

Phonological analysis of English consonants pronunciation

Ambalegin

Universitas Putera Batam, Batam, Indonesia
email: Ambalegin@puterabatam.ac.id

Abstract - This is descriptive qualitative research phonologically investigating the English consonant sounds as the central phenomena represented by letters. The theories of Bauer, Hayes, Katamba, Kreidler, McMahon, and Yule were applied in this research. The method of data collection was observational. The articulatory phonetic identity method was a method in analyzing the data with competence in differentiating technique. The Oxford Advanced Learner's Dictionary as a standard form of British pronunciation was a tool to compare the sound produced and differentiate the English Alphabet letter. There are some patterns of English consonant pronunciation. Letters p, s, t, c, g (gh- close syllable) meet h will produce fricative. Letter r is equivowel at the r-close syllable. Letter n meets /k/ will produce /ŋ/. Letter t is pronounced as /ʃ/ in morpheme noun form -tion. Letter s is pronounced as /ʒ/ in morpheme noun form -(s)ion. Letter t is pronounced as /tʃ/ in the final syllable -ture. Letter s is pronounced as /z/ in the final syllable -sure. Letter s is pronounced as /z/ in morpheme noun form -(s)ion. In -ue close syllable, -ue is not pronounced.

Keywords: consonants, phonology, Received Pronunciation

1. Introduction

English, as a global language, is a language that has difficult pronunciation. English pronunciation is one of the most difficult skills (Gilakjani, 2016). So, many Chinese English learners preferred learning “DUMB ENGLISH” to paying attention to studying English pronunciation (Zhang & Yin, 2009), and for over past thirty years, particularly, the pronunciation of English has taken the lion’s share of research Arab speakers (Kalaldehy, 2016). English has phonologically ambiguous rules. English isn’t a strictly phonetic language because the way it is written in English might not give any indication as to how to pronounce it in English. Each sound of the English language is represented by more than one written letter or by sequences of letters; and any letter of English represents more than one sound, or it may not represent any sound at all (Ambalegin & Arianto, 2019). In English, many letters can represent more than one sound. Letter c can be pronounced as /k/ as in can or as /s/ as in the cinema. And many sounds can be represented by more than one letter or combination of letters, for example, /ʊ/ appears input, book, and could.

Ambalegin and Arianto (2019), in their article, found some English mispronunciation such invite, examine, paste, entrepreneur, mild, paradise, online, mouse, finger, support, and orchid were pronounced as /pʌrʌdɪs/, /ɒnlen/, /mɒs/, /fɪnjɜr/, /sʊpɔrt/, and /ɔrʧɪt/. It indicates that English pronunciation is inconsistent. Ambalegin and Arianto (2019) discussed the English pronunciation inconsistency at The 2nd Annual International Conference on Language and Literature (AICLL) 2019. This study formulated that (1) one letter can be produced by more than one sound, and one sound can be represented by more than one letter; (2) The same letter of the English alphabet does not always produce the same sound; (3) The same sound is not always produced by the same letter of the English alphabet; (4) Some letters of English alphabet indicated in words are not produced as sounds; <r, e, gh, c, h, g, t, b, l, s, h, d, k, w, b, lo, g, m, p, u, o, l, z, a>; and (5) The sound is produced where there is no letter of the English alphabet; /j, w/.

People just learn new words, but they do not want to learn how to say them correctly. Teaching pronunciation is the most fundamentally important for the EFL learners (Ambalegin & Hulu, 2019). The ability to speak English embodies the correctness of pronunciation and intonation and directly affects intelligible communication in conversation (Zhang & Yin, 2009). But many English teachers do not count on it, then many teaching materials still do not make clear, finally pronunciation is just one tiny piece of the whole course credits (Ambalegin & Hulu, 2019). English pronunciation should be taught to engage students’ motivation in speaking with the correct pronunciation (Aprilia & Ahmad, 2020).

There are 5 vowels and 21 consonant letters when writing, but contrarily, there are 12 vowel sounds, 8 diphthong sounds, 5 triphthong sounds, and 24 consonant sounds when speaking English (Kelly, 2004; Kreidler, 1993; Roach, 2012). Ladefoged, (2006) stated that most of the sound symbols are the same letter used in spelling in the English words, but there are a few different. English shows the inconsistency of pronunciation (Ambalegin & Arianto, 2019). The pronunciation book for EFL learners showed only the phonetic symbols but does not show the appearance of a sound in different letters. It is very important to know how one sound exists in different letters. Thus, this study investigated the appearance of consonant sounds in different letters by grouping some letters into one single consonant sound.

Completing this study, it is needed to know what English consonant is. Katamba (1989) stated that the production of consonants involves four major parameters to create different kinds of consonants.

- (1) The airstream mechanism: This refers to the way in which the moving body of air that provides the power for speech production is generated and the direction in which it moves.
- (2) The state of the glottis: Voiceless sounds are produced when there is a wide open glottis, with a big space between the vocal cords; [p], [f], [θ], [t], [s], [ʃ], [tʃ], [k], [h].

Voiced sounds are produced when the vocal cords are close together so that the air has to force its way through them, making them vibrate in the process; [b] [m], [w], [v], [ð], [d], [z], [n], [l], [r], [ʒ], [dʒ], [j], [g], [ŋ].

(3) The place of articulation: This refers to the place in the vocal tract where the airstream is obstructed in the production of a consonant. there are seven kinds of place of articulation; bilabials, labiodentals, dental, alveolar, palatal, velar, and glottal (Bauer, 2012; Hayes, 2009; McMahon, 2002; Yule, 2014).

- a. Bilabial sounds are made by touching the upper and lower lips together in [p] [b] [m], [w]
- b. Labiodental sounds are made by touching the lower lip to the upper teeth in [f], [v].
- c. Dental sounds are made by touching the tongue to the upper teeth in [θ], [ð]
- d. Alveolar sounds are made by touching the tip or blade of the tongue to a location just forward of the alveolar ridge in [t], [d], [s], [z], [n], [l], [r]
- e. Palatal sounds are made by touching the tongue blade and the forward part of the tongue body to the hard palate in [ʃ], [tʃ], [ʒ], [dʒ], [j]
- f. Velar sounds are made by touching the body of the tongue to the hard or soft palate in [k], [g], [ŋ]
- g. Glottal sounds are made by moving the vocal cords close to one another [h]

(4) The manner of articulation: This refers to the way in which the airstream is interfered with in producing a consonant. Manner of articulation in consonants are consists of stops, fricative, affricative, nasal, liquid, and glides (Hayes, 2009; Kreidler, 2004; Yule, 2014).

- a. In a stop [p], [b], [t], [d], [k], [g], the airflow through the mouth is momentarily closed off.
- b. In a fricative [f], [v], [θ], [ð], [s], [z], [ʃ], [ʒ], a tight constriction is made, so that air passing through the constriction flows turbulently, making a hissing noise.
- c. An affricate is a stop followed by a fricative, made at the same location in the mouth in rapid succession so that the result has the typical duration of a single speech sound in [tʃ],[dʒ].
- d. In a nasal consonant [m], [n], [ŋ], the velum is lowered, allowing air to escape through the nose.
- e. The liquids are the sounds that have the characteristic acoustic quality of [l]-like and [r]-like sounds.
- f. The glides (also called semivowels) are the central approximants; [j], [w].

2. Method

The English consonant sounds are the central phenomena being the data (Creswell, 2012). The method of collecting the data was an observational method by heard-identifying the English articulation (Sudaryanto, 2015). The method of analyzing the data was the articulatory phonetic identity method with competence in differentiating technique (Sudaryanto, 2015). In this descriptive qualitative research (Creswell, 2003), the Oxford Advanced Learner's Dictionary (Received Pronunciation) was used to compare the sound produced and differentiate the English Alphabet letters which have the same pronunciation of English sounds by presenting the phonetic symbols. The presence of a single phonetic symbol in one fixed patterned letter was concluded as one pattern of English pronunciation.

3. Results and Discussion

The pronunciation of English alphabets is not sometimes pronounced in English words or speech sounds. The English consonants sounds change due to the influence of the letters after or before the sounds or letters. Each English alphabet cannot represent one fixed consonant sound due to the English pronunciation inconsistency

The English alphabets f, l, m, n, and s represent speech sounds /f, l, m, n, s/. There some patterns found in English consonant pronunciation.

- a) Letters p, s, t, c, g (gh- close syllable) meet h will produce fricative.

- b) Letter r is equivalent at the r-close syllable.
- c) Letter n meets /k/ will produce /ŋ/.
- d) Letter t is pronounced as /f/ in morpheme noun form -tion.
- e) Letter s is pronounced as /ʃ/ in morpheme noun form -(s)ion.
- f) Letter t is pronounced as /tʃ/ in final syllable -ture.
- g) Letter s is pronounced as /ʒ/ in final syllable -sure.
- h) Letter s is pronounced as /ʒ/ in morpheme noun form -(s)ion.
- i) In -C<ue> close syllable, -ue is not pronounced.

English consonant pronunciation mostly has no fixed pattern.

/p/ is pronounced by the letter p

<p> is pronounced as /p/ seen in words such as paper /peɪpə(r)/, happy /hæpi/, hope /həʊp/

/b/ is pronounced by the letters b

 is pronounced as /b/ seen in words such as before /bɪfɔ:(r)/, table /teɪbl/, verb /vɜ:b/

/t/ is pronounced by the letters t, z(z), (e)d,

<t> is pronounced as /t/ seen in words such as time /taɪm/, wait /weɪt/, vote /vəʊt/

<z(z)> is pronounced as /t/ seen in words such as pizza /pi:tʰə/, mozzarella /mɒtsərələ/

<(e)d> is pronounced as /t/ seen in words such as talked /tɔ:kt/, stopped /stɒpt/, washed /wɔ:ʃt/

/d/ is pronounced by the letters d

<d> is pronounced as /d/ seen in words such as damp /dæmp/, pedal /pedl/, cloud /klaʊd/

/k/ is pronounced by the letters k, q, c, -q(ue), c(h), x

<k> is pronounced as /k/ seen in words such as kid /kɪd/, sky /skaɪ/, sketch /skeɪʃ/, sick /sɪk/

<q> is pronounced as /k/ seen in words such as queen /kwi:n/, quantity /kwɒntəti/, queue /kju: /

<c> is pronounced as /k/ seen in words such as can /kæn/, cut /kʌt/, doctor /dɒktə(r)/, music /mju:zɪk/

<q(ue)> is pronounced as /k/ seen in words such as technique /tekni:k/, oblique /əbli:k/, calque /kælk/

<c(h)> is pronounced as /k/ seen in words such as character /kærəktə(r)/, stomach /stʌmək/, technology /tekɒlədʒi/

<x> is pronounced as /k/ seen in words such as six /sɪks/, taxi /tæksi/, excuse /ɪkskju:s/

/g/ is pronounced by the letters g, g(ue), x, -ng-

<g> is pronounced as /g/ seen in words such as gadget /gædʒɪt/, geese /gi:s/, garage /gærɪdʒ/

<x> is pronounced as /g/ seen in words such as exotic /ɪgzɒtɪk/, exhaust /ɪgzɔ:st/, example /ɪgzɑ:mpl/

<-g(ue)> is pronounced as /g/ seen in words such as colleague /kɒlɪg/, dialogue /daɪələg/, fatigue /fətiɡ/

<-ng-> is pronounced as /g/ seen in words such as hungry /hʌŋɡri/, longest /lɒŋɡəst/, jungle /dʒʌŋɡəl/

/m/ is pronounced by the letters m

<m> is pronounced as /m/ seen in words such as man /mæn/, someone /sʌmwʌn/, museum /mju:zi:əm/

/n/ is pronounced by the letters n, (g)n, (p)n, (k)n,

<n> is pronounced as /n/ seen in words such as noun /naʊn/, honesty /ɒnəsti/, man /mæn/

<(k)n-> is pronounced as /n/ seen in words such as knife /naɪf/, knight /naɪt/, knead /ni:d/, knee /ni:/

<(p)n> is pronounced as /n/ seen in words such as pneumatic /nju:mætɪk/, pneumonia /nju:məʊniə/, pneumococcal /nju:məʊkɒksəl/, pneumothorax /nju:məʊθɔ:ræks/

<(g)n> is pronounced as /n/ seen in words such as gnome /nəʊm/, gnaw /nɔ:/, gnash /næʃ/, gnat /næt/, gnarly /nɑ:lɪ/

/ŋ/ is pronounced by the letters ng, n(k), n(c), n(x), n(q),

<ng> is pronounced as /ŋ/ seen in words such as sing /sɪŋ/, slang /slæŋ/, long /lɒŋ/ England /ɪŋɡlənd/

<nk> is pronounced as /ŋ/ seen in words such as tanker /tæŋkər/, blanket /blæŋkɪt/, thank /θæŋk/

<nc> is pronounced as /ŋ/ seen in words such as concrete /kɒŋkri:t/, conjunction /kɒndʒʌŋkʃən/, zinc /zɪŋk/

<nx> is pronounced as /ŋ/ seen in words such as anxious /æŋʃəs/, lynx /lɪŋks/, Sphinx /sfɪŋks/

<nq> is pronounced as /ŋ/ seen in words such as conquest /kɒŋkwɛst/, relinquish /rɪlɪŋkwɪʃ/, tranquillize /træŋkwələɪz/

/θ/ is pronounced by the letters th

<th> is pronounced as /θ/ seen in words such as thank /θæŋk/, method /meθəd/, health /helθ/

/ð/ is pronounced by the letters th,

<th> is pronounced as /ð/ seen in words such as them /ðəm/, those /ðəʊz/, other /ʌðə(r)/, mother /mʌðə(r)/, smooth /smu:ð/

/f/ is pronounced by the letters f, ph, -gh,

<f> is pronounced as /f/ seen in words such as friend /frend/, freedom /fri:dəm/ often /ɒfn/, after /ɑ:ftə(r)/, beef /bi:f/

<-gh> is pronounced as /f/ seen in words such as cough /kɒf/, enough /ɪnʌf/, laugh /lɑ:f/

<ph> is pronounced as /f/ seen in words such as phone /fəʊn/, alphabet /ælfəbet/, apostrophe /əpɒstrəfi/, triumph /traɪʌmf/

/v/ is pronounced by the letters v, f, ph

<v> is pronounced as /v/ seen in words such as village /vɪlɪdʒ/, seven /sevən/, love /lʌv/

<f> is pronounced as /v/ seen in word such as of /ɒv/

<ph> is pronounced as /v/ seen in word such as Stephen /sti:vən/

/s/ is pronounced by the letters s, c, p(s), s(c), x,

<s> is pronounced as /s/ seen in words such as sad /sæd/, passive /pæsɪv/, serious /sɪəriəs/

<c> is pronounced as /s/ seen in words such as centre /sentər/, rice /raɪs/, city /sɪti/, cycle /saɪkl/, recent /ri:snt/, decent /di:snt/, twice /twɑɪs/, since /sɪns/

<x> is pronounced as /s/ seen in words such as next /nekst/, sexy /seksɪ/, six /sɪks/

<sc> is pronounced as /s/ seen in words such as science /saɪəns/, scene /si:n/, scent /sent/, miscellaneous /mɪsəleɪniəs/, fascinate /fæsɪneɪt/

<(p)s> is pronounced as /s/ seen in words such as pseudonym /su:dənɪm/, psephology /sɪfələdʒɪ/, pseud /su:d/, psalm /sɑ:m/

/z/ is pronounced by the letters z, s, x,

<z> is pronounced as /z/ seen in words such as zoo /zu:/, zebra /zebrə/, puzzle /pʌzl/

<s> is pronounced as /z/ seen in words such as music /mju:zɪk/, design /dɪzɑɪn/, easy /i:zi/

<x> is pronounced as /z/ seen in words such as exhibit /ɪgzɪbɪt/, exit /egzɪt/, xylophone /zaɪləfəʊn/

/ʃ/ is pronounced by the letters sh, s, t(ion), ch, s(sion), c

<sh> is pronounced as /ʃ/ seen in words such as shop /ʃɒp/, shy /ʃaɪ/, she /ʃi/, fashion /fæʃn/, wish /wɪʃ/

<t(ion)> is pronounced as /ʃ/ seen in words such as action /ækʃn/, variation /veəri'eɪʃn/, accommodation /əkɒmədeɪʃn/

<ch> is pronounced as /ʃ/ seen in words such as chef /ʃef/, champagne /ʃæmp'eɪn/, moustache /məʊstɑ:ʃ/

<c> is pronounced as /ʃ/ seen in words such as special /speʃl/, musician /myʊzɪʃn/, delicious /dɪlɪʃəs/

<s> is pronounced as /ʃ/ seen in words such as sure /ʃʊə(r)/, sugar /ʃʊgə(r)/, Asia /eɪʃə/, controversial /kɒntrə'vɜ:ʃl/

<s(sion)> is pronounced as /ʃ/ seen in words such as possession /pə'zeɪʃn/ depression /dɪpreʃn/, discussion /dɪskʌʃn/

/z/ is pronounced by the letters s(ion), s(ure), -g(e),

<s(ion)> is pronounced as /z/ seen in words such as decision /dɪsɪzən/, fusion /fju:zən/, delusion /dɪlu:zən/, illusion /ɪlu:zən/

<-g(e)> is pronounced as /z/ seen in words such as genre /zɒnrə/, garage /gæra:z/ prestige /presti:z/

<s(ure)> is pronounced as /z/ seen in words such as measure /meʒə(r)/, pleasure /pleʒə(r)/, treasure /treʒə(r)/

/tʃ/ is pronounced by the letters (t)ch, ch-, -tu(re), tu-,

<ch> is pronounced as /tʃ/ seen in words such as check /tʃek/, chair /tʃeə(r)/, chicken /tʃɪkɪn/, rich /rɪtʃ/

<tch> is pronounced as /tʃ/ seen in words such as snatch /snætʃ/, watch /wɒtʃ/ kitchen kɪtʃən

<t(ure)> is pronounced as /tʃ/ seen in words such as future /fju:tʃə(r)/, culture /kʌltʃə(r)/, structure /strʌktʃə(r)/

<tu> is pronounced as /tʃ/ seen in words such as maturity /mətʃʊərəti/, statue /stætʃu:/, saturation /sætʃəreɪʃn/

/dʒ/ is pronounced by the letters g, j, d, ch

<g> is pronounced as /dʒ/ seen in words such as gentle /dʒentl/ vegetable /vedʒtəbl/, large /la:dʒ/

<j> is pronounced as /dʒ/ seen in words such as jealous /dʒeləs/, eject /ɪdʒəkt/, jump /dʒʌmp/, conjunction /kən'dʒʌŋkʃən/

<d> is pronounced as /dʒ/ seen in words such as education /edʒʊkeɪʃn/, graduate /grædʒʊət/

<ch> is pronounced as /dʒ/ seen in words such as sandwich /sænwɪdʒ/

/w/ is pronounced by the letters w, u, o-,

<w> is pronounced as /w/ seen in words such as ward /wɔ:d/, why /waɪ/, awake /əweɪk/

<o> is pronounced as /w/ seen in words such as once /wʌns/, one /wʌn/, ouija /wi:dʒə/, quinoa /ki:nwɑ:/, choir /kwaɪə(r)/

<u> is pronounced as /w/ seen in words such as persuade /pəsweɪd/, suite /swi:t/, San Juan /sæn wɑ:n/, Ecuador /ekwədɔ:(r)/, quite /kwaɪt/, quesya /kwɪ:zi/, Quebec /kwɪ:bek/, queen /kwɪ:n/

/j/ is pronounced by the letters y, u, ie(w), (e)u-

<y> is pronounced as /j/ seen in words such as you /ju/, yellow /jeləʊ/, yes /jes/

<u> is pronounced as /j/ seen in words such as confusion /kən'fju:zən/, genuine /dʒenju:n/, dispute /dɪspju:t/ uvula /ju:vjələ/, university /ju:nɪvɜ:səti/, unite /jənaɪt/, unique /jʊni:k/, usual /ju:ʒuəl/

<(i)ew> is pronounced as /j/ seen in words such as view /vju:/, review /ri vju:/, preview /pri:vju:/, overview /əvɜ:vju:/, few /fju:/

<eu> is pronounced as /j/ seen in words such as Europe /jʊərəp/, eugenics /ju:dʒenɪks/, neuron /njʊərən/

/r/ is pronounced by the letters r

<r> is pronounced as /r/ seen in words such as run /rʌn/, ready /redi/, friend /frend/, variation /veəri'eɪʃn/

<-r> is pronounced as equivocalled r /r/ seen in words such as fear /fiə(r)/, for /fə(r)/, before /bɪfə:(r)

/l/ is pronounced by the letters l

<l> is pronounced as /l/ seen in words such as league /li:g/ laundry /lə:ndri/, like /laɪk/, also /ɔ:lsəʊ/, class /klɑ:s/, well /wel/

/h/ is pronounced by the letters h, wh-

<h> is pronounced as /h/ seen in words such as happiness /hæpɪnəs/, history /hɪstri/, inhale /ɪnheɪl/, ahead /əhed/

<wh-> is pronounced as /h/ seen in words such as whole /həʊl/, whom /hu:m/, whose /hu:z.

4. Conclusion

Producing correct pronunciation is important while speaking to catch the correct meaning and avoid misunderstanding. By knowing the sounds represented by letters and the patterns of how to pronounce them and makes it easier to pronounce the English words. The word mosque is mostly pronounced as /mɒski/ or /mɒsku:/ or / mɒskju:/ due to the unknown of pronunciation. One of the patterns found in this research is “in -C<ue> close syllable, -ue is not pronounced”. The pattern says that omits -ue while pronouncing it, so the mosque is pronounced as /mɒsk/.

English sounds are lettered by single, double, and cluster. Consonantly, /p/ is sounded by p, /b/ by b, /t/ by t, z(z), (e)d, /d / by d, /k / by k, q, c, -q(ue), c(h), x, /g/ by g, g(ue), x, -ng-/m/ by m, /n/ by n, (g)n, (p)n, (k)n, /ŋ/ by ng, n(k), n(c), n(x), n(q), /θ/ by th, /ð/ by th, /f/ by f, ph, -gh, /v/ by v, f, ph, /s/ by s, c, p(s), s(c), x, /z/ by z, s, x, /ʃ/ by sh, s, t(ion), ch, s(sion), c /z/ by s(ion), s(ure), -g(e), /tʃ/ by (t)ch, ch-, -tu(re), tu-, /dʒ/ by g, j, d, ch/w/ by w, u, o-, /j/ by y, u, (i)ew,(e)u- /r/ by r, /l/ by l, and /h/ is sounded by h, wh-

Letters p, s, t, c, g (gh- close syllable) meet h will produce fricative. Letter r is equi-vowel at the r-close syllable. Letter n meets /k/ will produce /ŋ/. Letter t is pronounced as /ʃ/ in morpheme noun form -tion. Letter s is pronounced as /ʃ/ in morpheme noun form -(s)ion. Letter t is pronounced as /tʃ/ in the final syllable -ture. Letter s is pronounced as /z/ in the final syllable -sure. Letter s is pronounced as /z/ in morpheme noun form -(s)ion. In -C<ue> close syllable, -ue is not pronounced.

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