three crucial terms in the framework of the intelligibility principle should be clarified: intelligibility itself, comprehensibility and accentedness. Derwing & Munro (2005) define *intelligibility* as “the extent to which a listener actually understands an utterance”, *comprehensibility* as “a listener’s perception of how difficult it is to understand” the speaker, and *accentedness* as “the listener’s perception of how different a speaker’s accent is” from the native community (p. 385). They also note that intelligibility can be measured by the percent of correctly transcribed words in a transcription task while comprehensibility and accentedness can be studied with Likert scales. An additional factor in favour of the intelligibility approach is that since the end of the 20th century, we have empirical evidence suggesting that accentedness does not have a significant effect on how intelligible native speakers perceive other speakers (Derwing & Munro, 1999).

Another important argument for the intelligibility principle stems from a sociolinguistic approach to the discussion. Jenkins (2000) found that non-native speakers of the same L1 use a variety that contains more non-native features among themselves, while they try to reduce their foreign accent when they are talking to a native speaker or a speaker of another L1. On the other hand, Munro, Derwing & Norton (2006) concluded that non-native speakers have no significant advantage in perception when they are listening to a speaker from the same L1. This might point to the realisation that non-native speakers of the same mother tongue use a more accented variety to express their identity. Thir (2016) also points out that the nativeness principle cannot be maintained from a socio-psychological point of view and that it is the right of the learners to retain their non-native accents to express their identity. (pp. 5-7).

2.1.3 Setting priorities: frameworks for focusing on intelligibility

One of the most influential frameworks of selected items for teaching and learning English for intelligibility is the Lingua Franca Core (LFC) by Jenkins (2000). LFC focuses on elements required for intelligible communication in international contexts between two non-native speakers. In this model, features of five main categories are listed: the consonant inventory, additional phonetic requirements, consonant clusters and features in connection with nuclear stress. For a short overview of the LFC, see *Appendix A* (taken from Jenkins, 2002: 96-97).

Jenkins’ (2000) framework has been the target of serious criticism despite it being widely adopted by teachers and cited by many researchers. One of the most important

objections against this framework is in connection with its focus on segmental rather than suprasegmental features (cf. Levis, 2018, p. 241) and the fact that stress falls outside of the core LFC items (cf. Levis, 2018, p. 124). Also, LFC is focused mostly on consonants while it is suggested that vowels affect intelligibility more consistently (Levis, 2018, p. 69). It is, however, important to point out that Jenkins herself comments that LFC is not a universal model and that the speaker's communication needs is a crucial factor in deciding which items should be acquired and should be the main basis of selection (Jenkins, 2006). Also, she points out that some non-core features should be touched upon with the aim of drawing attention to them "receptively" (Jenkins, 2002: 98).

Levis (2018) also offers a model of selecting features on the grounds of the intelligibility principle. This framework is closely related to that of Jenkins (2000), correcting and adding elements, especially in terms of suprasegmental features. Before concrete elements are mentioned, Levis (2018, p. 243) points out that the pronunciation of useful and frequent words, possible taboo words, professional terms and personal names should be promoted. In terms of orthography, basic decoding skills for vowels, changeable consonant letter-to-sound rules for consonants and the pronunciation of grammatical endings should be highlighted rather than complex spelling rules (p. 247). *Functional load*, that is, the number of minimal pairs in a given opposition of sounds (King, 1967), plays a crucial role in defining features crucial for intelligibility. In the case of both consonants and vowels, the sounds with higher functional load are prioritised in this framework along with distinctions in length. The correct pronunciation of initial and final consonant clusters and the lack of vowel-addition are also crucial features. In terms of word stress, the lack of rightward mis-stresses, basic rules of word stress and mis-stresses causing changed vowel quality are highlighted. For a list of key features in Levis' (2018) framework, see *Appendix B*, (taken from Levis, 2018: 249-261. Less important features are also given in the original. See the full source for a complete list and a list of less important features).

2.1.4 Setting priorities: Pronunciation Teaching in the Hungarian context

Since this study is concerned with Hungarian students, let me discuss some of the literature in connection with pronunciation teaching in Hungary. One of the most crucial works in the topic is Nádasdy's (2000) dictionary of English for Hungarian learners, which aims to provide intelligible pronunciation for certain language items that might prove difficult for Hungarian learners. Nádasdy (2006) also created one of the most impactful pronunciation text books written specifically for Hungarian teacher trainees. More recently, Balogné Bérces,

Gyurka & Piukovics (2020) created a website hosting pronunciation teaching classroom activities made specifically for Hungarian learners. One of the latest empirical studies on the topic of pronunciation teaching was conducted by Gyurka (2022), who examined the relevance and effectiveness of pronunciation tasks from an international coursebook (in a slightly modified form). She concluded that although there was only a slight difference in the pre- and post-test scores, explicit pronunciation teaching is extremely important in eradicating the fossilization of pronunciation errors.

Piukovics (2021) compiled a list of potentially problematic pronunciation features of Hungarian speakers of English based on the comparison of the two sound systems. She aims to provide a complete list of the features of “a hypothetical Hungarian learner of English whose pronunciation of English displays all the potential problem points” (p. 35). She presents the results of the contrastive analysis by listing the segmental features first (vowels and consonants separately), followed by phonotactical and laryngeal aspects, then focuses on supra-segmental features, namely word-stress and prosody. Finally, she also provides some insight into the problem of spelling pronunciations, which she considers crucial in terms of Hungarian learners, since English and Hungarian have the same writing system, but the same letter often stands for a different sound in the two spelling systems. For a simplified version of the list of potential errors by Piukovics (2021, 37-61), see *Appendix C*.

According to Piukovics (2021), one of the most crucial aspects of Hungarian-accented English is word stress. Due to the different behavior of stress in English and Hungarian, there are several problems that might arise in Hungarian learners’ word stress placement. In Hungarian, the stress is always on the first syllable. From the viewpoint of learners of ESL, however, stress can fall on practically any syllable, and for them, it is close to impossible to predict which syllable will be stressed. A Hungarian learner might not even recognize the crucial differences in the stress-systems of the two languages and pronounce all the English words with initial stress. This is referred to as *stress deafness* by Dupoux et al. (1997), and it can be prominent for speakers of languages that do not have distinctive stress. This results in, for example, not being able to distinguish between stress minimal pairs and pronouncing each word with a fixed stress. For more advanced learners, hypercorrect forms can also be present (applying word-medial stress while word-initial stress is required, such as *adjective*).

2.1.5 Setting priorities: Intelligibility in the Hungarian context

Although Hungarian-accented English is considered to be mostly understandable and is thought to exhibit fewer features that could threaten intelligibility (Piukovics, 2021, p. 11), it

can be beneficial to highlight those few language properties that would require special attention due to their intelligibility-inhibiting nature. Therefore, contrasting the intelligibility-models of Jenkins (2000) and Levis (2018) with Piukovics's (2021) list of Hungarian-accented English features, a list of those features of Hungarian-accented English which might hinder understanding was created. All in all, the features which might be problematic for Hungarian learners of English that can also hinder understanding can be seen in Table 1.

Table 1

Intelligibility-inhibiting features of Hungarian-accented English

- complete lack of aspiration in voiceless stops [p, t, k]
- differences in the distribution of high functional load vowel pairs (such as /ʌ/-/a:/ or /ɛ-æ/)
- pronouncing silent letters in certain initial clusters (e.g. *psychology* /psaɪ'kɒlədʒi/)
- possible absence of clipping and lengthening based on voicing (e.g. (pl. pronouncing *cheese* and *cheat* with an /i:/ of the same length)
- pronunciation of *-ed* and *-s* as *-[id]* and *-[iz]* respectively regardless of phonological context (earlier stages of acquisition only) (e.g. *based* /beɪst/)
- lack of basic rules on word stress placement, resulting in words stressed mostly on the first syllable (e.g. *personality* /'pɜ:(r)sənæləti/)
- change in vowel quality as a result of placing the stress on the first syllable (e.g. *personality* /'pɜ:(r)sənæləti/)
- rightward mis-stressing as a result of hypercorrection
- less lively intonation

Although the list is short, it is important to point out that although certain features are not necessary for intelligible pronunciation, awareness-raising about them might be crucial for perception (e. g. weak forms, contracted forms, features of connected speech etc). Also, it is important to keep in mind that no list of features can include individual differences and needs, therefore differentiation is of key importance even in possession of the knowledge of what features to look out for.

2.2 Language learning strategies

2.2.1 The definition and nature of learning strategies

Firstly, it is important to clarify the meaning of learning strategies. Oxford (1990) suggests that learning strategies are “specific steps” taken by learners in order to make their learning process more efficient (p. 63). This concept, obviously, should be differentiated from learning styles, which are simply “overall patterns” that give the general focus of language learning, according to Cornett (1983, p. 9). In this aspect, it can be said that learning styles form a much broader category than learning strategies, which are much more specific.

One of the most important controversial issues surrounding Oxford’s definition, according to Dörnyei & Skehan (2003), is whether learning strategies are “neurological, cognitive or behavioural” (p. 611), that is, on which conceptual level learning strategies can be examined. Oxford, as an example, refers to strategies as “steps” or “actions”, which suggests the classification of strategies as behavioural processes, while others, such as O’Malley & Chamot (1990) also include conceptual elements as well by defining strategies as “special thoughts or behaviours” (p. 1).

2.2.2 The taxonomy of learning strategies

Another important debate regarding learning strategies is their taxonomy and how they can be divided into different categories. Oxford (1990) lists 2 main categories: direct strategies, where mental processing of language is required and indirect strategies, which are processes that support language learning. She also distinguishes 6 different subcategories of learning strategies: direct strategies include *memory-related*, *cognitive* and *compensational strategies*, while *affective* and *social strategies* belong to the group of indirect strategies. *Memory-related* strategies include those strategies in which learners link two or more items together without developing a deeper understanding (e. g. learning by a logical string or rhymes). In *cognitive strategies*, learners manipulate the material through repeating, reasoning, analysis, note-taking, summarizing, outlining, synthesizing, practising in naturalistic settings, practising sounds formally. In case of *compensatory strategies*, students try to make up for missing knowledge by, for example, guessing from the context or switching back to the mother tongue. With *metacognitive strategies*, learners identify their own learning preferences by organising their materials or setting up a schedule, for instance. Regarding *affective strategies*, learners identify their mood, talk about their feelings and try to develop their learning by modifying their mood in a positive way. And finally, *social strategies* allow students to work with their peers, ask questions from each other, correct each other and help each other.

A lot of criticism has been targeted towards this taxonomy. An important point is raised by Dörnyei & Skehan (2003), noting that compensatory strategies are not in connection with the learning process but the production itself. The fact that, despite Oxford's behavioural views on learning strategies, one of the subcategories is *cognitive strategies* and the fact that it cannot be strictly distinguished from *memory-related* strategies might also raise some issues. As a result of this controversy, other alternative ideas are available for categorising learning strategies. O'Malley & Chamot (1990), for example divide learning strategies into three groups: *cognitive*, *metacognitive* and *social/affective strategies*.

Another important theory to take into consideration is Kolb's (1984) learning cycle construct. This model describes the general process of learning things. First, the learner observes the phenomenon, reflects on it, then *conceptualises* it making the phenomenon abstract, and finally the learner makes actions based on this conceptualised knowledge, which starts the cycle again. Obviously, Kolb's (1984) model is not specific for language learning, however Dörnyei & Skehan (2003) adapted it for the language acquisition theory, creating the cycle of *input*, *feedback/noticing*, *hypothesis forming* and *hypothesis testing*.

2.2.3 Pronunciation learning strategies: empirical research

As for the empirical research conducted in the field of pronunciation learning strategies, a growing number of related studies can be found. One of the first pieces of research into pronunciation learning strategies is that of Peterson's (2000), who uses qualitative methods and takes Oxford's (1990) taxonomy as a basis for his research. It is, however, important to point out that Peterson examined English learners of Spanish, which is, obviously, different from examining EFL learners. Vitanova & Miller (2002) studied the effects of teacher instruction on student's pronunciation from various linguistic backgrounds. As a result, it is not strictly concerned with pronunciation learning strategies. Derwing & Rosettier (2002) conducted a study with 100 participants focusing on the frequency of potential communication breakdowns due to certain pronunciation errors and the strategies for resolving them. Thus, the study focuses on strategies in connection with usage and not in connection with learning. The fourth study in the field was conducted by Osburne (2003). He interviewed 50 participants and asked them to make a recording of their autobiography and asked them to repeat certain sentences in order to elicit better pronunciation. He established 8 categories of pronunciation strategies and then went on to examine which is the most frequently used one. A more recent study conducted in the field of pronunciation learning strategies is conducted by Eckstein (2007). His study is based on Kolb's learning cycle. The results backed up Kolb's model, since students used strategies

from all four stages in a cycle. Campos (2015) studied possible correlations between aptitude, semi-spontaneous pronunciation performance and intelligibility. Surprisingly, the only significant correlations were found between two strategies (listening for new sounds in everyday speech and regulating mood when learning English). Szyszka (2017) examined the possible interrelations between the frequency of pronunciation learning strategy use and anxiety levels of Polish teacher trainees through quantitative and qualitative measures. She concluded that the most anxious students seem to use more strategies, while the less anxious participants used fewer strategies, although they favoured cognitive strategies that facilitate noticing, imitating native speakers and using authentic materials.

3. Research Design

The present study aims to answer the following Research Questions (RQ):

- (1) Which features of Hungarian-accented English could disturb intelligibility?
- (2) What recurring mistakes are there in the speech of Hungarian students of a language group of a secondary school in Budapest in terms of primary word stress placement and vowel reduction?
- (3) Which learning strategies do Hungarian students of English in a language group of a secondary school in Budapest use for learning pronunciation?
- (4) Which learning strategies might prove useful in the acquisition of intelligible primary word stress placement and vowel reduction for Hungarian students of English in a language group of a secondary school in Budapest?

Research Question 1 was answered through desk research in Section 2.3.5 by analysing and comparing earlier literature on intelligibility-prohibiting-inhibiting features (Jenkins, 2000; Levis, 2018) and the features of Hungarian-accented English (Piukovics, 2021). See Table 1 for the final list of intelligibility-inhibiting features of Hungarian-accented English.

Research Question 2 is attended to by the qualitative analysis of two production tests for primary word stress placement and vowel reduction. The concrete features analysed were chosen according to Table 1: basic rules of stress placement and rightward mis-stresses are both present in the list. Since vowel reduction is not part of Table 1, stress-induced vowel changes (SIVCs) were examined besides vowel reduction according to RP in order to approach the analysis from viewpoints of both the intelligibility principle and naiveness principle.

Research Question 3 is answered by comparing the means of the six main constructs of the questionnaires which measure the usage of different strategy-types. Research Question 4 is addressed by the correlation analysis between the strategy-type constructs and the final and partial scores of the two production tests.

Although the present paper employs quantitative methods, the results are not generalizable to a larger population, these methods are used in order to gain better understanding regarding the examined phenomena in the target group's language use and learning processes. Since the research design employed in the present study could be repeated on a larger sample for generalizable results, this paper could also be labelled as a pilot study.

Table 2

Research instruments, participants, data validation tools, data analysis methods and research questions and hypotheses

Data Collection Methods	Target Informants	Data Validation Tools	Data Analysis Methods	Research Questions (RQ)
Desk Research	Research into intelligibility-hindering features (Jenkins 2000; Levis 2018) and features of Hungarian-accented English (Piukovics 2021)	using multiple sources for intelligibility-hindering features, analyzing and finding consistent data in the source texts	qualitative content analysis of the literature	RQ 1
Production Tests	12 Hungarian secondary school learners	thorough phonetic analysis of the recordings, using PRAAT (2021) to determine word stress placement, Wilcoxon signed-rank test in order to check the significance of mean comparison	qualitative analysis mean comparison (Wilcoxon's signed-rank test) correlation analysis of partial and final scores, strategy-use and background variables	RQ 2 RQ 4
Questionnaire	12 Hungarian secondary school learners	pilot study, Contact validity: Dörnyei (2007), Construct validity: Cronbach's Alpha, factor analysis	mean comparison of strategy-types, correlation analysis of partial and final scores, strategy-use and background variables	RQ 3 RQ 4

3.1 Participants

3.1.1 Description of the participants

The participants of the study were 12 students from a secondary school in Budapest. Eight of the participants are male, and four of them are female. All of the participants are in 9th grade (ages 14-15), and five of them have a level B2 language exam. The group is at a stronger B1 level, according to the Common European Framework of Reference (CEFR) (Council of Europe, 2001), but naturally, there are individual differences between the participants' linguistic competence. During their English lessons, they use third edition of Oxford English File Intermediate course (Latham-Koenig & Oxenden, 2013), mostly following along with the activities provided by the textbook. Along with communicational tasks, there are explicit

grammar tasks and exercises aiming to develop vocabulary as well. It is important to point out, that the students of this language group are generally more motivated for learning and achieve great academic results. In general, learning is quite important for them, which might be explained by the fact that the middle school in which they are studying also has great achievements and a high university acceptance rate while putting great effort into motivating students as well. Therefore, the results of this study are not by any means generalizable to the population of Hungarian middle school learners. As a result of the special situation and the low number of participants, this present study could be classified as a case study, seeking deeper understanding of the pronunciation learning strategies and pronunciation development of this specific language group, rather than trying to produce results generalizable for a larger group of learners.

3.1.2 Ethical Concerns

Throughout the whole process of data collection, I used the British Association for Applied Linguistics' Recommendations on Good Practice in Applied Linguistics (2016) in order to maintain the ethicality of my study and ensure the well-being of the participants. Participation was voluntary, the completion of data collection tasks was not compulsory and students who did not complete one of the phases of the data collection process did not receive any negative retorsions. Anonymity was preserved throughout the data collection period. The participants were informed about the main topic of the research and all the data collection procedures and measures. The questions that arose were clarified immediately. Prior to the start of the data collection process consent forms were filled out by the parents to ensure that they know about every important detail of the research. See the consent form in Appendix D.

There was a point that might raise questions in connection with the ethical considerations of this study. At one point, the idea of giving out these tasks as critical listening tasks – in which participants get an audible version of the text and they have to recreate the pronunciation on the original recording as closely as possible – also emerged. In the end, however, I decided to only give the written version since the data collected would probably have mirrored the features on the recording. Critical listening tasks are probably pedagogically more optimal; therefore, this aspect of the study might be problematic in terms of research ethics as more development could have been achieved during my teaching period. However, the scripts to be read were short and the production tests were not time-consuming (much less time-consuming than critical listening tasks) and the pronunciation tests were administered as voluntary tasks, not as homework or compulsory tasks as part of an English lesson. Also, other

researchers have used similar methods (e. g. narration of a cartoon in Munro, Derwing & Norton, 2006; Munro & Derwing, 1999 and Jenkins 2000).

3.2 Data collection instruments and data analysis

The present study employs two data collection instruments: a set of reading prompts for the production tests in which the participants read out the provided texts and uploaded them as mp3 files to their Google Classroom page. Later these recordings were analysed for word stress placement and vowel reduction in order to answer RQs 2 and 4. Also, a questionnaire designed to statistically measure the pronunciation learning strategies of the participants and answer RQ 3 and 4. In the following section, these instruments will be discussed in detail.

3.2.1 The pronunciation teaching sessions

During the process of data collection, three pronunciation teaching sessions were conducted, each facilitating the usage of different learning strategies. This aspect of the present study is similar to Gyurka's (2022) research, which examined the effectiveness of similar pronunciation teaching activities of an international coursebook (Latham-Koenig et al., 2015) from the same line of books used in the present study.

The first session was conducted on 10th November, prior to giving out the first reading task. The aim of the pronunciation teaching session was to familiarise learners with the different realisations in pronunciation of the letter *o* using the strategies of categorisation, repetition and modification belonging to the categories of *cognitive* and *memory-related* strategies, according to Oxford (1990). This session might also improve the prediction skills of learners, which is a crucial pronunciation skill, according to Dickerson (2015). The task is based on Exercise 2 of Latham-Koenig & Oxenden (2013, p. 15)

The second pronunciation teaching session was held on 24th November, before asking students to do reading task 2 at home. This session was aimed to develop the sentence rhythm of student utterances in sentences containing present perfect continuous structures. The session was intending to facilitate *social strategies* by giving opportunity to model each other's pronunciation in larger groups as well as working together to create a working dialogue. The source of this task can be found in Latham-Koenig & Oxenden (2013, p. 19)

The third teaching session was conducted on 23rd January 2023, prior to giving out reading task three. The objectives of this activity were twofold: on the one hand, it aimed to draw students' attention to reduction and the usage of *schwa* by facilitating *cognitive* and *social* strategies by analysing word stress and connecting it to vowel form and modelling each others'

pronunciation in pairs, respectively. On the other hand, the session was also intending to provide students with an opportunity to learn about the different pronunciations of the definite article *the* by promoting *cognitive* strategies by observation and rule creation and *memory-related* strategies in the form of a memory game. The source of this task is Exercise 3 in Latham-Koenig & Oxenden (2013, p. 29). A detailed activity plan can be found for all of these teaching sessions in *Appendix G*.

3.2.2 *The production tests*

The production tests were conducted in order to seek answers to RQ 2 and 4, identifying the recurring mistakes of participants in word stress placement and vowel reduction and examining the effectiveness of pronunciation learning strategies. The reading prompts are short texts for participants to read out loud, approximately 100 words each. Since these tasks were given out during my teaching practice, they were created keeping the current pronunciation, linguistic and carrier content in mind. The prompts were given out as tasks to do at home, but there were no negative consequences for not doing them, the participants were able to opt out at any moment during the data collection process. The participants read out the texts to upload their work to Google Classroom as an mp3 file using their one-letter code, preserving the anonymity of the research. After listening to the scripts, the general problems in pronunciation were highlighted and the problematic features were practiced in the forms of follow-up tasks. Altogether, three production tasks were made, but the second one was not analysed and was viewed as an intermediate element in the whole data collection process due to time and resource constraints.

The fact that recordings of continuous speech were used instead of analysing isolated words, as a great number of research papers on the topic of pronunciation teaching do (cf. Jenkins, 2000; Piukovics, 2021; Gyurka, 2022), is also a crucial factor. Labov (1966) perceives the contextual styles as a continuum. According to him, the features of accented speech are present in different contexts to different degrees. At the bottom of the hierarchy of contextual styles is the pronunciation of minimal pairs, followed by isolated words, reading style, careful speech, and at the top of the list is casual speech, in which most of the accented features are present. It is, therefore, suggested from a sociolinguistic point of view to examine elements in styles closer to casual speech. Reading style is much closer to casual speech, therefore it is expected that more features of Hungarian-accented English can be observed in a reading task than words pronounced individually. Also, reading texts is much closer to authentic speech than

the pronunciation of isolated words, which should be the most crucial phenomenon for both phonology and language teaching.

The first reading prompt was made while the main topic of instruction was money, with a pronunciation focus on the different realisations of the letter *o*. The theme of the first listening script, therefore, is whether money can give happiness according to a study. The reading script is based on a task sheet that can be found at the website “Breaking News English” (Banville, 2016). Since the conclusion of the text is highly controversial, a follow-up discussion was held the following lesson asking students to express their opinion on the topic. The first test was taken from 10th November 2022 after the first pronunciation teaching session to 16th November, when the last task was uploaded.

The second reading task was a modified version of a section from a listening task in Latham-Koenig & Oxenden’s (2013) Unit 2A. Due to constraints of time and resources the second production test was not analysed and is considered as an intermediate step in the production tests.

The third prompt was about gender stereotypes, which was the main topic at the time of giving out this task. The script is based on a section from a task sheet from iSLCollective (Cacarpi, 2012), a popular site for sharing ESL teaching materials. The pronunciation features learnt in this period were reduction and schwa as well as the two different ways to pronounce the definite article *the*. The recordings of the third test were submitted from 23rd January 2023 after the third pronunciation teaching session to 29th February. All three of these prompts can be found in *Appendix E*.

The production tests were analysed for two pronunciation features: primary word stress placement and vowel reduction. Both of these closely related features were subject to distributive analysis into the most commonly mistaken items and statistical analysis attempting to measure the difference between the scores of the two tests.

In the analysis of word stress, phrasal stress plays an important role. Phrasal stress is the stress that is assigned “beyond word stress” in phrases, clauses or sentences, as Truckenbrodt (2006, p. 572) hints. The words with phrasal stress receive stronger stress than those without phrasal stress. Therefore, phrasal stress is much more prominent than simple words stress. As a result of this phenomenon, in the analysis of word stress, only words receiving phrasal stress were examined, since stress placement is clearly more audible in phrasal-stressed words. Although phrasal stress is considered to be a characteristic of native speakers, it was possible to identify the phrasal stressed words in the case of the speakers of the target group as well through analysing the amplitude and pitch of the articulation. In general, it can be said that the

participants usually followed the native sentence stress patterns, although with slightly less emphasis on the stressed words.

After identifying the words with phrasal stress, word stress is examined within these items. The results are then quantified: the total number of correctly primary-stressed syllables is calculated against all syllables in multi-syllable words with phrasal stress, giving the percentile ratio of correctly stressed elements for each speaker. The ratio of correctly stressed syllables is also calculated in phrasal-stressed words with stress falling on other than the first syllable, including rightward mis-stresses and excluding right-ward mis-stresses giving a second and third percentile ratio. In addition, the number of rightward mis-stresses are calculated and are given as a single number in the third ratio. It is also important to note that the present paper only examines primary word stress placement, since secondary and tertiary word stress placement is beyond the scope of this research.

In terms of vowel reduction, phonetic transcriptions were made for words with fluctuating pronunciation in the voice recording. The following words were transcribed: *believe, evil, however, researchers, conducted, customers, personality, compared* and *conclusion* from the first text and *gender, stereotype, illogical, unemotional, aggressive, emphasis, differences, miniature* and *construction* from the third task. After the analysis of the two sets of recordings, the ratios of correctly stressed syllables and correctly reduced vowels can be compared to see if there had been an improvement between the two data recordings, pointing to a conclusion whether strategies used in the second and third teaching session might be more effective than those in the first one.

3.2.3 The questionnaire

After the analysis of recordings from reading tasks 1 and 3, the questionnaire is going to be analysed. In a 2020 pilot study (Csizmazia, 2020), the questionnaire was presented to four language groups, giving a total participant number of 34 middle school learners, ranging from age 13 to age 18, with a mean age of 14.74 and a standard deviation of 2.14. After the pilot data collection. SPSS 26 was used to run reliability analysis tests. Constructs (2), (4) and (6) passed the reliability analysis with a Cronbach's alpha value of 0.705; 0.709 and 0.711 respectively. Constructs (1), (3) and (5) failed the reliability analysis. After conducting factor analysis, it was discovered that the constructs not reliable measured multiple dimensions and by omitting items constructs (1), (3) and (5) gave Cronbach's alpha values of 0.606; 0.637 and 0.779 respectively, each measuring a single dimension.

The questionnaire is employed in order to answer RQs 3 and 4 by comparing the means of the constructs measuring the frequency of use of different strategy-types, examining if there is a certain strategy that is favoured by the participants and by identifying the correlations between different strategy-types, the production scores and background variables. In this regard, the present study is somewhat similar to that of Campos (2015), who also intended to find correlations between strategy-use and speech production and intelligibility, although he measured separate strategies and the frequency of strategy-use in general, not strategy-types.

The questionnaire used in the present study to measure the use of pronunciation learning strategies was made earlier and has been tested in a pilot study in 2020 as part of a research methodology course (Csizmazia, 2020). The questionnaire was made in line with the taxonomy of Oxford's (1990). The decision of using this exact model was based on the fact that it was easily adaptable, since it also features a *Strategy Bank*. Seemingly, I could have chosen a more contemporary basis for my research. On the other hand, no other options seemed to be suitable for my aims (cf. Peterson, 2000; Vitanova & Miller, 2002; Derwing & Rosettier, 2002; Osburne, 2003).

The questionnaire has six constructs altogether, each measuring a category of pronunciation strategy in Oxford (1990). The constructs each consist of 2 to 6 statements, which participants rate on a five-point Likert-scale. The constructs are the following: (1) *Memory-related strategies* consists of four variables, (2) *Cognitive strategies* contains six items, (3) *Compensatory strategies* is made up of four items, (4) *Metacognitive strategies*, contains six items, (5) *Affective strategies* consists of two variables and (6) *Social strategies* is formed out of six.

In the present study, this updated version of the questionnaire was used to ensure the reliability of the data collected. The questionnaire was completed on 9th February using Google forms during a 13 minutes long session during one of the English lessons. The participants were given a letter for identification in order to preserve the anonymity of the study. For all the items in the questionnaire, please see *Appendix F*.

The responses were be imported into SPSS 26, and constructs were created based on the questionnaire made previously to see which type of strategies is the most popular among the members of the participant group. Additionally, scores of the two reading tasks were imported as well, and Spearman's Rank Order Correlation analysis will be run on the task scores and the strategy groups, to see whether there is a correlation between the strategies used and the pronunciation accuracy in the given language group.

4. Results and discussion

The analysis of the results employs both distributive and statistical methods. The distributive analysis intends to answer Research Question 2 by identifying recurring mistakes in primary word stress placement and reduction, discovering the items with the most mis-stresses and places where reduction is frequently absent where it should be present or present where it should be absent. The results of the production tests will also be quantified as well, to answer Research Question 4, giving a percentile value showing the ratio of correctly stressed and reduced items in both production tests, providing a hint about whether there were any positive or negative changes in stress placement and reduction between the two tests and pronunciation teaching sessions.

The debate between the intelligibility and nativeness principles were also taken into consideration when determining the examined features. Lack of understanding in more basic stress rules was present in Table 1, which lists the features of Hungarian-accented English that could possibly hinder intelligibility. Due to the fixed nature of Hungarian stress placement, the most intelligibility-threatening feature is consistent stress placement on the first syllable. Therefore, the analysis is included a score where only words in which the stress falls on a non-initial syllables are examined. Since rightward mis-stresses are considered to have an extremely negative effect on intelligibility, they will be examined as well, as they can be present as hypercorrections in the speech of Hungarian learners of English. Although vowel reduction is not present in Table 1, and it is generally considered redundant or downright detrimental for intelligibility, changing vowel quality as a result of stress-movement is considered to hinder understanding. Therefore, the analysis of vowel reduction will also cover stress-induced vowel changes (SIVCs), which is a phenomenon that might inhibit intelligibility, according to Levis (2018).

The questionnaire will be analysed from a statistical point of view, discovering which types of pronunciation learning strategies are more popular in the language group, thus answering Research Question 3 For more on research design, please see Section 3.

4.1 The production tests

4.1.1 Primary word stress placement results and discussion

After the data collection process ended, the recordings from the production tests were examined for word stress placement. PRAAT's (2023) "show pitch" and "show intensity" features were used for a more precise and reliable analysis, since pitch and volume are two

crucial aspects of word stress in English. Word stress was only analysed in words that received phrasal stress. Table 3 shows the results of the distributive analysis of word stress placement, indicating the number of mis-stresses and the total number of cases it was examined.

Table 3

Distributive analysis of word stress placement

Item	Number of mis-stresses	Phrasal stressed (=out of)
Production test 1		
personality	17 (<u>per</u> sonality: 16; per <u>son</u> ality: 1)	22
compared	5 (<u>com</u> pared)	24
researchers	3 (<u>re</u> searchers)	12
however	3 (<u>how</u> ever)	12
conclusion	2 (<u>con</u> clusion)	12
conducted	1 (<u>con</u> ducted)	11
customers	2 (cus <u>tom</u> ers)	7
Production test 3		
competitive	8 (<u>com</u> petitive)	11
construction	6 (<u>con</u> struction)	12
accommodating	5 (accom <u>mod</u> ating)	12
continues	4 (<u>con</u> tinues: 3; contin <u>ue</u> s: 1)	12
emphasis	3 (em <u>ph</u> asis)	12
behave	3 (<u>be</u> have)	11
unemotional	3 (<u>un</u> emotional)	12
insecure	2 (<u>in</u> secure)	12
aggressive	1 (<u>ag</u> gressive)	12
illogical	1 (<u>il</u> logical)	12
differences	1 (di ffe ren <u>ce</u> s)	5

The most commonly mis-stressed word in the first production test was *personalities*. Out of the 24 times it is present in the original task, it receives phrasal stress in 22 cases and it was mis-stressed in 17 of them. The word stress is usually placed on the first syllable (16 cases), with one participant placing the stress on the second syllable (*personalities*). Figure 1 shows an example of *personality* being stressed on the first syllable in PRAAT's (2023) analysis of pitch and intensity.

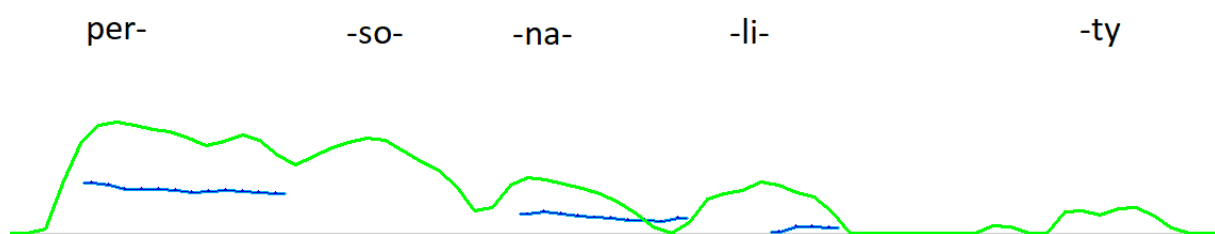
Another commonly mis-stressed item is *compared*. It is present 24 times in the original text, receiving phrasal stress in all cases. It was mis-stressed 5 times out of the 24 cases, placing the stress on the first syllable. In case of two participants (F and M) the word stress is on the second syllable (which is the standard placement) in the second case it is present (*They compared the personalities of more than 600 people...*), while it is mis-stressed in the first appearance of the word (*Researchers conducted a study that compared the spending habits of*

customers...). In case of participant E, the word is correctly stressed in the first appearance (*Researchers conducted a study that compared the spending habits of customers...*), but it is mis-stressed in the second time it is present (*They compared the personalities of more than 600 people...*).

Researchers and *however* were stressed on the first syllable 3 times out of the 12 cases they were phrasal-stressed. *Conclusion* was stressed on the first syllable two times out of the 12 times it received phrasal stress. *Conducted* was stressed on the first syllable one time out of 11. *Believe* and *university* are each stressed on the first syllable one out of twelve times. The two rightward mis-stresses occurred in the word *customers* (*customers*).

Figure 1

PRAAT's (2023) analysis of the word "personality" in the speech of participant M



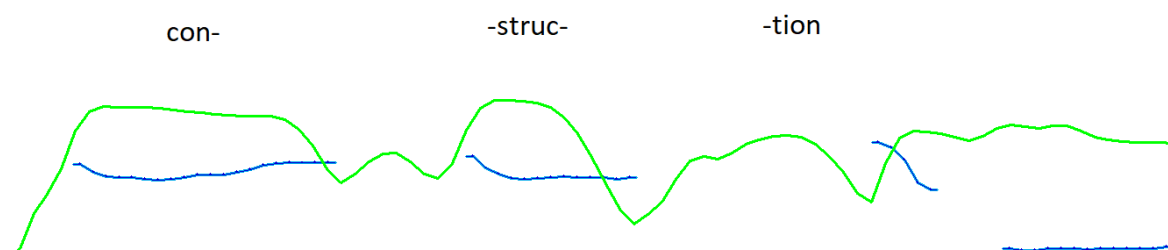
Note. As shown in the figure, the first syllable is stronger both in terms of pitch (blue) and intensity (green).

As for the third production test, the most frequently mis-stressed word was *competitive*, which was stressed on the first syllable 8 times out of the 11 times it received a phrasal stress. *Construction* is stressed on the first syllable 6 times out of 12, but in one of those cases, the second syllable was also slightly stressed. (Figure 2 shows PRAAT's, 2023, analysis of the pitch and intensity of the realization in question). *Continues* was mis-stressed four out of 12 times altogether, it was stressed on the first syllable three times, and it was stressed on the last syllable one time. *Behave* received word stress on the first syllable 3 out of 11, while *unemotional* 3 out of 12 times. *Insecure* was stressed on the first syllable 2 out of 12 times, but one of these times the third syllable also received a stress. *Ideas* was stressed on the first syllable once out of the two times it received phrasal stress (in most of the cases, the phrasal stress pattern was (*rigid ideas*)). The words *aggressive* and *illogical* were stressed on the first syllable one out of 12 times. In terms of rightward mis-stresses, the word *accommodating* was stressed on the fourth, the last but one syllable 5 times out of 12 (*accommodating*). *Emphasis* was stressed on the second syllable 3 out of 12 times. *Continues* was stressed on the last syllable one out of 12 times. One

out of 5 times, the word *differences* was stressed on the third syllable (*di|ffe|ren|ces*; the participant pronounced the word with five syllables).

Figure 2

PRAAT's (2023) analysis of the realization of "construction" in the speech of participant H



Note. As can be observed in the figure, the first and the second syllables are almost identical in terms of both pitch (blue) and intensity (green).

Out of the 18 words that were mis-stressed, six contained pre-stressed suffixes (*personality*, *conclusion*, *competitive*, *construction*, *unemotional*, and *aggressive*). Additionally, in *accommodating*, the word might be stressed on the fourth syllable to the analogy of *accommodation*, thus pre-stressed suffixes are also responsible for the mis-stresses in that word. All in all, out of the 70 mis-stressed syllables 42 are the result of pre-stressed suffixes. Table 2 shows the results of the qualitative analysis of the word stress, and 58 of all the mis-stresses are the result of stressing the word on the first syllable in items in which the stress would fall on a non-initial syllable. On the contrary, the number of rightward mis-stresses are 12 altogether, two out of 33 in the first test and 12 out of 37 in the third test. These results, therefore, might contradict Levis' (2018) claim, which suggests that rightward mis-stresses are more intelligibility-impairing.

Altogether, it can be noted that in a large number of cases, the lack of understanding regarding the effect of affixes on word stress has a considerable effect on stress placement in the speech of the participants. Pre-stressed suffixes play a crucial role in the major stress placement of the most frequently mispronounced items such as *personality*, *researchers*, *accommodating*, *continues*, *competitive*, *conclusion*, *unemotional* and *aggressive*. The crucial role of affixes in word stress placement cannot be overlooked in this sample, and might point to the realization that in a Hungarian context the connection of affixes and stress placement may deserve more emphasis in pronunciation teaching. Explicit instruction on the connection between suffixes and word stress placement could be beneficial for Hungarian learners. There are not many pre-stressed suffixes in existence but they affect the stress placement of many

formal units. Therefore, as a result of little effort into raising awareness of non-stress-neutral suffixes word stress placement of students could improve considerably. Besides providing learners with a list and example cases, pairs of words with and without stress-changing suffixes could be listened to and practiced in language classrooms to draw learners attention to the interrelation of the two phenomena and guide them to realization of the effect of suffixes on word stress. The coursebook used in this course (Latham-Koenig & Oxenden, 2013, p. 11) also mentions the connection between word stress and affixes, albeit it only demonstrates that the suffixes *-ous*, *-able*, *-ible*, *-ive* and prefixes *un-*, *-in* and *im-* are not stressed, which could also mislead students to the generalisation that affixes are never stressed and they do not affect the word stress pattern. Since the production test only contained pre-stressed suffixes, and no auto-stressed suffixes were present, only the effect of pre-stressed suffixes on primary stress placement can be inferred in this paper, the effects of auto-stressed suffixes on primary stress in Hungarian-accented English is beyond the scope of this research.

Words containing the prefixes *con-* and *com-*, such as *compared*, *conclusion*, *conducted*, *competitive*, *construction* and *continues* were also frequently mis-stressed. In terms of these prefixes, which were observed to be the reason for many mis-stressed realizations, it might be best to resort to teaching word stress as part of the lexis. In a large number of cases, the reason for the faulty word stress placement was a pre-stressed suffix behind the stem. Also, the role of prefixes in word stress placement can change according to their word class, and their presence might not be obvious, especially for B1-B2 level learners of English. At times, etymological analysis is necessary for distinguishing the prefixes (such as in *compare*), which is not to be expected from a learner. Also, there are few cases where the prefix is directly responsible for any change in word stress placement. Therefore, a large amount of effort would result in little to no development.

It is also important to discuss that the results of the distributive analysis showed that most of the mis-stresses were not right-ward mis-stresses, but stress placement on the first syllable in words that are not stressed on the initial syllable. This result is contrary to the findings of Levis (2018), who suggests that SIVCs are more intelligibility-inhibiting than stress on the first syllable. It is apparent through the results, though, that for Hungarian learners of English, stress falling on the first syllable in words with no initial stress is much more relevant. Therefore, it is possible that instead of using universal lists for compiling a list of intelligibility-inhibiting features, it might be more beneficial to explore these features through empirical studies, possibly on the basis of Derwing & Munro (2005). This could be a new line of study of pronunciation teaching in the Hungarian context. Although the present study did not employ

this method, it was adequate to suggest that lists compiled through existing research could be used in the Hungarian context. It is, therefore a finding of this present study that empirical analysis might be more beneficial for students with different L1s rather than relying on previous studies, since it seems that intelligibility-inhibiting features are not universal, but are different for each linguistic background. The texts of the production tests with the correctly and incorrectly stressed syllables of each participant can be seen in *Appendix H*.

Table 4 shows the results of the statistical analysis of primary word stress placement. The first column shows the code numbers of the participants. The second column shows the number of correctly stressed syllables divided by all the syllables in stressed multi-syllabic words. The third column shows the number correctly stressed syllables in words that are not stressed on the first syllable, rightward mis-stresses included. The fourth column shows the number of correctly stressed syllables in words that are not stressed on the first syllable, rightward mis-stresses excluded, indicating their number in brackets. The table also shows the correctly stressed syllables and the divider syllables all added up and the percentile forms of the fractions in the last but third row. Means of the percentile forms were also calculated. The means can be seen in the last but one row with the standard deviations in the last row.

Wilcoxon's signed-rank test ran on the difference between the scores revealed that the mean difference was not significant, returning a significance value of 0.754. As it can be observed in the table, the ratio of correctly stressed syllables in the first production task is 87.7% in all phrasal-stressed multi-syllable words, 81.2% in phrasal-stressed multi-syllable words with stress on a syllable other than the first, rightward mis-stresses included and 82.8% in phrasal-stressed multi-syllable words with stress on a syllable other than the first, rightward mis-stresses excluded, with means of 87.7%, 80.7% and 82.7% respectively. The ratios in the third production task, examining the same elements, are 89%, 82.8% and 86.1%, with means of 88.9%, 82.9% and 86.1%. It is, therefore, apparent that there was a positive change in the ratios of correctly stressed syllables in phrasal-stressed words, both in terms of means and the total number of syllables, however, it is important to point out that these results are not significant, according to the Wilcoxon's test. There was a 1.3% increase in terms of all correctly stressed phrasal-stressed syllables, a 1.6% increase in phrasal-stressed words with major word stress on other than the first syllable including rightward mis-stresses, and a 3.3% increase excluding rightward mis-stresses. In terms of means, the difference is 1.2%, 2.2% and 3.4%.

The quantitative assessment of word stress placement, therefore revealed no significant answers to Research Question 4. However, the mean differences suggest that it is possible for

social strategies to be more effective for acquiring word stress patterns. In the production tests, there was an observable difference between the mean scores of the production tests in all the different methods of evaluation (counting correctly stressed syllables in all syllables of phrasal-stressed multi-syllable words, in phrasal-stressed words with the main stress falling on other than the first syllable including rightward mis-stresses and in phrasal-stressed words with the main stress falling on other than the first syllable excluding rightward mis-stresses). It was, however, also discovered that the differences between the test scores are not significant in either of the evaluation methods. This means that although there is a positive difference between the two tests, it could be the result of random chance or reasons outside the effectiveness of pronunciation teaching and might not be related to the participants' individual development in any way. As a result, this difference should not, by any means, be taken as a relevant result in terms of language teaching. It might also be possible, though, that the two teaching sessions, and the time for improvement were simply insufficient for producing a significant improvement, and it might be possible that after a longer period of time it would be possible to observe a significant development in the test scores. However, this is mere speculation, and the data do not support the hypothesis that the activities promoting social and memory-related strategies might be more effective than those supporting cognitive strategies.

Table 4

Quantified results of stress analysis

	1st Production Test			3rd Production Test		
	correctly stressed syllables/all syllables in phrasal stressed multi-syllable words	correctly stressed syllables/all syllables in phrasal stressed words with non-initial word stress, incl. rightward mis-stresses	correctly stressed syllables/all syllables in phrasal stressed words with non-initial word stress (rightward mis-stresses)	correctly stressed syllables/all syllables in phrasal stressed multi-syllable words	correctly stressed syllables/all syllables in phrasal stressed words with non-initial word stress, incl. rightward mis-stresses	correctly stressed syllables/all syllables in phrasal stressed words with non-initial word stress (rightward mis-stresses)
A	44/52: 84.6%	30/38: 78.9%	30/38: 78.9% (0)	48/60: 80%	26/38: 68.4%	25/35: 71.4% (1)
B	41/53: 77.6%	21/33: 63.3%	21/33: 63.6% (0)	66/70: 94.3%	33/37: 89.2%	33/37: 89.2% (0)
C	51/55: 92.7%	29/33: 87.9%	29/33: 87.9% (0)	46/54: 85.2%	27/35: 77.1%	24/30: 80 % (1)
D	50/54: 92.6%	32/36: 88.8%	32/36: 88.8% (0)	52/56: 92.9%	31/35: 88.6%	31/35: 88.6% (0)

E	49/55: 89.1%	37/43: 86%	37/43: 86% (0)	47/51: 92.2%	29/33: 87.9%	29/33: 87.9% (0)
F	50/56: 89.3%	27/33: 81.2%	27/33: 81.2% (0)	50/56: 89.3%	32/38: 84.2%	28/30: 93.3% (2)
G	52/58: 89.7%	31/37: 83.8%	30/34: 88.2% (1)	43/52: 82.7%	26/35: 74.3%	24/31: 77.4% (1)
H	43/49: 87.8%	30/36: 83.3%	29/33: 87.9% (1)	52/57: 91.2%	32/37: 86.5%	29/32: 90.6% (1)
J	44/48: 91.7%	29/33: 87.9%	29/33: 87.9% (0)	47/49: 95.9%	30/32: 93.75%	30/32: 93.75% (0)
K	50/56: 89.3%	29/35: 82.9%	29/35: 82.9% (0)	42/50: 84%	26/34: 76.5%	22/26: 84.6% (2)
L	45/49: 91.8%	23/27: 85.2%	23/27: 85.2% (0)	55/61: 90.2%	28/34: 82.4%	27/31: 87.1% (1)
M	37/49: 75.5%	18/30: 60%	22/30: 73.3% (0)	48/54: 88.8%	35/41: 85.4%	32/36: 88.9% (1)
Ov.	556/634: 87.7%	336/414 81.2%	338/408 82.8% (2)	596/670 89%	355/429 82.8%	334/388 86.1% (10)
Mean	87.7%	80.7%	82.7%	88.9%	82.9%	86.1%
Std. Dev.	5.43	9	7.28	4.72	7.04	6.38

4.1.2 Vowel reduction results and analysis

Reduction was examined on words with audibly the most unstable pronunciations. If a word's pronunciation showed great variability in its realizations in the voice recordings, it was phonetically transcribed using IPA. Altogether 23 items were transcribed this way, out of which 18 were analysed for reduction. For a complete list of the words with the largest variety in pronunciation transcribed with the different realizations and their frequency, please see *Appendix I*.

Concerning the distributive assessment, the recurring and frequent mistakes were examined. Table 5 shows the most frequently mispronounced items, and the number of SIVCs in these items, while Table 6 lists the different realizations of the most commonly mispronounced items by participants.

Table 5*Qualitative analysis of vowel reduction*

Item	Mis-stressed according to RP (out of 12)	SIVCs
Production test 1		
personality	10	6
conducted	8	2
compared	7	3
customers	6	2
researchers	5	3
conclusion	3	1
Production test 3		
stereotypes	11	0
miniature	7 in the last syllable, 5 in the third	1
construction	6	3
aggressive	5	1
emphasis	4	1
differences	4	1
unemotional	2	2

In the first production test, the most commonly mispronounced word is *personality*. The first vowel was mispronounced in 10 of the 12 cases and it might hinder intelligibility in 6 out of those times, due them containing SIVCs. In most cases (9), the vowel was pronounced as /e/, and in one case it was pronounced as /ə/ (which is relatively close to the standard pronunciation). The third vowel (which in standard varieties receives major stress), was reduced six times. An additional word frequently mispronounced is *researchers*, in which the second syllable (which should have been stressed) was reduced three times as a result of the stress falling onto the first syllable.

Another mispronunciation with high frequency could be found in the first vowel of *conducted*. The first vowel was pronounced with a Hungarian /o/ eight times, and in two of those cases it was a result of the stress falling onto the first syllable. The same phenomenon can be observed in *compared*. Instead of reducing the vowel to a schwa, it was pronounced with a Hungarian /o/ five times, and with an /ʌ/ two times. Out of the five cases it was pronounced with an /o/, it was a result of stress change in three instances. Additionally, in *conclusion* *con-* was pronounced with an /o/ three times, out of which one was the result of a stress change. It was also pronounced with an /ʌ/ one time, which was also the result of the stress falling onto the first syllable. Altogether, out of 36 cases, the unstressed syllable *coN-* was pronounced with an /o/ 16 times, and with an /ʌ/ three times. Out of the 18 times it was mispronounced, it was a

result of the stress falling onto the first syllable. *Customers* was mispronounced six times, out of which two resulted from the rightward mis-stress. *Researchers* was mispronounced seven times, and in three cases the second vowel, which is stressed in RP, reduced to schwa.

Table 6

The most commonly mispronounced items in terms of vowel reduction listed by participants

1	personality	conducted	compared	customers	researchers	conclusion
A	[ˈpɜːsənəˌlɪtɪ]	[ˈkɒntrʊktɪd]	[ˈkɒmpeɪrd]	[ˈkʌstəmərz]	[ˈriːsəˌtʃəz]	[kənˈkluːʒən]
B	[ˈpɜːsənəˌlɪtɪ]	[kənˈdʌktɪd]	[kəmˈpeəd]	[ˈkʌstəmərz]	[ˈriːsəˌtʃəz]	[ˈkʌnklʌʃən]
C	[pɜːsəˈnælɪtɪ]	[kənˈdʊktɪd]	[kəmˈpeəd]	[ˈkʌstəmərz]	[riːˈsɜːtʃəz]	[kənˈkluːʒən]
D	[ˈpɜːrsənəˌlɪtɪːz]	[kændʒuːsd]	[kəmˈpeəd]	[ˈkʌstəmɜːrɪz]	[riːˈsɜːrtʃəz]	[kənˈkluːʒən]
E	[pəˈsɜːnælɪtɪ]	[kənˈdʌktɪd]	[kəmˈpeəd]	[ˈkʌstəmərs]	[riˈsɜːrtʃərs]	[kənˈkluːʒən]
F	[pɜːsəˈnælɪtɪ]	[kənˈdʌktɪd]	[kəmˈpeəd]	[ˈkʌstəmɜː]	[riˈsɜːtʃəz]	[kənˈkluːʃən]
G	[ˈpɜːsənəˌlɪtɪ]	[kɒnˈdʊktɪd]	[ˈkɒmpəred]	[ˈkɒstəmərs]	[riːˈsɜːtʃ]	[kənˈkluːʒən]
H	[ˈpeːrsənəˌlɪtɪ]	[kənˈdʒʊktɪd]	[kɒmˈpeəd]	[ˈɒstəˈmɜːrs]	[riˈsɜːrtʃsɜːz]	[kənˈkluːʒən]
J	[pɜːsəˈnælɪtɪ]	[kənˈdʌktɪd]	[kəmˈpeəd]	[ˈkɒstəmərz]	[ˈriːsəˌrtʃəz]	[kənˈkluːʒən]
K	[ˈpɜːsənəˌlɪtɪ]	[kənˈdʊktɪd]	[kəmˈpɜːrd]	[ˈkʌstəmərz]	[riˈsɜːtʃəz]	[kənˈkluːʒən]
L	[ˈpɜːsənəˌlɪtɪː]	[ˈkɒndʒuːzd]	[kəmˈpeəd]	[kʌstəˈmɜːrɪz]	[riˈsɜːtʃɪrs]	[kənˈkluːʒən]
M	[ˈpɜːsənəˌlɪtɪ]	[kənˈdʌktɪd]	[kɒmˈpeəd]	[ˈkʌstəmɜːrɪz]	[riˈsɜːdʒəs]	[ˈkɒnklʌːʒən]

3	stereotypes	miniature	construction	aggressive	emphasis	differences	unemotional
A	[ˈsteɪəˌtaɪps]	[ˈmɪniətɜːr]	[ˈkɒnstrʊkʃən]	[əˈɡresɪv]	[ˈemfəˌzeɪs]	[ˈdɪfəˌrɛnsɪz]	[ˈʌneməˌʃənəl]
B	[ˈsteɪəˌtaɪps]	[mɪniətɜːr]	[kənˈʃʌkʃən]	[əˈɡresɪv]	[ˈemfəˌsɪs]	[ˈdɪfrɛnsɪz]	[ʌneˈmoːʃənəl]
C	[ˈsterɪˌtaɪps]	[ˈmɪniˌʌtʃər]	[ˈkənstrʌkʃən]	[əˈɡresiːv]	[ˈemfəsaɪz]	[ˈdɪfərɛnsɪz]	[ʌneˈmoːʃənəl]
D	[ˈsterɪˌtaɪps]	[ˈmɪniˌetʃə]	[kənˈstrʌkʃər]	[əˈɡresɪv]	[ˈemfəˌsɪs]	[ˈdɪfərɛnsɪz]	[ʊnɪˈməʊʃənəl]
E	[ˈsterɪˌtaɪbz]	[ˈmɪniˌɒtɪr]	[kənˈtsrʌkən]	[ˈæɡresɪv]	[ˈæmfəˌzɪz]	[ˈdɪfərɛnsɪz]	[ʌnɪˈmoʃənəl]
F	[ˈsteɪəˌtaɪps]	[mɪniətɜːr]	[kənˈstrʌkʃən]	[əˈɡresɪv]	[emˈfəˌsɪs]	[ˈdɪfrɛnsɪz]	[ʌneˈməʊʃənəl]
G	[ˈsteɪəˌtaɪps]	[ˈmɪnɪˌʌtʃər]	[kənˈsjʊktʃən]	[əˈɡresɪv]	[ˈemfəˌsɪs]	[ˈdɪfərɒːnsɪz]	[ˈʊneməˌtɪʃənəl]
H	[ˈstɪrɪˌtaɪbz]	[ˈmɪniˌʌtʃər]	[ˈkɒnsrʊkʃən]	[ɒˈɡresɪv]	[ˈemfəˌsɪs]	[ˈdɪfəˌrɛnsɪz]	[ʊneˈmoːʃənəl]
J	[ˈsterɪˌtaɪps]	[ˈmɪnɪtʃər]	[kənˈsrʌkkən]	[əˈɡresɪv]	[ˈemfəˌsɪ]	[ˈdɪfəˌrɛnsɪz]	[ʌnɪˈmoːʃənəl]
K	[ˈstɪrɪˌtaɪps]	[ˈmɪniˌetɪr]	[kənˈstrʌkʃən]	[əˈɡresɪv]	[ɪmˈfɛzɪs]	[ˈdɪfrɛns]	[ʌneˈmoːʃənəl]
L	[ˈsterɪˌtaɪps]	[ˈmɪniətɜːr]	[ˈkɒnʃʌktʃən]	[əˈɡresɪv]	[ˈemfəˌsɪz]	[ˈdɪfrɛnsɪz]	[ʌnɪˈmoʊʃənəl]
M	[ˈstɪrɪˌtaɪps]	[ˈmɪnɪtʃər]	[kəˈstrʌkʃən]	[əˈɡreːsɪv]	[ˈemfəˌsɪz]	[dɪfəˈreːnz]	[ʌnɪˈmoːʃənəl]

Note. The mistakes compared to RP are highlighted in green and SIVCs are highlighted in red

In the third production test, the most frequently mispronounced item was the third syllable of *stereotypes* which was pronounced as a Hungarian /o/ 11 times. However, in none of these cases was the lack of reduction a result of a change in word stress. Another commonly mispronounced item was the last vowel of *miniature* (*miniature*), which, instead of being reduced, was pronounced as an /ɜː/ four times, one of which one was a result of stress change, and with a Hungarian /yː/ three times. The third vowel (*miniature*) should either be silent or pronounced with a schwa. However, it was pronounced as /ʌ/ three times, as /e/ two times and

as /ɒ/ one time. In *aggressive*, the first syllable was pronounced as /ʌ/ four times, as /ɒ/ one time and as /æ/ one time, which was also the result of the stress falling onto the first syllable. In *differences*, the third vowel in the syllable (in spelling, that is *differences*) should be reduced to schwa, however, it was pronounced as /e/ three times, one of which was the result of the stress falling on that syllable, and as /ɒ/ one time. In *unemotional*, the third syllable, which should be stressed, was reduced to schwa one time, and was pronounced as /o/ one time.

The syllable *con-*, which was a highly frequently mis-stressed element in the first test is also present in *construction* in the third test. Instead of the vowel being reduced to a schwa, it was pronounced with an /o/ six times, three out of which was a result of the stress falling on the first syllable. All the examined words transcribed and highlighted for reduction analysis can be found in *Appendix J*.

The qualitative analysis of vowel reduction revealed that word stress placement has a significant effect on vowel reduction, therefore pointing to the realization that a possible answer to Research Question 2 in terms of vowel reduction would be that recurring mistakes are mostly present in words with problematic word stress placement, which mostly include items with stress-changing affixes. There are several takeaways from the analysis of the two production tests. In terms of stress placement, certain suffixes play a crucial role in determining word stress. English L2 learners are generally not familiar with this nature of affixes, and therefore they might pronounce the word to the analogy of previously known items in terms of word stress placement. Also, in terms of vowel reduction, spelling might mislead English L2 students and cause spelling-induced pronunciation errors, usually pronouncing the sound represented by the letter at hand in their native language (as observed in the cases of <e> and <o>). It is important to clarify basic letter-to-sound elements where L1-transfer might produce altered vowel quality, especially in cases with high functional load. Additionally, on a more practical level, it was observed that the prefix *coN-* is especially prone to mispronunciations both in terms of stress and vowel quality due to their word-initial position and their vowel being spelt as <o>. The cause of this, though, might simply be that these words are present in a large number in the two production tests. It might, though, be worthwhile to highlight and practice such elements during pronunciation sessions, since there words beginning with *coN-* are frequently encountered during formal education.

In terms of the statistical analysis, vowels where reduction to schwa was possible were examined and taken as a basis for analysis. The number of such vowels was not the same in case of each speaker, since the speakers pronounced some items with different numbers of syllables. Also, stress placement could change whether reduction to schwa was possible (for

example, in *personality*, the third syllable was reduced to a schwa in a number of cases, which was possible because the main stress moved to the first syllable).

Two separate ratios were examined in accordance with the debate of the nativeness and intelligibility principles in pronunciation teaching. In the first ratio, RP pronunciation is taken as a basis of the analysis. If the given item must be reduced in RP, and it is not in the production task, it is marked as incorrect. In some cases, reduction is possible but not necessary in RP. In those cases, when the vowel is not reduced, it is excluded from the analysis. If the vowel is not reduced and is pronounced as a vowel not possible in RP, it is counted as an error (e. g. *aggressive* pronounced as ['ʌgresɪv]). For identifying the different pronunciations present in RP, I used the 3rd edition of Longman Pronunciation Dictionary (Wells, 2008), since it presents all the acceptable ways to pronounce the items according to RP. In the second ratio, a feature that can hinder intelligibility, stress induced vowel change (SIVC) was used as the foundation for analysis, which according to Levis (2018) can hinder understanding. Only those items were marked incorrect where the change in word stress placement caused the vowel quality to change, resulting in the lack of reduction. Table 7 shows the results of the quantitative analysis of reduction in production tasks 1 and 3.

Table 7

Distributive analysis of reduction

	Production Test 1						Production Test 3					
	Correct vowel reduction according to RP	vowels where reduction is possible	%	Vowels without SIVC	vowels where reduction is possible	%	Correct vowel reduction according to RP	vowels where reduction is possible	%	Vowels without SIVC	vowels where reduction is possible	%
A	6	14	42.9%	9	14	64.3%	6	14	42.9%	12	14	85.7%
B	8	14	57.1%	9	14	64.3%	8	12	66.7%	12	12	100%
C	10	11	90.9%	11	11	100.0%	11	13	84.6%	13	13	100%
D	10	11	90.9%	11	11	100.0%	11	13	84.6%	13	13	100%
E	8	10	80.0%	10	10	100.0%	9	13	69.2%	12	13	92.3%
F	7	10	70.0%	10	10	100.0%	8	12	66.7%	10	12	83.3%
G	3	10	30.0%	8	10	80.0%	6	14	42.9%	13	14	92.9%
H	5	11	45.5%	9	11	81.8%	7	13	53.8%	12	13	92.3%
J	11	13	84.6%	12	13	92.3%	10	12	83.3%	12	12	100%
K	6	12	50.0%	9	12	75.0%	5	11	45.5%	12	12	100%
L	7	12	58.3%	9	12	75.0%	9	12	75.0%	11	12	91.7%
M	5	14	35.7%	9	14	64.3%	8	12	66.7%	11	12	91.7%
Total:	86	142	60.6%	116	142	81.7%	98	151	64.9%	143	152	94.1%
Mean, Std.Dev.	61.3%, 20.61			83.1%, 14.23			65.1%, 15.03			94.2%, 5.63		

In the first column, the letter codes of the participants can be seen. The first three columns in each task show the results of the analysis using the RP pronunciation as a basis, showing the ratio of correctly reduced/pronounced vowels and all vowels where reduction was possible. The second three columns in each production task show the ratio of correctly pronounced vowels in all vowels where reduction would be possible, only counting vowel changes caused by misplaced stress as mistakes.

Wilcoxon's signed-rank test revealed that the differences between the scores of vowel reduction in the two production tests are significant, returning a significance value of 0.034. Further analysis revealed that the change in means in terms of mispronunciations according to RP was not significant ($p=0.328$), however, the development was significant in terms of SIVCs ($p=0.034$). Therefore, the development is more likely to be the result of the fewer number of SIVCs in the second test. As it can be observed in the table, the percentile ratio of correctly pronounced vowels where reduction would be possible is 60.6% according to the RP pronunciation and 81.7% only counting SIVCs as mistakes, with average scores of 61.3% and 83.1%. In the third tasks. the scores are 64.9% and 94.1%, with average scores of 65.1% and 94.2%. Apparently, there was a 4.3% increase in terms of reduction according to standard pronunciation and a 12.4% increase in terms of SIVC. As for the scores, there was a 3.8% and an 11.1% increase in standard pronunciation and intelligible pronunciation respectively. In the first production task, there have been 26 cases of SIVCs, while there were only 9 cases in the second one, which is fewer by 17.

The quantitative analysis, therefore, revealed that there was a considerable improvement in terms of applying vowel-reduction between the two sets of production samples, which points to the conclusion that social strategies might be effective for acquiring intelligible vowel reduction, providing a possible answer to Research Question 4. Further analysis revealed that this change might be significant, and that the apparent development is more likely to be attributed to the reduction in the quantity of stress-induced vowel changes in the third text, since the change in that regard was also significant. The reason behind this phenomenon might be that the lack of stress-induced vowel changes is a phenomenon present in the sound system, a lower level of the grammatical hierarchy which is only relevant in a fewer number of cases. Therefore, improvement is achieved more easily than native-like vowel-reduction, a more frequent phenomenon, or let alone a close-to-standard stress placement, which also utilizes higher levels of the grammatical system. In other words, the lack of SIVCs might be the first step on the road of achieving more advanced knowledge and proficiency regarding vowel reduction and stress placement. It is, however, still important to point out that other factors

might have intervened with the result the most important of which is the fact that the texts for the production tests were completely different from each other, containing a distinct set of words and items. Therefore, the apparent and significant improvement in the third production test might be due to the words containing fewer elements that could present SIVCs in the particular text used for the data collection.

4.1.3 Correlations between the two examined phenomena

The two pronunciation features examined seem highly interrelated at first glance, since reduction can only happen in unstressed syllables. Furthermore, SIVCs are the result of a change in stress pattern, they require mis-stresses to be present. Therefore, correlation analyses were also run on the scores of the production tests, after calculating mean scores of all the different types of test scores.

The correlation analysis on the final scores of the two tests revealed a strong ($r=0.762$) correlation. Further analysis reveals a strong correlation between the correctly stressed syllables of all phrasal stressed multisyllable words and the correctly reduced vowels according to RP in the third test ($r=0.711$). Also, there was a strong correlation ($r=0.790$) between the correctly stressed syllables of all phrasal stressed multisyllable words and SIVCs in the first test. It is questionable why there was no correlation in the third analysis. It is possible that the relatively small number of SIVCs in the third production test is to blame for this result, or the fact that most students who mis-stressed a large number of items did not change vowels as a result of the stress changes.

The number of correctly stressed syllables in words that are not stressed on the first syllable with rightward mis-stresses correlated with the lack of SIVCs in the first tests ($r=0.719$) and the correctly reduced items according to RP in the third test ($r=0.685$). The number of correctly stressed syllables in non-initially stressed words correlated with the lack of SIVCs in the first test, which means that most of the SIVCs happened in words that are not originally stressed on the first syllables. Table 8 shows the results of the correlation tests between the scores of the different tests (about the mean scores of the word stress test and the reduction test, see section 4.2.3).

The related nature of the two examined phenomena has already become apparent during the qualitative analysis of the two production tests. To begin with, reduction can only happen in unstressed syllables, which already relates the two examined pronunciation features. In addition, SIVCs, as the name suggests, is the result of change in the word stress pattern.

Therefore, SIVCs require the stress patterns to change, deepening the connection between the two examined phenomena.

It is also interesting to observe that in general, the correlation coefficients are lower in the second test. This could mean that participants producing the highest number of mis-stresses might not have produced as many mistakes in terms of vowel reduction. Generally, it is apparent that the two examined items are interrelated, which is also reflected in the test scores.

Table 8

Significant correlations between the different test scores

		Correctly stressed syllables/all syllables in phrasal stressed multi-syllable words in the first production test	Correctly stressed syllables/all syllables in phrasal stressed words with non-initial word stress incl. rightward mis-stresses in the first test	Correctly stressed syllables/all syllables in phrasal stressed words with non-initial word stress excl. rightward mis-stresses in the first test	Correctly stressed syllables/all syllables in phrasal stressed multi-syllable words in the third production test	Correctly stressed syllables/all syllables in phrasal stressed words with non-initial word stress incl. rightward mis-stresses in the third test	Correctly stressed syllables/all syllables in phrasal stressed words with non-initial word stress excl. rightward mis-stresses in the third test
Correctly reduced vowels according to RP in the first test	Pearson Correlation						
	Sig. (2-tailed)						
Correctly reduced/unreduced vowels counting SIVCs as mistakes in the first test	Pearson Correlation	.734**	.719**	.669*			
	Sig. (2-tailed)	.007	.008	.017			
Correctly reduced vowels according to RP in the third test	Pearson Correlation				.711**	.687*	
	Sig. (2-tailed)				.010	.014	
Correctly reduced/unreduced vowels counting SIVCs as mistakes in the third test	Pearson Correlation						
	Sig. (2-tailed)						

4.2 The questionnaire

After the process of administering the questionnaire during an English lesson, the responses were downloaded from Google Forms as a Microsoft Excel document. The results were then transformed for quantitative analysis. SPSS 26 was used to create constructs measuring the six types of strategies in Oxford (1990) and to run bivariate correlation tests calculating Spearman's rho values between the background variables and strategy-use, between the strategy-types, between the types of strategies used and the results of the production tests and between the background variables and the production test.

4.2.1 The popularity of different strategy-types

After calculating the constructs based on means of the variables in each construct, the means of each strategy-type were calculated between all the participants. The analysis showed that the most popular type of strategies was *cognitive strategies* with a mean value of 3.21, followed by *social strategies* measuring 2.61, *compensatory strategies* with a 2.52 mean value, *memory-related strategies* measuring 2.44, *metacognitive strategies* with a mean value of 2.4 and finally *affective strategies* which measured 2.23 in average. The numerical values of the popularity of the different strategy-types can be seen in Table 9.

Table 9

The popularity of types of strategies among the participants in a decreasing order

	COGNITIVE	SOCIAL	COMPENSATORY	MEMORY	METACOGNITIVE	AFFECTIVE
A	2.5	2	2.25	1.5	2	1.4
B	3.83	4	2.25	4.5	2.33	3
C	3	2.33	2.25	3.25	3.17	2.4
D	3.33	2	3	3	1.67	2.6
E	2.83	1.67	1.75	1.75	3.17	1.2
F	3.33	4.33	3	3	2.5	3.4
G	2.5	1.33	1.75	1.5	1.67	2.6
H	2.67	2.67	4	2.25	2.33	2.8
J	2.83	2.67	2.5	1.75	1.83	1.4
K	4.33	3.67	1.75	2	2.83	2.4
L	3.83	2.33	3.5	2.5	2.83	2.4
M	3.5	2.33	2.25	2.25	2.5	1.2
MEAN:	3.206667	2.610833	2.520833	2.4375	2.4025	2.233333

The findings of the analysis of which strategy-types are the most popular seem to be in line with the results of the pilot study, where also *cognitive strategies* were the most popular, although *social strategies* were much less frequently used in that target group. Oxford (1990) also reports that cognitive styles are among one of the most popular ones (cf. p. 43). Campos (2015) also found that pre-service English teachers from Chile are also more likely to use direct strategies, namely *cognitive* and *compensatory* ones. On the contrary, Szyszka (2017) found that Polish pre-service teachers mostly use affective strategies, followed by *compensatory* and *cognitive* strategies. Interestingly, Hanók & Magyar (2018) found that the most frequently used strategies by Hungarian learners of grades 5-8 were *metacognitive*, *affective* and *social* strategies. In the present study, however, it was found that *metacognitive* and *affective* strategies

were the least popular among the different strategy types. The difference in results might be rooted in the fact that the present study discusses and examines pronunciation learning strategies specifically, and not learning strategies in general.

The group profile might be an important factor for the interpretation of these results. As it was mentioned in section 4.1, these students focus on achieving higher grades and good academic results are really important for them. Also, as I have observed during my teaching practice, they tend to prefer conventional exercises in general, where mostly cognitive strategies are facilitated. On the other hand, they do pair and group activities quite frequently during English lessons, and they like engaging in these more communicative activities, hence the high popularity rating of social strategies. Also, social strategies were used in two of the pronunciation teaching sessions, which might also have influenced the outcome of the questionnaire results.

4.2.2 Correlations between the strategy-types and background variables

The bivariate correlation test run on the six types of strategies and the background variables (participant's evaluation of their own pronunciation, the frequency of pronunciation teaching, speaking motivation, the importance of native-like pronunciation and the importance of intelligible pronunciation) showed that there is a moderate correlation ($r=0.653$) between *speaking motivation* and *cognitive strategies*, and a moderate correlation ($r=0.612$) between the importance of the intelligibility of pronunciation and *affective strategies*. Also, there was a strong ($r=0.707$) correlation between two background variables, speaking motivation and the participant's evaluation of their own pronunciation. The bivariate correlation test between the different types of strategies showed that there is a moderate correlation ($r=0.606$) between memory-related and cognitive strategies. Table 10 shows the significant results of the correlation analysis of the strategy-types and the background variables.

The lack of correlations between the different strategy-types is especially surprising given the fact that Oxford (1990, p. 15) suggests that the different types of strategies support each other through language acquisition. The lack of more correlations could possibly be the result of the small sample size, though. The correlation between *memory-related* and *cognitive* strategies might be explained by the fact that they are both direct strategies and that they are both connected to more traditional approaches. Also, *memory-related* and *cognitive* strategies are commonly used together, since *memory-related* strategies can be used for learning new items and *cognitive* strategies can be used afterwards to practice the same items.

The correlations of background variables and strategy-use and between the various background variables were not examined by any Research Questions, they could be considered as supplementary findings and information about the language group. The moderate correlation found between speaking motivation and *cognitive strategies* might be in connection with the participants' general relationship with English as a subject. In the construct *cognitive strategies*, there were mostly statements about analysing and practising different sounds, which is usually done in language classrooms. Besides, it is also clear that students who like English as a subject and analysing different pronunciation features might be more motivated to speak in the given language as well. The other moderate correlation was between the importance of intelligibility and *affective strategies*. The correlation between these two elements shows how focusing on intelligibility rather than aiming for a native-like pronunciation is in connection with affective elements of language learning, since it legitimates and approves foreign features in one's pronunciation. Focusing on intelligibility, therefore, might be an affective strategy by itself.

Table 10

Significant results of the bivariate correlation test between background variables and strategy types

		Memory-related strategies	Cognitive strategies	Affective strategies	Self-evaluation of pronunciation	Speaking motivation	Importance of illegible pronunciation
Memory-related strategies	Spearman's rho		.606*				
	Sig. (2-tailed)		.037				
Cognitive strategies	Spearman's rho	.606*				.653*	
	Sig. (2-tailed)	.037				.021	
Affective strategies	Spearman's rho						.612*
	Sig. (2-tailed)						.035
Self-evaluation of pronunciation	Spearman's rho					.707**	
	Sig. (2-tailed)					.010	
Speaking motivation	Spearman's rho		.653*		.707**		
	Sig. (2-tailed)		.021		.010		
Importance of intelligible pronunciation	Spearman's rho			.612*			
	Sig. (2-tailed)			.035			.

Between the different background variables, there was one significant correlation altogether. A strong correlation was found between the participants' perception of their own pronunciation and speaking motivation. The reason behind this correlation is quite clear:

someone who is more content with their English pronunciation, and evaluates it to be better, is more likely to be motivated to speak English, since the pronunciation of different language elements does not cause a problem for them.

4.2.3 Correlations between the results of the production test, the types of strategies used and the background variables

After the analysis mean values of the different methods of measurements (all syllables in multisyllable words, all syllables in multisyllable words that are not stressed on the first syllable including and excluding rightward mis-stresses in the stress test, and taking RP as a basis of analysis and taking SIVC as the main principle in the reduction test) were calculated, including the results from both texts, in order to give a single numeric value representing the performance of participants.

The bivariate correlation showed no significant correlations between the types of strategies used by the participants and the overall results of the production tests. Bivariate correlation tests were also ran between the strategy-types and each partial score from the two production tests, showing a moderate ($r=0.629$) correlation between social strategies and the scores of the primary word stress analysis in the second text in syllables of words that are not stressed on the first syllable, excluding rightward mis-stresses.

The bivariate correlation test ran between the background variables and the final scores of the test revealed a moderate ($r=0.629$) correlation between the final result of the reduction analysis and the participants' evaluation of their own pronunciation. Further analysis between the individual production task scores and the background variables revealed a strong ($r=0.774$) correlation between participants' evaluation of their own pronunciation and the correctly stressed syllables in all syllables of multisyllable words in production task 1. Also, there were moderate correlations between the scores of the two reduction analyses taking RP as the basis of the examination with $r=0.0677$ and 0.586 for the first and the second test, respectively). There is a moderate negative correlation ($r=-0.685$) between the frequency of pronunciation learning and the correctly stressed syllables in multisyllable words that are not stressed on the first syllable in the second production task. There was a moderate correlation ($r=0.669$) between speaking motivation and lack of SIVCs in the second production task. There was also a negative moderate correlation ($r=-0.616$) between the importance of native-like pronunciation and the lack of SIVCs in the second production task.

Table 11 shows the results of the bivariate correlation analyses between the results of the production tests, strategy-types used by the participants and the background variables. The

rows show the relevant test results, and the columns show the relevant background variables and the relevant strategy-type (social strategies).

Table 11
Significant correlations between the production tests, strategy-types and background variables

		General score of the reduction analysis	correctly stressed syllables/all syllables in phrasal stressed multi-syllable words in the first production test	correctly stressed syllables/all syllables in phrasal stressed words with non-initial word stress, excl. rightward misstresses in the third test	Correctly reduced vowels according to RP in the first test	Correctly reduced vowels according to RP in the third test	Correctly reduced/unreduced vowels counting SIVCs as mistakes in the third test
Pronunciation self-evaluation	Spearman's rho	.629*	.774**		.677*	.586*	
	Sig. (2-tailed)	.029	.003		.016	.045	
Frequency of pronunciation learning	Spearman's rho			-.685*			
	Sig. (2-tailed)			.014			
Speaking motivation	Spearman's rho						.669*
	Sig. (2-tailed)						.017
Importance of native-like pronunciation	Spearman's rho						-.616*
	Sig. (2-tailed)						.033
Social strategies	Spearman's rho			.629*			
	Sig. (2-tailed)			.028			

The analysis of the correlations between strategy-use and production test scores seemed to suggest that social strategies might be useful for learning problematic word-stress patterns, which is a possible solution to Research Question 4. However, it is important to point out that there is only one significant correlation between the production test scores and the strategy types, and it was not between one of the general mean scores of the production tests, only between a partial score. Therefore, further research is necessary to either reject or retain this hypothesis.

The fact that there were no significant correlations found between individual strategy-groups and the final, general scores of the pronunciation tests might sound surprising at first. However, Oxford (1990) constantly suggests that strategies by themselves are not as effective as used together, supporting each other. Therefore, the question of “Which strategy is more effective for pronunciation learning?” is too broad, since different language elements might require different types of strategies, and an approach with wider range of strategies might be more effective (cf. Rao, 2012, p.4).

The correlation between social strategies and correct primary word stress placement in phrasal-stressed words with non-initial word stress suggests that social strategies and activities might be useful for practising and acquiring problematic word stress patterns, which proved to be one of the most frequent mistakes of participants. It might also be relevant that this correlation was present in the scores of the third production test, which might be explained by the fact that there were teaching sessions utilizing social strategies conducted prior to the collection of data for the third test, but not before to the first test. Therefore, the social elements in the teaching sessions might have had an effect on the outcome of the stress analysis by increasing the usage of social strategies. *Social strategies* were used in the second and third pronunciation teaching sessions as well, and the fact that there was an improvement in the third production test mean scores, which was also significant in the case of the vowel reduction analysis also supports the claim that *social strategies* could be effective in acquiring native-like and intelligible word stress and vowel reduction. This effectiveness was inferred statistically in case of both examined phenomena: through significant development in mean scores in terms of vowel reduction and through correlation analysis in terms of word stress placement. This, though, is mere speculation and further research would be required to explore such connections.

As Table 11 shows, seven correlations were found altogether between different background variables and test scores. In four of these cases, the participants' evaluation of their own pronunciation was present. This might mean that the participants' assumptions about their own pronunciation might indeed be correct, and they think their pronunciation is better because they might actually be better in terms of imitating native vowel reduction and stress placement. Another possible explanation, though, could be that positive self-evaluation and more confidence has a positive effect on speaking performance.

There was also a correlation between speaking motivation and the lack of SIVCs in the third test. A reason for this correlation could be that since SIVCs can hinder understanding, those learners who produce them might be less eager to speak English, since they are less understandable and may experience more communication breakdowns, which is negative feedback on their speech. It is also important to point out that these two variables – speaking motivation and the participants evaluation of their pronunciation – are correlated as well. Speaking motivation also correlates with *cognitive strategies*, which could mean that using cognitive strategies might lead to more motivation to speak, which could result in more self-confidence about one's pronunciation, which might help produce more native-like and intelligible word stress and vowel reduction.

Both of the negative correlations were highly surprising outcomes. The most possible explanation for these correlations is that this correlation is that they are simply the result of the small sample size.

Altogether, it is possible that students' own evaluation of their speaking proficiency might influence word stress placement and native-like reduction. Therefore, positive feedback might lead to better results. Also, social strategies might help develop better word stress placement, therefore practice exercises facilitating them might be useful in classroom settings. Additionally, it might be more important to deal with items that can hinder understanding, since mistakes influencing intelligibility might also have an effect on speaking motivation, while paying too much attention to native-like pronunciation might result in hypercorrection.

6. Conclusions

The present study aimed to find answers in connection with features hindering intelligibility in Hungarian-accented English, the recurring mistakes in primary word stress and vowel reduction, the usage of different pronunciation learning strategies and their effects on the production of word stress placement and vowel reduction in a language group of a middle school in Budapest.

In connection with the first Research Question, which was concerned with discovering those features of Hungarian-accented English that could hinder intelligibility, a list was compiled based on Jenkins' (2002) LFC and Levis' (2018) list of features relevant in an intelligibility-based classroom, as well as on Piukovics's (2021) list of the features of Hungarian-accented English. It was discovered that the lack of understanding in connection with the basic word-stress rules can lead to the word stress falling on the first syllable in a larger frequency which might hinder understanding, and can lead to change in vowel quality as a result of the shifting stress, which could also interfere with intelligibility. Moreover, hypercorrect forms can be present as well in the form of rightward mis-stresses, which might also be disadvantageous for understandability. It was found in the empirical study, however, that for Hungarian learners stressing the first syllable in non-initially stressed words is much more relevant than rightward mis-stresses, which contradicts Levis' (2018) framework and suggests that intelligibility-inhibiting features could be strongly connected to L1-background, giving a suggestion for further research. For the full list, see Table 1 in Section 2.3.5.

In terms of Research Question 2, the most important finding was that the effect of affixes on primary word stress placement plays a crucial role in mis-stresses in the language group studied in this paper. The other main takeaway is that while it might be worthwhile to deal with the stress-changing effects of certain suffixes explicitly, the same cannot be said about prefixes, where teaching word stress placement on a lexical level might be more adequate.

As for Research Question 3, which aims to discover which strategy is the most popular in the language group examined, it can be concluded that the learners of the language group studied in this paper prefer *cognitive strategies* by a significant amount. The other strategy-types are preferred more or less equally. *Affective strategies*, however, are preferred somewhat less than other strategies. Research Hypothesis 2, which is concerned with whether participants prefer certain strategies over others, in this regard, shall be retained, since the participants apparently prefer cognitive strategies over others.

Regarding Research Question 4, which investigates the effects of strategy-use on production of word stress placement and vowel reduction, it seems that social strategies might be more effective in acquiring intelligible and accurate word stress placement and vowel reduction. In terms of the mean difference in production test scores, it was revealed that although there is no significant change in terms of word stress placement, however, there was a significant development regarding vowel reduction. It was also discovered that there is a moderate correlation between social strategies and the correct word stress placement in non-initially stressed syllables in the second production test, which suggests that besides the non-significant difference in word stress test scores, social strategies might be effective for acquiring more difficult word stress patterns.

The present study was naturally not without limitations. Due to time and resource constraints further analysis of the participants' learning processes in the form of interviews was not possible, although the deeper understanding of individuals' learning processes is of key importance in case studies. Also, the recordings of the second pronunciation test were not analysed also due to the limited time and resources, which might have provided even more information about the research questions.

Additionally, as emphasized many times above, due to the small number and similar background of the participants this present study examined the pronunciation learning strategies and pronunciation features of a single language group and it did not aim to provide results generalizable to Hungarian middle school learners of English, let alone Hungarian learners of English. Further and more thorough analysis in the field is necessary to declare which pronunciation learning strategies are the most effective for Hungarian learners of English. Moreover, the difference between the two analysed production tests could easily have distorted the outcomes of the research.

Besides these limitations, the present study is not devoid of merits either. Apart from providing answers to the research questions, valuable insight was gained into the pronunciation learning processes, strategy uses and language use of a language group of a secondary school in Budapest. Additionally, the list of features that might hinder intelligibility in Chapter 2 could be used as a point of reference for later studies conducted in the field, while a new line of future research, which is concerned with intelligibility-inhibiting features of Hungarian-accented English on an empirical basis, was suggested. Also, the data collected and the transcribed words with their distribution might also serve as a database that could be tested and analysed in further research.

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Appendices

Appendix A: The main features of ELF

Appendix B: List of intelligibility-inhibiting features according to Levis (2018)

Appendix C: List of Hungarian-accented English features
according to Piukovics (2021)

Appendix D: Consent form

Appendix E: Strategy-type questionnaire

Appendix F: Reading task prompts

Appendix G: Activity plans of the pronunciation teaching sessions

Appendix H: Production test prompts with correctly and incorrectly stressed syllables
marked in phrasal-stressed words

Appendix I: : Different pronunciations of the transcribed words
with their frequency in number and percentage

Appendix J: Results of the reduction analysis

Appendix A: The main features of ELF

(from Jenkins 2002: 96-97).

1. *The consonant inventory with the following provisos:*

- some substitutions of /θ/ and /ð/ are acceptable (because they are intelligible in EIL);
- rhotic 'r' rather than non-rhotic varieties of 'r';
- British English /t/ between vowels in words such as 'latter', 'water' rather than American English flapped [ɾ];
- allophonic variation within phonemes permissible as long as the pronunciation does not overlap onto another phoneme, for example Spanish pronunciation of /v/ as [β] leads in word-initial positions to its being heard as /b/ (so 'vowels' is heard as 'bowels' etc.).

2. *Additional phonetic requirements*

- aspiration following word-initial voiceless stops /p/ /t/ and /k/ e.g. in [p^hɪn] ('pin') as compared with /spɪn/ ('spin'), otherwise these stops sound like their voiced counterparts /b/ /d/ and /g/;
- shortening of vowel sounds before fortis (voiceless) consonants and maintenance of length before lenis (voiced) consonants, for example the shorter /æ/ in 'sat' as contrasted with the longer /æ/ in 'sad', or the /i:/ in 'seat' as contrasted with that in 'seed'.

3. *Consonant clusters*

- no omission of sounds in word-initial clusters, e.g. in promise, string;
- omission in middle and final clusters only permissible according to L1 English rules of syllable structure, e.g. 'factsheet' can be pronounced 'facsheet' but not 'fatsheet' or 'facteet';
- /nt/ between vowels as in British English 'winter' pronounced 'wɪntər' rather than American English where, by deletion of /t/, it becomes /wɪnər/;
- addition is acceptable, for example 'product' pronounced [pər'ɒdʌkʊtə] was intelligible to NNS interlocutors, whereas omission was not, for example 'product' pronounced /'pɒdʌk/.

4. *Vowel sounds*

- maintenance of contrast between long and short vowels for example between 'live' and 'leave';

- L2 regional qualities acceptable if they are consistent, except substitutions for the sound /ɜ:/ as in 'bird', which regularly cause problems.

5. *Production and placement of tonic(nuclear) stress*

- appropriate use of contrastive stress to signal meaning. For example, the difference in meaning in the utterances 'I came by TAXI' and 'I CAME by taxi' in which nuclear stress is shown in upper case. The former is a neutral statement of fact, whereas the latter includes an additional meaning such as 'but I'm going home by bus'.

Appendix B: List of intelligibility-inhibiting features according to Levis (2018)

(From Levis 2018: 249-261. See the full source for a complete list and a list of less important features).

Segmental features

Consonants:

- High functional load (=participating in more minimal pairs) (e.g., /l/-/n/, /p/-/f/)
- Lengthened vowels before voiced consonants or in open syllables

Vowels:

- High functional load contrasts (e.g., /ε-æ/, /i-ɪ/, /ɑ-ʌ/)
- Vowel quality distinctions rather than length as a phonemic distinguisher
- Vowels in stressed syllables

Consonant clusters:

- Initial consonant clusters
- Final consonant clusters, including those created with -ed and -s/'s endings
- Vowels pronounced when no vowel is expected (e.g., *evening*, *temperature*, *chocolate* with all written vowels pronounced), unexpected vowels (e.g., *gift* - *gifuto*), or the insertion of unexpected vowels with grammatical endings (e.g., *walked* - *walk it*)
- Unexpected sound or syllable deletions

Word stress:

- Rightward mis-stressings (e.g., *COMfort* said as *comFORT*; *FOLLOW* as *folLOW*)
- Minimal straightforward rules that do not require extensive morphological knowledge
- Unpredictable minimal pairs
- Mis-stressings with changed vowel quality (e.g., *senTENces*)

Suprasegmentals:

Rhythm:

- Perception training to identify key words in the stream of speech
- Lengthening of stressed syllables, and shortening of unstressed syllables
- Being able to guess unstressed function words from inadequate acoustic signals
- Connections of stress and word classes
- Weak forms of frequent function words

- (Vowel reduction and production of schwa are less important)

Connected speech:

- Perception of connected speech features that result in unexpected segments
- Perceiving differences between full and reduced vowels (especially schwa) in normal speech, and being able to interpret speech based on full vowels
- Perception of linking that does not change segments
- Contractions versus full forms (e.g., *I'm* versus *I am*)
- (Perception is more crucial than production)

Prominence (i. e. nuclear stress):

- Default prominence (i.e., the last content word of the thought group)
- Contrastive prominence (e.g., *I'd like the RED roses*)
- New information (e.g., *The singer is GOOD, but not THAT good*)
- De-accented given information (e.g., *The singer is GOOD, but not THAT good*)

Intonation:

- Rising/falling distinctions on declaratives or incomplete sentences
- Intonation across multiple phrases, with rising intonation early in extended speech and falling intonation at a pause break
- Perception of meaning on falling–rising contours and other nonfinal contours (e.g., level contours)
- Liveliness of intonation and rhythmic variation for monologic speech
- Topic-changing pitches (paratones) in speech. (e.g., The NEXT topic we'll discuss in intonation).

Appendix C: List of Hungarian-accented English features according to Piukovics (2021)

Features that are mentioned in one of the previous models and could potentially hinder intelligibility are marked with an asterisk (*) and are written in **bold** font (items possibly reducing intelligibility that are present in both models are marked with double asterisk [**]).

Segmentals:

Consonants:

- perception of θ and δ as [f] and [v], respectively, and substitution with [s] and [d] respectively
- substitution of [w] with [v]
- **lack of aspiration in voiceless stops [p, t, k] ***
- lack of distinction between clear and dark [l]
- phonetic difference in production of [t] and [d] (alveolar in English but dental in Hungarian)
- phonetic difference between Hungarian (tapped) and English (postalveolar approximant) R
- difference in the distribution of eng [ŋ]: in Hungarian they only appear before pronounced [k] or [g], therefore words such as *sing* and *singer* might be pronounced with [ŋg]
- full rhoticity
- the use of [v] for [v] (or [w]) before vowels or after consonants other than [b], [p] or [f]
- lenis obstruents might be always voiced regardless of phonological context
- difficulty in comprehension regarding different native realisations of /t/
- different treatment of hiatus (only with [j], not with [w] and [r])
- [h] might be pronounced where it would be dropped in native accents such as in *vehicle* or *shepherd*
- geminates (double consonants) might be present where there are double consonants in spelling

Vowels:

- **difference in short-long vowel pairs (in Hungarian there is no difference in quality between long and short vowels except for [ɒ]–[a:] and [ɛ]–[e:] ***

- Vowel substitutions in stressed syllables:
 - **The TRAP-DRESS merger: [æ] merges with the DRESS-vowel, which results in Hunglish homophones such as bat=bet [ɛ]. ***
 - The THOUGHT-GOAT merger: these two vowels are replaced by [o:], thus making bought and boat homophones.
 - **The STRUT and START vowels may both be pronounced [a] or [ʊ] thus the vowel of words like cut and cart may be the same. ***
 - The LOT and NORTH vowels may both be pronounced [o] thus the vowel of words like pot and port may be the same.
 - The STRUT-LOT merger: pronunciation of words like hut and hot the same. Words with misleading spelling (e.g., *done* vs. *gone*) may also contribute to this problem (GA feature).

Phonotactics (consonant clusters):

- more complex final clusters (such as [ksts] in *texts* might cause problems for Hungarian learners
- **pronouncing silent letters in initial clusters like [pn-], [ps-], [gn-] and [kn-], in words like *pneumonia*, *psychology*, *gnu* and *knight* (predictable consonant addition) ***
- pronouncing silent letters in word-final clusters such as [-mb] (*climb*, *comb*)
- lack of syllabic consonants in Hungarian may result in vowel-addition after the syllabic consonant in words such as *Wimbledon* (this might be expected), and *Google* [gugli] *
- as a result of different voicing rules in the two languages, assimilation may occur in both ways (voicing or devoicing) as an obligatory rule (therefore, fortis obstruents might assimilate to lenis obstruents following them)
- **clipping and lengthening based on voicing might also be absent ****
- also stemming from the different voicing rules, the pronunciation of the suffixes -s and -ed might be fixed as [-s] and [-d] respectively (except when -[iz] and -[id] forms would be present), with the last consonant of the stem assimilating to them, resulting in forms as [piks] for *pigs* or [lɛks], [tɛps], [kligd] and [ribd] for *legs*, *tabs*, *clicked* and *ripped*.
- **In the earlier stages of acquisition, the pronounced forms -ed and -s can also be fixed as -[id] and -[iz]. ***

Suprasegmentals:

Stress:

- **due to the fixed nature of Hungarian stress, word stress can be fixed on the first syllable for Hungarian speakers of English and stress-placement might not even be perceived** (this phenomenon is referred to as stress-deafness by Dupoux et al., 1997; although Piukovics 2021: 108-120 found that only one in 18 participants demonstrated signs of stress deafness)
- no distinction between strong and weak vowels
- **as an effect of the previous two points, vowel-quality might also be changed in the first syllable (*alone* pronounced as ['ɔləʊn]) ***
- **Hypercorrect forms might result in rightward mis-stressing (adjECtive) ***

Intonation:

- **since the pitch-range of English is much higher than that of Hungarian, Hungarian students might perceive English speech as too affected, and native speakers might perceive Hungarian speakers as monotonous ***
- the low-rising tone in Hungarian is used for questions, therefore Hungarian learners might perceive sentences with such tone as questions
- usage of rise-fall tone instead of high rise in Yes/No questions might result in the perception of the sentence as a declaration instead of a question

Appendix D: Consent form

Tisztelt Szülők!

Csizmazia Mátyás vagyok, a Pázmány Péter Katolikus Egyetem Bölcsész- és Társadalomtudományi Karának angol-magyar osztatlan tanári szakos hallgatója. A szakdolgozatom elkészítéséhez szükséges, hogy kutatást végezzek egy nyelvi csoporton, amelynek gyermekük is tagja. A kutatás elvégzéséhez szeretném kérni a beleegyezésüket. A kutatás célja, hogy megvizsgálja, milyen összefüggések állhatnak az egyes nyelvtanulási stratégiák és az idegen nyelvi beszédkésztség között. A kutatás során egy anonim kérdőív kitöltésére, egy 15 perces interjúra, illetve 2 darab olyan hangfelvétel elemzésére kerülne sor, amelyen a csoport tagjai olvasnak fel egy előre megadott szöveget. A hangfelvételeket harmadik félnek nem adom ki, csak én és a szakdolgozati témavezetőm, Dr. Reményi Andrea Ágnes férhetünk hozzá a felvételekhez. A kutatás lezárulta után a fájlok törlésre kerülnek. Ha bármi kérdésük van a kutatással kapcsolatban, a következő email-címen érhetnek el: csimatyi@gmail.com

Előre is köszönöm megértésüket és támogatásukat!

Én,, engedélyezem,
hogy gyermekem,
részt vegyen a fent említett kutatásban.

Engedélyezem, hogy gyermekem anonim kérdőíves felmérésben vegyen részt.

IGEN / NEM

Engedélyezem, hogy gyermekemmel interjú készüljön.

IGEN / NEM

Engedélyezem, hogy gyermekemről hangfelvétel készüljön.

IGEN / NEM

2022,

.....
aláírás helye

Appendix E: Strategy-use questionnaire

Kedves kitöltő!

Köszönöm, hogy időt szánasz a kérdőív kitöltésére! Van néhány fontos információ, amelyről mindenképpen tudnod kell. Kérlek, alaposan olvasd át az alábbi pontokat, mielőtt elkezded a kérdőív kitöltését:

- A felmérésben való részvétel teljes mértékben önkéntes alapon történik. Ha úgy döntesz, hogy nem szeretnél részt venni benne, akkor ne töltsd ki a kérdőívet, vagy ha már elkezdted a kitöltést, hagyd abba bármelyik ponton!
- A kérdőív anonim jellegű. Ez azt jelenti, hogy senki sem fogja tudni, hogy te, név szerint, milyen válaszokat adtál, az összegyűjtött adatok adatok mellett nem szerepelnek nevek.
- A kérdőív kitöltése körülbelül 10-15 percet vesz igénybe

A fentieket elolvastam és megértettem

Kor:

Nyelvvizsga szintje:

Nincs

A1

A2

B1

B2

C1

C2

Hány éve tanulsz angolt?

Ismered a fonetikus ábécé jeleit?

Egy egytől ötig terjedő skálán hogyan értékelnéd az angol kiejtésedet?

(1: borzalmas; 2: rossz; 3: közepes; 4: jó; 5: tökéletes)

Egy egytől ötig terjedő skálán milyen gyakran foglalkoztok kiejtéssel az angolórákon?

(1: soha; 2: egy tanévben egyszer; 3: egy hónapban egyszer; 4: egy héten egyszer; 5: egy héten többször)

Egy egytől ötig terjedő skálán mennyire szívesen beszélsz angolul?

(1: nem merek megszólalni angolul; 2: nem szívesen szólok meg angolul; 3: ha kell, beszélek angolul; 4: szívesen beszélek angolul; 5: nagyon szeretek angolul beszélni)

Mennyire értesz egyet a következő állítással?

Akkor jó valakinek a kiejtése, ha hasonlít az anyanyelvi beszélők kiejtésére.

(1: Egyáltalán nem értek egyet – 5: Teljesen egyetértek)

Mennyire értesz egyet a következő állítással?

A jó kiejtés legfőbb feltétele az érthetőség.

(1: Egyáltalán nem értek egyet – 5: Teljesen egyetértek)

Construct 1: Memory-related strategies

Mennyire igazak rád a következő állítások?

(1: egyáltalán nem igaz; 2: inkább nem igaz; 3: valamelyest igaz; 4: inkább igaz; 5: teljesen igaz)

1. Ha meg akarom tudni egy szó kiejtését, megnézem a szótárban a szó fonetikus átírást
2. Ha meg akarom jegyezni egy szó kiejtését, átírom a saját fonetikus írásommal, és megpróbálom megjegyezni
3. Ha meg akarom jegyezni egy szó kiejtését, leírom úgy, mintha magyarul lenne
4. Ha meg akarom jegyezni egy szó kiejtését, megpróbálok emlékezni rá, hogyan ejtette ki a tanár a szót

Construct 2: Cognitive strategies:

(1: egyáltalán nem igaz; 2: inkább nem igaz; 3: valamelyest igaz; 4: inkább igaz; 5: teljesen igaz)

5. Ha meg akarom tudni egy szó kiejtését, meghallgatom a kiejtést egy online szótárban
6. Ha meg akarom jegyezni egy szó kiejtését, beszéd közben szándékosan az adott szó kiejtésére koncentrálok
7. Ha meg akarom tudni egy szó kiejtését, megfigyelem, hogyan ejti ki az adott szót egy anyanyelvi beszélő (pl. egy internetes videóban)
8. Ha meg akarom tanulni egy szó kiejtését, először lassan mondom ki, majd egyre gyorsabban
9. Sokat segít egy szó kiejtésének megjegyzésében, ha órán a tanár után ismétlem az adott szót
10. Ha meg akarom tanulni egy szó kiejtését, elismétlem, ha meghallom egy anyanyelvi filmben vagy sorozatban

Construct 3: Compensatory strategies

(1: egyáltalán nem igaz; 2: inkább nem igaz; 3: valamelyest igaz; 4: inkább igaz; 5: teljesen igaz)

11. Ha nem tudok helyesen kiejteni egy szót, megpróbálom kiejteni úgy, ahogy első ránézésre helyesnek tűnik
12. Ha nem tudok helyesen kiejteni egy szót, inkább magyar nyelven mondom el, amit szeretnék
13. Ha nem tudok helyesen kiejteni egy szót, elmutogatom
14. Ha nem tudok helyesen kiejteni egy szót, megpróbálom az írása alapján kitalálni a kiejtését

Construct 4: Metacognitive strategies

(1: egyáltalán nem igaz; 2: inkább nem igaz; 3: valamelyest igaz; 4: inkább igaz; 5: teljesen igaz)

15. Érdekelnek az angol nyelv kiejtésének szabályai
16. Gyakran olvasok az angol nyelv kiejtésének szabályairól

17. Ha meg akarom tanulni egy szó kiejtését, sokat segít az angol nyelv kiejtésének szabályairól való tudásom
18. Meg szoktam tanulni kifejezett beszédhangok ejtését
19. Szándékosan odafigyelek bizonyos hangok kiejtésére, amikor hallom egy beszélt szövegben
20. Ha előadást kell tartanom, a jegyzetemben kiemelem a számomra bonyolult kiejtésű szavakat

Construct 5: Affective strategies

(1: egyáltalán nem igaz; 2: inkább nem igaz; 3: valamelyest igaz; 4: inkább igaz; 5: teljesen igaz)

21. Nevetek, ha valamit rosszul ejtek ki, hogy oldjam a feszültséget
22. Viccesnek találom, ha egy szót rosszul ejtek ki
23. Kellemetlenül érzem magam, ha egy szót rosszul ejtek ki
24. Ha helyesen ejtek ki egy nehéz szót, megjutalmazom magam valamivel
25. Akkor is megpróbálkozom egy szó kimondásával, ha nem vagyok teljesen biztos a kiejtésében

Construct 6: Social strategies

(1: egyáltalán nem igaz; 2: inkább nem igaz; 3: valamelyest igaz; 4: inkább igaz; 5: teljesen igaz)

26. Szoktam segítséget kérni bizonyos szavak kiejtése kapcsán olyan tanulóktól, akik jók angolból
27. Szoktam másokat korrepetálni bizonyos szavak kiejtéséből
28. Ha meg akarom tudni egy szó kiejtését, megkérdezem egy anyanyelvi beszélőtől

Köszönöm a kitöltést!

Dear respondent,

Thank you for taking the time to fill out the questionnaire! There is some important information that you should know. Please read the following points carefully before starting to complete the questionnaire:

- Participation in the survey is entirely voluntary. If you decide that you do not want to participate, do not fill out the questionnaire, or if you have already started filling it out, stop at any point!
- The questionnaire is anonymous. This means that nobody will know what specific answers you provided by name; names are not included alongside the collected data.
- Filling out the questionnaire takes approximately 10-15 minutes.

I have read and understood the information above.

Age:

Language proficiency exam level:

None

A1

A2

B1

B2

C1

C2

How many years have you been studying English?

Are you familiar with symbols of the phonetic alphabet?

On a scale from one to five, how would you rate your English pronunciation?

(1: terrible; 2: bad; 3: average; 4: good; 5: perfect)

On a scale from one to five, how often do you focus on pronunciation during your English lessons? (1: never; 2: once per school year; 3: once per month; 4: once a week; 5: several times a week)

On a scale from one to five, how much do you enjoy speaking English? (1: I'm too afraid to speak English; 2: I don't like speaking English; 3: I speak English when I have to; 4: I enjoy speaking English; 5: I love speaking English)

How much do you agree with the following statement?

Someone's pronunciation is good if it is similar to that of native speakers.

(1: Strongly disagree - 5: Strongly agree)

How much do you agree with the following statement?

The main requirement for good pronunciation is comprehensibility.

(1: Strongly disagree - 5: Strongly agree)

Construct 1: Memory-related strategies To what extent do the following statements apply to you? (1: not at all true; 2: somewhat untrue; 3: somewhat true; 4: mostly true; 5: completely true)

1. If I want to learn how to pronounce a word, I look up its phonetic transcription in the dictionary.
2. If I want to remember how to pronounce a word, I write it in my own phonetic script and try to memorize it.
3. If I want to remember how to pronounce a word, I write it down as if it were in Hungarian.
4. If I want to remember how to pronounce a word, I try to remember how the teacher pronounced the word.

Construct 2: Cognitive strategies: (1: not at all true; 2: somewhat untrue; 3: somewhat true; 4: mostly true; 5: completely true)

5. If I want to learn how to pronounce a word, I listen to the pronunciation on an online dictionary.
6. If I want to remember how to pronounce a word, I intentionally concentrate on the pronunciation of the word during speech.
7. If I want to learn how to pronounce a word, I observe how a native speaker pronounces the word (e.g., in an online video).
8. If I want to learn how to pronounce a word, I say it slowly first, then faster and faster.
9. It helps me to remember how to pronounce a word if the teacher repeats it after class.
10. If I want to learn the pronunciation of a word, I repeat it when I hear it in a native language movie or series.

Construct 3: Compensatory strategies (1: not true at all; 2: not really true; 3: somewhat true; 4: mostly true; 5: completely true)

11. If I can't pronounce a word correctly, I try to pronounce it the way it looks at first glance.

12. If I can't pronounce a word correctly, I prefer to say it in Hungarian.
13. If I can't pronounce a word correctly, I gesture it.
14. If I can't pronounce a word correctly, I try to guess its pronunciation based on its spelling.

Construct 4: Metacognitive strategies (1: not true at all; 2: not really true; 3: somewhat true; 4: rather true; 5: completely true)

15. I am interested in the rules of English pronunciation.
16. I often read about the rules of English pronunciation.
17. Knowing the rules of English pronunciation helps me a lot when I want to learn the pronunciation of a word.
18. I learn the pronunciation of specific speech sounds intentionally.
19. I intentionally pay attention to certain sounds when I hear a spoken text.
20. If I have to give a presentation, I highlight the words with difficult pronunciation in my notes.

Construct 5: Affective strategies (1: not true at all; 2: not really true; 3: somewhat true; 4: rather true; 5: completely true)

21. I laugh when I mispronounce something to relieve tension.
22. I find it funny when I mispronounce a word.
23. I feel uncomfortable when I mispronounce a word.
24. If I pronounce a difficult word correctly, I reward myself with something.
25. I still try to pronounce a word even if I'm not completely sure of its pronunciation.

Construct 6: Social strategies (1: not true at all; 2: not really true; 3: somewhat true; 4: rather true; 5: completely true)

26. I ask for help from other students who are good at English with regard to the pronunciation of certain words.
27. I correct others' pronunciation of certain words.
28. If I want to know the pronunciation of a word, I ask a native speaker.

Thank you for completing the survey!

Appendix F: Reading task prompts

Reading task 1:

based on Banville (2016)

The English pop group The Beatles told us that money can't buy us love. Many people believe that money cannot buy happiness and that it is the root of all evil. However, a new study from Cambridge University says that money can buy happiness. Researchers conducted a study that compared the spending habits of customers of a bank with their personality. They compared the personalities of more than 600 people with a list of what the people spent their money on. The conclusion of the study was that buying the right things can lead to happiness.

Reading task 2:

based on Latham-Koenig & Oxenden (2013, p. 20)

And finally, on the news, BBC presenter Helen Skelton has almost completed her long journey down the Amazon river in a kayak. She has been paddling for six weeks on a journey which many people thought would be impossible. She has been fighting with the rough conditions since last Friday. She has been travelling 100 kilometres every day, but now she is only 50 kilometres away from her goal. We will return with updates when she crosses the finish line.

Reading task 3:

based on Cacarpi (2012)

Gender stereotypes are rigid ideas about how boys and girls should behave. We all know what the stereotypes are: a “feminine” girl should be insecure, accommodating and a little illogical in her thinking. A “masculine” boy should be strong, unemotional, aggressive, and competitive. The emphasis on differences begins at birth and continues throughout childhood. For example, few people would give pink baby’s clothes to a boy or a blue blanket to a girl. Later, many of us give the girls dolls and miniature kitchen tools, while the boys get action figures and construction sets.

Appendix G: Activity plans of the pronunciation teaching sessions

Pronunciation teaching activity plans

Pronunciation teaching activity 1: the letter *o*

Strategies in focus: memory-related and cognitive

Source: Latham-Koenig & Oxenden (2013, p. 15)

Timing (minutes)	Group organization	What the teacher does	What students do/say
0-5	Frontal	Presents the different realisations of the letter <i>o</i> with phonetic symbols (/ʌ/, /ɒ/, /əʊ/, /ɔ:/, /ɜ:/) and example words (<u>u</u> p, cl <u>o</u> ck, ph <u>o</u> ne, <u>f</u> orm and w <u>o</u> rk respectively)	Listen to the teacher
5-10	Individual	Tells students that they are going to hear a recording with words containing the letter <i>o</i> in spelling and asks them to categorize the words based on which of the previously presented vowels they hear. The words on the recording are the following: <i>clothes, cost, dollar, done, honest, loan, money, note, nothing, shopping, some, sold, won, worry, afford, order, worth, organized, mortgage, store, work</i>	Listen to the recording and group the words after listening to the words.
10-15	Frontal	Asks the students to repeat the words heard in the recording after him. He modifies the repetition with saying the words slower, faster, more quietly etc.	Students repeat the words after the teacher.

Pronunciation teaching activity 2: sentence rhythm of present perfect continuous sentences

Strategy in focus: social

Source: Latham-Koenig & Oxenden (2013, p. 19)

Timing (minutes)	Group organization	What the teacher does	What students do/say
0-5	Frontal	Tells students that they are going to hear a recording of six sentences and that their task is going to be to write down these sentences into the brackets: 1 <i>How long</i> <i>learning</i> <i>French</i> ? 2 . 3 ? 4 . 5 ? 6 .	They listen to the recording and they write down the sentences: : How long have you been learning French? I've been learning French for three years. How long has it been raining? It's been raining since lunchtime. How long have you been waiting? I've been waiting for half an hour.
5-10	Frontal	Asks students to repeat the sentences stressing the highlighted words only. Asks students to repeat the sentences only saying the stressed words, which are in larger brackets. Divides students into two groups based on different criteria (girls and boys, this side and that side of the classroom etc.) and signals which group has to say the sentence by raising his hand. He then tells the groups if they have to say the odd or even numbered sentences only, therefore creating a whole-class conversation.	Repeat the sentences based on the teacher's instruction.
10-15	Pairwork	Makes pairs and gives out roles of student A and B. Asks student A to read only the sentences with an odd number, and student B has to read sentences with an even number.	Read out the dialogues in pairs.

Pronunciation teaching activity 3: schwa and the definite article

Strategy in focus: cognitive, social (schwa) and memory-related (the definite article)

Source: Latham-Koenig & Oxenden (2013, p. 29)

Timing (minutes)	Group organization	What the teacher does	What students do/say
0-5	Frontal	Shows students a list of words: <i><u>about</u>, <u>anniversary</u>, <u>cinema</u>, <u>problem</u>, <u>relationship</u>, <u>spider</u>, <u>usually</u>, <u>woman</u></i> Asks them to listen to a recording of the same words and underline the stressed syllables, which he also demonstrates by saying the word <i>potato</i> with the stress emphasized and then underlining the second syllable. Then, he asks them to look at the letters in pink and decide if they are stressed. He says that they are going to learn about a letter called schwa, which is only found in unstressed syllables. He demonstrates the pronunciation of schwa.	Listen to the teacher
5-15	Individual	Asks students to repeat the words in the previous list, adding different modifications (slower, more quietly etc.) Asks students to repeat the following sentences: What are we going to have for lunch today? I'd like to see a good film tonight. We need to go in the other direction. Could you ask the woman over there? There is a cinema and there are lots of shops. He then divides the class into groups based on	Students repeat words after the teacher applying the modifications. Students repeat sentences after the teacher and then after each other in pairs.

		different criteria and signals which sentences they have to say by raising his right or left hand. He reads out sentences only pronouncing the vowels and asks students to repeat the whole sentence. Then asks students to repeat the following sentences in pairs, repeating after each other. He then tells students that one person in the pair should read out a sentence only pronouncing the vowels, while the other person has to repeat the whole sentence. They then have to switch roles.	
15-25	Frontal	Asks the students how many ways they think the definite article <i>the</i> can be pronounced. Then, he asks when we use which. He shows a recording containing the following expressions: <i>the cinema, the end, the other day, the world, the sun, the internet, the kitchen, the answer, the Earth</i> to help students find out the rule. Shows pictures of animals. Asks students to memorise as many of them as they can with the correct form of the definite article included. He then turns to a different slide and asks students to try to recollect as many as possible (with the correct form of the definite article).	It can be pronounced /ðə/ or /ði:/. We pronounce <i>the</i> as / ðə/ before consonants, and as /ði:/ before vowels. the cat the dolphin the anaconda the shark the wolf the octopus the elephant the mule the alligator the turtle the axolotl the eagle

Appendix H: Production test prompts with correctly and incorrectly stressed syllables marked in phrasal-stressed words

A:

The **Eng**lish pop group the **Bea**tles told us that **mo**ney can't buy us love. Ma|ny **peo**ple **be**lieve that mo|ney **can**|not buy ha|ppi|ness and that is the **root** of all e|vil. **How**|ev|er, a new study from **cam**|bridge u|ni|ver|si|ty says that mo|ney can buy ha|ppi|ness.

Re|sear|chers **con**|duc|ted (sic. con|structed) a study that **com**|pared the **spen**|ding ha|bits of cus|to|m|ers of a bank with their **per**|so|na|li|ties. They **com**|pared the **per**|so|na|li|ties of more than 600 (**six**|-**hun**|**dred**) peo|ple with a **list** of what the peo|ple **spent** their mo|ney **on**. The **con**|clu|sion of the stu|dy was that **buy**|ing the right things **can** lead to ha|ppi|ness.

44/52: 84.6%

30/38: 78.9%

A3:

Gender ste|re|o|types are ri|gid i|de|as how a|bout **boys** and **girls** should **be**|have. We **all** know what the ste|re|o|types **are**: a “**fe**|mi|nine” girl should be **in**|se|cure, a|cco|m|mo|da|ting and a li|tle **il**|lo|gi|cal in her thin|king. A “**mas**|cu|line” boy should be **strong**, **un**|e|mo|tio|nal, **ag**gres|sive, and **com**|pe|ti|tive. The **em**|pha|sis on **di**ffe|ren|ces be|gins at **birth** and **con**|tin|ues through|out **child**|hood. For e|xam|ple, few peo|ple would **give** pink ba|by's clothes to a **boy** or a **blue** blan|ket to a **girl**. La|ter, **ma**|ny of us give the girls **dolls** and **mi**|ni|a|ture ki|tchen|ware, while the boys get **ac**tion fi|gures and **con**|struc|tion sets.

48/60: 80%

26/38: 68.4%

B:

The English **pop** group the **Bea**tles told us that **mo**ney can't buy us love. **Ma**|ny peo|ple **be**lieve that mo|ney **can**|not buy ha|ppi|ness and **that** is the root of all e|vil. **How**|ev|er, a new study from **cam**|bridge u|ni|ver|si|ty says that mo|ney can **buy** ha|ppi|ness.

Re|sear|chers **con**|duc|ted a study that **com**|pared the **spen**|ding ha|bits of **cus**|to|m|ers of a **bank** with their **per**|so|na|li|ties. They **com**|pared the **per**|so|na|li|ties of more than 600 (**six**|-**hun**|**dred**) peo|ple with a **list** of **what** the peo|ple **spent** their mo|ney **on**. The **con**|clu|sion of the stu|dy was that **buy**|ing the right things **can** lead to ha|ppi|ness

41/53: 77.6%

21/33: 63.6%

B3:

Gender ste|re|o|types are **ri**|gid i|de|as a|bout how **boys** and **girls** should **be**|have. We **all** know what the ste|re|o|types **are**: a “**fe**|mi|nine” girl should be **in**|se|cure, a|cco|m|mo|da|ting and a li|tle **il**|lo|gi|cal in her thin|king. A “**mas**|cu|line” **boy** should be **strong**, **un**|e|mo|tio|nal, **ag**gres|sive, and **com**|pe|ti|tive. The **em**|pha|sis on **di**fferen|ces be|gins at birth and **con**|tin|ues through|out **child**|hood. For e|xam|ple, few peo|ple would give **pink** ba|by's clothes to a **boy** or a **blue** blan|ket to a **girl**. La|ter, **ma**|ny of us give the girls **dolls** and **mi**|ni|a|ture ki|tchen|ware [**ki**|tchen tools], while the **boys** get **ac**tion fi|gures and **con**|struc|tion sets.

66/70: 94.3%

33/37: 89.2%

C:

The **Eng**lish pop group the **Bea**tles told us that **mo**ney can't buy us love. **Ma**|ny peo|ple **be**lieve that mo|ney **can**|not buy **ha**|ppi|ness and that is the **root** of all e|vil. **How**|ev|er, a new stu|dy from **cam**|bridge u|ni|ver|si|ty says that mo|ney can **buy** **ha**|ppi|ness.

Re|sear|chers **con**|duc|ted a study that **com**|pared the **spen**|ding ha|bits of cus|to|m|ers of a

bank with their **per|so|na|li|ties**. They **com|pared** the **per|so|na|li|ties** of more than 600 (six|-hun|dred) people with a list of **what** the people **spent** their mo|ney on. The **con|clu|sion** of the stu|dy was that **buy|ing** the right things can **lead** to ha|ppi|ness.

51/55: 92.7%

29/33: 87.9%

C3:

Gen|der ste|re|o|types are **ri|gid** i|de|as a|bout how **boys** and **girls** should **be|have**. We all know what the ste|re|o|types are: a “fe|mi|nine” [fe|mine] girl should be **in|se|cure**, **a|cco|mmo|da|ting** and a li|ttle **il|lo|gi|cal** in her thin|king. A “**mas|cu|line**” boy should be strong, **un|e|mo|tio|nal**, **ag|gres|sive**, and **com|pe|ti|tive**. The **em|pha|sis** on **di|ffe|ren|ces** be|gins at **birth** and **con|tin|ues** through|out child|hood. For e|xam|ple, few people would **give pink** ba|by’s clothes to a **boy** or a **blue** blan|ket to a **girl**. **La|ter**, ma|ny of us give the girls **dolls** and mi|ni|a|ture ki|tchen|ware [ki|tchen **tools**], while the boys get **ac|tion** fi|gures and **con|struc|tion** sets.

46/54: 85.2%

27/35: 77.1%

D:

The **Eng|lish** pop group the **Bea|tles** told us that **mo|ney** can't buy us love. **Ma|ny** people **be|lieve** that mo|ney **can|not** buy ha|ppi|ness and **that** it is the **root** of all e|vil. **How|ev|er**, a new stu|dy from **cam|bridge u|ni|ver|si|ty** says that mo|ney **can** buy ha|ppi|ness. **Re|sear|chers** con|duc|ted [**con|duced**] a study that **com|pared** the **spen|ding** ha|bits of **cus|tomers** of a bank with their **per|so|na|li|ties**. They **com|pared** the **per|so|na|li|ties** of more than 600 (**six|-hun|dred**) people with a **list** of **what** the people spent their mo|ney on. The **con|clu|sion** of the stu|dy was that **buy|ing** the right things **can** lead to ha|ppi|ness.

50/54: 92.6%

32/36: 88.8%

D3:

Gen|der ste|re|o|types are **ri|gid** i|de|as a|bout how **boys** and **girls** should **be|have**. We all know what the ste|re|o|types are: a “**fe|mi|nine**” girl should be **in|se|cure**, **a|cco|mmo|da|ting** and a li|ttle **il|lo|gi|cal** in her thin|king. A “**mas|cu|line**” boy should be **strong**, **un|e|mo|tio|nal**, **ag|gres|sive**, and **com|pe|ti|tive**. The **em|pha|sis** on di|ffe|ren|ces **be|gins** at birth and **con|tin|ues** through|out child|hood. For e|xam|ple, few people would give **pink** ba|by’s clothes to a **boy** or a **blue** blan|ket to a **girl**. **La|ter**, **ma|ny** of us **give** the girls **dolls** and mi|ni|a|ture ki|tchen|ware [**ki|tchen** tools], while the **boys** get **ac|tion** fi|gures and **con|struc|tion** sets.

52/56: 92.9%

31/35: 88.6%

E:

The **Eng|lish** pop group the **Bea|tles** told us that **mo|ney** can't buy us love. **Ma|ny** people **be|lieve** that mo|ney **can|not** buy **ha|ppi|ness** and **that** is the root of all e|vil. **How|ev|er**, a new stu|dy from **cam|bridge u|ni|ver|si|ty** says that mo|ney **can** buy ha|ppi|ness. **Re|sear|chers** **con|duc|ted** a study that **com|pared** the **spen|ding** ha|bits of **cus|tomers** of a **bank** with their **per|so|na|li|ties**. They **com|pared** the **per|so|na|li|ties** of more than 600 (six|-hun|dred) people with a **list** of **what** the people spent their mo|ney **on**. The **con|clu|sion** of the stu|dy was that **buy|ing** the right things can lead to **ha|ppi|ness**.

49/55: 89.1%

37/43: 86%

E3:

Gen|der ste|re|o|types are **ri**|gid i|de|as a|bout how **boys** and **girls** should **be**|have. We **all** know what the ste|re|o|types **are**: a “**fe**|**mi**|**ni**ne” girl should be **in**|se|**cure**, a **cco**|**mmo**|**da**|ting and a li|ttle **il**|**lo**|**gi**|cal in her thin|king. A “**mas**|**cu**|line” **boy** should be **strong**, **un**|e|**mo**|tio|nal, **ag**|**gres**|sive, and **com**|**pe**|ti|tive. The **em**|**pha**|sis on di|ffe|ren|ces **be**|gins at birth and **con**|**tin**|ues through|out **child**|hood. For e|xam|ple, **few** peo|ple would give **pink** ba|by’s clothes to a **boy** or a **blue** blan|ket to a **girl**. La|ter, **ma**|ny of us **give** the girls **dolls** and mi|ni|a|ture ki|tchen|ware [**ki**|tchen tools], while the boys get **ac**|tion fi|gures and **con**|**struc**|tion sets.

47/51: 92.2%

29/33: 87.9%

F:

The **Eng**|lish pop group the **Bea**|tles told us that mo|ney can't **buy** us love. **Ma**|ny peo|ple **be**|lieve that **mo**|ney can|not buy ha|ppi|ness and **that** [it] is the **root** of all e|vil. **How**|**ev**|er, a **new** stu|dy from **cam**|bridge u|ni|**ver**|si|ty says that mo|ney can buy ha|ppi|ness. **Re**|**sear**|chers **con**|**duc**|ted a study that **com**|**pa**|red the **spen**|ding ha|bits of cus|to|mers of a **bank** with their **per**|so|na|li|ties. They **com**|**pa**|red the **per**|so|na|li|ties of more than 600 (**six**|-**hun**|dred) peo|ple with a **list** of **what** the peo|ple spent their mo|ney **on**. The **con**|**clu**|sion of the stu|dy was that **buy**|ing the right things can **lead** to ha|ppi|ness.

50/56: 89.3%

27/33: 81.2%

F3:

Gen|der ste|re|o|types are **ri**|gid i|de|as a|bout how **boys** and **girls** should **be**|have. We **all** know what the **ste**|re|o|types are: a “**fe**|**mi**|**ni**ne” girl should be **in**|se|**cure**, a **cco**|**mmo**|**da**|ting and a li|ttle **il**|**lo**|**gi**|cal in her thin|king. A “**mas**|**cu**|line” **boy** should be strong, **un**|e|**mo**|tio|nal, **ag**|**gres**|sive, and **com**|**pe**|ti|tive. The **em**|**pha**|sis on di|fferen|ces **be**|gins at birth and **con**|**tin**|ues through|out **child**|hood. **For** e|xam|ple, **few** peo|ple would give **pink** ba|by’s clothes to a **boy** or a **blue** blan|ket to a **girl**. La|ter, **ma**|ny of us **give** the girls **dolls** and mi|ni|a|ture ki|tchen|ware [**ki**|tchen **tools**], while the **boys** get **ac**|tion fi|gures and **con**|**struc**|tion sets.

48/56: 85.7%

30/38: 78.9%

G:

The **Eng**|lish pop group the **Bea**|tles told us that **mo**|ney can't buy us love. **Ma**|ny peo|ple **be**|lieve that **mo**|ney can|not buy ha|ppi|ness and that it is the **root** of all e|vil. **How**|**ev**|er, a **new** stu|dy from **cam**|bridge u|ni|**ver**|si|ty says that **mo**|ney can buy ha|ppi|ness. **Re**|**sear**|ch(ers) **con**|**duc**|ted a study that **com**|**pa**|red the **spen**|ding ha|bits of cus|to|**mers** of a **bank** with their **per**|so|na|li|ties. They **com**|**pa**|red the **per**|so|na|li|ties of more than 600 (**six**|-**hun**|dred) peo|ple with a **list** of **what** the peo|ple spent their mo|ney **on**. The **con**|**clu**|sion of the stu|dy was that **buy**|ing the right things can **lead** to ha|ppi|ness.

52/58: 89.7%

31/37: 83.8%

G3:

Gen|der ste|re|o|types are **ri|gid** i|de|as a|bout how **boys** and **girls** should be|have. We all know what the ste|re|o|types are: a “fe|mi|nine” girl should be in|se|cure, a|cco|mmo|da|ting and a li|ttle il|lo|gi|cal in her thin|king. A “mas|cu|line” boy should be strong, un|e|mo|tio|nal, ag|gres|sive, and **com|pe|ti|tive**. The **em|pha|sis** on di|ffe|ren|ces be|gins at **birth** and **con|tin|ues** through|out child|hood. For e|xam|ple, few peo|ple would give pink ba|by’s clothes to a boy or a **blue** blan|ket to a **girl**. La|ter, **ma|ny** of us give the **girls** dolls and mi|ni|a|ture ki|tchen|ware [**ki|tchen** tools], while the boys get **ac|tion** fi|gures and **con|struc|tion** sets.

46/52: 88.5%

26/35: 80%

H:

The **Eng|lish** pop group the **Bea|tles** told us that mo|ney can’t buy us love. **Ma|ny** peo|ple be|lieve that mo|ney can|not buy ha|ppi|ness and that it is the **root** of all e|vil. **How|ev|er**, a new stu|dy from cam|bridge u|ni|ver|si|ty says that mo|ney can buy ha|ppi|ness. **Re|sear|chers** **con|duc|ted** a study that **com|pared** the spen|ding ha|bits of **cus|to|mers** of a bank with their **per|so|na|li|ties**. They **com|pared** the **per|so|na|li|ties** of more than 600 (six|-hun|dred) peo|ple with a **list** of **what** the peo|ple spent their mo|ney **on**. The **con|clu|sion** of the stu|dy was that **buy|ing** the right things **can** lead to ha|ppi|ness.

43/49: 87.8%

30/36: 83.3%

H3:

Gen|der ste|re|o|types are **ri|gid** i|de|as a|bout how **boys** and **girls** should be|have. We all know **what** the ste|re|o|types are: a “fe|mi|nine” girl should be in|se|cure, a|cco|mmo|da|ting and a li|ttle il|lo|gi|cal in her thin|king. A “mas|cu|line” boy should be strong, un|e|mo|tio|nal, ag|gres|sive, and **com|pe|ti|tive**. The **em|pha|sis** on di|fferen|ces be|gins at birth and **con|tin|ues** through|out child|hood. For e|xam|ple, few peo|ple would give pink ba|by’s clothes to a **boy** or a **blue** blan|ket to a **girl**. La|ter, **ma|ny** of **us** give the **girls** dolls and mi|ni|a|ture ki|tchen|ware [**ki|tchen** tools], while the **boys** get **ac|tion** fi|gures and **con|struc|tion** sets.

52/57: 91.2%

32/37: 86.5%

J:

The **Eng|lish** pop group the **Bea|tles** told us that mo|ney **can’t** buy us love. **Ma|ny** peo|ple be|lieve that mo|ney **can|not** buy ha|ppi|ness and that it is the **root** of all e|vil. **How|ev|er**, a new stu|dy from **cam|bridge u|ni|ver|si|ty** says that mo|ney can buy ha|ppi|ness. **Re|sear|chers** **con|duc|ted** a study that **com|pared** the spen|ding ha|bits of **cus|to|mers** of a **bank** with their **per|so|na|li|ties**. They **com|pared** the **per|so|na|li|ties** of more than 600 (six|-hun|dred) peo|ple with a **list** of **what** the **peo|ple** spent their mo|ney **on**. The **con|clu|sion** of the stu|dy was that **buy|ing** the right things can **lead** to ha|ppi|ness.

44/48: 91.7%

29/33: 87.9%

J3:

Gen|der ste|re|o|types are **ri|gid** i|de|as a|bout how **boys** and **girls** should be|have. We all know what the ste|re|o|types are: a “fe|mi|nine” girl should be in|se|cure, a|cco|mmo|da|ting and a li|ttle il|lo|gi|cal in her thin|king. A “mas|cu|line” boy should be strong, un|e|mo|tio|nal,

ag|gres|sive, and **com|pe|ti|tive**. The **em|pha|sis** on di|fferen|ces be|gins at **birth** and **con|tin|ues** through|out child|hood. For e|xam|ple, few peo|ple would give **pink** ba|by's clothes to a boy or a **blue** blan|ket to a **girl**. La|ter, **ma|ny** of us give the girls **dolls** and mi|ni|a|ture ki|tchen|ware [**ki|tchen** tools], while the **boys** get **ac|tion** fi|gures and **con|struc|tion** sets.

47/49: 95.9%

30/32: 93.75%

K:

The **Eng|lish** pop group the **Bea|tles** told us that **mo|ney** can't buy us **love**. **Ma|ny** peo|ple **be|lieve** that mo|ney **can|not** buy ha|ppi|ness and **that** [it] is the **root** of all e|vil. **How|ev|er**, a **new** stu|dy from **cam|bridge u|ni|ver|si|ty** says that **mo|ney** can buy ha|ppi|ness.

Re|sear|chers **con|duc|ted** a stu|dy that **com|pared** the **spen|ding** ha|bits of **cus|to|mers** of a bank with their **per|so|na|li|ties**. They **com|pared** the **per|so|na|li|ties** of **more** than 600 (six|-hun|dred) **peo|ple** with a **list** of **what** the peo|ple spent their mo|ney **on**. The **con|clu|sion** of the stu|dy was that **buy|ing** the right things can **lead** to ha|ppi|ness.

50/56: 89.3%

29/35: 82.9%

K3:

Gen|der **ste|re|o|types** are **ri|gid i|de|as** a|bout how **boys** and **girls** should **be|have**. We **all** know what the ste|re|o|types are: a “**fe|mi|nine**” girl should be **in|se|cure**, a|cco|mmo|da|ting and a li|ttle **il|lo|gi|cal** in her thin|king. A “**mas|cu|line**” boy should be **strong**, un|e|mo|tio|nal, **ag|gres|sive**, and com|pe|ti|tive. The **em|pha|sis** on di|fferen|ces be|gins at **birth** and **con|tin|ues** through|out child|hood. For e|xam|ple, few peo|ple would give **pink** ba|by's clothes to a **boy** or a **blue** blan|ket to a **girl**. La|ter, **ma|ny** of us give the girls **dolls** and mi|ni|a|ture ki|tchen|ware [**ki|tchen** **tools**], while the **boys** get **ac|tion** fi|gures and **con|struc|tion** sets.

42/50: 84%

26/34: 76.5%

L:

The **Eng|lish** pop group the **Bea|tles** told us that **mo|ney** can't buy us **love**. **Ma|ny** peo|ple **be|lieve** that mo|ney can|not buy **ha|ppi|ness** and that it is the **root** of all e|vil. **How|ev|er**, a **new** stu|dy from **cam|bridge u|ni|ver|si|ty** says that **mo|ney** can buy ha|ppi|ness.

Re|sear|chers **con|duced** a **stu|dy** that **com|pared** the spen|ding ha|bits of **cus|to|mers** of a **bank** with their per|so|na|li|ties. They **com|pared** the **per|so|na|li|ties** of **more** than 600 (six|-hun|dred) peo|ple with a **list** of what the peo|ple spent their mo|ney **on**. The **con|clu|sion** of the stu|dy was that **buy|ing** the right things can lead to **ha|ppi|ness**.

45/49: 91.8%

23/27: 85.2%

L3:

Gen|der ste|re|o|types are **ri|gid i|de|as** a|bout how **boys** and **girls** should **be|have**. We **all** know **what** the ste|re|o|types **are**: a “**fe|mi|nine**” girl should be **in|se|cure**, a|cco|mmo|da|ting and a li|ttle **il|lo|gi|cal** in her thin|king. A “**mas|cu|line**” boy should be **strong**, un|e|mo|tio|nal, **ag|gres|sive**, and **com|pe|ti|tive**. The **em|pha|sis** on di|fferen|ces be|gins at **birth** and **con|tin|ues** through|out **child|hood**. For e|xam|ple, few peo|ple would give **pink** ba|by's

clothes to a **boy** or a **blue** blan|ket to a **girl**. La|ter, **ma**ny of us give the girls **dolls** and **mi**ni|a|ture ki|tchen|ware [ki|tchen tools], while the **boys** get **ac**tion fi|gures and **con**struc|tion sets.

55/61: 90.2%

28/34: 82.4%

M:

The **Eng**lish pop group the **Bea**tles told us that mo|ney **can't** buy us love. **Ma**ny peo|ple **be**lieve that mo|ney **can**|not buy ha|ppi|ness and that it is the **root** of all e|vil. **How**ev|er, a new stu|dy from **cam**bridge u|ni|ver|si|ty says that mo|ney **can** buy ha|ppi|ness.

Resear|chers **con**duc|ted a stu|dy that **com**pared the spen|ding ha|bits of **cus**to|mers of a bank with their per|so|na|li|ties. They **com**pared the **per**|so|na|li|ties of **more** than 600 (**six**-**hun**dred) peo|ple with a **list** of **what** the peo|ple spent their mo|ney **on**. The **con**clu|sion of the stu|dy was that **buy**ing the right things can lead to **ha**ppi|ness.

37/49: 75.5%

18/30: 60%

M3:

Gender ste|re|o|types are **ri**gid **i**de|as a|bout how **boys** and **girls** should be|have. We **all** know **what** the ste|re|o|types **are**: a “**fe**mi|nine” girl should be in|se|cure, a|cco|mmoda|ting and a li|ttle il|lo|gi|cal in her thin|king. A “mas|cu|line” **boy** should be **strong**, un|e|mo|tio|nal, **ag**gres|sive, and **com**pe|ti|tive. The **em**pha|sis on di|fferen|ces be|gins at **birth** and **con**tin|ues through|out child|hood. For e|xam|ple, **few** peo|ple would give **pink** ba|by's clothes to a **boy** or a **blue** blan|ket to a **girl**. La|ter, **ma**ny of us give the girls **dolls** and mi|ni|a|ture ki|tchen|ware [ki|tchen **tools**], while the **boys** get **ac**tion fi|gures and **con**struc|tion sets.

Appendix I: Different pronunciations of the transcribed words with their frequency in number and percentage

Production test 1:

group:

/gru:p/	8	66.7%
/grɑ:p/	2	16.7%
/gru:pə/	1	8.3%
/grəu:p/	1	8.3%

believe:

/bə'li:v/	6	50%
/be'li:v/	3	25%
/bɪ'li:v/	2	16.7%
/bɪ'lɪv/	1	8.3%

evil:

/i:vəl/	7	58.3%
/evɪl/	3	25%
/'evəl/	1	8.3%
/'i:vɜ:l/	1	8.3%

however:

/haʊ'evər/	6	50%
/haʊevər/	1	8.3%
/'hɑ:evər/	1	8.3%
/'hɑ:wevər/	1	8.3%
/hʌv'evɜ:r/	1	8.3%
/'haʊər/	1	8.3%
/'hɑ:vevrɜ:/	1	8.3%

researchers:

/'ri:sətʃəz/	2	16.7%
/rɪ'sɜ:tʃəz/	2	16.7%
/'ri:sərtʃəz/	1	8.3%
/ri:'sɜ:tʃəz/	1	8.3%
/rɪ'sɜ:rtʃəz/	1	8.3%
/rɪ'sɜrtʃərs/	1	8.3%
/ri:'sɜtʃ/	1	8.3%
/rɪ'sɜ:rtʃɜ:z/	1	8.3%
/rɪsɜ:dʒəs/	1	8.3%
/rɪ'sɜ:tʃɪrs/	1	8.3%

conducted:

/kən'dʌktɪd/	2	16.7%%
/'konʊkʊtɪd/	1	8.3%
/kən'dʌkted/	1	8.3%
/kən'dʊktɪd/	1	8.3%
/kəndju:sd/	1	8.3%

/konn'dʊkted/	1	8.3%
/kən'dʌktɪd/	1	8.3%
/kən'dʊktɪd/	1	8.3%
/'kondju:zd/	1	8.3%
/kən'dʌkted/	1	8.3%

customers:

/'kʌstəmərz/	5	41.7%
/'kʌstəmɜ:rz/	1	8.3%
/'kʌstəmɜ:/	1	8.3%
/'kɒstəmərs/	1	8.3%
/kɒstə'mɜ:rs/	1	8.3%
/'kɒstəmərz/	1	8.3%
/kʌstəmɜ:rz/	2	16.7%

personality:

/'persənəlɪtɪ/	3	25%
/persənə'lɪtɪ/	2	16.7%
/'persənəlɪ/	1	8.3%
/pərsənə'lɪtɪ/	1	8.3%
/'pe:rsənəlɪtɪ/	1	8.3%
/'pɜ:rsənəlɪtɪ:/	1	8.3%
/pər'sɜnəlɪtɪ/	1	8.3%
/'persənəlɪtɪ/	1	8.3%
/'pɜrsənəlɪtɪ:/	1	8.3%

compared:

/kəm'peəd/	3	25%
/kəm'peərd/	3	25%
/'kompeɪrd/	1	8.3%
/kəm'peəd/	1	8.3%
/kəm'perd/	1	8.3%
/'kompəred/	1	8.3%
/kʌm'peəd/	1	8.3%
/kʌm'pɜ:rd/	1	8.3%

conclusion:

/kən'klu:ʒən/	7	58.3%
/kən'klu:ʒən/	2	16.7%
/'kʌnklʌʃən/	1	8.3%
/kən'klu:ʃfən/	1	8.3%
/'konklu:ʒən/	1	8.3%

Production test 3:**gender:**

/ˈdʒendər/	6	54.5%
/ˈdʒendə/	3	27.3%
/ˈdʒender/	1	9.1%
/ˈdʒendʒ:r/	1	9.1%

stereotypes:

/ˈsteriətaɪps/	3	25%
/ˈstereotaɪps/	2	16.7%
/ˈstɪriətaɪps/	2	16.7%
/ˈsteətaɪps/	1	8.3%
/ˈstereətaɪps/	1	8.3%
/ˈstɪriətaɪbz/	1	8.3%
/ˈsteriətaɪbz/	1	8.3%
/ˈsteɪotaɪps/	1	8.3%

ideas:

/aɪˈdi:əz/	3	25%
/aɪˈdɪəz/	2	16.7%
/ˈɪdeɪz/	1	8.3%
/aɪˈdɪəs/	1	8.3%
/aɪˈdɪəz/	1	8.3%
/ˈaɪdɪəz/	1	8.3%
/ˈaɪdɪəz/	1	8.3%
/ˈɪdeɪz/	1	8.3%
/aɪˈdi:əz/	1	8.3%

feminine:

/ˈfemɪnɪn/	5	41.7%
/ˈfemɪni/	2	16.7%
/ˈfemɪneɪ/	1	8.3%
/ˈfeməni/	1	8.3%
/ˈfemɪni:/	1	8.3%
/ˈfeməni:n/	1	8.3%
/ˈfemənɪn/	1	8.3%

masculine:

/ˈmæskəlɪn/	2	16.7%
/ˈmeskylɪn/	2	16.7%
/ˈmeskələm/	1	8.3%
/ˈmʌskjəlɪn/	1	8.3%
/ˈmæskələm/	1	8.3%
/ˈmɒskjəlɪn/	1	8.3%
/ˈmʊskəl/	1	8.3%
/ˈmeskula:n/	1	8.3%
ˈmæskylɪn/	1	8.3%

/ˈmeskəlɪn/	1	8.3%
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illogical:

/ɪˈlɒdʒɪkəl/	4	33.3%
/ɪlˈlɒdʒɪkəl/	3	25%
/ˈɪllogɪkəl/	1	8.3%
/ɪˈlɒdʒɪkər/	1	8.3%
/ɪlˈlɒgɪkə:l/	1	8.3%
/ɪˈlɒdʒɪkəl/	1	8.3%
/ɪlˈlɒgɪkəl/	1	8.3%

unemotional:

/ʌneˈməʃənəl/	2	16.7%
/ʌniˈməʃənəl/	2	16.7%
/ˈʌneməsənəl/	1	8.3%
/ʊniˈməʃənəl/	1	8.3%
/ʌniˈmoʃənəl/	1	8.3%
/ʌneˈməʃənəl/	1	8.3%
/ˈʊneməʃənəl/	1	8.3%
/ʊneˈməʃənəl/	1	8.3%
/ʌneˈməʃənəl/	1	8.3%
/ʌniˈmoʃənəl/	1	8.3%

aggressive:

/əˈɡressɪv/	3	25%
/əˈɡresɪv/	2	16.7%
/ʌˈɡressɪv/	2	16.7%
/ʌˈɡresɪv/	1	8.3%
/ʌˈɡresi:v/	1	8.3%
/ˈæɡressɪv/	1	8.3%
/pˈɡressɪv/	1	8.3%
/əˈɡre:ssɪv/	1	8.3%

emphasis:

/ˈemfəsɪz/	2	16.7%
/ˈemphezɪs/	1	8.3%
/ˈemfəsɪs/	1	8.3%
/ˈemfəsəɪz/	1	8.3%
/ˈemfəsɪs/	1	8.3%
/ˈæmfəzɪz/	1	8.3%
/emˈfɑ:sɪs/	1	8.3%
/ˈemphəsɪs/	1	8.3%
/ˈemfʌsɪs/	1	8.3%
/ˈemfəsi/	1	8.3%
/ɪmˈfezɪs/	1	8.3%

differences:

/ˈdɪfrənsɪz/	3	25%
/ˈdɪfərənsɪz/	3	25%
/ˈdɪferənsɪz/	1	8.3%

/ˈdɪfərəːnsɪz/	1	8.3%
/ˈdɪferensɪz/	1	8.3%
/ˈdɪfərənsɪz/	1	8.3%
/ˈdɪfrəns/	1	8.3%
/dɪfə're:nz/	1	8.3%

/ko'strʌkʃən/

throughout:

/ˈtrʊxou:t/	1	8.3%
/ˈtrʊaʊt/	1	8.3%
/ˈtru:/	1	8.3%
/ˈtru:aʊt/	1	8.3%
/frʊ'aʊt/	1	8.3%
/ˈθru:hu:t/	1	8.3%
/tro:t/	1	8.3%
/tru:'aʊt/	1	8.3%
/θrʊ'aʊt/	1	8.3%
/sro:'aʊt/	1	8.3%
/ˈθru:aʊt/	1	8.3%

blanket:

/ˈblænkɪt/	3	25%
/ˈblæŋket/	3	25%
/ˈblɒŋket/	3	25%
/ˈblenkɪt/	2	16.7%
/ˈbænkɪt/	1	8.3%

miniature

/ˈmɪnɪtʃər/	2	16.7%
/ˈmɪnɪʌtʃər/	2	16.7%
/ˈmɪnɪətɜ:r/	1	8.3%
/mɪnɪətʃy:r/	1	8.3%
/ˈmɪnɪetʃə/	1	8.3%
/ˈmɪnɪətyr/	1	8.3%
/mɪnɪə'tʃɜ:r/	1	8.3%
/ˈmɪnjɪʌtɜr/	1	8.3%
/ˈmɪnɪetyr/	1	8.3%
/ˈmɪnɪətʃɜ:r/	1	8.3%

construction:

/kon'strʌkʃən/	2	16.7%
/ˈkonstrʊkʃən/	1	8.3%
/kən'ʃʌkʃən/	1	8.3%
/ˈkəntrʌkʃən/	1	8.3%
/kəns'trʌkʃər/	1	8.3%
/kən'strʌkən/	1	8.3%
/kən'sjʊktʃən/	1	8.3%
/ˈkonsrʊkʃən/	1	8.3%
/kən'srʌkkən/	1	8.3%
/ˈkonʃʌktʃən/	1	8.3%

Appendix J: Results of the reduction analysis

Mistakes according to RP are highlighted in green, SIVCs are highlighted in red

1	believe	evil	however	researchers	conducted	customers	personality	compared	conclusion	Total:	
A	/be'li:v/	/ev il /	/haʊevər/	/ri:sə'tʃəz/	/'kɒntruktɪd/	/'kʌstəmərz/	/'persənə'lɪtɪ/	/'kɒmpeɪrd/	/kɒn'klu:ʒən/	6/14	9/14
B	/be'li:v/	/'i:vəl/	/'ha:evər/	/'ri:sə'tʃəz/	/kən'dʌkted/	/'kʌstəmərz/	/'persənə'lɪtɪ/	/'kɒm'peəd/	/'kʌnklʌʃən/	8/14	9/14
C	/bə'li:v/	/'i:vəl/	/'ha:wevər/	/ri:'sɜ:tʃəz/	/kən'dɒktɪd/	/'kʌstəmərz/	/persə'næ'lɪtɪ/	/kəm'peəd/	/kən'klu:ʒən/	10/11	11/11
D	/bə'li:v/	/'i:vəl/	/haʊ'evər/	/rɪ'sɜ:rtʃəz/	/kændju:sd/	/'kʌstəm 3 :rz/	/'pɜ:rsənəlti:z/	/kəm'peərd/	/kən'klu:ʒən/	10/11	11/11
E	/bə'li:v/	/'i:vəl/	/haʊ'evər/	/rɪ'sɜ:rtʃərs/	/kɒn'dʌktɪd/	/'kʌstəmərs/	/pər'sɜnəlɪtɪ/	/kəm'perd/	/kɒn'klu:ʒən/	8/10	10/10
F	/bə'li:v/	/'i:vəl/	/haʊ'evər/	/rɪ'sɜ:tʃəz/	/kɒn'dʌkted/	/'kʌstəm 3 :/	/persə'næ'lɪtɪ/	/kəm'peərd/	/kən'klu:ʃfən/	7/10	10/10
G	/be'li:v/	/'evəl/	/hʌv'ev 3 :r/	/ri:'sɜtʃ/	/kɒnn'dʌkted/	/'kɒstəmərs/	/'persɒnəlɪtɪ/	/'kɒmpəred/	/kən'klu:ʒən/	3/10	8/10
H	/bə'li:v/	/'ev il /	/haʊ'evər/	/rɪ'sɜ:rtʃ 3 :z/	/kɒn'dʒʊktɪd/	/kɒstə'm 3 :rs/	/'pe:rsənəlɪtɪ/	/kɒm'peəd/	/kən'klu:ʒən/	5/11	9/11
J	/br'li:v/	/'i:vəl/	/haʊ'evər/	/'ri:sə'tʃəz/	/kən'dʌktɪd/	/'kɒstəmərz/	/pərsə'næ'lɪtɪ/	/kəm'peərd/	/kən'klu:ʒən/	11/13	12/13
K	/bə'li:v/	/'ev il /	/'haʊər/	/rɪ'sɜ:tʃəz/	/kɒn'dɒktɪd/	/'kʌstəmərz/	/'persənə'lɪtɪ/	/kʌm'pɜ:rd/	/kən'klu:ʒən/	6/12	9/12
L	/br'li:v/	/'i:vəl/	/haʊ'evər/	/rɪ'sɜ:tʃɪrs/	/'kɒndju:zd/	/kʌstə'm 3 :rz/	/'pɜrsənəlti:/	/kʌm'peəd/	/kən'klu:ʒən/	7/12	9/12
M	/'bɪl iv /	/'i:v 3 :l/	/'ha:vev 3 :/	/rɪ'sɜ:dʒəs/	/kɒn'dʌktɪd/	/'kʌstəm 3 :rz/	/'persənəltɪ/	/'kɒm'peəd/	/'kɒnklʌ:ʒən/	5/14	9/14

3	gender	stereotypes	illogical	unemotional	aggressive	emphasis	differences	miniature	construction	Total:	
A	/'dʒend er /	/'stee o taɪps/	/'ɪllogikəl/	/'ʌnemə s ənəl/	/ə'g r essɪv/	/'emphe z ɪs/	/'dɪfərənsɪz/	/'mɪnɪə t3 :r/	/'kɒnstrʊkʃən/	6/14	12/14
B	/'dʒendər/	/'stere o taɪps/	/'ɪl'lɒdʒɪkəl/	/'ʌne'mə:ʃənəl/	/ə'g r esɪv/	/'emf ɒ sɪs/	/'dɪfrənsɪz/	/'mɪnɪə t3 :r/	/'kən'ʃʌkʃən/	8/12	12/12
C	/'dʒendə/	/'ster i otaɪps/	/'ɪ'lɒdʒɪkəl/	/'ʌne'mə:ʃənəl/	/ə'g r esi:v/	/'emfəsəɪz/	/'dɪfərənsɪz/	/'mɪnɪ ɪ tʃər/	/'kəntrʌkʃən/	11/13	13/13
D	/'dʒendər/	/'ster i otaɪps/	/'ɪl'lɒdʒɪkəl/	/'ʊnɪ'məʊʃənəl/	/ə'g r essɪv/	/'emfəsɪs/	/'dɪfərənsɪz/	/'mɪnɪ e tʃə/	/'kəns'trʌkʃər/	11/13	13/13
E	/'dʒendər/	/'ster i otaɪbz/	/'ɪ'lɒdʒɪkər/	/'ʌnɪ'məʊʃənəl/	/'æ'g r essɪv/	/'æmfəzɪz/	/'dɪfərənsɪz/	/'mɪnɪ ɪ tyr/	/'kən'tsrʌkən/	9/13	12/13
F	/'dʒendər/	/'stere o taɪps/	/'ɪ'lɒdʒɪkəl/	/'ʌne'məʊʃənəl/	/ə'g r essɪv/	/'em'f ɒ :sɪs/	/'dɪfrənsɪz/	/'mɪnɪə't 3 :r/	/'kɒn'strʌkʃən/	8/12	10/12
G	/'dʒendə/	/'stere ə taɪps/	/'ɪl'logɪk ɔ :l/	/'ʊnemə t ɪɒn ɔ :l/	/ə'g r essɪv/	/'emphəsɪs/	/'dɪfə r ənsɪz/	/'mɪnɪ j ɪ t3 :r/	/'kən'sjʊktʃən/	6/14	13/14
H	/'dʒendə/	/'stɪr i otaɪbz/	/'ɪ'lɒdʒɪkəl/	/'ʊne'mə:ʃənəl/	/'g r essɪv/	/'emfəsɪs/	/'dɪf e rensɪz/	/'mɪnɪ ɪ tʃər/	/'kɒnsrʊkʃən/	7/13	12/13
J	/'dʒendər/	/'ster i otaɪps/	/'ɪ'lɒdʒɪkəl/	/'ʌnɪ'mə:ʃənəl/	/ə'g r esɪv/	/'emfəsɪ/	/'dɪf e rensɪz/	/'mɪnɪtʃər/	/'kən'srʌkkən/	10/12	12/12
K	-	/'stɪr i otaɪps/	/'ɪl'logɪk ɒ l/	/'ʌne'mə:ʃənəl/	/ə'g r essɪv/	/'ɪm'f e zɪs/	/'dɪfrəns/	/'mɪnɪ e tyr/	/'kɒn'strʌkʃən/	5/11	12/12
L	/'dʒendər/	/'ster i otaɪps/	/'ɪl'lɒdʒɪkəl/	/'ʌnɪ'məʊʃənəl/	/ə'g r esɪv/	/'emfəsɪz/	/'dɪfrənsɪz/	/'mɪnɪə't 3 :r/	/'kɒn'ʃʌktʃən/	9/12	11/12
M	/'dʒend 3 :r/	/'stɪr i otaɪps/	/'ɪ'lɒdʒɪkəl/	/'ʌnɪ'mə:ʃənəl/	/ə'g r e:ssɪv/	/'emfəsɪz/	/'dɪfə r e:nz/	/'mɪnɪtʃər/	/'kɒ'strʌkʃən/	8/12	11/12