

## **The Development and Assessment of Critical Listening Skills in the Speech Program**



**Ahmed Basyoni – Graeme Medd**

Kimyo International University in Tashkent, Uzbekistan.

**ABSTRACT:** Critical listening is comparing what is heard to some standard or cognitive evidence. The creative listener analyses the statements and facts throughout this process to generate critical judgments. This highly intentional endeavor requires a questioning and analytical mentality to conclude or act on the judgments formed through creative listening. The capacity to make knowledgeable judgments while hearing analytically to discern both qualities and faults is the goal of critical listening. The main goal is pedagogical and concerns designing and testing a tool that could measure students' critical listening skill improvement during a speech course program. A total number of N = 170 learners participated in qualitative-experimental studies in which we developed a t-test and program to develop and assess critical listening skills. Results show that students' listening skills improved in specific aspects of critical listening at both times. Effects were more significant in the second round due to adjustments to the program curriculum and the assessment tool. Results support the impact of the intervention by modest to high effect sizes and the construct validity of the assessment tool. We consider the improvement found in the current study a vital beginning and recommend that listening skills become an integral part of the curriculum at the undergraduate level. It would be essential to do a follow-up measurement to verify if the learners retain the critical listening skills beyond the current course and use their spontaneously inappropriate real-life situations.

**KEYWORDS:** Critical listening, assessments of listening, pedagogical, listening skills, interpretation.

### **INTRODUCTION**

Listening is regarded as a "natural" language talent, and educational institutions frequently do not devote time to teaching students the skill. A survey found that just 5% of more than 500 universities in the United States have listening classes. Similar figures were found ten years later. The public speaking course is where students learn and practice listening abilities at most institutions. However, Adams and Cox discovered that most public speaking textbooks focused on reading and writing rather than speaking and listening in their work "The Teaching of Listening as an Integral Part of an Oral Activity: An Examination of Public-Speaking Texts" (2010). Adams and Cox advocated for separating public speaking and writing classes (Adams & Cox, 2010; Gülten Erkek & Batur, 2020).

A similar request was made for additional listening components in public speaking classes and throughout the college curriculum. After reviewing more than three decades of listening research, college students benefited from mastering listening skills on educational, interpersonal, and career levels. According to a growing body of studies on essential and desired job skills in several industries, practical listening abilities in the workplace were "inextricably related to influential and important performance in organizations," according to a growing body of studies on essential and desired job skills in several industries (Erstentia, 2016). Given the significance of listening as effective communication, it's natural to wonder how children may learn to listen and how their listening abilities might be measured. Although the term "critical" generally connotes skepticism or faultfinding, the definition of critical listening does not necessarily have to have negative connotations or attitudes (Ferrari-Bridgers et al., 2017). Learning anything about the speaker's biography is vital for a critical listener (s) (Floyd & Clements, 2005). Various community workers might be invited to speak to the class to offer experience in this part of critical listening. Before their arrival, the students should be encouraged to research the duties, credentials, and other facets of each worker's employment. Students will be better equipped to analyze and compare what they have learned with what they hear if they have this prior information (Gulten Erkek & Batur, 2019).

Analytical listeners must be aware that they must interpret more than just the words that emerge from the speaker's lips. The meaning of spoken words is heavily influenced by voice inflections, gestures, and facial expressions. The class could be scheduled to watch a televised address, such as the Administration's Address to the Nation, to offer a guided exposure in this field. Students should be told to take notes on what verbal and nonverbal behaviors accompanied certain lecture parts ahead of time. They

## The Development and Assessment of Critical Listening Skills in the Speech Program

might then analyze how replacing alternative verbal and nonverbal behaviors could have resulted in different emphasis or meaning (Nisa, 2018).

### LITERATURE REVIEW

Researchers have accumulated substantial evidence addressing the nature of critical listening and the influence of direct education on this ability during the last two decades. According to the findings, training in this skill improves a person's capacity to make objective decisions. In a study of first graders' critical listening skills, Kellogg discovered that those who participated in a systematic listening comprehension program improved their listening skills statistically significantly more (Jon Trace, 2013). The inference is that direct education to strengthen listening skills can benefit young children in elementary school. Several additional studies have found that critical listening abilities may be improved with proper training (Kita & Eley, 2019).

The student is constantly inundated with verbal messages from slick salespeople, prevaricating politicians, eager editorialists, and worried community members due to the prevalence of radio and television (Couper, 2009). The listener's job is to properly assess this bombardment of verbal cues and determine what is real, somewhat proper, and generally deceptive. To complete this activity, one must thoroughly comprehend what has been said, necessitating critical listening skills (Hloba, 2016). It also indicates that critical listening is an acquired talent rather than something learned at random. This emphasizes the need for an organized program to help improve this talent. One of the desired outcomes of a language arts education should be the development of the capacity to examine and synthesize information critically (Kazu & Demiralp, 2017).

Knowledge of what is heard is another desirable attribute for the listener to acquire. The employment of verbal (pitch, inflexions, etc.) and nonverbal (gestures, facial expressions, etc.) signals by the orator needs to be clarified. This allows the listener to discern subtle differences in meaning. The capacity to discern the speaker's goals is a third skill acquired (Arono, 2014). The listener can better assess whether prejudice or propaganda methods are being used by establishing the monologist's primary purpose and what, if anything, he stands to gain from his talk. Finally, fundamental reasoning can help you get the most out of your critical listening abilities. Listeners will avoid making incorrect or misleading inferences due to this (Jonathan Trace, 2013).

Scholars have attempted to convey the complexities of listening since Rosa-Lugo & Allen, effort to define it as vigorous and cognitive activity. The International Listening Association defines listening as "the process of receiving, building meaning from, and reacting to spoken and nonverbal stimuli" (Rosa-Lugo & Allen, 2011).

Maria suggests four areas that should be improved to help a person improve his critical listening skills. The first step is to gather as much baseline info as necessary about the presenter. This contains details about his schooling, qualifications, and work experience (Maria, 2018). The listener can judge the speaker's competence by gaining insight into these parts of their personality. To summaries, critical listening is a cognitive process that includes hearing, evaluating, and making decisions. These abilities must be taught, as evidenced by research. In today's world, the capacity to listen critically is essential. Above all, it is the role of instructors to create opportunities for students to master this critical skill.

### OBJECTIVES

We considered the following concerns while developing a course to promote critical listening and an instrument to assess critical listening comprehension:

- 1) In a novice public speech program, what are the essential abilities to teach critical listening skills?
- 2) How can an instrument for assessing critical listening abilities be designed to track student progress while also accommodating the demands of ethnic and multilingual students?

The capacity to (1) "identify patterns," (2) "make comparisons new knowledge with prior experience" while understanding, and (3) "re-evaluate prior knowledge in light of new evidence" are the three main components of critical listening identified by the ILM.

### THEORETICAL FRAMEWORK

Because the Integrative Listening Model's dynamic interpretation of listening, teaching purpose of improving college students' listening practices, and hands-on approach coincide with our inquiry's pedagogical character, we organized our study around its dimensions. The Integrative Listening Model (ILM) definition of listening, for example, as "the dynamic, interactive process of integrating appropriate listening attitudes, knowledge, and behaviors to achieve the handpicked goal of a listening event," assumes that listening is an endeavor and that the listener plays an exciting and adventurous role during the listening occasion. In light of this, Thompson devised curricular goals targeted at "developing, listening talents methodically and progressively" in four stages: "making preparations for listening, employing the listening modeling approach, measuring listening efficiency, and defining targets for improvement listening."

We interpret the construct of critical listening more specifically as analytical listening, described as the capacity of the listener to assess and control whether a message complies or will not adhere with sequence and design specifications that comprise the statement in the discussion because command and assessment are customized to beginners in the field. Our definition of critical listening goes beyond students' subjective interpretations of a communication's content, and it also demands them to listen

## The Development and Assessment of Critical Listening Skills in the Speech Program

objectively to a message to determine what is standard and what is poor based on a set of patterns already acquired in class. Raising critical listening to an objective and analytical level, connected to our second pedagogical issue, required us to develop an evaluation method that bound all students to the same objective standards. We chose a design that was strongly tied to the subject taught in our speech programs and required students to listen to the speech and use their structural knowledge to identify the speech components to accommodate our students' different academic, cultural, and language competency backgrounds. We reasoned that by regulating and selecting what students should pay attention to a priori, we would decrease biased responses caused by our students' different cultural and linguistic backgrounds.

### Assessment of critical listening

We opted to build an instrument that helped students practice their critical listening abilities objectively because the primary emphasis of our assignment was to detect the pattern of communication using a standard rubric. This approach should overcome cultural and individual listener variations to be helpful in multicultural situations. We created our test using Blankenship's Four Curriculum-Based Assessment Steps, which consists of steps:

- The measuring processes evaluate students directly utilizing the materials they are being taught. This entails selecting items from the curriculum to sample.
- Each measure is typically administered for a short period (one to five minutes). The design is set up to take measurements often and repeatedly.

Dow have argued that similar requirements are critical criteria underlying the construction of a good assessment. Based on Backlund and Blankenship's recommendations, we built a listening evaluation that tapped into content the students needed to learn for the course (Dow, 1955). Furthermore, the evaluation was written in a multiple-choice quiz with straightforward replies. The class was shown the listening material via video. The films' content was based on real-life situations that our audience was interested in, and their linguistic registers were spoken and colloquial. Learners were asked to listen to two speeches in the assessment framework and identify which speech template components were represented or lacking.

### Sample

Students studied the significant components of the MLA (2009) speech outline in depth throughout the program and used what they acquired to produce two speeches. We supposed that students' explanatory listening skills would improve significantly of their speech session program, which included having to learn about the MLA format, writing and trying to deliver two speeches in the MLA format, and listening to their classmates' presentations, for the first round of data collection (fall of 2019). We used two evaluations to track training programs: one at the start and one near the conclusion. Their learners belong from 130 multiple nations, speak 101 different languages, and report speaking a language other than English at home 29% of the time. With more than 40% of individuals born outside the United States, the statistics demonstrate a nearly equal distribution of the primary demographic groups. They've come from all across the world. In the fall of 2019, more than 70% of first-year students needed remedial training, with 10% requiring reading, writing, and arithmetic assistance. Part-time first-year students had higher corrective requirements, with 85.5 percent requiring remediation in one or more categories and over 13 percent requiring instruction in all three. Learners range in age from 18 to 24 years old. In a class of 23, 4–7 learners are monolingual English speakers on average.

### 5 Stages of the Critical Listening Process



Figure 1. Present the model of the critical listening process.

### Materials

We adopted two videotaped speeches from Alex's DVD (2020) as stimulating content for all learners in The Technique of Delivering A speech (2019/2020) textbook 11th and 12th versions. Both addresses are purposefully inferior; they lack all needed speech elements. We picked subpar talks on purpose to challenge the students to a broader focus because we wanted to see whether they could listen and critically distinguish what parts of the speech were standard and divergent. We also chose against giving the same lecture to students again since we didn't want their results to be influenced by what they remembered from the first viewing/listening.

## The Development and Assessment of Critical Listening Skills in the Speech Program

We were fully aware that switching testing materials from one administration to the next could cause issues with our test results, such as making it impossible to tell whether our results reflected actual student improvement in listening skills or simply semantic and contextual differences between the two testing materials. We ruled out this possibility by choosing two speeches with equal degrees of difficulty regarding the number of present or absent speech components. There are 9/12 identical replies in the selected speeches, resulting in a 75 percent overlap of essential elements. We reasoned that a high degree of similarity would account for error variation in our results caused by semantic and contextual differences. Both talks lasted about four minutes. The degree to which the students recognized the essential components of the speeches was measured using our assessment instrument. A speech evaluation form is included with the tool. Students identify which speech components were present and absent in each discussion. The 12 MLA (Supplement#2) (2016) speech components are reflected in questions 1 through 12 (Supplement#1). We included three multiple-choice questions regarding the topic at the end of each form. To determine whether students had an overall understanding of the content of each speech address.

### Procedure of Assessment

The 7 teachers presented the critical listening session and described the evaluation to the students. The instructors were instructed to follow the identical test administration technique rigorously to eliminate experimenter expectation effects. Similarly, all teachers read out the precise directions to their pupils to avoid potential demand characteristic effects. Instructors were instructed not to discuss the assessment's objective with students but rather to inform them that their participation was not graded, rewarded, or credit-bearing but was entirely optional. The test was given twice during the semester. After the teachers had presented the lesson on creating, the evaluation was given for the first time around the fifth week of class. How to create an MLA (Ed 2016) speech outline. The second time was around the 13th week of class, after the students had already performed their first speech and had completed their second speech.

### Assessment Supplement

#### Supplement# 1

<b>Speech Title:</b>				
<b>NOTE:</b> Listen carefully, indicating which speech components are present in this speech and rating the speaker on each point. Remember that your goal is to identify which speech components are missing from the speaker's speech.				
<b>INTRODUCTION</b>				
No (A) Yes (B)				
1. Concentration getter	o	o		
2. Reason to hear	o	o		
3. Reveal Theme	o	o		
4. Traditional reliability	o	o		
5. Performance form of the speech	o	o		
<b>BODY</b>				
0 (A) 1(B) 2 (C) >2 (D)				
6. How many key concepts	o	o	o	o
7. How many sources are appropriately quoted		o	o	o
8. How many changes	o	o	o	o
<b>CONCLUSION</b>				
No (A) Yes (B)				
9. Signs of the viewers	o	o		
10. Analysis of main facts	o	o		
11. Repeat theory	o	o		
12. Intense wind-up/Closing	o	o		
<b>QUESTIONS</b>				
13. This speech is about				
A. Marine collection trip.				
B. Health issues.				
C. Space Technology.				
D. Computer mechanics.				
14. The speech information is taken from:				
A. The person wrote the information.				
B. Taken from the magazine.				
C. It had an event.				
D. It was scientific paper-based information.				
15. Speaker's said the big publishing houses are not interested in these techniques, why:				
A. It is threatened for publication.				

## The Development and Assessment of Critical Listening Skills in the Speech Program

B. Not Effective information.
C. It was not considerable.
D. It's popular among the students.

### Supplement # 2

An established MLA (Ed.2016) speech outline contains the following speech components:
<b>INTRODUCTION</b>
i. Attention getter
ii. Motive to attend
iii. Theory (Topic)
iv. Integrity statement
v. Showing main points
<b>MAIN TEXT</b>
vi. Main Thoughts
vii. Suitably Mentioned Sources
viii. Conversions
<b>CONCLUSION</b>
ix. Signs to conclusion
x. Appraisal main themes
xi. Restate the speech topic
xii. End

## RESULTS AND DISCUSSION

Cronbach's alpha was .86 for pre-and post-test reliability across the 12 elements, which is good. To quantify students' improvement in a semester between the two measurement points, we used a paired t-test for means ( $N = 170$ ). The results show a significant difference between the two assessment points, with  $t(176) = -5.41, p.05$ . With a test power of  $1-\beta = .91$ , the effect size value (Cohen's  $d = .71$ ) showed a moderate to high practical significance.

**Table 1. Element of Statistics for Listening at Time 1 and Listening at Time 2 for Questionnaire.**

Questions	Listening at 1 Time		Listening at 2 Time	
	Mean	SD	Mean	SD
1	.54	.48	.67	.47
2	.56	.47	.69	.47
3	.88	.34	.80	.40
4	.69	.47	.73	.44
5	.75	.43	.78	.41
6	.26	.42	.27	.44
7	.46	.49	.28	.45
8	.39	.49	.45	.49
9	.30	.45	.41	.49
10	.77	.44	.77	.40
11	.69	.49	.70	.45
12	.32	.46	.71	.44
Total	.54	.49	.60	.47

The expressive outcomes for the particular scoring objects are accounted for in Table 1. As per the data shown in Table 1 on the capacity to notice portions of a discourse, understudies improved 10 regions from tuning in at Time 1 to tuning in at Time 2. They were better at recognizing such parts of speeches as: (1) Consideration getter, (2) motive to attend, (4) support for reliability, (5) a broadcast of the body of the speech, (6) key concepts, (8) the number of conversions, (9) signs for the listeners, (10) appraisal main themes, (11) restates the theory and (12) intense ending. Though students showed an overall increase in their ability to recognize speech components from the first to the second administration of the assessment, they were less likely to detect parts of the speech that (3) reveal the topic and (7) quantity of mentioned sources. The realistic inspection proposes that understudies developed their basic listening abilities during the Speech course program. They could recognize the parts of speech regularly at listening Time 2. It raises listening ability is credited to concluding the coursework. The impression size for the distinction between paying attention to listen at Time 1 and paying attention to listen at Time 2 showed a performance better over a half standard deviation, which suggests that the improvement can be supposed of as significant. Concerning the three primary parts of a discourse, for example, introduction, the main text of speech and conclusion, we observed that learners picked quickly end parts and transitional conversions than different parts. Learners showed more insignificant improvement in identifying the fundamental speech points like the analysis,

## The Development and Assessment of Critical Listening Skills in the Speech Program

(5) a broadcast of the body of the speech, (6) key concepts, (10) Analysis of main facts, (11) restate topic; and they even scored lower in (3) identifying the speech topic. We evaluate the feature of this outcome to how the performance and the body speeches have more fundamentally complex subcomponents that are intensely content-based and semantically interlocked; hence, it might require more work to recognize and identify all their sub-parts.

Moreover, the presence of clue words or “clue expressions” such as “in conclusion” or “summing up” that “clue the listener to some change in the paper structure” (Grosz & Sidner, 1986, p. 178) might have reawakened the learners’ attention to the message facilitating the listening process. To some grade astonishingly low detection rate for number 7, “the quantity of quoted sources,” needs a clarification. Perhaps it did not indicate what a legitimate source reference implies in the appraisal. As indicated by MLA (2016) guidelines, orally citing a source comprises of either referring to the writer and the extended time of distribution of the article or book, or the writer and the title of the article or book, or writer, title and year of distribution. In this way, requesting (7) “the number of referred to sources” is excessively ambiguous and may bring about a stranded detection rate.

At long last, it appears that a particular perspective, for example, distinguishing an appropriately referred to the source (7), needs unique consideration in the guidance and practice stage. The students get around three hours of directions from the teacher or an expert administrator to look and refer to sources following the MLA (2016) design. They refer to recorded as a hard copy and orally for their talks. The general difficulty faced in recognizing the MLA (2016) norms may be because of an absence of training or because of the idea of literary plagiarism. As Xoshimova, (2019) consider the three fundamental inspirations behind why students getting struggle for copying: (1) cultural explanations behind missing reference (Xoshimova, 2019); (2) unsatisfying by the Internet: the Internet free access along with the challenges in recognizing the creation due to hypertext makes it challenging to assign an origin to a text; and (3) deserted time usage abilities, making the learner see the reference as irrelevant. We accept that these three variables may have affected our understudies’ outcomes in distinctive legitimate references. Further exploration is expected to help understudies in perceiving appropriate references (Wong et al., 2021).

To conclude, testing our objectives supports the concept that learners overall improved in the period, demonstrating that their course work affected their dimensions to listening basically. Thrilled by the general expansion in the learners listening execution, we needed to test if we could drive it further if we enriched the curriculum and addressed the pertaining skills more directly and comprehensively. Considering that a significant improvement of listening abilities could be accomplished during speech program duration through necessary listening abilities, it could be anticipated when teachers advance their educational plan with exercises if these types of activities started across a few disciplines, as the Thompson (Thompson et al., 2004) Integrative Listening Model demonstrates, steady and nonstop improvement of listening abilities at the school level could be guaranteed.

## CONCLUSION

By requesting that learners distinguish what they had been paying attention to, we tracked down significant improvement in their basic listening abilities to recognize the various parts. We identify the challenges with distinguishing point-related speeches and suggest that further guidance and practice are expected to conquer the relating listening boundaries. We included listening abilities in the Public Speaking educational plan, which is an uplifting finding and a valid statement for instructing and growing more complex listening abilities as a component of any examinations educational program. In the depth of the Integrative Listening Model (ILM), as a team with instructors from different disciplines, we could align our evaluation instrument and strategy with evaluating basic listening abilities across educational places. We accept that by educating and working on tuning in across disciplines of an associate degree, students will have the opportunity to dramatically improve their critical listening skills and develop lifelong healthy listening habits.

However, the current concept is a promising beginning, and it makes sense to assume that beginners teaching to focus on structure is an essential first step towards more complex critical listening skills. In addition, it would be essential to do a follow-up measurement to verify if the learners retain the critical listening skills beyond the current course and if they use their spontaneously inappropriate real-life situations. So far, we had instructed them to use the rubric, but we do not know that they would be using their skills if our assessment instruction had not prompted them. We can ensure that the abilities are sustainable and adaptable open to additional examinations.

## REFERENCES

- 1) Adams, W. C., & Cox, E. S. (2010). The teaching of listening as an integral part of an oral activity: An examination of public-speaking texts. *The Intl. Journal of Listening*, 24(2), 89–105.
- 2) Arono, A. (2014). Improving students listening skill through interactive multimedia in Indonesia. *Journal of Language Teaching and Research*.
- 3) Couper, G. (2009). *Teaching and learning L2 pronunciation: Understanding the effectiveness of socially constructed metalanguage and critical listening in terms of a cognitive phonology framework*. University of New England, Armidale, NSW.
- 4) Dow, C. W. (1955). Listening Instruction at Michigan State: 1954-55. *Journal of Communication*, 5(3), 110–112.

## The Development and Assessment of Critical Listening Skills in the Speech Program

- 5) Erkek, Gulden, & Batur, Z. (2019). Activity Suggestions for Improving Critical Listening Skills. *Educational Research and Reviews*, 14(17), 639–646.
- 6) Erkek, Gülten, & Batur, Z. (2020). A Comparative Study on Critical Thinking in Education: From Critical Reading Attainments to Critical Listening Attainments. *International Journal of Education and Literacy Studies*, 8(1), 142–151.
- 7) Erstentia, M. E. (2016). *Students' responses to the implementation of impromptu speech practice to improve students' speaking skills in critical listening and speaking 1 class*. Yogyakarta: Sanata Dharma University.
- 8) Ferrari-Bridgers, F., Stroumbakis, K., Drini, M., Lynch, B., & Vogel, R. (2017). Assessing critical-analytical listening skills in math and engineering students: An exploratory inquiry of how analytical listening skills can positively impact learning. *International Journal of Listening*, 31(3), 121–141.
- 9) Floyd, J. J., & Clements, S. M. (2005). The vital importance of critical listening: An extended example. *International Journal of Listening*, 19(1), 39–47.
- 10) Hloba, O. V. (2016). TED speeches as a tool to improve listening skills of students majoring in psychology. *ECONOMICS, MANAGEMENT, LAW: SOCIO-ECONOMIC ASPECTS OF DEVELOPMENT*, 212–215.
- 11) Kazu, H., & Demiralp, D. (2017). Comparison of Critical Listening Proficiency of Teacher Candidates in Terms of Several Variables. *Eurasian Journal of Educational Research*, 68, 81–95.
- 12) Kita, C. A., & Eley, M. R. (2019). Cultivating Critical Listening: Hörspiele in the German Classroom. *Die Unterrichtspraxis/Teaching German*, 52(1), 69–81.
- 13) Maria, A. D. (2018). THE RELATIONSHIP BETWEEN LISTENING STRATEGIES AND STUDENT'S ACHIEVEMENT AT 2nd SEMESTER STUDENTS OF ACCOUNTING PROGRAM POLITEKNIK SEKAYU. *Esteem Journal of English Education Study Programme*, 1(1).
- 14) Nisa, Y. A. (2018). *STUDENTS' PERCEPTION ON THE USE OF ORAL PEER-FEEDBACK IN CRITICAL LISTENING AND SPEAKING 2 COURSE A SARJANA PENDIDIKAN RESEARCH PAPER*. SANATA DHARMA UNIVERSITY.
- 15) Rosa-Lugo, L. I., & Allen, S. G. (2011). Assessing listening skills in children with cochlear implants: Guidance for speech-language pathologists. *The ASHA Leader*, 16(3), online-only.
- 16) Thompson, K., Leintz, P., Nevers, B., & Witkowski, S. (2004). The integrative listening model: An approach to teaching and learning listening. *The Journal of General Education*, 225–246.
- 17) Trace, Jon. (2013). Designing a task-based critical listening construct for listening assessment. *University of Hawai'i Second Language Studies Paper 32 (1)*.
- 18) Trace, Jonathan. (2013). *A Task-Based Construct of Critical Listening Comprehension in Assessment*.
- 19) Wong, S. W. L., Leung, V. W. H., Tsui, J. K. Y., Dealey, J., & Cheung, A. (2021). Chinese ESL learners' perceptual errors of English connected speech: Insights into listening comprehension. *System*, 98, 102480.
- 20) Xoshimova, D. (2019). Features of Grow of Sensate-Expressive Speech in English Language at the Students via Conceiving by Listening. *European Journal of Research and Reflection in Educational Sciences Vol*, 7(12).



There is an Open Access article, distributed under the term of the Creative Commons Attribution–Non Commercial 4.0 International (CC BY-NC 4.0) (<https://creativecommons.org/licenses/by-nc/4.0/>), which permits remixing, adapting and building upon the work for non-commercial use, provided the original work is properly cited.