Cognitive and Metacognitive Strategies in Listening Activities: Tips for Effective Listening

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Abstract: *Listening is the most used skill in language usage, but it is not usually given adequate attention in English language classes. English language teachers usually focus more on reading, grammar, writing and speaking activities. This research tries to find out about students' strategies and techniques to monitor listening comprehension. Using quantitative analysis, it targets 41-second baccalaureate students with a questionnaire that helps inquire about how they enhance their understanding. This research provides insights into students' cognitive and metacognitive strategies. The results may open for teachers new paths for better teaching listening. They demonstrate that students use some listening strategies and are aware of their use and its importance.*

Keywords: Listening Comprehension, Listening Strategies & Techniques, Teaching of Listening

1. Introduction

It is axiomatic that listening is important for successful human communication. Studies have affirmed that it has the lion's share of the skills used in communication (Imof, 2006, et al.). There are positive outcomes that stem from listening-related competencies. It enables one to understand what others are saying in terms of linguistic units as well as the situation, context background knowledge and topic (Richards & Schmidt, 2010). It is an 'elusive aspect of any productive communication event' (Bodie & Powers, 2004). Miscommunication and misunderstanding between the sender and receiver of a message may have a devastating effect on human relationships developing feelings of anxiety, and physical and mental pressures. 'Minimising misunderstanding is importantly falls within the realm of demonstrating the value of listening' (Bodie & Powers, 2004).

For a long time, Listening was considered a simple skill to teach, but awareness has grown gradually to prove that it is a cognitive and behavioural complex activity. 'While the process takes place in the listener's mind as a way to assign meaning, other communicators cannot read the listeners' mind; they only perceive if a person is listening through the listener's verbal and nonverbal behaviour' (Janusik & Imhof, 2016). In contrast to hearing, listening entails attentional capacity and active cognitive decoding skills. The cognitive model conceptualized listening as information processing. It is a four-step process that involves: first the intention to listen, what for; this triggers attention and perception. This determines the criteria selected to formulate the message in the second step. The criteria include verbal, non-verbal and context information. The formulated information is then put in the working memory to be organized and to create a representation of the message. This is done by referring to linguistic competence, world knowledge and meta-cognitive, reflective and problem-solving skills. Finally, the information is integrated into the long-term memory to draw conclusions and formulate judgments (Imhof, 2014) (Mayer, 2014). This model helps to identify several factors related to the listening process (attention/perception; decoding/interpretation; working memory/ long-memory, decoding and interpretation); but it is still limited to the linear pattern "message sent", "message received" with a focus on viewing listening as "successful retention of the information presented orally" (Bodie , Imhof , Worthington , & Cooper, 2008).

From another perspective, listening is thought to consist of three complex interrelated processes. First, the cognitive process refers to 'attending to, understanding, receiving and interpreting content (Bodie, 2013). It tries to probe how people retain information in listening, but not simply to respond to comprehension

questions. It is to go beyond participating and engaging in fruitful interactions. Second, the affective process has relation to 'being motivated to attend to messages' (Bodie, 2013). It is the perspective through which people usually qualify listeners. In other terms, a good listener usually has a good attitude about the process, rather than a retentive ability' (Bodie, 2013). It is the willingness to listen or to avoid listening. For example, people usually dislike listening to boring details and like to listen to abstracts and conclusions. Finally, the behavioural process indicates verbal responses that indicate understanding or asking for more clarity, and non-verbal acts such as smiling, eye contact and gestures. All three elements contribute massively to successful communication and help to describe the nature of listening with further precision.

Furthermore, viewing listening on the basis of individual differences helps to gain insight into it from the perspective of a receiver. The manner of listening people chooses influences the outcome of the listening process. There are four types of listening styles profile. (Bodie & Villaume , 2004). The first listeners are people-oriented; they are also labelled relationally oriented. They concentrate on the emotional state of others. They try to find common ground with others, understand them and seek emotional support. The second listeners are content-oriented. They focus on the content of the message. They listen carefully to information, evaluate it and draw conclusions. They tend to ask questions for more clarification and listen to various points of view. The third listeners are action-oriented who are labelled task-oriented; they focus on the ends rather than the process. They need action-organized fashion. Finally, some listeners are time-oriented. They are overwhelmed with time limitations and express it explicitly. They interrupt others using verbal or non-verbal language when they exceed time. However, these types of listening styles are not tools to categorize people. Individuals cannot be categorized by having one listening style, but they can score more in one type. Also, they change their own style according to the listening situations (Bennet, 2004) and (Janusik & Imhof , 2016).

2. Literature Review

Dhea Saragih conducted research on the importance of dictation in improving listening skills (Saragih, 2022). She uses a qualitative approach for her research. She proves by collecting data from various researches that dictation is useful for improving students' listening abilities. It enhances students' listening skills; it provides them with confidence and motivation. The research's viability shows the utility of dictation as a method of teaching listening and improving students' skills. It gives suggestions for making dictation enjoyable and beneficial listening activity for both teachers and students.

Dwi Yulianto Nugroho in his article entitled 'EAP Students' Perceptions of Extensive Listening' draws attention to the little importance given to teaching listening in teaching English for Academic Purposes settings. He suggests teaching extensive listening as a solution. He studies then the perception of students to the activities of extensive listening. He finds that their perception is positive especially when the activities are introduced in a funny and meaningful manner. Students enrich their vocabulary, and they get access to new English accents. In consequence, they become more fluent and confident speakers (Nugroho, 2020).

Another article entitled 'Metacognitive Strategies Used by EFL listeners' tackles the issue from a different point of view. The writers recognize the difficulty of teaching listening, and the anxiety students feel when they are exposed to listening passages. The study investigates the metacognitive strategies students use in listening classes. It reveals that they adopt problem-solving strategies to solve their difficulties in listening tasks. However, the most effective listeners do not use mental translation; they opt more for cognitive and metacognitive strategies (Wulanjani & Indriani, 2019).

These studies among others tend to investigate the nature of teaching and learning listening in the English language. They aim to developing new approaches and methods to facilitate the teachers' jobs and enhance students' skills. This research has try to study teaching and learning from different perspectives.

It covers the areas of cognition and metacognitive strategies that the students often use in listening activities. It probes them in detail showing how they are used. It demonstrates how the strategies interlink with each other to facilitate understanding competency.

3. Methodology

This study aims at investigating the cognitive and metacognitive strategies used by students to understand listening texts; it eventually suggests some techniques that facilitate teaching listening. Therefore, the researcher adopts a quantitative approach for this research which seeks to demonstrate the most used strategies in the sample population. The quantitative data allows for highlighting the current situation in English classes and uncovering the problems and difficulties are believed to encounter. Consequently, the proposed solutions are built on empirical observation.

Participants: The targeted population in this study is the students of the second baccalaureate in a public school in the east of Morocco. They are supposed to be intermediate at their level. They have studied English for four years.

As far as the sampling method, I opt for simple random sampling, because it is the common one used in quantitative studies. Besides, it is a feasible method that allows for studying a small proportion of the population and getting results that can be generalizable (Ary, Jacobs, Sorensen, & Razavieh, 2010).

Data Collection: I first started by choosing the school adequate to make the study. The selection criteria are: First, the availability of students, second, the collaboration of teachers and administration. Then, I coordinated with the teachers about the time and the targeted students. They affirmed the availability of two classes. I put the questionnaires on paper. I gave them to the students. I told them about the objectives behind the activity. I explained some statements they asked about their meaning. I checked that all the statements are ticked because the questionnaire that misses one of them will be rejected.

After collecting the questionnaires, I devised a sheet in Excel to administer the answers. I coded them strongly disagree (1), disagree (2), neutral (3); agree (4); strongly agree (5). Then, they are easily imported to SPSS for analysis.

Validity and Reliability: The questionnaire is first developed by Vandergrift, Goh, Mareschal and Tafaghodtari in 2006. It was field tested on 966 students in different countries. After the analysis, they made some adjustments and did the second administration on 512 students. They got a result alpha= .91 (Vandergrift, Goh, Mareschal, & Tafaghodtari, 2006).

The same questionnaire is adapted in this questionnaire with slight modifications. I omit 3 statements that seem to be far-fetched. The result of alpha Cronbach which measures reliability seems to be acceptable (.58). The result of constructive validity measured by the correlation between the questionnaire sequences and the general sum are as follows:

Planning-evaluation   .669

Directed attention   .642

Person knowledge   .423

Problem-solving   .763

It indicates that the questionnaire has an acceptable validity. Accordingly, the results I get in this study are based on a reliable and valid instrument.

4. Results

This descriptive study investigates cognitive and metacognitive strategies used by high school students. The participants include 41, 9 males and 32 are females. They are in the final grade to go to colleges. They are due to sit for a national exam by June. Their level is intermediate. They study English for three hours each week.

Before analyzing the collected data, I make sure that they meet the assumption of normality. I find that the test of Skewness and Kurtosis which gives -.148 and -.637 respectively and the test of Kolmogorov-Smirnov which gives significance of .200 assure the normality distribution of data. It allows depending on parametric statistics for the analysis.

Descriptive statistics are to be used as a key tool for the analysis. The mean is the hallmark of the used parameters. Besides, the Standard deviation is to discern the distribution of the variables. Furthermore, the skewness is the most important to determine the tendency of students towards the statements. However, I add the calculated Z_c[1] value to be able to judge correctly the significance of the students' tendencies.

Planning-Evaluation: The section aims to study whether students can plan and monitor the listening stages. The listening process in classes passes by three stages: pre-listening where students try to guess and predict and acquire the main tools that facilitate their understanding; the listening stage where students have to focus and understand the listening passages; the post is posted listening students can appreciate what the listen to and have their interpretation and reaction. During these stages students should be able to evaluate their level to regulate their strategies (Imhof & Janusik, 2006). There are five statements depicting this process which the following results:

	Mean	Std. Deviation	Skewness	Kurtosis	Zc
Before I start to listen in class, I have a plan in my head for how I am going to listen	3,24	1,261	-0,566	-0,464	1,23
Before listening in class, I think of similar lectures or discussions that I may have listened to.	3,44	1,074	-0,089	-0,734	2,61
After listening in class, I think back to how I listened, and about what I might do differently next time in class.	3,41	1,264	-0,617	-0,528	2,09
As I listen in class, I periodically ask myself if I am satisfied with my level of comprehension.	3,59	1,303	-0,517	-0,909	2,87
I have a goal in mind as I listen in class	4,22	1,037	-1,597	2,686	7,52

The five statements have a mean above 3 which means that most students agree and strongly agree with them. The skewness values are negative (-0,566, -0,089, -0,617, -0,517, -1,597). They are another argument reinforcing the claim that students agree with the statements of 'planning-evaluation'. In addition, Z values reinforce that; they are significantly above -1, 64.

The results reveal that students have the basic competencies and strategies for listening. They design goals for listening tasks. They put plans to facilitate their understanding. They link what they are listening to with their prior knowledge and make deductions. They evaluate their understanding to adjust their strategies for better comprehension. However, this does not give exact quantification of much they acquire and use the strategies; it gives only the idea that they use them. It needs another job a detailed evaluation to cater for their personal needs.

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[1] The value of Z_c is calculated by this formula: $Z_c = \dfrac{\bar{X} - U}{\frac{S}{\sqrt{n}}}$

Direct Attention: The statements of this section probe their perseverance, motivation, and readiness to work hard to understand listening passages. As stated before, listening is not easy to learn for a foreigner who is not accustomed to the English stream of talking. It is an 'elusive aspect of any productive communication event' (Bodie & Powers, 2004) Therefore, students need to make effort to achieve an adequate level. The statements: 'I focus harder on the lecture or discussion when I have trouble understanding, 'when my mind wanders in class, I recover my concentration right away, 'I try to get back on track when I lose concentration while listening in class, 'When I have difficulty understanding what I hear in-class lectures and discussions, I give up and stop listening are made to discover students' perseverance and motivation. The result is:

	Mean	Std. Deviation	Skewness	Kurtosis	Zc
I focus harder on the lecture or discussion when I have trouble understanding	3,61	1,430	-0,826	-0,562	2,73
When my mind wanders in class, I recover my concentration right away.	2,93	1,385	0,137	-1,295	-0,33
I try to get back on track when I lose concentration while listening in class.	3,73	1,265	-0,553	-0,867	3,70
When I have difficulty understanding what I hear in-class lectures and discussions, I give up and stop listening.	2,76	1,496	0,205	-1,423	-1,04

The results disclose that students do not give up easily when they find difficulty in understanding. They try to work hard and concentrate to find the right path and the clues to get the meaning. They make strategies of looking backwards to maintain concentration. The statistics of these statements show that mean of the first and the third statement are above 3. It means students agree and strongly agree with them. However, the second and the fourth statements are under three. They are 2.93 and 2.76 respectively. The critical values Zc demonstrate that they are not significant.

Person Knowledge: These section statements probe students' perception of listening. There are three statements: the first one probes whether they see listening as difficult or an easy task; the second asks about whether listening is challenging or not; the third statement interrogates their feeling when they find listening challenging. The results are:

	Mean	Std. Deviation	Skewness	Kurtosis	Zc
I find that listening in English is more difficult than reading, speaking, or writing in English.	2,78	1,24	0,27	-0,66	-1,14
I feel that listening comprehension in class is a challenge for me.	3,80	1,08	-0,60	-0,33	4,78
I don't feel nervous when I listen in class.	3,34	1,44	-0,17	-1,34	1,52

In this section, the first statement 'I find that listening in English is more difficult than reading, speaking, or writing in English' mean is under 3. This implies about half of students consider listening more difficult than the other learning skills. Furthermore, the majority of them consider it challenging. Therefore, they feel nervous and anxious during the listening tasks.

Problem-Solving: Listening needs some meticulous strategies that students use either consciously or consciously. Listening is usually depicted as 'a largely unconscious process controlled by mysterious cognitive mechanisms' (Rost, 2002). Strategies like guessing the meaning, comparing with other similar content, the ability to use schemata, and the competency of getting the gist are tools used to understand spoken English. These statements investigated those strategies: 'I use the words I understand to guess the meaning of the words I don't understand when listening to class lectures and discussions; 'As I listen in

class, I compare what I understand with what I know about the topic'; 'I use my experience and knowledge to help me understand when listening in class'; 'As I listen in class, I quickly adjust my interpretation if I realize that it is not correct'; 'I use the general idea of the lecture or discussion to help me guess the meaning of the words that I don't understand'; 'When I guess the meaning of a word in a class lecture or discussion, I think back to everything else that I have heard, to see if my guess makes sense.

	Mean	Std. Deviation	Skewness	Kurtosis	Zc
I use the words I understand to guess the meaning of the words I don't understand when listening to class lectures and discussions.	3,93	1,08	-1,10	0,97	5,49
As I listen in class, I compare what I understand with what I know about the topic.	3,66	1,22	-0,52	-0,73	3,47
I use my experience and knowledge to help me understand when listening in class.	4,27	1,03	-1,60	2,15	7,92
As I listen in class, I quickly adjust my interpretation if I realize that it is not correct.	3,63	1,13	-0,51	-0,34	3,58
I use the general idea of the lecture or discussion to help me guess the meaning of the words that I don't understand.	4,02	1,17	-1,32	1,23	5,60
When I guess the meaning of a word in a class lecture or discussion, I think back to everything else that I have heard, to see if my guess makes sense.	3,73	1,10	-0,51	-0,05	4,27

The results in this section reveal that students have some competencies that are considered necessary for a language learner. They try to guess the meaning when they do not understand the words' meaning. They compare what they learn to prior knowledge; they trigger their schemata and passive vocabulary. They use their prior skills to understand, and they try to adjust their interpretation to realise the correct one. They link the specific to general meaning. All the statements get a mean over 3 with significance over -1.64.

Relation between Strategies: Students do not use each strategy independently, because they are interlinked with each other. They use them simultaneously in a complex manner. However, the question here is whether one strategy has a positive impact on another one. In other words, is the existence of one strategy help the development of the others and vice versa? This question is approached by the matrix of correlation starting from these two hypotheses:

1. The null hypothesis: the strategies do not correlate

2. The alternative hypothesis they correlate

Correlations		Planning evaluation	Directed attention	Person knowledge
Directed attention	Pearson Correlation	0,264	--	
	Sig. (2-tailed)	0,096		
Person knowledge	Pearson Correlation	0,171	0,087	--
	Sig. (2-tailed)	0,284	0,587	
Problem-solving	Pearson Correlation	0,248	,533**	0,180
	Sig. (2-tailed)	0,118	0,000	0,259
**. Correlation is significant at the 0.01 level (2-tailed).				

The matrix reveals that only problem-solving and directed attention correlates positively with each other. The significance is 0.000 which means the rejection of the null hypothesis and the adoption of the alternative hypothesis that the two strategies correlate. However, the significance between the other strategies is: (directed attention and planning-evaluation is 0.096), (person knowledge and planning-evaluation is 0.284), (person knowledge and direct attention 0.587), (problem-solving and planning evaluation 0.118), (problem-solving and person-knowledge 0.259). They are all above 0.05 which means we should keep the null hypothesis. The strategies do not correlate. It implies that the strategies are not interlinked powerfully with each other; therefore, they should be taught independently.

Subgroup Differences: Individual differences in listening styles and strategies are clear from the results above. The standard deviation in each statement confirms the disparity between students. Personality traits and learning styles play a crucial role in the observed differences. However, I investigate here gender-based differences depending on the mean of two subgroups. The processing of data by SPSS gives the following results.

Groups		N	Mean	Std. Deviation	Std. Error Mean
Subgroups	Male	9	66,63	7,633	2,699
	Female	32	72,78	8,123	1,436

There are 9 males and 32 females. The mean is 66, 63 and 72, 78 respectively. The standard deviation is 7,633 and 8,123. The first observation reveals a slight difference between the two. This can be confirmed depending on independent samples T-test. I start with the following hypothesis to do that:

1. The null hypothesis: there is no difference in listening strategies between genders.

2. The alternative hypothesis: there are differences in listening strategies between genders.

Independent Samples Test		Levene's Test for Equality of Variances		t-test for Equality of Means				95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Lower	Upper
Gender differences	Equal variances assumed	0,001	0,98	-1,94	38	0,06	-6,16	-12,59	0,27
	Equal variances not assumed			-2,01	11,320	0,07	-6,16	-12,86	0,55

The independent samples test shows the inequality of the standard deviation between the two subgroups. The value of Fischer is 0.001 and the significance is 0,98. Furthermore, there is a -6.16-mean difference, and the two-tailed significance is 0.07. This implies the rejection of the null hypothesis. The adoption of the alternative hypothesis proves that there are differences in listening strategies between males and females in the sample study.

5. Discussion

The results of the previous sections prove that there is individual as well as gender differences in using listening strategies. Females express that they are more skillful than males in listening competencies. However, both of them strive for better use of listening strategies. They work to achieve a satisfactory level of understanding in listening to English.

Bearing in mind the importance of listening strategies and individual differences between students, I think teachers should cater implicitly and explicitly for teaching them. Listening tasks should put into consideration their development instead of focusing on comprehension. The approach of spoon-feeding vocabulary, function and structure cannot develop autonomous learners who take responsibility for their learning. Students should be active in the process and be motivated and engaged.

Furthermore, sticking to textbooks in teaching listening has various shortcomings though the passages can be authentic and taken from real-life situations. Listening is a key component of communication; therefore, it is highly demanding to integrate soft skills into the teaching process. Skills like body language, tone, eye contact, empathy, and reasoning are teachable. Besides, students should know cultural differences and respect them. Teachability implies measurability; consequently, the skills should be subject to measurement. It facilitates the regulation of teaching practices and enables the tracing of student achievement. Furthermore, electronic and mass media communication should take part in teaching practices because they are used massively.

6. Conclusion

This research has so far investigated the importance of listening as a key communication skill. It has researched some arguments which prove that students use some listening strategies. They use planning evaluation, directed attention, person knowledge and problem-solving strategies. There are significant differences between students in extent of that use, yet they use them.

The strategies are correlating weakly; therefore, teachers should teach them independently. They should plan to teach each of them through specific tasks. If Students are informed by those strategies and how to develop them, they will do better in their work.

Personality traits and learning styles contribute largely to differentiating listening abilities. A few investigations are conducted to probe this aspect. How personality traits can be exploited to develop students' language abilities in general and listening in specific entails further studies.

7. References

Ary, D., Jacobs, L., Sorensen, C., & Razavieh, A. (2010). Introduction to Research in Education. Belmont: Wadsworth.

Bodie , G., & Villaume , W. (2004). Aspects of Receiving Information: The Relationship between Listening Preferences Communication Apprehension, Receiver Apprehension and Communicator Style. International Journal of Listening, 49-69.

Bodie, G., Imhof, M., Worthington, D., & Cooper, L. (2008). What Would a Unified Field of Listening Look Like? A proposal Linking Past Perspectives and Future Endeavors. International Journal of Listening, 103-122.

Bodie, G., & Powers, W. (2004). Listening Fidelity: Seeking Congruence Between Cognition of the listener and the sender. International Journal of Listening, 21-33.

Bodie, G., Cyr, K., Pence, M., Rold, M., & Honeycutt, J. (2012). Listening Competence in Initial InteractionsI: Distinguishing Between What Listening is and What Listeners do. The International Journal of Listening, 1-28.

Imhof, M. (2014). Listening is Easy!? Looking at Critical Factors for Listening Performance. International Colloquium on Communication, 1-12.

Imhof , M., & Janusik , L. A. (2006). Development and Validation of the Imhof-Janusik Listening Concepts Inventory to Measure Listening Conceptualisation Differences between Cultures. Journal of Intercultural Communication Research, 79-98.

Janosik, L., & Imhof, M. (2016). Intercultural listening: Measuring Listening Concepts with the LCI-R. International Journal of Listening, 1-18.

Mayer, R. (2014). Cognitive Theory of Multimedia learning. Dans R. Mayer, Cambridge Handbook of Multimedia Learning (pp. 43-71). Cambridge: Cambridge University Press.

Nugroho, D. (2020). EAP Students' Perceptions of Extensive Listening. Journal of English Language Literature and Teaching, 95-106.

Richards, J., & Schmidt, R. (2010). Dictionary of Language Teaching & Applied Linguistics. Harlow: Pearson Education Limited.

Rost, M. (2002). Teaching and Researching Listening. Edinburgh: Pearson.

Saragih, D. (2022). The Use of Dictation Strategy to Teach Listening Skills. Transformational Language, Literature, and Technology Overview in Learning, 1-9.

Sulaiman, N., Muhammad, A., Ganapathy, N., Khairuddin, Z., & Othman, S. (2017). Students' Perceptions on Using Different Listening Assessment Methods: Audio-Only and Video Media. Canadian Center of Science and Education, 93-99.

Vandergrift, L., Goh, C., Mareschal, C., & Tafaghodtari, M. (2006). The Metacognitive Awareness Listening Questionnaire: Development and Validation. Language Learning, 431–462.

Wulanjani, A., & Indriani, L. (2019). Metacognitive Strategies Used by EFL Listeners: A Student Need Analysis in Developing Listening Tasks. Journal of English Language Literature and Teaching, 60-69.

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