Vol.6/
2016
Special
Issue

Listening Education

Editor: Erica J. Lamm

International Listening Association

Listening Education

Editor

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Special Issue (2016) Contents

Fostering listening and learning in the classroom across the curriculum

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Grade level: 6 - 12; Undergraduate; Adult Education;
Keywords: Information processing, cognitive processes, metacognition, Self-regulation

Introduction:
Listening: Connecting theory and practice

Listening is at the basis of any kind of classroom interaction: Teachers and students as well as students among themselves use oral language to communicate and, therefore, need listening skills, to process the information which needs to be shared to learn, to explain, to discuss, and to negotiate in class. Oral communication is a core activity across the curriculum, which means that learning to listen and listening to learn needs to be practiced in all learning environments and is not restricted to designated listening or communication classes. Therefore, it is a challenge for all instructors to take into account the listening competences of their audience and to generate learning tasks which encourage the practice of efficient listening skills.

This special issue proposes strategies which instructors may use to foster listening across the curriculum. We will first present a model of listening and expand it with a theory of self-regulation. This extended model serves as a backdrop for the specific teaching and learning strategies some of which have been empirically tested in High School classrooms.

Listening as Information Processing

The model of listening as information processing (Imhof, 2010) allows to identify critical activities involved in listening. In this model, listening is defined as the intentional selection, organization and integration of both verbal and nonverbal information in oral communication.

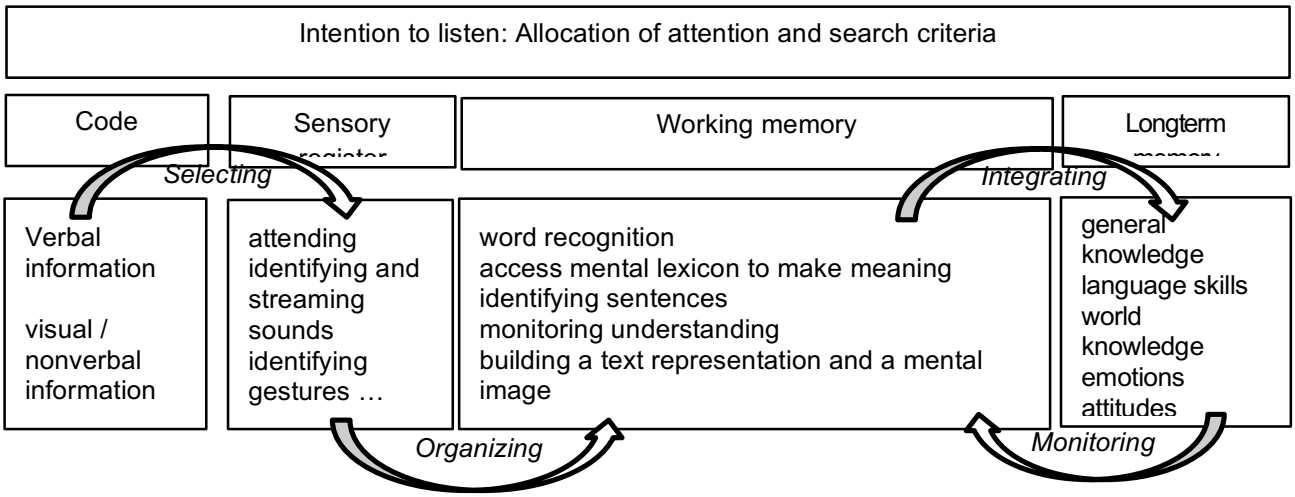

Figure 1. Cognitive Model of Listening (adapted from Imhof, 2010).

According to this model, listening begins by creating an intention to listen (step 1). Listening initiates when a communicator has successfully activated some kind of interest and motivation to attend to what the other person has to say.

Step 2 involves the effective selection of information from the receptors in several modalities (hearing, vision, smell, touch), a ultra short term store called sensory register. In any given moment, the sense organs receive a myriad of information which is retained for a very brief period of time, usually in range of milliseconds. Therefore, the mental system needs to act quickly to select information which is relevant and to dismiss information which is not needed from the various sources.

Step 3 works involves working memory (WM) and basically makes sense of the information. Working memory is considered to be the central processing unit of the mind (Baddeley, 2006). Its specific functions are to monitor the selection of information, e.g., to decide which sources to attend to, and to separate relevant from irrelevant information. WM is also the unit which keeps information active through rehearsal so that information can be organized in a meaningful way and that it is combined with and attached to prior knowledge. What is more, WM combines verbal and nonverbal information, discovers contradictions, inconsistent or incomplete information. On the one hand, WM is hampered by limited capacity, on the other hand, it is equipped with an impressive flexibility. A person can typically keep four to seven units active in WM (Alloway & Copello, 2013; Kane, Bleckley, Conway, & Engle 2001) – which does not sound much. However, the size of the units is expandable. When individual pieces of information are summarized into one unit, WM can adjust easily and WM can handle much larger lumps of information (try to remember seven digits 9 1 1 2 0 0 1 or one date). From extensive research on learning through reading, there is ample evidence that the processes in WM are both susceptible to and benefit from the use of cognitive and metacognitive strategies (Guthrie, Wigfield, & Perencevich, 2004).

Step 4 in the listening process requires the integration of information into longterm memory (LM). While LM is theoretically unlimited in space (like a huge library), the problem is to locate the information in a way that one can access the information and retrieve it as needed.

Research from cognitive psychology suggests that all four steps of information processing can be strategically enhanced by both external and mental learner activity. The pertaining body of research is listed under headings such as self-regulated learning and learning and information processing strategies.

Listening and Self-Regulated Learning

For the purpose of this paper, we are drawing on the model of self-regulation proposed by Boekaerts (1999). The basic idea of this model is that self-regulation strategies operate on three distinct levels. On the level of cognitive competence, strategies are need which facilitate information intake, e.g., attentive processes, activating prior knowledge, storing and rehearsing information. Activities located on the metacognitive level are concerned with monitoring the information processing, e.g., generating and sustaining attention and willingness to listen, anticipating difficulties and barriers, evaluating information, separating information and opinion. Finally, the level of self-regulation and resource-management comprises activities such as note-taking, effort management, giving feedback, and searching for missing information.

The combination of the model of listening as information processing and the model of the levels of self-regulation is reflected in Figure 2. The resulting grid of the four steps of

listening as information processing, on the one hand, and of the three levels of self-regulation, on the other hand, encourages instructors to think about activities that might facilitate a specific aspect of listening.

	Intention	**Selection**	**Organization**	**Integration**
Cognitive Level	Define goals and objectives	Focus attention Activate prior knowledge Language recognition	Structure Categorize Summarize input detect units of meaning (words, phrases)	Connect with prior knowledge Visualize Rehearse Review Attach meaning
Metacognitive Level	Anticipate and control communication difficulties and barriers	Monitor and control input Consider various sources of information	Consider different perspectives Identify missing information Check for credibility and consistence	Evaluate consider / add / substract emotions Separate attitudes and information
Self-Regulation and Resource Management	Listen to whom, when, how long? Prepare for effort investment	Take notes Use memory strategies Define type and scope of notes	Monitor processes Monitor channels and interaction Give and receive feedback	Switch and combine sources Create, test, and complete situation model generate deep learning What am I supposed to do?

Figure 2. Listening and Levels of Self-Regulation.

We used this overview as a heuristics to generate questions which stimulate thinking about potentially effective mental activities in listening situations. To illustrate the point, use the combination of “cognitive competence” and “Intention” which may pose the following question:

- a) What can a learner do on a *cognitive level* to increase the *intention* to listen?
  b) What kind of task can instructors use to encourage a learner / listener to engage in this activity?

We found the combination of the model of listening and the model of self-regulation prolific and helpful when we used it to generate a series of questions which challenged teaching ideas. The combination of the metacognitive level and organization of information can serve as another example:

- a) What can a learner do on a *metacognitive level* to arrive at a meaningful *organization* of the information s/he is listening to?
  b) What kind of task can instructors use to encourage a learner / listener to engage in this activity?

We applied this procedure to the grid that we had created and developed a series of teaching activities, which were tailored to the needs of specific subjects, age groups, and

competence levels. We share these activities in the remainder of the special issue while we emphasize that other instructors will have to generate their own activities along these lines in order to adjust the activity to the group of learners / listeners they are working with.

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Acknowledgement

All teaching activities were developed and tested by graduate students in two research classes taught by Dr. Myriam Schlag and myself. We wish to thank all students in our classes and all schools, teachers, and high school students who volunteered to give their time to participate in the course of the projects.

Title: Building an intention to listen by identifying learning needs

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Grade level: 7-16; Undergraduate; Graduate; Adult Education; General; adjustable to any level; current project on 8th grade students
Keywords: Building an intention to listen; cognitive preparation for listening
Goals: stimulate a focus on a topic, increase curiosity, activate prior knowledge
Type / Aspect of listening in focus: Listening for information, critical listening

Listening Practice:

Description: Many learning environments contain audio material (with or without a video) to teach a specific topic. To learn from this material clearly involves listening. We looked at different ways how teachers can support students to process the information. The options are:

a) increase suspense by not saying anything about the text before playing the recording
   ⇒ no preview
b) preview the text against the backdrop of the teacher knowledge of the content
   ⇒ teacher provided preview by information and questions
c) ask students to write down what they know and up to three questions which occur to them when they hear the title of the recording
   ⇒ student generated preview

All three options have been observed in classrooms. The teacher provided preview seems to reflect the most common practice, because the teacher knows where the lesson is supposed to be going and shepherds the students in this direction. Student generated questions could, on the one hand, be considered the most risky procedure, because their questions might be totally off target or just playful. On the other hand, student generated questions have the potential to create an intention to listen, because the students want to know if there is an answer to their questions.

In a small-scale study we found that all students retained and recalled information from a recording. When we looked closer, we found that the group with the student generated preview scored significantly higher in a recall test than the group with the teacher preview.

Preparation and Procedures: Use a 5-minute introduction phase in which you introduce the topic of the listening episode ahead. Prepare a worksheet (Figure 1) for groups of four. Ask students to use their assigned sections to write down facts / items which they believe to know about the topic and to generate questions about what they would want to know in addition. Ask them to do this individually at first. To wrap up the preview, ask students to identify shared interests and individual questions in the center of the worksheet.

To prepare for the activity, the following setup can be used:

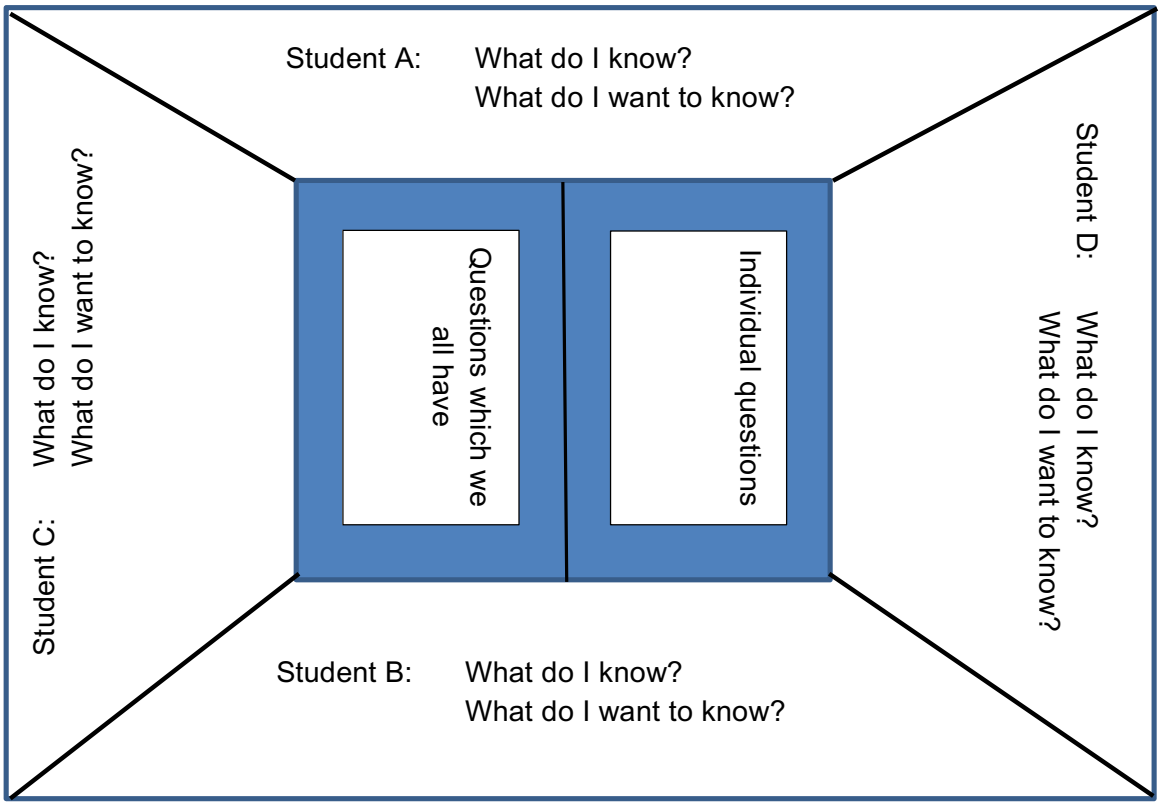

Figure 1: Worksheet suggestion for student generated preview of listening

Tips and Debriefing: As an instructor you need to prepare this exercise in detail so that it does not take more than 5 minutes. The idea is that the exercise preserves its character of a preview.

In addition to using this preview technique, instructors might consider exposing their students to all three types of preview and to reflect on the pros and cons of each approach.

Assessment: The questions generated by the students are not assessed. They are what they are. It might be a consideration to use the questions to conclude the learning episode and to check if the questions have been answered and, in case they are still open, suggest sources where students might find answers or bookmark the question for another class.

We found the technique helpful to facilitate intention building which is prerequisite to start the listening process. Student generated preview can facilitate the process of focusing and sustaining attention to oral information. Further research is invited to investigate the efficiency of this technique across subjects and competence levels.

Title: Using pictures to build an intention to listen

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Grade level: 7-16; Undergraduate; Graduate; Adult Education; General; current project on 8th grade students; adjustable to any level
Goals: stimulate a focus on a topic, increase curiosity, activate prior knowledge
Keywords: Building an intention to listen, cognitive preparation for listening, open the mind
Type / Aspect of listening in focus: intention to listen

Listening Practice:

Description: When a learning environment contains audio material and involves listening, it is key to mentally prepare for focused information processing. Knowing the topic is certainly helpful to allocate attention to the relevant information. Pictures can be instrumental to intensify the experience and to support subsequent listening. Two strategies were used:

a) show students thematically relevant pictures and instruct them to generate questions on the topic (question group).
b) present pictures and ask students to describe what they see (description group).

Based on the literature, both options could be useful for listeners: Asking questions opens the mental gaps to be "filled" with the new information. Describing pictures activates the semantic network pertaining to the topic at hand.

Preparation and Procedures: In a 5-minute introduction phase, explain the task to the students. Provide students with a picture, which is related to the content of the audio material. Instruct students to actually write down their self-generated questions and their descriptions, respectively. Expose the students to the audio material and test retention.

Tips and Debriefing: In a small-scale study we found no difference in learning outcomes and students motivation between the question and the description group. We found significant correlations between the number of questions and immediate recall.

Assessment: The instruction to generate questions or a description based on a visual stimulus, such as a picture, has been shown to facilitate intention building. However, there is no evidence that one strategy would be stronger than the other. Since students who generate larger amounts of associations are more efficient at subsequent listening, it might be worthwhile for teachers to encourage students to expand as much as possible. This strategy could be susceptible to encouragement, practice, and feedback.

Title: Using headings to preview listening and to build an intention to listen

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Course level: 7-16; Undergraduate; Graduate; Adult Education; General; adjustable to any level; current project on 8th grade students
Goals: stimulate a focus on a topic, increase curiosity, create a sense of autonomy
Type / Aspect of listening in focus: intention building, identifying knowledge gaps
Keywords: Building an intention to listen; cognitive preparation for listening, experiencing autonomy

Listening Practice:

Description: When a learning environment contains audio material and involves listening, it has been shown that information processing is more efficient when listeners have a sense of autonomy and define their own listening goals. To accomplish this, we used headings and subheadings to support student listeners in identifying their listening goals. Two instructions were used: Students received the information on what the text is going to be about through the headline in one of the following scenarios:

a) students were asked to generate 3-5 questions they would have after knowing the headline (autonomous group)
b) the teacher gave the students a set of questions after he had let them know the headline (guided group)

Both procedures have been observed in the classroom and both might be successful. The set questions may help the students to focus on the relevant information. The self-generated questions are more risky and may be off the point, but since they support student autonomy, they might generate sustainable motivation to listen.

Preparation and Procedures: In a 5-minute introduction phase the teacher explains the task to students. The students read the headings (and subheadings) of the audio material to preview the listening text. Students are allowed another 5-minute students to read the teacher's guiding questions or to generate 3 - 5 questions individually. Then all students listen to audio material.

Tips and Debriefing: In a small-scale study with 8th graders, we found no difference in learning outcomes between self-generated questions and given questions. We found significant correlations between the number of questions and immediate recall.

Assessment: The instruction to generate questions or a description based on the headings and subheadings of a text can facilitate intention building and, as a consequence, can impact listening efficiency. The more questions students come up with before they listen to a text, the more information they seem to retain. It might be worthwhile for teachers to encourage

students to identify their listening interests widely. Effects might be increased when the questions are reconsidered later to monitor learning.

Title: Support selection of information by preparing for note-taking strategies

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Grade level: 7-16; Undergraduate; Graduate; Adult Education; General; adjustable to any level from secondary education on; current project on 8th grade students
Keywords: metacognitive control, selection of information
Goals: support selection of information,
Type / Aspect of listening in focus: Listening for information, critical listening for content

Listening Practice:

Description: Listening and learning frequently involve note taking. Empirical evidence shows that not all note-taking strategies are equally efficient. Listening situations which require note-taking also pose the challenge to simultaneously take in new information while writing down the somewhat "older" information for retention. Therefore we assume that preparing note-taking in a structured manner will facilitate the selection of information from oral presentations. In particular, we introduced two styles of note-taking to high school learners:

a) free note taking
b) using wh- questions to prestructure the notes.

Free notes may entail that students would create a broad focus and attend to the information as fully as possible. Guided or pre-structured notes could remind students of what they are listening for: the who, what, when, why, how of a story or a presentation. A small-scale experiment with 8th graders was administered to investigate if one form of note-taking is to be preferred over the other. In both cases, students were introduced to the basics of the strategy and their listening performance before and after was assessed in their first language.

Preparation and Procedures: The teacher gave a 10-minute introduction to the respective type of note-taking. One group learned about the procedure of free note-taking, the other group was instructed how to use question words to guide their notetaking.

Tips and Debriefing: Two groups of 8th graders were tested for their listening competence (retention) before and after the intervention. After the short intervention, they were tested again with a listening test. We found better listening results after the short intervention in both groups. A brief introduction of only 10 minutes helped the students to retain more of the information they had heard.

Assessment: Smart note-taking strategies yield immediate benefits for listeners. Teenage students benefit from a brief intervention providing them with an instruction on how to take note efficiently. The actual variety of note-taking style did not make a difference in our study. More research would be needed to confirm this assumption for more complex and longer

listening text. It is encouraging to see that even a very short intervention can be helpful for developing listeners.

Title: Using previewing to facilitate selection of information

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Grade level: 7-16; Undergraduate; Graduate; Adult Education; General; adjustable to any level from secondary education on; current project on 9th grade students
Keywords: metacognitive control, selection of information
Goals: Support selection of information
Type / Aspect of listening in focus: Listening for information, select relevant information for learning

Listening Practice:

Description: Reading research has confirmed the power of previewing a text on comprehension and retention. The formula of SQ3R proposed by Robinson (Survey, Question, Read, Recite, Revise) has been shown to be a helpful strategy to master even challenging readings. The open question is if this strategy translates to listening. The part of surveying and questioning a reading could be transferred to listening as learning about the title and asking yourself questions (see other contributions in this special issue on building an intention to listen). The 3 R's, however, pose a problem. Does listening to the same audio input twice increase comprehension and retention when the first time around is used in analogy to a first cursory reading?

In our study we tested if students learned more from an audio text if they listened to the same text twice than others who listened to the text only once. We asked the students who listened to the text twice, to use two different colors of pencils in order to identify which notes they took in the first and which they took in the second round.

Preparation and Procedures: Students were instructed according to the experimental situation. They did not receive any particular instructions for note-taking strategies.

Tips and Debriefing: Students in both groups yielded comparable levels of learning outcome. Students who listened twice to the same audio did not take more elaborated or in-depth notes.
Assessment: Taking notes and selecting information need instruction and practice. Students do not automatically benefit from a second round of listening to a text. It might be worthwhile to investigate if more specific instructions for both rounds of listening would make a difference. In addition, the audio text was rather short and both the preview activity and the double listening might have a different impact for more complex and longer texts.

Title: Monitoring selection of information

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Grade level: 7-16; Undergraduate; Graduate; Adult Education; General; adjustable to any level; current projects with 6th and 10th grade students
Keywords: Metacognitive control, selection of information, using diverse sources of information
Goals: using nonverbal information to learn and understand
Type / Aspect of listening in focus: Selecting information, monitoring multiple sources

Listening Practice:

Description: Long before infants understand words, they understand gestures, tone of voice and other nonverbal messages. Research on children in school has shown that in formal instruction, misplaced or inadequate gestures may confuse learners, in particular young learners and learners with a learning disability. Therefore, it is extremely important that teachers control not only the verbal language they are using, but also their nonverbal expression. In the current exercise, we were interested in the receiving end of nonverbal information. We wanted to investigate if learners can use nonverbal information more efficiently when they receive explicit training on its meaning and value.

Preparation and Procedures: We prepared two videos in which teachers used hand gestures to structure their lectures. The topics we used were plate tectonics for the 10th graders and techniques of crime scene analysis for the 6th graders. One group of students was exposed to the videos to learn the material, another group of students learned about the gestures first, and a third group listened to the audio recordings and did not watch the videos. Drawing on the observations in our projects we suggest that well-prepared gestures enrich teacher-learner communication and foster student learning.

Tips and Debriefing: Students who learned the material with audio and video achieved higher test scores than the audio only group. Explicit instruction on how to read nonverbal information did not make a difference. Appropriate teacher gestures can support student learning without additional instruction.

Assessment: We observed that 6th and 10th grade students are intuitively competent at reading nonverbal information and at combining verbal and nonverbal information to learn. Further research may show if additional metacognitive instruction on using nonverbal information facilitates learning further.

Title: Organizing information

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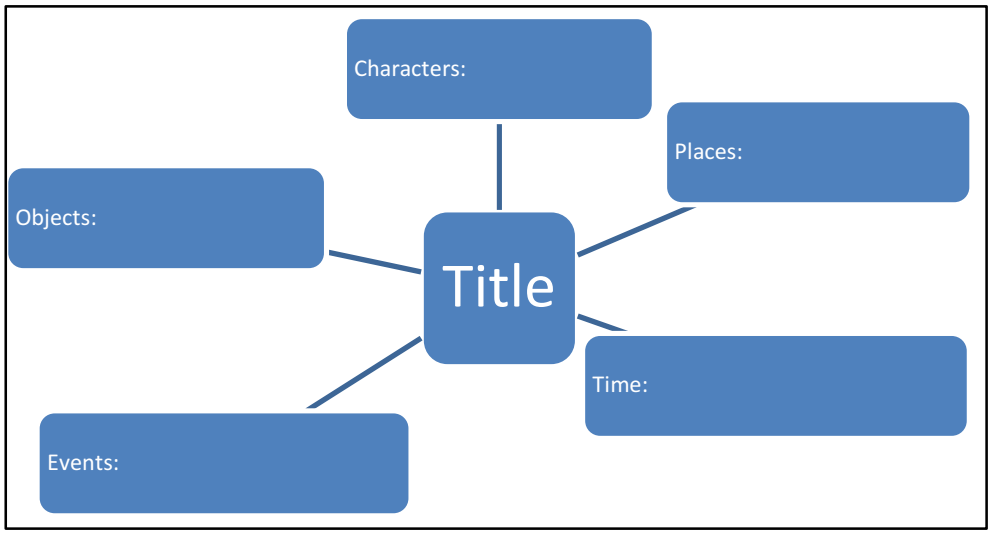
Grade level: 7-16; Undergraduate; Graduate; Adult Education; General; adjustable to any level from secondary education on; current project on 9th grade students
Keywords: Organizing information, Concept Maps, cognitive strategies, note taking
Goals: support organization of information, contain information from disparate sections of a listening text
Type / Aspect of listening in focus: Listening for information, critical listening for structure and content

Listening Practice:

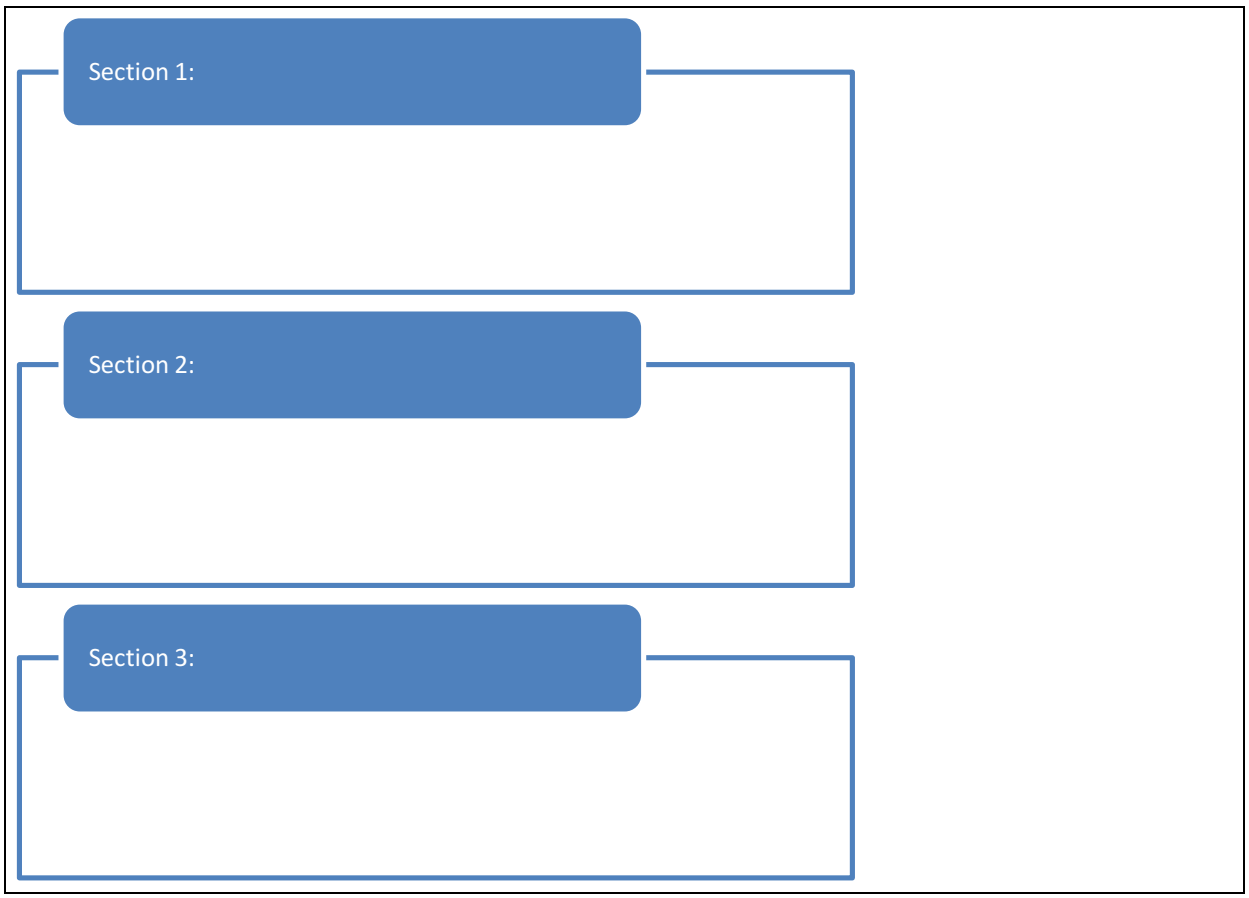
Description: Learners typically take notes when they listen to lectures and other forms of oral instruction. Concept maps (CM) have been shown to be quite efficient for taking notes from written text. The purpose of the current exercise is to adapt the use of concept maps to a listening situation. The challenge of CMs is to develop a graphic representation of the information, including the relationships between different parts of a text.

Preparation and Procedures: CMs may be organized either in terms of text content or text structure. To prepare a CM for *content*, instructors can prepare a template along these lines:



Tips and Debriefing: Using prefabricated CMs can be useful for developing learners and support them to grow their note taking skills. In a listening situation, in particular, a prepared CM can save time and reduce distraction in the dual task situation of listening and note taking, which might be confusing for novices.

To prepare a CM for text *structure*, instructors can prepare a template along these lines:



Since we saw large individual differences between students in their competence to use CMs in a meaningful way, we recommend that instructors give their students an opportunity to practice the use of CMs for notetaking.

Assessment: We observed that 9th grade students who used the CM which organized the content had higher scores on a subsequent recall test than students who used a CM which was organized to represent the text structure.

Title: Organizing Information in a Cloze-Concept Map (CCM)

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Grade level: 7-16; Undergraduate; Graduate; Adult Education; General; adjustable to any level from secondary education on; current project on 9th grade students
Keywords: Organizing information, Concept Maps, cognitive strategies, note taking
Goals: support organization of information, organize information from disparate sections of a listening text
Type / Aspect of listening in focus: Listening for information, critical listening for content

Listening Practice:

Description: Research has shown that the use of concept maps (CM) can facilitate learning. Since the technique of generating CM is not self-explanatory and needs practice, it might be a helpful step to provide students with cloze-concept maps (CCM) which both provide a structure and leave room for individual development of the notes. Using CCM has been shown to be particularly useful for novice learners in a field and it had been successfully used for reading assignments. We transferred the strategy to listening and to test the effect of CCMs in a listening situation, we prepared a structure for the listeners with a rough structure and some cloze items for the students to fill in.

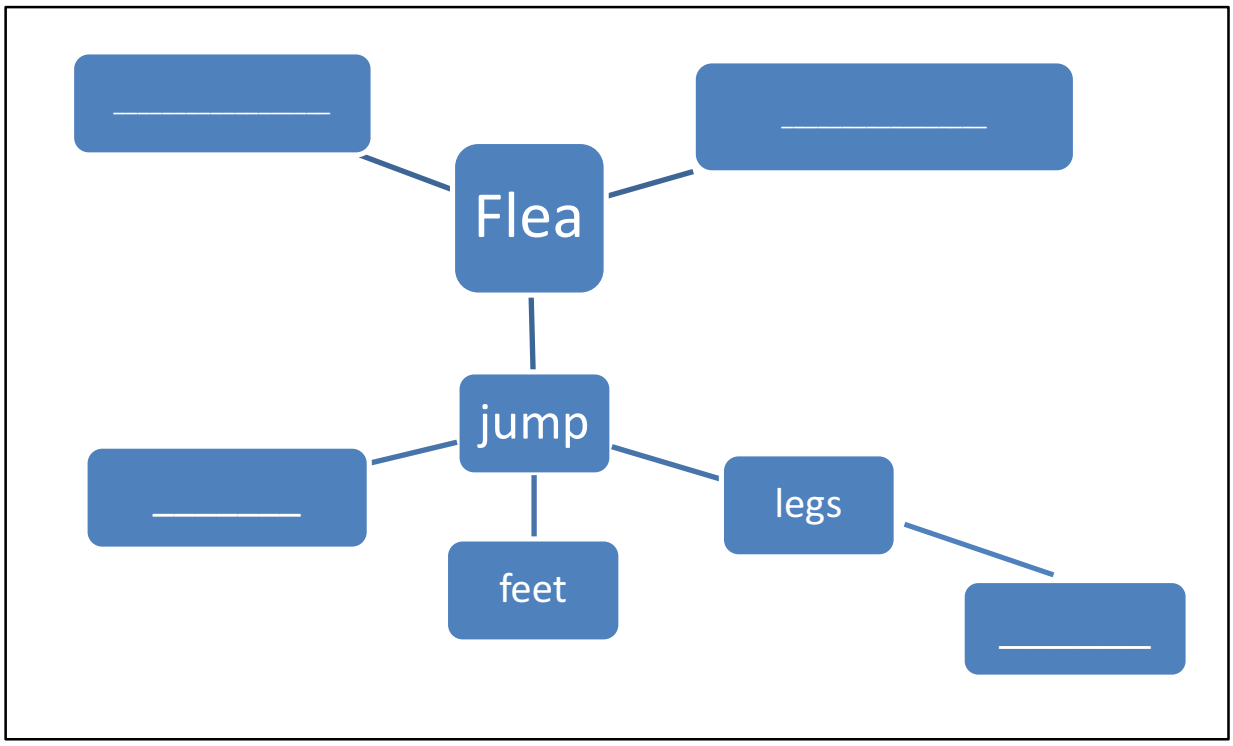

Figure 1: Cloze Concept Map (CCM) with parts of the information provided and other parts to be completed by the listeners.

Preparation and Procedures: We selected a listening text and prepared CCMs for students. We asked the teachers to decide which information will be provided and which items the students have to add. Learners received a 10- minute introduction explaining to them the use of a CM (see Figure 1) in general and doing a practice CM by co-creating CM on the blackboard with all students.

Tips and Debriefing: Providing listeners with (C)CMs can support the development of note taking skills and information processing. (C)CMs direct a listener's attention to specific pieces of information which may appear in disparate sections of a text. We found the CCM to be more difficult than the open CM, because the selection of information seems to be too narrowly focused when students have to listen for specific pieces information.

Assessment: Overall we found no differences in a retention test for students who used a self-directed note-taking strategy and those who used a CCM. We found that students who used the CCM focused on filling the gaps and did not attend to the full listening text. If teachers want to use the technique to provide parts of the information and to ask listeners to fill in the gaps, we recommend that they think carefully about what kind of information to provide and how to ask for the missing parts.

Title: Integration of Information and Building a Situation Model in the L2 Classroom

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Grade level: intermediate L2 learners, (current projects with 9th and 10th grade ESL students)
Keywords: Self-regulation and integration of information, Listening in the second language classroom
Goals: fostering comprehension beyond word by word translations
Type / Aspect of listening in focus: Integrating information, adding new information to a previewed situation model

Listening Practice:

Description: Listening to a second language is particularly challenging, when original voices of native speakers are used. While beginning L2 listeners might still try to generate a word-by-word translation of what they hear, more advanced L2 learners are able to use context information and bridging inferences to infer meaning. It is common teaching practice, to feed the students the vocabulary that is going to be in a listening text to facilitate subsequent listening. Thus, L2 listeners have a chance to preview the words required for comprehension. However, this practice assumes a "passive" listener. The alternative would be to ask L2 listeners to actively create a situation model by opening the semantic space using a free association technique.

Preparation and Procedures: Two groups were exposed to an L2 listening exercise. The topic was a public radio documentary about a new experimental playground in Boston. One group received a list of words which specifically contained the vocabulary which occurred in the recording. The other group was asked to write down whatever they could come up with in association with the title "A new playground." While the first group could work with the exact selection of words, the second group had generated a situation model which might finally contain words, which were kind of in the neighborhood of the topic, but which, for the most part, did not appear in the recording.

Tips and Debriefing: Recognition of text information was not affected by the type of preview: Students who listened to the audio with situation model including self-generated vocabulary performed as well as students who had received an exact account of the vocabulary. What is more, deep processing, such as drawing inferences and retaining meta-information (e.g., listen for emotions) was richer in the group of students who listened in the self-generated, unspecific preview situation.

Assessment: Student-generated preview activity fosters deep learning and comprehension. Students create a mental model which can serve as an anchor for the new information. Providing a set of vocabulary may narrow the listening focus and distract from comprehension and active deep processing. Actively opening the semantic space can prepare the mind of a listener for comprehensive and active information processing.

Title: Connecting New Information with Prior Knowledge

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Grade level: 7-16; Undergraduate; Graduate; Adult Education; General; adjustable to any level if some prior knowledge is available
Keywords: Cognitive activity, integration of information
Goals: Filling the gaps and expanding on prior knowledge
Type / Aspect of listening in focus: Integrating information, connecting new information and stored knowledge

Listening Practice:

Description: Listening to oral information typically builds on the network of prior knowledge. When the prior knowledge is activated, listeners are more efficient to process the information, which is present in a listening situation. Teachers may want to mitigate anticipated challenges of a listening text by previewing the concepts and by pointing out the difficulties which might occur. Alternatively, prospective listeners may be encouraged to share what they believe to know about a topic. This may be both little and off target.
Preparation and Procedures: Two groups were exposed to a listening exercise. The topic was about the life of a flea. The teacher guided one group towards the topic and the content of the recording. The students learned that they would hear about shape, special features, characteristics, and the life cycle of fleas. The other group was asked to write down the bits of prior knowledge that they had on fleas. Both activities were timed to take 5 minutes.
Tips and Debriefing: Students listened to a recorded text and took a retention test. Student centered activation of prior knowledge yielded significantly higher retention rates than teacher-guided preview.

Interpretation and Conclusion: Student-generated preview activity fosters integration of information. An attempt to narrowly guide listeners through a listening episode seems to limit mental activity during listening and to impede retention.

Conclusion

In a series of field experiments, we explored a set of activities and tested if they were effective to foster listening. The activities were derived from a theoretical model of listening which claims that listening takes place in four steps which include intention building, selecting, organizing and integrating information on three levels, i.e., cognitive, meta-cognitive, and resource management. The activities were tested against common practice teaching strategies for their effect on retention and deep comprehension. The general finding was that student driven (mental) activities which involve activating prior knowledge and defining knowledge gaps, substantially enhance both the listening process, and, eventually, learning through listening.

We believe that more ideas and strategies could be derived from the model that we used to foster listening, and, in particular, to reinforce listener activity and rich information processing. We tested the effects of enhanced listening across the curriculum to emphasize the idea that deep listening is not only taught in the language classroom, but can be taught – implicitly or explicitly – in the context of any subject.

Therefore, the general recommendation for teachers across the curriculum would be to start with a focus on the phases of the listening process (Becker & Krelle, 2016a) and to think about strategies to stimulate and initiate a specific form of listening behavior (Becker & Krelle, 2016b). We recommend to test these ideas against a strong competition; the strongest competition is typically the personal habit of teaching and / or learning. To gain a better understanding of what the strategy can do and how it could be used to enhance the listening experience. We encourage teachers and learners to share their results and to expand and adjust the methods and strategies across the curriculum.

Becker, S., & Krelle, M. (2016a). Zuhören verstehen und gestalten [Understanding and creating listening]. *Deutsch: Unterrichtspraxis für die Klassen 5-10*, *46*, 30-32.

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