

# A Systemic Functional Multimodal Discourse Analysis of English Microlectures

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Abstract: Lim (2019) states that one challenge for the researchers in multimodal discourse analysis is to describe and discuss the interplay across various semiotic resources. English micro-lectures, as a kind of popular and widespread teaching materials in the information age, are typical multimodal discourses involving multi-semiotic resources. This article adopts the systemic-functional synthetic framework for multimodal discourse analysis from Zhang Delu (2018) to explore the relationship of various modes involved in excellent English micro-lectures and further examine how the semiotic resources cooperate and interact to construct communicative meaning. By analyzing and interpreting the context of culture, the meaning, the lexico-grammar, the media and the substance systems of involved modes in micro-lectures, it proves that English micro-lectures demonstrate complicated intersemiosis and various modes cooperate in a perfect way in meaning construction. This comprehensive investigation of semiotic systems sheds light on teachers' mode choice and teaching design in producing micro-lectures and students' learning strategies of micro-lectures in the mobile-assisted learning environment. \*Keywords\*:\* micro-lecture\*, synergy, context of culture\*, meaning sysytem\*, lexico-grammar system\*, media system\*, substance system\*, systemic-functional synthetic framework for multimodal discourse analysis

## 1. Multimodal micro-lecture discourse

The rapid development of information and communication technology makes multimodal discourses a commonplace phenomenon. In multimodal discourses, language is no longer the only and dominant mode of communication with the mixed use of images, sounds, music, gestures, colors and many other modes in communicative activities. And a full understanding of the meaning construction process in multidoal discourses involves examining 'how different kinds of meaning making are combined into an integrated, multimodal whole' (Jewitt et al., 2016: 2), that is, exploring the interactions and interplay across the semiotic resources in the constellation of meaning made (Lim, 2019).

Research of multimodality has been conducted on both static and dynamic multimodal discourses throughout the years, for instance, paintings (O'Toole, 1994), diagrams (Lemke, 1998), posters (Ling Bing, et. al., 2015), advertisements (Lim, et. al., 2012), films (Liu Menglong, 2017), TV programms (Chen Ming, 2020), among these multimodal classroom discourse is a heated research subject, because obviously in the classroom "meanings are made through the teacher's use of language, gesture, space and positioning, as well as resources such as textbooks, whiteboard and educational technology" (Lim, 2019). With this recognition, many scholars have investigated teachers' use of multimodal resources across various subject classrooms (see, for example, Jamani, 2010) and many more researchers applied multimodal analysis to meaning-making in the classroom (see, for example, Taylor, 2014).

And since it is relatively challenging to study a 45-minute class, micro-lectures, short recorded audios or videos on a single and tightly defined topic within 10 minutes, have aroused a large number of scholars in the field of multimodality. A large volume of studies abroad focus on the multimodality in the classroom (see, for example, Jocuns, A, 2007; Jaipal, K., 2010; He, Q. and Forey, G., 2018; Komarawan, Y., 2019; Martin, J., et. al., 2021), however, very few have touched on the language learning classrooms, and micro-lectures are even less examined. Comparatively, many scholars in China are interested in the multimodality of English micro-lectures. Ma Aimei (2015) believes adopting multimodal micro-lectures in college English course can cultivate students multiliteracies; Li Ming and Wang Yan (2016) suggest multimodal micro-lectures can meet students' psychological need and help to improve their communicative ability; Wu Ting (2017) analyzes two English micro-lectures based on visual grammar and systemic-functional image-text relations theory and develops a multimodal framework of image-text relations in micro-lectures; Jin Shaojing (2018) conducts multimodal discourse analysis on three award-winning English micro-course videos from Chinese Foreign Language Micro-course Competition (CFLMC) and finds that excellent micro-lectures have commonalities in the distribution of modality and three-mode interaction is commonplace (words, sounds and images) in constructing meaning; Liu Yanru (2019) examines the image-text relations

and how visual and audio modes interact to construct meaning in two typical micro-lectures and tries to build a framework of multimodal discourse analysis. Though there are no lack of studies on the synergy of different modes in multimodal micro-lecture discourses in literature (see also Zhao Juan, 2018; lü Qian, 2019), few have explored the the cooperation and interaction of various modes in multimodal micro-lectures from the perspective of Zhang Delu's systemic functional synthetic framework for multimodal discourse analysis (Zhang Delu, 2018). This article aims to examine the use of various modes in English micro-lectures from Zhang Delu's framework (2018) and propose the relationships and mechanisms in which how these modes combine to construct multimodal discourse meaning.

# 2. Theoretical Framework for Multimodal Discourse Analysis

Multimodal discourse analysis (MDA) derives from discourse analysis with the emergence of multimodal discourses. Therefore, the theories of systemic functional linguistics (SFL) are also the basis of multimodal discourse analysis. Based on SFL, Martin (1992) introduces a five-level theoretical framework for MDA: culture level, context level, meaning level, form level and media level. Then in 2004, Lim conceptualizes three planes to analyze semiotic resources of language and visual images: expression plane, content plane and context plane, and develops Martin's idea of relations of different modes into space of integration where intersemiosis occurs to expand semantics. Inspired by Martin (1992) and Lim (2004), Zhang Delu (2009) proposes a four-level synthetic theoretical framework for MDA, namely, culture level, context level, content and expression level, which covers Martin's five levels and further develops mode relations into complementary and non-complementary with their specific sub-categories. In this framework, the culture level is composed of ideology and genre; the context level refers to the context of situation which covers field of discourse, tenor of discourse and mode of discourse; the content level contains the semantic level of Halliday's three meta-functions and the form level, the various modes involved in a communicative event and their relations which Zhang Delu classifies as complementary and noncomplementary relation; and lastly the expression level refers to different media system such as language and non-language media with sub-divisions of pure language and para-language and body actions and non-bodily elements. This is a top-down and hierarchy system in which the upper level constrains the lower while the lower realizes and expresses the upper level. This synthetic theoretical framework is further developed to explore a dynamic multimodal discourse by Zhang Delu and Yuan Yanyan in 2011. The framework can be stated as the following figure:

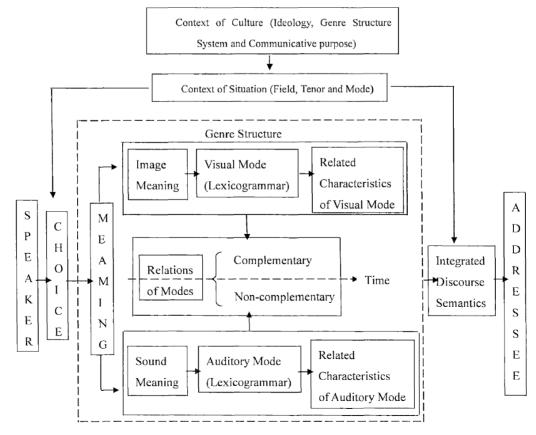


Figure 1. A Synthetic Theoretical Framework for Dynamic MDA

The rationale of this framework is: in certain context of culture, the speaker has to choose the meaning he or she wants to convey according to the specific field, tenor and mode of discourse and the purpose involved in the communicative event and then express the meaning in appropriate modality and generic structure. The chosen meaning could be expressed by both images, the lexicogrammar of visual mode, and sounds, the lexicogrammar of auditory mode, where the key is to make full use of the interaction and cooperation of different modes to construct the whole meaning of dynamic multimodal discourse. The negotiation of multiple modes is mainly reflected in the level of lexicogrammar and classified as complementary and non-complementary. Furthermore, the mode relations tend to change with time, sometimes the language is the main mode and the images are complementary, and other times the relations are on the contrary. The texts and images in visual mode also present a kind of complementary relation. And the change of the relations is closely related with the progression of the communicative event. Zhang Delu concludes that dynamic multimodal discourse analysis focuses on the dynamic relations between images and language as well as discourse and animation.

Although the synthetic theoretical framework for Dynamic MDA is recognized as applicable and powerful is analyzing dynamic multimodal discourses, there are still some concepts to be further clarified, such as the concept of culture in multimodal discourses, the characteristics of non-verbal semiotics, the relationship between Kress & van Leeuwen's (2001) four levels based on discourse production and the four levels in linguistics. Therefore, in 2018, Zhang Delu develops his framework further and puts forward a systemic-functional synthetic framework for MDA, which can be presented as:

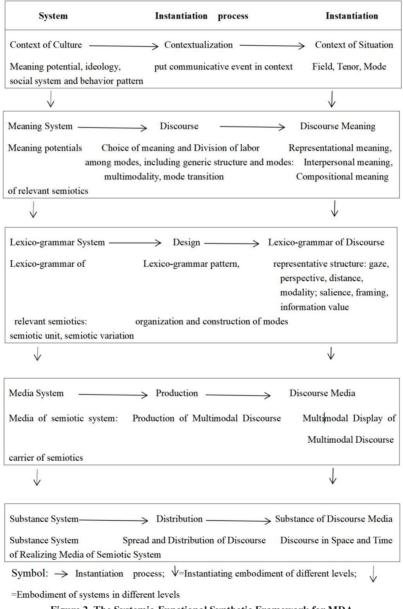


Figure 2. The Systemic-Functional Synthetic Framework for MDA

As Zhang Delu (2018) reckons, this framework has five strengths compared with the former one. Firstly, it emphasizes the systemic nature of the framework, taking system recognition and description as a premise for further study, therefore the choices from the system are made on the basis of knowing the affordances of the semiotic systems to get the best choices of the system. Secondly, it highlights the unity of system and function. All multimodal discourses are virtually the result of choices from the system to fulfill communicative functions. Thirdly, it stresses the process of choice by adding the description of the process of choice at all levels. Fourthly, it values the study of mode relations. Finally, this framework extends to include describing the level of substance, emphasizing the effect of the affordances embodied in the entities that realize the related signs, and that of technicality and physical features on the selection of the sign (Zhang Delu, 2018: 732). Obviously, this new framework is an optimized and more comprehensive one, the adoption of which will definitely produce new or deeper understanding of multimodal discourses. Taking this framework as theoretical basis, this article analyzes mode selections and use in English micro-lectures based on five systems and further explores how the designers (teachers) achieve synergy among different modes to produce excellent teaching videos. It will provide great guidance for college teachers in designing and producing good micro-lectures and benefit college students in their learning of micro-lectures and learning strategies in today's mobile-assisted learning environment.

# 3. Micro-lecture samples and methodology

The exploration of the synergy of multiple modes in English micro-lectures draws examples from Micro-course Contest of Foreign Languages in China (MCFLC). The MCFLC is a national micro-course contest targeted foreign language teachers in colleges and universities at different levels. It started in 2015 and attracts many provincial contestants every year, which are divided into four groups: undergraduate group, higher vocational English group, secondary vocational English group and a group of other languages. The annual final contest produces the winners of different prizes based on the online votes and the evaluation of judges. Obviously, the grand prize winners in different sessions (if not, the first prize winner on the top of the list) are the best micro-lectures, which are the representatives of synergy in multimodal meaning construction. The data of this article is the 6 micro-lectures of the grand prize or first prize winners of undergraduate English group in MCFLC. They are The Mysterious Seven in Western Culture (1st session, from Luo Qiong of Wuhan Institute of Technology), World of Medical Terminology—pancreas (2nd session, from Lu Fengxiang of Capital Medical University), How to define terminology (3rd session, from Wang Xuehua of Southeastern University), How to Describe a Concept? (4th session, from Qian Xi of Xi'an Jiaotong University), Descriptive Writing with Sensory Details (5th session, from Tian Jing of University of Electronic Science and Technology of China) and Posing questions in public speaking (6th session, from Li Wei of Hengshui University).

These micro-lecture samples, though differing from each other in themes, design and presentation, share overt similarities in mode use and synergy of discourse meaning construction while holding their specific features. A multimodal discourse analysis based on Zhang Delu's systemic-functional synthetic framework will be good illustrations in this aspect.

### 4. Multimodal discourse analysis of English micro-lectures

The multimodal analysis of English micro-lectures in this article is conducted from five levels, that is, the context of culture, the meaning system, the lexico-grammar system, the media system and the substance system in Zhang Delu's systemic-functional synthetic framework.

#### 4.1 Context of culture

Context of culture is the first level in the systemic-functional synthetic framework, which mainly concerns the meaning potential of particular culture, including the ideology, the social system and behavioral potential of the society, and can be realized by context of situation. English Micro-lecture is a typical product of the development of information technology and English teaching reform. Traditionally, the online open courses are virtually the recording of the offline classroom teaching, which are long (about 40-45 minutes), loosely-structured and time-consuming for students to view and learn, let alone to attract adult learners from different walks of life. In contrast, micro-lectures are relatively short—usually within 10 minutes, focused (on a specific topic), vivid (mixed use of multimodal resources) and problem-targeted (solve a particular problem). Therefore they are suitable for current individualistic, fragmented and autonomous learning environment and are widely preferred by both students and adult learners.

In China, there are many large-scale platforms of micro-courses, such as MOOC of Chinese universities, Chaoxing MOOC, Zhihuishu, etc., providing micro-courses across various disciplines and serving millions of learners. Micro-courses have become an essential learning resource on and out of campus. Its contextualized process is a process of teaching a particular knowledge point to students. The field of this context is an instructor introduces or explains a specific point or

problem in language learning to increase students' knowledge as well as strengthen their certain abilities. The tenor here involves an English teacher, his or her students, the video viewers and the relationship between these participants. The instructor is an expertise in English learning, who enjoys more power and higher social status compared with the students and video learners. Therefore, the instructors frequently express their evaluation or judgement on students' performance by saying "well done!", "good job!", etc., and the students tend to use expressions like "Could you please tell us...?" to show their politeness and respect. On the other hand, the teacher often address students with "we", "you", or "let's..." to shorten the distance between them, to imply their frequent contact and close relationship and also to ensure that students could learn effectively in a relaxing and harmonious atmosphere. Micro-lectures are recorded short videos, aiming at transmitting knowledge or teaching skills to students and viewers. They are typical multimodal discourses of images, sounds, actions, gestures, colors, etc. Most teachers choose to appear occasionally in the video, whether on the screen or not, they are always communicating with the students and viewers with their oral English as the dominate auditory mode, accompanied by their sounds, facial expressions, gestures, actions and other teaching aids. They are decently dressed, friendly but also serious in communication, using live language, appropriate tone, precise gestures and clear subtitles interactively to construct and transmit multimodal meaning. The micro-lecture "How to Describe a Concept?" of the fourth session is an excellent illustration of this. In screenshot 1, the instructor is introducing the topic; in screenshot 2, the virtual student is asking a question very politely.







Screenshot 2

And in the third one, the teacher is praising students' answers, and in the last one, the teacher invites students to do a quiz to summarize the main issues and shorten the teacher-student distance, among all of which the cultural background, the context of situation and the clever combination of multimple modes in the specific multimodal discourse are vividly demonstrated.



Screenshot 3



Screenshot 4

# 4.2 Meaning system

The meaning system in Zhang Delu's (2018) framework refers to the meaning potential of various modes in producing multimodal discourses, including the meaning the speaker intends to convey, the modes he or she chooses and mixes, the genre structure and also the three discourse meaning: the representational, the interpersonal and the textual meaning. To instruct a particular language point or skill clearly, comprehensively and vividly within a time limitation, the teachers in micro-lectures are inclined to adopt different mode systems simultaneously to bring into full play the potential of varied modes in meaning construction. In "Descriptive writing with sensory details" (the 5th session), for example, in order to

teach and illustrate students and video viewers how to write description by five senses, the teacher jointly uses the language system—describing the people in the picture and the library by sensory details, presenting the five senses and the homework, discussing the questions of what sensory details should select and why sensory details are important in descriptive writing as well as the subtitles; the visual system—the teacher including her facial expressions, the two pictures for description, the diagram of the five senses, the images inserted in describing the library, the bright color of pictures and the square brackets for emphasis; the auditory system—the teacher's lecturing with corresponding scripts throughout the video, the occasional voice of students, the inserted rustling sound of the pages and also the whispering. The micro-lecture is designed as expository teaching, following the genre structure of "(Greeting) ^Lead-in (in descriptive writing, details matter the most, which is illustrated by describing a man in the picture and sensor details are introduced thereby) ^Presentation and practice (describing the other two people and the library with in sensory details) ^Discussion (what sensory details should select and why sensory details are important in descriptive writing) ^(Homework).

As for the discourse meaning, in micro-lectures generally the representational meaning is a teacher is teaching a language point or skill to his or her students and also the potential video viewers with a time limit by adopting different semiotic systems to construct multimodal meaning, which is the epitome of traditional classroom teaching and the typical product of information and internet technology development. For instance, in "descriptive writing with sensory details", the teacher focuses on teaching some simple but effective writing skills to help students write like experienced writers in a few minutes (screenshot 5).



Screenshot 5

According to Kress and van Leeuwen (2006), interactive meaning involves the represented participants (the people, the places and things depicted in images), the interactive participants (the people who communicate with each other through images, the producers and viewers of images) and their relations. In micro-lectures, interactive meaning reflects the relationship between the teaching aids (images, pictures, diagrams, etc. on the screen) and the teacher, students and viewers by virtue of gaze, perspective, social distance, modality. It is easy to see that whenever the teacher (even a virtual one) appears on the screen, he or she is in direct eye contact with the viewers (see screenshot 1); the images or pictures or video clips are usually objective ones and are placed in the horizontal angle indicates involvement (see screenshots 6-8); and most of the represented participants are presented in close-up shot, rarely in medium or long shot to attract students and viewers' close attention (see screenshot 9); and the use of various elements in rich color saturation, differentiation and modulation demonstrate high modality in micro-lectures to invite learners' involvement and participation (see screenshot 10).



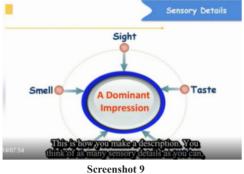




Screenshot 7



Screenshot 8





Screenshot 10

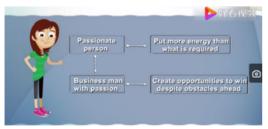
And the compositional meaning, the way in which the representational and interactive elements are made to relate to each other and the way they are integrated into a meaningful whole (Kress and van leeuwen, 2006: 176), refers to the placement, the salience and framing of all the involved elements in micro-lectures. Since micro-lectures aim at teaching or explaining knowledge or skills in nature, placing the teacher, the key images and the important points in the middle, making the key images and information more salient in size and color, and frequently using framing to highlight key information are commonplace and necessary (see screenshot 11).



Screenshot 11

#### 4.3 The lexico-grammar system

As a typical type of multimodal discourses, English micro-lectures make an integrative use of multiple modes in meaning construction. Generally speaking, the micro-lecture designers mainly adopt language, sound, image, picture, gesture, facial expression, color, graph, video, and other kinds of symbols, most of which belong to complicated semiotic systems. Some of the symbols are static and one-dimensional, such as language and color, some of them are static and two-dimensional, such as graphs, and some other of them are dynamic and three-dimensional, such as video and facial expressions. Each semiotic system is a meaning potential and is composed of a series of symbols, which are chosen to interact with other semiotic systems to construct multimodal meaning in micro-lectures. For example, in micro-lecture "How to describe a concept?", the teacher occasionally invites her students—the animated characters to advance her teaching or provide examples (see screenshot 12). They are dynamic and three-dimensional symbols to present a vivid teaching-learning atmosphere. In "Descriptive writing with sensory details", the teacher makes creative use of pictures, a static and two-dimensional semiotic system, to help explain the importance of sensory details in descriptive writing. To be specific, the three people waiting for a job interview in the first picture is described one by one to show the use of different senses in creating descriptive details, and the library serves as an example to practice using sensory details in description (see screenshots 13-14). These pictures run through the micro-lecture and are carefully chosen and creatively adopted to jointly construct discourse meaning.







Screenshot 12

Screenshot 13

Screenshot 14

In "Posing questions in public speaking", the teacher uses Noriko Arai's TED speech "Can a robot pass a university entrance exam?" and Yve Blake's "For the love of fangirls" to illustrate how to pose questions and the functions of questions in different parts of a speech (see screenshots 15-16). The three-dimensional dynamic speech clips are incorporated into different parts of the micro-lecture to serve as a semiotic system.



Zhang Delu (2009) distinguishes form relations of multimodal discourses into complementary and non-complementary with their respective subcategories as is listed in the following diagram.

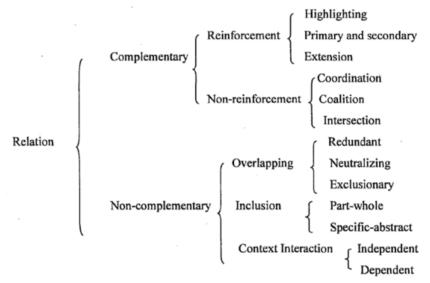
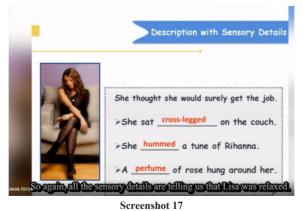
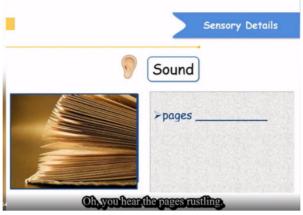


Figure 3 Mode Relation in Multimodal Discourse (Zhang Delu, 2009)

In English micro-lectures, the various relations of semiotic resources clearly demonstrate the interplay and cooperation of semiotic systems in multimodal meaning construction. For instance, in screenshot 17, the image and the written language present a relation of coordination. If one of them disappear in this slide, the meaning will be incomplete.

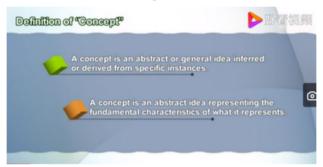


And in screenshot 18, the relation between the sound of pages rustling, the picture and the words is a kind of coalition, which cooperate with each other to construction meaning.



Screenshot 18

And also in screenshot 19, when the instructor introduces the definition of "Concept" in voice, the screen shows exactly the words of the two definitions, this constitutes a overlapping-redundancy relationship. This relation is definitely necessary in micro-lectures to provide learners with concrete knowledge to remember and record.



Screenshot 19

Then in screenshot 20, there is a kind of specific-abstract relation between the language and the images which make the five senses of human beings more specific and vivid for students and viewers to understand.



Screenshot 20

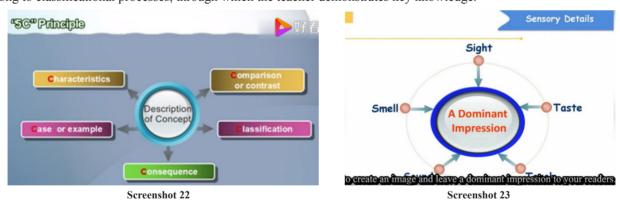
And finally in screenshot 21 and the following video playing, the video actively takes part in the communication and demonstrates clearly how the questions at the end of a public speech perform the reaffirmation and advocating function, which is a relation of dependent context interaction.



Screenshot 21

All of these complicated semiotic relations prove that the designers of English micro-lectures skillfully utilize different modes to achieve the interplay and interaction of them in constructing multimodal meaning and their specific teaching purposes.

According to Kress & van Leeuwen (1996, 2002, 2006), the lexico-grammar of multimodal discourses refers to the functional grammar embodies representational, interactive and compositional meaning, which can be elaborated by their respective systems. In English micro-lectures, the representation meaning is reflected by both narrative and conceptual processes. Since a micro-lecture demonstrates a teaching-learning process, the teacher's verbal language and communication with students usually run throughout the lecture. For instance, in "How to describe a concept", the teacher carries out her teaching by occasionally interacting with virtual students and in "Descriptive writing with sensory details", the teacher introduces and summarizes the topic by speaking straightforward to students and viewers. Teaching involves not only transmitting information, but also presenting and explaining new knowledge. Therefore, conceptual processes are commonplace in micro-lectures, including classificational, analytical and symbolic processes. For example, the summarizing diagrams in "How to describe a concept?" (screenshot 22) and "Descriptive writing with sensory details" (screenshot 23) belong to classificational processes, through which the teacher demonstrates key knowledge.



And in practicing how to describe the library by five senses, the teacher inserts images of "a sore neck (screenshot 24)", "rustling pages of a book", "two people's whispering (screenshot 25)" "a shushing gesture (screenshot 26)" and "books of fresh ink" to give students hints, these obviously present the analytical processes.



Screenshot 24 Screenshot 25 Screenshot 26

The interactive meaning is mainly realized by four major systems: contact, social distance, perspective and modality. Since in micro-lectures, whenever the teacher appears, there is gaze, facial expressions and gestures, they are all demand images. In this way, the teachers want to draw students' attention to the content, arouse their learning interest and lead them to going through the teaching process. Except for instructors, the pictures, diagrams and video clips are all serving as teaching aids to demand students' observation and study. Frequent and even in-depth contact create intimate relationship between represented and interactive participants in English micro-lectures.

Social distance involves the selection of distance suggesting the different relations between represented participants and viewers. Obviously, in all micro-lectures, the teacher and students are all in close-up shot and personal distance, which suggests the close, friendly and cooperative relationship between the two sides. And also the pictures, diagrams and video clips, their close-up shot and personal distance with interactive participants are in favor of viewers' examination and learning. These arrangements are determined by the nature of micro-lectures: everything is for teaching and learning.

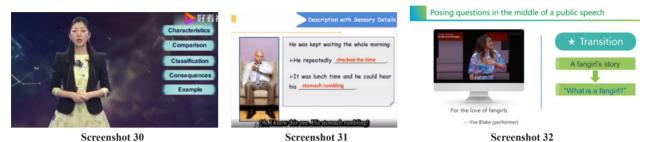
Perspective refers to the selection of an angle expressing the different attitudes towards represented participants, which can be divided into horizontal and vertical angle. Obviously, the teachers, images, diagrams and video clips in micro-lectures are all taken from the horizontal and frontal angle, because the participants involved form a parallel relation with the viewers. It seems like the viewers of the micro-lectures are directly looking at the participants by standing in front of them. This angle helps create a kind of close link communication between represented participants and viewers and facilitates students' learning.

Modality concerns the truth of information. It can be classified into high, middle and low modality based on modality markers like color, contextualization, representation and so on. Among these, color is the most important one and can be analyzed from three aspects: color saturation, color differentiation and color modulation. It's not difficult to find that most of the time the background in micro-lectures is monotonously cold color, such as dark blue, gray, light green, etc. (see screenshot 27), which are not very saturated, and the representation is vague. While the foregrounded main color of the instructors (see screenshot 27-28), the students, the diagrams (see screenshot 29) and other elements are all saturated, diverse and bright and the representation is very distinct. The low modality of the background and the high modality of the main participants present a sharp contrast and the evident authenticity of knowledge in the teaching processes. This kind of design is also determined by the nature of micro-lectures. Aiming at transmitting and explaining professional English knowledge, micro-lectures definitely need to guarantee the truth value of the information and make the main contents prominent. In no way should the background be more noticeable than the foregrounded participants.



Finally, the compositional meaning is mainly realized through three interrelated systems: information value, salience and framing. According to Kress and van Leeuwen (2001), information value is usually reflected by the placement of the elements in images. The placement of left and right leads to the information structure of Given-New, the top and bottom leads to the structure Ideal-Real, and the center and margin the Margin-Center. An examination of the information value of the micro-lectures can clearly manifest that they employ these three kinds of placement in turn according to their teaching contents and objectives. In "How to describe a concept?", when the teacher explains "what is a concept?" and illustrates

the "5C principle", it presents the essential and new information on the right (screenshot 30); the same as in "Descriptive writing with sensory details" when the teacher describes the figures (screenshot 31) and the library in sensory details and also in "Posing questions in public speaking" when the teacher illustrates the function of posing questions in different part of speech: The reused TED speech on the left, functions on the right (screenshot 32).



And in presenting concrete knowledge under the umbrella of a general idea or an abstract concept, the teachers tend to put the idea or concept (ideal information) on the top or right top as a thread to direct the viewers, and the real and concrete examples, descriptions or details are put under the umbrella, in the middle extending to the bottom(see screenshots 33-34).



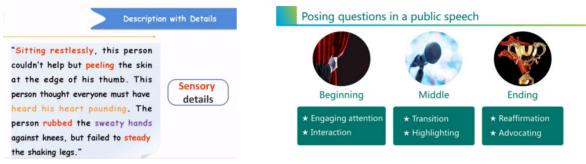
As for the margin-center placement, it is a more evident design in micro-lectures. When the teachers, students, pictures, diagrams and video clips appear in the lectures, they are basically placed in the center of the screen to serve a better view and show their significance (see screenshots 35-37).



Salience refers to the degree of viewers' attention attracted by the represented participants, which is usually realized by the placement of the participants, the color contrasts, the cultural factors, etc. Therefore, firstly the represented participants which are placed in the middle belong to the most salient ones, which include the instructors, the video clips and the diagrams (screenshot 38-40).



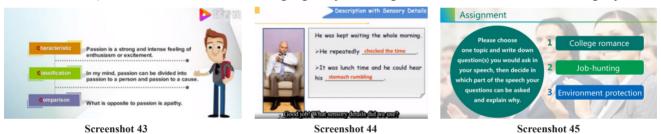
Secondly, the instructors tend to use bright-colored words, images as well as symbols on a light background to highlight key knowledge points or attract viewers' attention. The following screenshots are clear illustrations of color contrasts (see screenshots 41-42).



Screenshot 41 Screenshot 42

Cultural elements are seldom presented in the chosen discourses. Although they are English micro-lectures with a focus on English knowledge, skills and culture, traditional Chinese culture still ought to be important contents in the age of cultural confidence.

Kress and van Leeuwen (2001) hold that framing is the presence or absence of framing devices disconnects or connects elements of the image, signifying that they belong or do not belong together in some sense. A careful examination of the micro-lectures reveal that English instructors frequently use framing devices (boxes, diagrams, background coloring, etc., see screenshots 43-45) to catch viewers' attention and highlight key knowledge and further to achieve their teaching objectives.



### 4.4 The media system

In Zhang Delu's Systemic-functional synthetic framework for multimodal discourse analysis, the media system refers to the carriers of different semiotic systems and the production and multimedia presentation of multimodal discourses. Micro-lectures are usually made through the following processes: firstly, the instructor chooses a topic of interest; secondly the instructor considers carefully how to explore the topic, that is, how to make it clear to students step by step and what kinds of teaching materials (images, diagrams, audio or video clips, etc.) could be adopted; next the instructor usually makes the multimedia courseware to realize his or her teaching design; then, the teaching process will be recorded by the instructor or by professionals with the prepared courseware and script, the computer, camera, microphone and other necessary devices; finally, the micro-lecture is produced after a series of cutting and editing. Evidently, the multimedia courseware containing chosen images and diagrams, the subtitles (digital or printed), the video or audio clips, the computer, the camera, the microphone, the instructor (if he or she wants to deliver the lecture in person with voice and appearance) and even some students are all the carriers of the semiotic systems and involve in the production and presentation of micro-lectures. The micro-lectures are multimodal products of the joint efforts of different represented participants and the comprehensive use of the media system.

#### 4.5 The substance system

The substance system involves the materialization of the media system as well as the distribution and transmission of multimodal micro-lectures. First of all, the involved multiple mediums need to be arranged to appear in proper time and space in micro-lectures. For instance, throughout the teaching process, some slides of the courseware tend to be shown to remind the viewers of key points and procedures; well-chosen pictures are presented occasionally to provide vivid images or deep impression; the digital subtitles are always at the bottom of the slides; the instructors with or without a microphone may just appear now and then in the lectures, while their voices are always there to advance the teaching; the students (real

or virtual) participate in the lectures serving either as questioners or interlocutors to cooperate with the instructors; the video or audio clips are inserted as introductions of the topic or as examples to illustrate key knowledge; the computer and camera or cellphone are indispensable devices in making courseware and recording lectures; and at last there are people (the instructors and/or video professionals who do the cutting and editing before micro-lectures finally come into being). After all the substance is arranged and presented in proper space and time and the micro-lectures are produced, it is high time that they were submitted first to college judges for evaluation, then were uploaded to the official website (https://weike.hep.com. cn/) for provincial and national judges to evaluate and for viewers to vote.

### 4. Conclusion

The systemic-functional synthetic framework for multimodal discourse analysis is a new theoretical development. Taking the six grand or first prize winners of undergraduate English group of China Micro-courses for Foreign Languages as research data, this article analyzes the six excellent English micro-lectures in light of the five systems in the framework, namely, context of culture, the meaning system, the lexico-grammar system, the media system and the substance system. The analysis reveals that excellent micro-lectures share prominent qualities in their use of multimodality and their design of synergy in constructing multimodal discourse meaning, which are of significant reference and guidance in college English teachers' designing and utilizing micro-lectures in teaching as well as students' developing of strategies in mobile-assisted language learning environment. And further it verifies the application and operationability of this new theoretical framework.

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