

Key Elements for a Good Academic Presentation from Japanese Scientists' Perspectives

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1. Introduction

English is undoubtedly positioned as a 'lingua franca' in research communication (Swales, 2004) and has become the major language for academic conferences worldwide (Ventola, 2002). For scientists, being able to conduct effective presentations is one of the essential skills for their research life (Rowley-Jolivet & Carter-Thomas, 2005b). This fact, however, poses a great challenge to non-native English speaking scientists, especially novice members (Swales, 1990).

In response to these circumstances, the world of education has been experiencing various kinds of changes. In syllabus designs at universities, teachers are now required to be prepared for materials which enable students to improve not only English proficiency but also for cultivating linguistic ability of specific genres (Cianflone, 2011). In Japan, the Ministry of Education, Culture, Sports, Science and Technology has been advocating "Development of global human resources", and universities in Japan have been working on education for the improvement of presentation skills in English for the advancement of communicative competency. A fundamental problem, however, remains in such education of academic presentations¹, that is to say, the research conducted on academic presentations thus far is scarce (McKinlay & Potter, 1987; Thompson, 1998; Ventola, 2002) and is in a primary stage. Furthermore, although the audience can be actual evaluators for presentations, the past studies on discourse of academic presentations are based on linguistical view points and lack audience perspectives (Shimamura & Takeuchi, 2011). The result is construed by scholars, and opinions from discourse members are scarcely seen in those studies (Berkenkotter and Huckin, 1995).

In addition, there is a concern that advice on academic presentation tends to be similar to that of public speaking, offering suggestions such as use of eye-contact with the audience, but little linguistic advice (Ventola, 2002). This suggests that the concept of a good presentation in English which is to be referenced as a model in teaching has not yet been established. In such an educational environment, the effectiveness of the current presentation teaching cannot always be guaranteed even if it was provided. Therefore, clear guidelines for teaching academic presentation and systematic methods are required along with the contents of teaching based on the

genre knowledge incorporated for discourse members. Thus, in this article, the essential elements that constitute a good academic presentation are comprehensively investigated through the use of a questionnaire from the Japanese scientists' perspectives of an audience. Then, the author would like to examine what the implications are for the pedagogy of teaching academic presentations and discuss what should be included in classroom teaching for realizing effective presentations.

2. Method

2.1 Participants

XYZ institute is a prestigious scientific institution in Japan, and international conferences and more than one hundred seminars are held in the institute every year. Not to mention the international conferences, most of the presentations in the seminars including luncheon forums at the institute are conducted in English. Japanese researchers make up the largest number with majority of the scientists at the XYZ institute, but as many researchers from overseas work here, daily conversations and discussion are held in English on a frequent basis. All of the 119 researchers who participated in this study have attended academic conferences and listened to English presentations as audience members, and 98 out of 119 researchers have experience in giving presentation in English. Their research fields vary, but they mainly focus on biology such as developmental biology, regenerative biology and molecular biology. The age groups range from twenties to forties.

2.2 Data collection

The author conducted academic presentation seminars for the researchers at the XYZ institute, and prior to the seminar, a questionnaire was distributed to the 119 researchers at the institute who applied for the seminar as a preliminary survey. The questionnaire included a total of 10 questions to find out about their knowledge, experiences, and opinions on academic presentation. For the purpose of this study, only the answers to question No. 7 which asks, "What do you think are the most important elements for a good academic presentation?" was utilized (see Appendix 1) so that the results could be applied to the pedagogy of academic presentation in English. Multiple answers were allowed for this question in the questionnaire. The answers were to be written in a free writing form style to obtain various opinions in order to find the important elements. After the data was collected from the 119 researchers, 105 out of 119 questionnaires were used as valid data (only the responses to questions No. 7 were used), because 12 of the questionnaires had no answer to the question No. 7, and 2 questionnaires from Chinese scientists were also excluded as this study examines key elements for a good academic presentation from Japanese scientists' perspectives. As a result, 236 comments were extracted from the valid 105 questionnaires and used as the data for this study.

2.3 Data analysis

236 comments were processed as the qualitative data collected from 105 questionnaires by using the Grounded theory (Glaser & Strauss, 1967) as follows:

Step1. The responses to Question No. 7 were read thoroughly until they were understood sufficiently, and text data was created.

Step2. The text was divided into small sections as objectively as possible.

Step3. The sectioned text was categorized by concisely labeling each one with a concrete concept which adequately described the content.

Step4. Similarly labeled sections were repeatedly grouped into larger categories and each category was named.

Step5. One category was linked to multiple subcategories. The categories are to be key elements, and subcategories belonging to each key element show the features that each category has.

3. Results and Discussion

As a result of the analysis, Table 1 shows key elements and subcategories of the key elements for a good academic presentation. The results are based on the total 236 comments obtained from 105 Japanese researchers at the XYZ scientific institute.

Table 1 Key Elements and Details of Key Elements for Good Academic Presentations Extracted from the Comments in the Questionnaire of the Preliminary Survey for the Academic Presentation Seminar

Key Element	Subcategory of Key Element	Number of Comments	Total Number of Comments	Percentage of Total
Intelligibility of Speech	Intelligibility of phonetics	68	112	47%
	Intelligibility of language	44		
Organization of Speech	Clear points	31	45	19%
	Relevance with slides	6		
	Logically well-organized	5		
	Conciseness	3		
Organization of Slides	Easy to read	16	21	9%
	Facilitate understanding of content	5		
Attitude	Eye contact	7	14	6%
	Confidence	4		
	Pointing to slides	3		
Entertainment	Attention catching	5	9	4%
	Humor	4		
Emphasis	Repetition	6	8	3%
	Stress	2		
Contents	Interesting contents		7	3%
Others			20	8%
Total			236	100%

Table 2 Ranking of Key Elements for Good Academic Presentations Extracted from the Comments in the Questionnaire of the Preliminary Survey for the Academic Presentation Seminar

Key Element	Percentage of Total
Intelligibility of Speech	47%
Organization of Speech	19%
Organization of Slides	9%
Attitude	6%
Entertainment	4%
Emphasis	3%
Contents	3%
Others	8%
Total	100%

Table 3 Notable words of Both Subcategories of Intelligibility of Speech

Intelligibility of Speech	
Intelligibility of Phonetics	Intelligibility of Language
clear	concise
speed	plain
pronunciation	clear
intonation	transition
volume	short sentences

As shown in Table 1 and 2, the results revealed that *Intelligibility² of Speech* was the most abundant response, and appeared on 42% of the questionnaires. The results of this study based on the comments from Japanese scientists in the XYZ institute revealed that an effective presentation is intelligible and understandable for the audience so that the contents can be shared by the participants. In other words, the ability to convey content and to be understood well by the audience seems to be the biggest key to a successful academic presentation. As Shalom (2002) mentions in his work, academic presentations are held to extend scientists' knowledge in their research fields and enable the audience to share and keep up with the latest developments and information in the fast-moving research fields (Rowley-Jolivet, 2002). Therefore, it is obvious that presentations which are easy to understand are highly helpful to gain sufficient information from the speaker, especially for novice members of the non-native English speaker group. In Table 1, there are two subcategories of *Intelligibility of Speech*, such as *intelligibility of phonetics* and *Intelligibility of language*. Although both subcategories represent the majority of the responses, *Intelligibility of phonetics* was the most common answer, and so it can be

assumed that this feature is most easily noticeable. The notable words of *Intelligibility of phonetics*, such as *clear speech*, *appropriate speed*, *volume of voice*, and *intonation* shown in Table 3 can be referred to as some of the teaching points. Also, it is important to note that spoken English highly contributes to enhance *Intelligibility of language* in academic presentation (Shimamura & Takeuchi, 2011). In the case that a speaker just reads a prepared manuscript which has many sentences in written style English, that is not easy to understand and not communicative (Rowley-Jolivet & Carter-Thomas, 2005a; Shimamura & Takeuchi, 2011), and thus there is no doubt that teaching spoken English can be considered as a crucial teaching point in academic presentation. Notable words of *Intelligibility of language* are described in Table 3, such as *concise*, *plain*, *clear*, *transition* and *short sentences*, and these words can also be a basis for a good academic presentation in terms of language use.

The next key element of an effective academic presentation is *Organization of Speech*. In this category of key elements, there are four subcategories, *Clear points*, *Relevance with slides*, *Logically well-organized*, and *Conciseness*. As scientists' presentations are filled with a lot of information (Rowley-Jolivet & Carter-Thomas, 2005a), it is understandable that an audience would appreciate the presentation which has these factors. Undoubtedly, various elements and skills are related and required to realize a well-organized speech, but since the contents of the speech partially relate to the discourse management of the information in the stream of slides (Swales, 2004), organizing the speech with careful attention to the slides organization is one of the crucial points to make a well-organized presentation. Besides, in order to match slides with speech, it is obviously difficult to utter long and complex sentences, expressions and words. While a presenter may have plenty of information to share, he/she must consider the limitations on time that they have to work with, and specifically elaborate on their research points selected from much information. Therefore, it can be said that spoken style English which features discourse markers, signal devices, and short sentences is also helpful to facilitate good *Organization of Speech*.

The third key element is *Organization of Slides*. While a research paper and academic presentation have much in common (Dubois, 1980), the usage of slides is a characteristic that is unique to a presentation. For a non-native speaker with limited English skills, slides can be an important communication channel in aiding them to understand a presentation (Rowley-Jolivet, 2002). As it can be said that "visuals are worth a thousand words" (Dudley-Evans & St. John, 1998, p. 113), where the majority of participants are non-native speakers, the use of non-linguistic semiotics ensures that the main elements of the message will be communicated even if the speaker's expression or audience's comprehension of spoken English is limited (Rowley-Jolivet, 2002). However, if the visuals have many written characters, it offers little benefit. The number of comments indicated that slides for an audience are to be visually easy to follow and not over-filled with characters or text. Furthermore, reading aloud the

text in visuals negates the effectiveness of the visual as well (Dudley-Evans & St. John, 1998).

For the next answer, *Attitude*, such as using eye-contact and being confident, was given as one of the key elements for a good academic presentation. These are undoubtedly very important because speakers have to build and maintain a rapport with their audience (Ventola, Shalom, & Thompson, 2002) as they are aware of their position to be open to judgment and criticism from audience (Heino, Tervonen, and Tommola, 2002). As academic presentation is a vitally important genre which provides "proto-claims" in front of their colleagues (Rowley-Jolivet, 2001a), presenting their work with confidence and calmness can be a good behavior to convince an audience.

With regard to *Entertainment*, there were specific comments such as *Humor*, as well as *Attention catching*. Needless to say, humor is an effective way to attract the audience's interest and to ease nervousness. (Frobert-Adamo, 2002) However, for the non-native speaker giving a presentation in English, this is not an easy thing to do, and if not done well, might end up having a negative impact on the presentation.

Regarding *Emphasis*, "repeat important points" was a common formula. This reflects that a presentation is an excellent opportunity to highlight the importance of research findings, while a paper is written from an objective point of view. According to comments in the data, when appealing their research question and/or research finding, it can be useful to intonate and stress the words and areas where speakers desire to draw the audience's attention. More importantly, there were comments saying that pointing to the corresponding data is appreciative to follow the speech, which indicates a deep connection between the categories of *Emphasis and Attitude* that has *Pointing to slides* as one of subcategories.

Finally, the *Contents* are to be discussed here. *Emphasis* and *Contents* have the same percentages of the total grade, and most of the comments said interesting content of research make for a good academic presentation. It should be understood that there are a broad range of research areas for academic presentations, and so it is obviously beyond an ESP teacher's control to evaluate the contents from the professional viewpoints in the research fields. This seems to be one of the most difficult issues for ESP teachers, and that is why collaboration between ESP teachers and professionals is necessary (Terauchi H., Yamauchi, H., Noguchi, J. & Sasajima, S. (Eds.), 2000) in ESP teaching.

4. Conclusion

This study aimed to discover important factors for good academic presentation, and revealed that there are seven key elements which are derived from the total 236 comments from 105 Japanese scientists' opinions. Although this study identified seven key elements and various factors for a good academic presentation, we should, first of all, work on the top of the list of seven key elements, which is *Intelligibility of Speech*.

This key element includes two factors, both *Intelligibility of phonetics* and *Intelligibility of language*, and thus the author suggests that teachers who teach academic presentation provide students with activities to improve their English phonetic skills and teach what exactly spoken English is along with how to apply it to their manuscripts.

5. Implications for pedagogy

The results carry considerable pedagogical implications for the design of academic presentation curriculum to determine what and how to teach in the academic presentation classes, and some of them are pointed out below:

1. Teach students the accurate pronunciation and accents in their manuscripts or have them check references to confirm the correct pronunciation of the words. Also show students a model example and have them read aloud and practice.
2. Have them record and listen to their own speech and do a self/peer assessment, and check for any problems that they may have (Jordan, 1997).
3. Have students write the open style³ presentation manuscripts, and have them consciously pay attention to not only syntax but also characteristics of spoken style English including discourse markers, syntactic features, and show differences between the manuscripts with many features of written English.
4. Make them aware of time limitations for their presentations, and give them an opportunity to be clear what to say in each slide. Have them give a synopsis of their presentation, but limit the number of words they can use. Have them check if the speech does not exceed the time allowed.
5. Have them rehearse their speech in front of their peers, focusing on eye-contact throughout, and avoid showing diffidence in a classroom. It is a great opportunity to receive feedback from a teacher and peers as well.
6. Have them understand what they want to emphasize, and intonate and/or stress the areas to be highlighted. Also, teach them English expressions to emphasize the points.
7. Teach them to create slides which are easy to read, and not overly wordy. Give advice regarding appropriate font style, sizes, colors, and animation use.

The Table 4 shows a summary of targets and more detailed teaching methods for each element in academic presentation with superordinate categories, such as "Delivery", "System" and "Slides".

Table 4 Summary of Targets and Teaching Methods for Each Key Element for Academic Presentation in English

	Key Element	Goal	Teaching Method
	Intelligibility of Speech	The speech and use of English language are clear, concise and appropriate	<p>Teach students the correct pronunciation and intonation of the words in their manuscript or have them check references. Also, show students an example of correct intonation of whole sentences and have them practice by reading the sentences aloud while mimicking the example. Have students listen to recordings of their own speech for self-evaluation to identify their problematic points, or have other students evaluate.</p> <p>Instruct students to write their manuscripts in Open style³. To do so, teach students components of spoken English such as syntax features, metadiscourse including discourse markers. Show the manuscript sample written in Open style.</p>
Delivery	Attitude	Make eye contact with the audience, be confident and emphasize the important points during presentation. Putting in humor and catching the audience's attention	<p>Have them memorize their manuscript as much as possible so that they can make eye-contact. (Memorize the manuscript, do not recite.) To avoid nervousness, have them experience making a speech in English in front of peers. Referring to the manuscript sometimes is allowed. Then, students have an actual rehearsal while having other students as their audience and practice making more eye contact.</p>
	Emphasis		<p>Have students understand their presentation contents well and recognize which points they wish to emphasize. Also, teach students various English expressions used for emphasis. Have students practice speaking slowly, breathe out strong, intonate, and stress the parts which they intend to emphasize.</p>
	Entertainment		<p>Have them make an "introduction section" of speech which includes rhetorical questions and/or key words which attract audience attention. Try to put humor in the speech.</p>
System	Organization of speech	Organize the speech logically and concisely, and be consistent with the organization of slides	<p>Let the students know the presentation scheme, such as Introduction, Body and Conclusion, and teach what kind of information should be included in each part accompanying the well-organized sample manuscript.</p> <p>Lead students to become conscious of the time limitation of presentation and give them an opportunity to clarify the points of their speech in order to give a concise presentation, or, have them practice summarizing their presentation contents into a limited number of words, etc. Have them practice summarizing what they are going to say briefly in Introduction, Body, and Conclusion.</p>
	Contents of speech	Create interesting contents	<p>Collaborate with professionals in the research fields. Use presentation contents which were made for students' research or in other classes related to their majors or specializations.</p>
Slides	Organization of slides	Slides don't have too much text and they help the audience understand the presentation better	<p>Show good samples and bad samples of slides, and have them understand why they are good or bad. Teach them appropriate font sizes, types, how to use colors and let them know that the priority is "easy to read and concise". Instruct how to change from sentences to phrases, and headlines.</p>

Additionally, with regards to *Entertainment*, putting humor in a presentation is helpful (Swales, 2004) to break ice and a good window to establish rapport with audience. It can be very effective to have students try to add some humor to their presentations. It is my belief, however, if a student is a novice researcher, then improving *Intelligibility of Speech* should be focused on first before concentrating on how to make an audience laugh. In addition, it must be considered that it is not only English presentations which are in need of training, but also presentations in the native language as well. I would also like to emphasize the importance of metadiscourse including signal devices and discourse markers. These are such effective tools (Ventola, 2002) for novice members to make the frame of speech clear and have an audience understand what they intend to argue. In the end, they all have the same goal, which is to improve the intelligibility of a presentation, so that their research finding can be delivered well and accepted by members of their discourse community. All of these elements that have been spoken of are not independent of each other, but rather work off of each other to make a good academic presentation.

Notes

1. The definition of "academic presentation" in this article is a presentation that is given in English by scientists and/or science and engineering students in scientific/medical conferences or seminars including those held in external, internal, and international settings. The Q & A sessions are excluded from the definition of academic presentation in this article.
2. "intelligibility" is the extent to which a listener "can easily understand" (Hornby, 2000). Another scale for measurement, "comprehensibility", is not covered in this article.
3. The definition of the "open style" is a presentation that has more diction of casualness in its structures and involves hedging, modalization, and discourse markers (Swales, 2004). "

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Appendix. Questionnaire before Academic Presentation Seminar

(English Translation)

English Academic Presentation (questionnaire sheet)

Date	2007/ /	Name	
Department		Age	Ans. () ①20s ②30s ③40s ④50s
Study Abroad Experience	If you have experience studying abroad long-term in an English-speaking countries, please provide the name of the country and the duration of stay. (* if not, please proceed to the next question) Country _____ Duration _____		

Note 1: The questionnaire is 2 pages long and contains 10 questions.

Note 2: The term "English Presentation" used in this questionnaire indicates an academic presentation in English.

1. Do you have any certificates or some other documentation that indicates your level of English proficiency? (*If the answer is "No," please proceed to the next question.)

TOEIC (Score) _____ (If you don't remember the exact score, please provide the approximate score)

STEP (Grade) _____

Other () <

2. Have you ever given an academic presentation in English before?

Answer() ①Yes ②No

3. (If your answer to the question #2 is 「①Yes」, please answer the following)
How many times have you given academic presentations in English?

Answer() ①1- 3 times ②4- 10 times ③10 times or more

4. What are the things you pay attention to when giving an academic presentation in English? (list as many as you can, and please be specific)

