


Students' Perception of the Use of American and British Accents in Movies and Songs

 <https://doi.org/10.31004/jele.v11i1.1060>

*Imelda Putri Utami, Maida Norahmi, Rezqan Noor Farid, Erma Sujiyani, Sifa Hayati^{abcde} 

¹²³⁴⁵Universitas Palangka Raya, Indonesia

Corresponding Author: iimeldautamii@gmail.com

ABSTRACT

Exposure to different English accents through audiovisual media can significantly affect learners' comprehension and engagement in language learning. Given the frequent use of movies and songs in English classrooms, the choice of accent may influence students' listening development. This study investigates students' perceptions of American and British accents in audiovisual materials and identifies which accent they find easier to understand and more beneficial for improving their English skills. The participants were 35 sixth-semester English Education students from Class C at Universitas Palangka Raya. Data were collected through a mixed-method questionnaire adapted from Hermeni (2019), with additional items developed by the researcher to capture more nuanced perceptions. The findings indicate a strong preference for the General American (GA) accent, which students described as clearer, more familiar, and easier to follow. While Received Pronunciation (RP) was perceived as formal and culturally prestigious, most students found it more challenging to comprehend. Notably, 100% of participants reported that GA was easier to understand in songs, and 94.3% expressed the same for movies. The results suggest that consistent exposure to a specific accent enhances listening comprehension. Educators are encouraged to prioritize GA-based materials initially while gradually introducing RP to broaden students' listening competence over time.

Keywords: *Perception, British Accent, American Accent, Learning Media, Movie, Song*

Article History:

Accepted 16th June 2025

Accepted 22nd January 2026

Published 24th January 2026



INTRODUCTION

English has become a global language used across various regions and cultures, resulting in a wide diversity of accents. According to Weisi et al. (2019), two of the most widely recognized native English accents are British and American, both of which are highly accepted and favored in educational and media contexts. In addition, accents in language primarily refer to the distinctive way people pronounce words based on their region, social background, or first language. A similar point is stated by Astuti et al. (2024), who explain that accents naturally develop as languages evolve and can be found in every spoken language around the world. Accents can reveal where a person comes from, as well as aspects of their cultural and social background. Likewise, Olegovna and Yurievna (2021) explain that accents can help people express their identity and capture the attention of others.

The British accent originates from southeastern England and is often associated with Received Pronunciation (RP). "Received" means it is widely recognized and accepted in English society. This accent is known for dropping the "r" sound at the end of words and pronouncing vowels more clearly. Moreover, Fitria (2023) noted that the /r/ sound is often non-rhotic in British English, especially when it appears at the end of words. In addition, British English tends to preserve more French-influenced spellings. The British accent is also widely regarded as the standard in educational contexts throughout Europe and many Commonwealth nations.

On the other hand, the American accent, especially General American (GA), is the standard American English spoken by most Americans and is more rhotic, meaning the "r" sound is pronounced clearly. Furthermore, Fitria (2023) states that in an American English accent, the letter 'r' is typically pronounced with the tongue rolled back against the roof of the mouth. Additionally, according to Xue and Zuo (2013), the dominance of English, particularly American English, in global communication is significant, as it is a common language for exchanging ideas and information across cultures. Hence, American English has become increasingly dominant in international media, which makes it more familiar to many learners.

Research indicates that exposure to a variety of English accents can substantially affect language comprehension and acquisition. In a study examining listening comprehension, Ilahiy (2023) compared the impact of British and American accents on student performance. The findings showed that students exposed to the American accent improved their listening comprehension scores by an average of 16.2 points. This may be because familiarity with the accent makes it easier to understand. In comparison, those exposed to the British accent showed an average increase of 11.28 points, indicating that familiarity with a specific accent may facilitate better comprehension. Similarly, a study conducted at Cokroaminoto University found that students predominantly use American English vocabulary and favour American English in learning, citing its more accessible pronunciation and widespread use. However, a minority view British English as more formal and appealing. This is supported by FaeqAbdulla (2024), who found that the majority of English-major students at Salahaddin University perceived British English as more prestigious and appealing than American English. Additionally, Büyükahıska and Uyar (2019) point out that how students perceive different accents can influence their attitudes toward English and impact their learning process.

While numerous studies have examined students' general preferences for American and British accents, relatively few have focused on how these accents are perceived when used in media, particularly movies and songs. Given that audiovisual materials play a vital role in language learning, understanding how students perceive different accents in such media can provide valuable insights for language instruction. Therefore, this study aims to explore students' perceptions of the use of American and British accents in movies and songs among students of the English Education Department at Universitas Palangka Raya. Specifically, the study seeks to answer the following research questions: (1) How do students perceive the use of American and British accents in movies and songs? (2) Which accent do students find more comprehensible and appealing in these contexts? (3) How do students' perceptions of these accents influence their learning preferences and motivation?

This research is expected to contribute to the development of more effective language teaching strategies that align with students' exposure, attitudes, and preferences toward English accents in media-based learning.

METHOD

This research was conducted using descriptive quantitative research design with qualitative support. According to a study by Creswell & Creswell (2018), quantitative research involves systematically collecting, analyzing, and interpreting data numerically, followed by reporting the findings. In this study, the quantitative approach was used to measure students' perceptions of American and British accents in movies and songs, while open-ended responses provided supporting qualitative insights.

The sample of this study was the 6th-semester students of English education in class C at Universitas Palangka Raya in the academic year 2024/2025. The total population consists around 118 students distributed across three classes (A, B, and C). Class C, composed of 35 students (12 males and 23 females), were selected as the sample. The sampling technique used to determine this study's sample is purposive sampling, where the selected class has passed the English listening course from Basic to Advanced. Therefore, they have been exposed to American and British accents in learning media using movies and songs. Participants were

typically aged 19–22 years and had an upper-intermediate proficiency level in English based on their course achievements.

The research data were obtained through the questionnaire, using a mixed-method questionnaire that combines open-ended and closed-ended questions. The questionnaire was distributed via Google Forms. The questionnaire was adapted from the researcher's (Hermini, 2019) and modified to match the objectives of the current research. It contained 14 questions in total, consisting of: (1) 8 closed-ended questions, including Yes/No, multiple-choice, and 5-point Likert-scale items, designed to measure students' perceptions, preferences, and frequency of exposure to American and British accents in movies and songs; and. (2) 6 open-ended questions, which allowed participants to express their personal opinions, experiences, and reasons for their preferences in more detail.

To ensure validity and reliability, the adapted questionnaire was reviewed by lecturer specializing in English Language Teaching. The feedback helped refine the wording and content relevance of the items. A pilot test involving 10 students from the same department (not included in the main sample) was conducted to check clarity and reliability.

Data were collected over a two-week period using online distribution to facilitate accessibility and efficiency. The quantitative data from the closed-ended questions were analyzed using descriptive statistics—including frequency, percentage, and mean scores—using SPSS 26 and Microsoft Excel. These analyses described the overall trends and levels of student perception toward each accent.

Meanwhile, the qualitative data obtained from the open-ended responses were analyzed using thematic analysis to identify recurring ideas and patterns in students' attitudes, preferences, and challenges when encountering American and British accents in media. The results from both quantitative and qualitative analyses were then integrated to provide a comprehensive interpretation of students' perceptions.

FINDINGS AND DISCUSSION

The results of this study are based on the questionnaire that has been distributed via Google Form to 35 students in the sixth semester of Class C, English Education study program at Universitas Palangka Raya. All the students responded to the questionnaire completely. From the data in Figure 1 below, it can be seen that the number of respondents who have completed the Advanced English Listening (AEL) course is 100%, with all 35 students confirming their participation in the course.

Participants

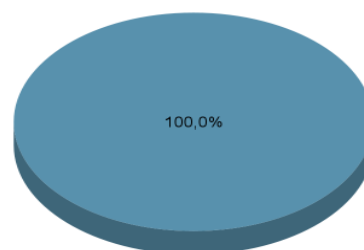


Fig 1. Distribution of Students Based on Completion of the AEL Course

The questionnaire was designed to answer students' perceptions of using American and British accents in English learning media, particularly in movies and songs. In total, the questionnaire consisted of 14 questions that were grouped into two main categories. The first category focused on students' exposure, preferences, and classroom experience with American and British accents. This includes questions such as whether students have been exposed to the accents, which accents they prefer, and how often they are used in their learning environment. The second category focused on students' perceptions of using these accents, specifically in movies and songs. All these data are shown in sections 1 and 2 below.

Table 1. Students Exposure, Preference, and Classroom Experience

Students' Perception of the Use of American and British Accents in Movies and Songs

Question 1	Responses		Total
	Yes	No	
Exposure to American and British Accents	34	1	35
<i>Percentage</i>	97.1%	2.9%	100%

Based on the data Question 1 above, it shows that 97.1% of the students (34 out of 35 respondents) have been exposed to both American and British accents during their learning experience, particularly through the Advanced English Listening (AEL) course. Only 2.9% (1 student) reported that they had not been exposed to these accents.

Question 2	Responses			Total
	GA	RP	Both	
Students' preference of American Accent/ General American (GA) and British Accent/ Received Pronunciation (RP)	26	2	7	35
Reason	It is easy to understand, listen to, and pronounce More familiar and more casual	It sounds artistic and unique Familiarity due to previous exposure More formal	Both sound cool and interest To be more flexible in speaking English	
<i>Percentage</i>	74.3%	5.7%	20%	100%

The results indicate a strong preference for the American accent (General American), with 74.3% of the students (26 out of 35) choosing it as their preferred accent. This preference likely stems from greater exposure to the American accent through media and the perception that it is easier to understand, listen to, and pronounce. In contrast, only 5.7% of the students (2) preferred the British accent (Received Pronunciation), describing it as artistic, unique, and more formal. Additionally, 20% of the students (7 out of 35) selected both accents, expressing that they find both interesting and that being familiar with both allows them to be more flexible when speaking English.

Question 3: Students' views on the distinction between American and British accents

Most students find the American accent clearer, easier to understand, and simpler to pronounce, noting its fuller pronunciation of words and emphasis on the "r" sound. In contrast, British English, especially Received Pronunciation, often drops the "r" and is viewed as more formal and unique, though sometimes challenging to follow due to its quicker pace and tonal changes. Students often mentioned that pronunciation patterns were the most noticeable difference. One participant explained: "In my opinion, the difference between American and British accents is quite noticeable, especially in the way they pronounce words. The American accent sounds flatter and clearer, especially in pronouncing the letter "r". For example, the word car is pronounced with an "r", while in the British accent, especially British RP, the letter "r" at the end of the word is often not heard. In addition, the way they record is also different. For example, the word bath is pronounced with an "æ" like "bat" in the American accent, but in the British accent it often becomes like "bahth". So, even though the language is the same, the way they speak can be very different and immediately sound unique to each".

Overall, the American accent is seen as straightforward and modern, while the British accent is regarded as refined and complex.

Question 4	Responses			Total
	GA	RP	Mix of Both	
Variety of English accents commonly used by Students	27	0	8	35
<i>Percentage</i>	77.1%	0	22.9%	100%

Students' Perception of the Use of American and British Accents in Movies and Songs

The data from Question 4 above indicates that out of the 35 students surveyed, 77.1% (27 students) primarily use the General American (GA) accent. No students reported using Received Pronunciation (RP) as their primary accent. Additionally, 22.9% (8 students) stated they use a combination of GA and RP accents.

Question 5: Students' Preferred Accent for Learning Purposes in Class

The majority of students prefer to learn English using the American accent. They find it easier to understand, clearer, and more familiar due to frequent exposure through media such as movies and songs. One of the respondents explained: "If I had the choice, I would prefer to be taught using an American accent. I find the American accent easier to understand, especially because I often hear it in movies, videos, and on social media. The pronunciation also feels clearer and more practical for everyday conversation. While the British accent is also interesting and sounds elegant, I feel that the American accent is easier for me to follow and learn".

Many students report that the American accent helps them recognize words better and follow lessons more easily, which can positively impact their grades when American-accented audio is used. While a few students prefer the British accent because they find it more interesting, unique, and cool, they also acknowledge that it can be harder to understand, especially for beginners. Some students enjoy both accents and believe that learning either or both is beneficial as long as they can comprehend the lessons. Overall, the American accent is favoured for its clarity, ease of comprehension, and practical familiarity. In contrast, the British accent is appreciated for its distinctiveness but is often viewed as more challenging for learners.

Question 6	Responses			Total
	GA	RP	Mix of Both	
Types of English accents used by lecturers according to students	29	1	5	35
<i>Percentage</i>	82.9%	2.9%	14.3%	100%

According to the responses from 35 students, the majority (82.9%) reported that their lecturers predominantly use General American (GA) accents when speaking English. A small portion (2.9%) indicated that their lecturers use Received Pronunciation (RP) accents, while 14.3% stated that their lecturers use a mix of both GA and RP accents.

Question 7: Aspects differentiating American and British accents according to Students

Differences	Responses	Percentage
1) Pronunciation consonant	26	74.2%
Vocabulary	1	2.9%
Spelling	7	20%
Grammar	0	0
Almost all of them	1	2.9%
Total	35	100%

Based on question 7, most students (74.2%) recognized consonant pronunciation as the key difference between American and British accents. Spelling was noted by 20% of students, while only 2.9% mentioned vocabulary or believed that almost all aspects differ. None of the students identified grammar as a distinguishing factor between the two accents.

Question 8	Responses			Total
	Yes	No	Not Sure	
Students' perception of the usefulness of American and British accents in English learning	27	1	7	35

Students' Perception of the Use of American and British Accents in Movies and Songs

Percentage	77.1%	2.9%	20%	100%
-------------------	-------	------	-----	------

Based on the data above, the majority of students (77.1%) believe that American and British accents are useful in learning English. A small number (2.9%) do not find them useful, while 20% of the respondents are not sure about their usefulness.

Section 2. Students Exposure, Preference, and Classroom Experience

Question 9	Responses		Total
	Yes	No	
Students' exposure to American and British accents through movies and songs	34	1	35
Percentage	97.1%	2.9%	100%

Based on the data from question 9, nearly all students (97.1%) reported being exposed to American and British accents through movies and songs, while only 2.9% said they were not exposed. This indicates that media is a significant source of accent exposure for students.

Question 10	Responses					Total
	SA	A	N	D	SD	
Accents in movies or songs can affect how much I understand it.	11	16	5	1	2	35
Percentage	31.4%	45.7%	14.3%	2.9%	5.7%	100%

Based on the data from question 10, a majority of students agreed that accents in movies or songs affect their understanding, with 45.7% agreeing and 31.4% strongly agreeing. Meanwhile, 14.3% were neutral, and a small portion disagreed (2.9%) or strongly disagreed (5.7%). This suggests that accents play a significant role in students' listening comprehension.

Question 11	Responses		Total
	GA	RP	
1) Students' perception of the easiest accent to understand in movies	33	2	35
Percentage	94.3%	5.7%	100%

Based on the data from question 11, the majority of students (94.3%) perceived the General American (GA) accent as the easiest to understand in movies, while only 5.7% found the Received Pronunciation (RP) accent easier. This indicates a strong preference or familiarity with the GA accent in media.

Question 12	Responses		Total
	GA	RP	
Students' perception of the easiest accent to understand in songs	100	0	35
Percentage	100%	0	100%

Based on the data from question 12, all students (100%) said that the General American (GA) accent is the easiest to understand in songs. No one chose the British (RP) accent. This means students find the GA accent much clearer in music.

Question 13	Responses		Total
	GA	RP	
Students' accent preference when using movies to learn English	31	4	35
Reasons	Easier to understand More familiar Clearer pronunciation Used more often in movie	British accent is more entertaining or has its own color/unique Preference developed from specific media (e.g., Harry Potter, Dr. Who)	
Percentage	88.6%	11.4%	100%

Based on the data from question 13, most students (88.6%) like the American accent when learning English from movies because it's easier to understand, more familiar, and clearer. They also see it more often in movies. One student wrote: "When I learn English through media

Students' Perception of the Use of American and British Accents in Movies and Songs

like movies or videos, I personally prefer the American accent. It's more familiar to me because most of the content I watch uses that accent, so it's easier to understand and get used to. I also think the way they speak is more straightforward, which helps me follow conversations better and improve my listening skills". For instance, another student stated: "American movies are more widely available, and the accents are consistent with the everyday English I encounter (e.g., on YouTube, TV shows), so American accents are more helpful and easy to understand". On the other hand, only a few students (11.4%) prefer the British accent because it sounds more interesting or they like it from movies. One of the student stated "Perhaps i watched too much of Dr. Who TV series and Harry Potter Movies And that made me prefer british accent more".

Question 14	Responses		Total
	GA	RP	
Students' accent preference when using songs to learn English	35	0	35
Reasons	Easier to understand and follow Clearer pronunciation More familiar and common in popular songs Easier to sing along with	-	
Percentage	100%	0	100%

Based on the data from question 14, All students (100%) chose the General American (GA) accent as their preferred accent for learning English through songs. As one respondent noted: "For music itself, i've been listening music daily and usually i listen to a lot of raps song, and even to an extent listening to british rapper which if you know the words that they utter almost obscure in some way. So because of that i pretty much prefer to american rapper or singer"

The results of this study indicate a strong and consistent preference among students for the General American (GA) accent over Received Pronunciation (RP), especially in learning media such as movies and songs. This supports earlier studies, which indicate that familiarity has a significant influence on how accents are perceived and understood by language learners (Ilahiy, 2023).

In this study, students' preferences were shaped by repeated exposure and familiarity, as demonstrated by the fact that 97.1% of participants chose the GA accent. Recent studies have likewise shown that repeated exposure to an accent improves comprehension and preference (Astuti et al., 2024). In addition, 74.3% of the students explicitly preferred the GA accent. Meanwhile, only 5.7% chose RP as their preferred accent, whereas 20% stated that they preferred a combination of both accents."

Moreover, all participants agreed that the General American (GA) accent is easier to comprehend in songs. At the same time, 94.3% expressed the same view regarding movies. These findings confirm that GA is generally perceived as more approachable and suitable for learners, particularly when encountered through learning media. Similarly, Choerunnisa et al. (2024) reported that nearly half of their participants believed watching English movies, predominantly featuring General American (GA) accents, improved their spoken accent and listening clarity. These experiences align with student feedback in this study, where GA was perceived as more straightforward, more familiar, and easier to follow in media contexts.

Familiarity is not just a matter of preference; it affects comprehension. According to Ilahiy (2023), learners exposed more often to the American accent showed greater improvement in listening comprehension compared to those exposed to British English. This finding supports our results, where 77.1% of students reported that accents in movies and songs affected their ability to understand. A study from BENT T. (2018) illustrated that the brain predicts upcoming words less accurately when a speaker uses an unfamiliar accent; however, as listeners gain experience, their predictive ability strengthens and becomes comparable to that used for more familiar accents. Since most students are frequently exposed to GA through media, this accent naturally becomes easier to process. Furthermore, as explained by Büyükahıska and Uyar (2019), repeated interaction with a specific accent improves a learner's

cognitive ability to anticipate and decode speech patterns, particularly in informal learning contexts like songs and films.

The dominance of GA in student learning is further reinforced by classroom experience. In this study, 82.9% of students reported that their lecturers primarily use the General American (GA) accent, which likely reinforces their preference for this accent. Fitria (2023) also noted that the rhotic nature of American English makes pronunciation more transparent and accessible for learners, especially compared to the non-rhotic patterns found in Received Pronunciation (RP). This finding aligns with our result that 74.2% of students identified consonant pronunciation, particularly the /r/ sound, as the most noticeable difference between the two accents.

The way people pick up accents is strongly shaped by what they hear in the media. As Xue and Zuo (2013) pointed out, American English has become dominant in global media, and this study reflects that trend. Many students say they understand the General American (GA) accent more easily, likely because they hear it so often in movies, music, and online platforms. Being exposed to it regularly not only helps improve their listening skills but also makes them more comfortable with the accent itself. In the same way, Astuti et al. (2024) found that media plays an important role in how learners get used to different accents and develop strategies for better listening.

Although fewer students preferred RP, some acknowledged its appeal, calling it “formal,” “refined,” or “unique.” However, they also admitted that it was more difficult to understand, especially in fast-paced or natural speech. Additionally, recent research at Salahaddin University, which found that some English-major students still consider British English more appealing and prestigious, often associating it with formality and higher status (FaqeAbdulla, 2024). Furthermore, Nguyen (2021) observed that unfamiliar British regional accents (e.g., Yorkshire, Scouse) often require much more time and effort for learners to comprehend, especially if exposure is limited.

This study demonstrates that students' perceptions of English accents are influenced by several key factors, including their exposure to different accents, the impact of media, and the ease of understanding them. The General American (GA) accent is viewed as the most approachable, likely because it is commonly heard in popular media such as films, music, and even classroom activities. Its familiar sound patterns and clear pronunciation enable students to follow along more easily, particularly when learning through audio or video content.

In contrast, while Received Pronunciation (RP) holds certain cultural and historical prestige, many students find it more challenging to understand due to its limited presence in their daily experiences. Consequently, RP is generally less preferred in practical learning contexts, especially among learners who have had little exposure to British English.

CONCLUSIONS

The results of this study show that students generally prefer the American accent over the British accent, especially when learning English through movies and songs. This strong preference for the General American (GA) accent is mainly influenced by frequent exposure through media, more precise pronunciation, and the belief that it is easier to understand. Most students stated that GA was easier to follow in both movies and songs, which are widely used in English learning. While the British accent, or Received Pronunciation (RP), was recognized for its uniqueness, formal tone, and prestige, students often found it more difficult to understand, particularly in fast conversations or when they were less accustomed to hearing it. These findings emphasize how important exposure and familiarity are in shaping students' views and understanding of different English accents. The researcher also suggests that when choosing learning materials, especially those that include media, teachers should consider not just the content but also the types of accents students are used to. Using accents that students find easier to follow can help improve comprehension, boost their confidence, and make learning more enjoyable. At the same time, slowly introducing students to different English accents, such as Received Pronunciation (RP), can help improve their listening flexibility and

prepare them to understand a broader range of spoken English. In conclusion, while both GA and RP have value in learning English, GA is more effective for media-based learning because it is easier for students to understand and more commonly heard. Teachers are encouraged to utilize students' familiarity with GA while also helping them develop the ability to understand other English accents for a more comprehensive listening experience.

REFERENCES

- Astuti, R. S., Winda Sri Widianingsih, A., & Nurfithri. (2024). British and American Accents Analysis of the Contestants of the Public Speaking Academy Competition in 2017: Sociolinguistics Perspective. *Jurnal Sastra Studi Ilmiah Sastra Universitas Nasional Pasim E-ISSN*, 14(2). <https://doi.org/10.56413/studi%20ilmiah%20sastra.v14i2.493>
- Bent, T. (2018). Development of unfamiliar accent comprehension continues through adolescence. *Journal of Child Language*, 45(6), 1400–1411. <https://doi.org/10.1017/S0305000918000053>
- Büyükahıska, D., & Uyar, A. C. (2019). The Effects of Different Accents on Listening Comprehension in EFL Classes. *OPUS Uluslararası Toplum Araştırmaları Dergisi*, 1–1. <https://doi.org/10.26466/opus.610859>
- Choerunnisa, A., Putri Amanah, N., & Arochman, T. (2024). The Effect of Watching English Movies on the Accent of Students' Speaking Skill. *JOLALI*, 3(1). <https://doi.org/10.32497/jolali.v3i1.5788>
- Creswell, J. W., & Creswell, J. D. (2018). *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches* (Fifth Edition). SAGE. <https://doi.org/10.1080/15424065.2022.2046231>
- Faqeabdulla, B. (2024). *British or American English: An Investigation among Students in the English Department-College of Education At Salahaddin University*. <https://doi.org/10.13140/RG.2.2.28930.90564>
- Fitria, T. N. (2023). *English Accent Variations of American English (AmE) and British English (BrE): An Implication in English Language Teaching*. <https://translate.google.co.id/?hl=id>
- Hermi. (2019). *Students' Perception Toward American and British English in Cokroaminoto University*. <https://doi.org/10.24256/ideas.v7i1.724>
- Ilahiy, N. D. (2023). *The Effectiveness of British and American Accents on Listening Comprehension to the Second Semester of English Departmen at IAIN Ponorogoin Academic Year 2022/2023*.
- Olegovna, K. M., & Yurievna, A. E. (2021). Accents Variety in English. *World of Science. Series: Sociology, Philology, Cultural Studies*. <https://sfk-mn.ru/PDF/12FLSK121.pdf>
- Vasquez Diaz, K. R., & Iqbal, J. (2024). Challenges Faced by International Students in Understanding British Accents and Their Mitigation Strategies – A Mixed Methods Study. *Education Sciences*, 14(7). <https://doi.org/10.3390/educsci14070784>
- Weisi, H., Raygan, A., & Bakhtiari, F. (2019). *British or American? Iranian EFL Learners' Perceptions Toward English Accents: Exploring Possible Relationships*. <https://doi.org/10.15642/ijet2.2019.8.1.9-22>
- Xue, J., & Zuo, W. (2013). English Dominance and Its Influence on International Communication. *Theory and Practice in Language Studies*, 3(12), 2262–2266. <https://doi.org/10.4304/tpls.3.12.2262-2266>