Translation from EFL textbook to classroom: Pedagogy, semiosis and strategy

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Abstract: The modern semiotic world has undergone dramatic changes. Due to the development of technology, a wide range of media and mode are now available to sign makers, facilitating as well as requiring translations within and across semiotic systems. This research takes a social semiotic multimodal approach to study translation practices in educational situations in China. It explores how meaning is translated from EFL textbook to classroom teaching in Chinese universities, from the aspects of pedagogy, semiosis and effects. Focusing on translation, this article analyzes how pedagogy is redesigned in terms of situated practice, overt instruction, critical framing, and transformed practice. Based on the analysis of semiotic resources available in textbook and classrooms, this article discusses the functional loads of modes, patterns of mode combinations, translation categories, and semiotic strategies for realizing multiliteracies pedagogy. Finally, the effects of translation are explored in terms of pedagogy, sentient perception, cognitive process, physical features, and dissemination quality.

Keywords: social semiotics; translation; multiliteracies; EFL

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1. Introduction

Translation is "a part of human semiosis" and can be traced as far back as there are records such as sculptures, paintings, carvings in caves, on rock faces, in sites of ancient habitation (Bezemer and Kress, 2008). According to Kress (2010: 10), translation is the shift of meaning from one context to another, involving transformative uses of semiotic modes and producing changes in both form and content. It is a process requiring semantic and semiotic redesign of the source text to suit the target context. In representation practices, meaning is constantly transferred within the same mode or modal ensemble, or from one mode or modal ensemble to another. It is not surprising to see books written in ancient Chinese translated into modern Chinese, poems in English translated into Chinese, or novels translated into film. Such translations are inevitable because of the cultural, social and

situational changes in the meaning-making environment on the one hand, and the differences in the materiality of semiotic resources on the other. In modern communicational landscape, intersemiotic translation practices are increasing. The semiotic world of representation is transformed by the increasing use of modes beyond language (Kress, 2000: 182) and many new media are available to sign makers. This indicates that sign makers have to frequently make choices from semiotic options and to obtain correspondent semiotic knowledge in their translation practices.

In school education, teachers always incorporate information or knowledge from various sources into their class teaching practices, in which the source texts or multimodal ensemble must be redesigned to suit the classroom situation and the students' background. From the media perspective, now most of the classrooms in schools are equipped with multimedia equipment , so teachers have to frequently choose from the media of projection screen, blackboard, audio equipment, and their bodies, as well as to make choices of available modes when they transfer knowledge from other sources into classroom teaching. Whether they choose the same mode as the original text or not, teachers have to familiarize themselves with the semiotic affordances of a variety of modes present to them and also be aware of the multimodal translation mechanism, otherwise they will not be able to transfer and represent meaning in an appropriate way.

Of all the sources for translation, the textbook is one of the main source many Chinese teachers depend on, so the aim of this research is to examine translation from EFL textbook to classroom teaching in Chinese universities. Classroom teaching, surely, is not always an exact translation from textbook, so this research tries to investigate and identity parts of teachings that could be taken as translation because the textbook source text and teaching target texts are representing the same or very similar semantic contents. This article first presents relevant literature on social semiotic framework and multiliteracies pedagogy, then introduces research data and methodology, finally discusses the translation from the aspects of pedagogy, semiosis and effects.

2. Translation and multiliteracies

2.1. Multimodal approach to translation

In the modern communicational landscape, the semiotic world of representation is transformed by the increasing use of various semiotic modes beyond language (Kress, 2000: 182), such as image, sound, gesture, space, etc.. According to the social semiotic theory, these modes realize three metafunctions: ideational, interpersonal and compositional. From a multimodal social semiotic perspective, Kress defined translation as "a process in which meaning is moved. It is moved 'across', 'transported'—from mode to mode; from one modal ensemble to another; from one mode in one culture to that 'same' mode in another culture" (Kress, 2010: 124).

Early in 1959, Jakobson differentiated three types of translation: intralingual, interlingual and intersemiotic ones (Jakobson, 1959). The first referred to translation in the same language, the second referred to translation across languages, and the last referred to translation across semiotic systems. In the social semiotic framework, Kress (2003, 2010) differentiated two types of translation: transformation and transduction. The former refers to "the process of meaning change through re-ordering of the elements in a text or other semiotic object, within the same culture and in the same mode; or across cultures in the same mode" (Kress, 2010: 129) while the latter refers

to "the process of moving meaning-material from one mode to another" (Kress, 2010: 125). These descriptions actually they shows three key criteria for the categorization of translation: 1) intramode and intermode; 2) monomode and multimode; 3) same culture and different cultures.

2.2. Transformative pedagogy of multiliteracies

Due to the increase of media and modes in classrooms as well as the changes in working life, public life and private life, the New London Group (1996) recognized that the traditional language-centered approach to literacy should be changed, thus they proposed the notion of multiliteracies, which emphasized the diversity of culture and society and the multitude of representational resources, such as language, image, music, and space as well as the rules and conventions of those systems.

To achieve multiliteracies, the New London Group (1996) proposed a framework that consisted of situated practice, overt instruction, critical framing, and transformed practice. Situated practice provides lifeworld experiences for students and situates meaning making in real world contexts. Overt instruction requires the use of metalanguage to guide students to "describe the form, content, and function of the discourse of practice" (New London Group, 1996). Critical framing "help learners frame their growing mastery in practice and conscious control and understanding in relation to the historical, social, cultural, political, ideological, and value-centered relations of particular systems of knowledge and social practice" (New London Group, 1996). Transformed practice requires students to transform their existing knowledge through recreation of discourses for their own purposes.

Kalantzis and Cope (2005) developed the above framework into four "knowledge processes" of "experiencing", "conceptualizing", "analyzing", and "applying". They identified eight subcategories and proposed the Learning by Design model (see **Figure 1**). "Experiencing" correlates to situated practice, including experiences of known and unknown discourses, perspectives, domains, and situations. "Conceptualizing" correlates to overt instruction, including conceptualizing by naming and conceptualizing with theory. The former "involves or drawing distinctions of similarity and difference, categorizing and naming", and the latter involves "making generalizations and putting the key terms together into interpretative frameworks" (Kalantzis and Cope, 2005). Analyzing correlates to critical framing, including analyzing functionally and analyzing critically. The former "includes processes of reasoning, drawing inferential and deductive conclusions, establishing functional relations such as between cause and effect and analyzing logical and textual connections", and the latter refers to evaluation of students' and authors' perspectives, interests, and motives (Kalantzis and Cope, 2005). Applying correlates to transformed practice, including analyzing appropriately and applying creatively. The former "entails the application of knowledge and understandings to the complex diversity of real world situations and testing their validity", and the latter "involves making an intervention in the world which is truly innovative and creative and which brings to bear the learner's interest, experiences and aspirations" (Kalantzis and Cope, 2005). The four knowledge processes also draw on Kolb (1984), and Bernice McCarthy's (1987) two continua of perceiving and processing. Experiencing and conceptualizing relate to perceiving while analyzing and applying relate to processing (Mills, 2006).

What lies at the center of the transformative pedagogy of multiliteracies is design. The role of a teacher should shift from an authority that transmits knowledge to a designer of learning process

Pedagogical Orientations - 1996 Formulation	Knowledge Processes - 2006 Reformulation
Situated Practice	Experiencing ... the Known ... the New
Overt Instruction	Conceptualising ... by Naming ... with Theory
Critical Framing	Analysing ... Functionally ... Critically
Transformed Practice	Applying ... Appropriately ... Creatively

Figure 1. The Learning by Design model

and environments. The content of teaching was suggested not to be static rules and principles, but dynamic and active process of making meaning. In the transformative designing process, the available designs will be redesigned, and the redesigned signs may be used as the available designs in the next meaning-making process. In this process, the available designs are re-presented and re-contextualized, involving semiotic and semantic transformations of the available resources.

3. Research data and methodology

At one of the top universities in China, four 45-minute EFL lessons for 32 first-year non-English majors were video-recorded from three perspectives: the teacher, the students and the Powerpoint presentation. In addition, 16 teaching videos were downloaded from the Jingpinke (http://www. jingpinke.com), an open-course database where video-recordings of excellent courses from many Chinese universities are made publicly accessible.

The EFL textbook used are the *Integrated Course of New College English and New Horizon College English* textbooks, published by Shanghai Foreign Language Education Press and Foreign Language Teaching and Research Press respectively. According to the preface of the textbooks, their objectives are: to create a self-study environment, to emphasize personalized learning, and to foster students' comprehensive ability of using the English language, especially the abilities in listening and speaking, so as to enable them to communicate effectively in written and spoken English in their future work and social life. The textbooks were scanned into PDF files, named, numbered, and stored for further analysis. Videos were converted into MP4 files, named and numbered for ELAN annotation. Based on textbook units, the textbook and teaching data were segmented into different stages in an attempt to elucidate their generic structures. The segmentation was mainly based on the functions and purposes of each book and teaching section.

The classroom teaching, of course, is not always a translation of the textbook because teachers often incorporate contents from other sources. This is also the reason we collected 17 teaching cases, hoping to find short clips where those parts of teaching are particularly consistent with the textbook content which could allow the possibility of comparison between the textbook and teaching.

This research adopts a qualitative method to analyze the translation from EFL textbook to

classroom teaching. Focusing on the translated parts, we aim to examine the redesign of pedagogy and semiosis and to identify the patterns and effects of translation. The analysis is based on multiliteracies and social semiotic framework. Multiliteracies analysis cover the four components of the New London Group (1996) model and the eight knowledge processes proposed by Kalantzis and Cope (2005). As for semiotic analysis, the actual deployment of media and modes in the translation, the Metafunctions of modes, the patterns of modal combinations, and the semiotic strategies for realizing multiliteracies pedagogy are analyzed.

4. Translation from EFL textbook to classroom

4.1. Translation of pedagogy

To investigate the pedagogical design of textbook and classroom teaching, the four components of multiliteracies pedagogy (New London group, 1996) were used to analyze their generic structures and contents (see **Table 1** and **Table 2**). We found that the textbook provides massive situated practices throughout its generic stages, overt instructions are present in every stage following the introduction of units, critical framings are utilized in the design of listening tasks and reading comprehension exercises, and transformed practices are offered only in exercise sections, such as vocabulary, translation, and cloze. In classroom teaching, the redesigns of the above multiliteracies pedagogy could be seen in the following:

In terms of situated practice, teaching incorporates more lifeworld experiences into classrooms. According to Kalantzis and Cope (2005), situated practice correlates to the knowledge process of experiencing, including experience of the old and the new. While textbook contents are mainly centered on the target topic and text, teachers activate students' previous knowledge by associating textbook contents with students' old experiences. In one of the unit about the virtual world, the teacher illustrates the advantages and disadvantages of the Internet with regard to students' online experiences of reading news, chatting, and shopping. Through this activation of previous knowledge, it is easier for students to understand the new word "virtual".

Overt instruction starts as early as the unit introduction stage. While the textbook provides visual experiences of image and writing at the unit introduction stage, teachers utilize overt instruction to help students conceptualize the unit topic. According to Kalantzis and Cope (2005), overt instruction correlates to the knowledge process of conceptualizing, either conceptualizing by naming or with theories. In classroom teaching, at the stage of unit introduction, the primary strategy is conceptualizing by naming. For example, in order to help students develop the concept of the "American dream", the teacher gives its definition from *Cambridge Advanced Learner's Dictionary*: "the belief that everyone in the US has the chance to be successful, rich and happy if they work hard". After this quotation of this definition, the teacher points out the key elements in the concept: "so in this definition, two words very important, so, one, you should work hard, yeah, then you can be successful, and rich and happy. So this marks the definition of American dream". In this way, the intentions of the concept are identified.

Critical framing is used frequently in teaching, including not only functional analysis but also critical analysis in terms of knowledge processes. The textbook design emphasizes functional analysis of text structure, text content, and grammar. In some teachers' classroom teaching, apart

from these functional analyses, teachers also guide students to critically analyze the cultural background, and writing intentions. However, it is found that most of the analyses in teaching still belong to the first category, leaving critical analysis insufficiently addressed in most of the classrooms.

Transformed practice is used in one third of the generic stages, offering plenty of opportunities for students to apply what they have learned. According to Kalantzis and Cope (2005), transformed practice correlates to the knowledge processes of applying appropriately and creatively. Textbook designs application of knowledge primarily in the exercise sections and emphasizes on the appropriate uses of the learned language points. In teaching, applications of knowledge go through more generic stages, including language points, text explanation, text discussion, in-class activity, and exercises from the book. Apart from appropriate application, teachers also design creative application of knowledge through various in-class activities, such as role-play, imaginary dialogue, and oral presentation (see Table 2). For example, in a lesson addressing the moral implications of cloning, the teacher provides chances for students to create imaginary dialogues between the original and the copy during class.

The effect of such pedagogical redesign could be seen in sentient perception and cognitive process (see Table 1 and Table 2). In terms of sentient perception, teaching translates the visual-oriented design into visual- and aural- oriented design. This transformation situates students in a context more closely to real communication and gives them constant visual and aural experiences of English language. In terms of cognitive process, teaching also requires students to actively 1) experience information through attention, 2) recall previous knowledge through memory and retrieval, 3) conceptualize information through comprehension, and 4) analyze information through induction, comparison, judgment, evaluation, etc.. In these ways, students could construct new knowledge and transform their previous knowledge.

Table 1. Knowledge processes, sentient perception and cognitive processes in the textbook

Generic structure	Content	Pedagogy	Knowledge process	Sentient perception	Cognitive process
Unit introduction	Unit title, image, unit preview	SP	Experiencing	visual	ATT
Reading text lead-in	Pre-reading: listening	SP, OI, CF	Experiencing, conceptualizing, analyzing	aural & visual	ATT, MEM, RET, JUD
Reading text	Text A & B	SP, OI	Experiencing, conceptualizing	visual	ATT, COMP
Vocabulary	New words, phrases, expressions, proper Names	SP, OI	Experiencing, conceptualizing	visual	ATT, MEM, RET, COM
Exercises	Comprehension, language points, translation, cloze, structure analysis, writing	SP, OI, CF, TP	Experiencing, conceptualizing, analyzing, applying	visual	ATT, MEM, RET, JUD, EVA, COMP, ANA, IND, COM

Note: ATT=Attention; MEM=Memory; RET=Retrieval; JUD=judgment; COMP=Comprehension; COM=Comparison; EVA=Evaluation; ANA=Analysis; IND=Induction

Table 2. Knowledge processes, sentient perception and cognitive processes in teaching

Generic structure	Content	Pedagogy	Knowledge process	Sentient perception	Cognitive process
Class opening	Stand up; movement; clap hands; greetings	SP, OI	Experiencing, conceptualizing,	visual, aural,	ATT
Unit introduction	Introducing unit topic, image, song, recorded speech, video				ATT, COMP
(Teaching objectives)	Illustrating what are to be achieved				ATT
(Review of the previous lesson)	Review what learned previously				ATT, MEM, RET
Reading text lead in	Pre-reading questions, images, songs, videos	SP, OI, CF	Experiencing conceptualizing, analyzing	visual, aural,	ATT, COMP, JUD
(Background information)	Cultural background, text background	SP, CF	Experiencing, analyzing	visual, aural,	ATT, COMP, COM
Students reading text	Read and discuss	SP	Experiencing	visual	ATT, COMP,
Language points	Words, expressions	OI, TP	Conceptualizing, applying	visual, aural,	ATT, MEM, RET, COM, JUD
Text explanation	Interpretations of words, sentences and paragraphs	OI, CF, TP	Conceptualizing, analyzing, applying	visual, aural,	ATT, COMP, IND, ANA, EVA, JUD
Text discussion	Text structure, text content	CF, TP	Analyzing, applying	visual, aural,	ATT, ANA, COMP, IND
In-class activity	Presentation, role play, paired dialogue	TP	Applying	visual, aural,	ATT, MEM, RET, COM, JUD
Exercises on book	Vocabulary, translation, cloze	TP	Applying	visual, aural,	ATT, MEM, RET, COM, JUD
(Summary)	Summary of present lesson	SP	Experiencing	visual, aural,	ATT, MEM, RET
Assignments	Composition; interview; presentation				ATT, MEM
Class closure	Announcement of ending; arrangements for next				ATT

Note: ATT=Attention; MEM=Memory; RET=Retrieval; JUD=judgment; COMP=Comprehension; COM=Comparison; EVA=Evaluation; ANA=Analysis; IND=Induction

4.2. Translation of semiotics

4.2.1 Deployment of semiotic resources

Mode and medium

In terms of media and semiotic modes, textbooks and teaching practices are designed in very different contexts. In a textbook, the main modes are writing, image, layout, color, and typography, which are materialized into the medium of a book. Apart from these, speech, music and sound are materialized into the medium of a CD-ROM. In classroom teaching, there are more media and modes than in the textbook. The embodied modes like speech, facial expression, gaze, gesture, and movement are available within the medium of teachers' bodies. Writing, image, layout, color and typography are available within the medium of blackboard, and the same modes are available within the medium of projection screen. Speech, music and sound are available within the medium of audio facility. The medium of classroom offers the modes of space and layout (See **Table 3**).

The primary differences in the modal ensembles between textbook and teaching lie in the embodied modes and in the dynamic and multimodal resources afforded by computer-enhanced technologies, such as PPT, projection screen and audio facility. Due to the differences of media, affordances of similar modes differ between textbook and teaching. In terms of image, book affords static features while PPT affords both static and dynamic utilities. In terms of layout, book provides a 2-dimension (2D) space while classroom provides a 3-dimension (3D) one.

Table 3. Mode and medium in textbook and teaching

Genre	Mode					Medium
Textbook	Writing	Image	Layout	Color	Typography	Book
	Speech, Music, Sound					CD-ROM
Classroom teaching	Speech	Facial Expression	Gaze	Gesture	Movement	Teacher's Body
	Writing	Image	Layout	Color	Typography	Blackboard
	Writing	Image	Layout	Color	Typography	Projection Screen
	Speech, Music, Sound					Audio facility
	Layout					Classroom

Functional loads of modes

From a social semiotic perspective, every mode, like language, has the potential to realize three metafunctions: ideational, interpersonal and compositional. Based on the analysis of the 17 classroom teachings, it is found that designers have preferences when selecting semiotic resources for the realization of metafunctions. Although all modes could realize three metafunctions, they are differently used for different metafunctions.

As shown in **Table 4**, the capitalized modes are primarily used for realizing ideational and interpersonal metafunctions. In textbook, writing and image are the main modes for representing knowledge and expressing interpersonal meanings. Within the medium of CD-ROM, speech is the main mode for representing knowledge. It is found that, in textbook, writing is more frequently used than image and image is more frequently used than speech. In teaching, speech, writing, image, and gesture are the primary modes for representing knowledge and expressing interpersonal meanings. It is found that the frequencies of their use decrease from speech to gesture.

The italicized modes are primarily used for realizing interpersonal metafunctions. In teaching, embodied modes like facial expression, gaze and movement, and some gestures are used to develop social relations, control social distance and express attitudes. These modes usually do not convey experiential meanings.

For the rest of the modes, some are used for realizing compositional metafunctions, including layout, color and typography within textbook, music and sound in CD-ROM, layout, color, and typography within projection screen, music and sound within audio facility, and layout within classroom. As for the modes available within blackboard, although they may have ideational and interpersonal potentials, they are constantly ignored and remain unused in most of the classrooms.

Table 4. Categories of modes according to functional loads in teaching

Genre	Mode					Medium
Textbook	WRITING	IMAGE	Layout	Color	Typography	Book
	SPEECH, Music, Sound					CD-ROM
Classroom teaching	SPEECH	Facial Expression	Gaze	GESTURE	Movement	Teacher's Body
	Writing	Image	Layout	Color	Typography	Blackboard
	WRITING	IMAGE	Layout	Color	Typography	Projection Screen
	SPEECH, Music, Sound					Audio facility
	Layout					Classroom

Note: Capitalized modes: ideational & interpersonal; Italicized modes: interpersonal; Other modes: compositional

Patterns of mode combination

In multimodal discourse, when one mode can not fully satisfy the semantic and rhetorical needs of sign makers, several modes will be utilized together for meaning making. In the two kinds of EFL textbooks investigated, it is found that there are five mode combinations (see **Table 5**). In terms of visual representation, the most frequent combination is "Writing + Image + Typography + Color + Layout", followed by "Writing + Typography + Color+ Layout". Linguistic signs are usually accompanied with images. Visual and aural representation is used for listening tasks and reading texts. In *New College English*, listening instruction, new words explanation, and questions are printed in book while listening material and reading text are provided as recorded speech in CD-ROM. In *New Horizon College English*, the whole textbook is projected into CD-ROM. Listening instructions and questions in book are visually repeated on screen while listening material and reading text are provided as recorded speech. In both textbooks, listening tasks locate at the second page of each unit, taking up about half a page and lasting for one to two minutes. Images provided in listening task are usually small icons. For example, in *New Horizon College English*, image of small headphones is used to indicate this part involves listening practices.

An analysis of 17 instances of classroom teaching, revealed that there are 12 mode combinations (see **Table 6**). According to Zhang and Ding (2013), in EFL classroom teaching, choices are made from mode combinations instead of single mode. Combining the findings of Zhang (2010), Zhang and Wang (2010), and Zhang and Li (2012), Zhang and Ding (2013) summarized 14

mode combinations in EFL teaching. However, their classification has some problems: first, they did not attend to the mode of gaze but in this research it is found gaze is an important mode for teacher-students interaction. Second, they have missed three mode combinations (the first three combinations in Table 6). These combinations are used at the stage of text reading. Third, they did not distinguish media. According to Table 4, the same mode could be provided by different media and different media offer different modal affordances, so it is necessary to clarify which media provide the combinations. Lastly, some of the combinations they identified could be conflated. Smile and serious facial expression (Zhang and Wang, 2010) could be conflated because the classification is at the level of mode and the above two belong to the same mode of facial expression. Similarly, static image and dynamic image belong to the same mode of image, because the difference between static and dynamic results from the extra dimension of time not from the nature of mode. Under these circumstances, this research summarizes the mode combinations into twelve, adds the mode of gaze, and distinguishes between media (see Table 6).

Table 5. Mode combinations in investigated EFL textbooks

No.	Mode combinations	Media	Sensory
1	Image+Color+Layout		
2	Writing+Typography+Color+Layout	Book	Visual
3	Writing+Image+Typography+Color+Layout		
4	Writing+Typography+Color+Layout+Speech+Sound	Book+CD	Visual+Aural
5	Writing+Typography+Color+Layout+Speech+Sound+Image		

Table 6. Mode Combinations in investigated EFL classroom teaching

No.	Mode Combinations	Media	Sensory
1	Writing+Typography+Color+Layout		
2	Image+Color+Layout	Book	Visual
3	Writing+Image+Typography+Color+Layout		
4	Speech+Writing+Typography+Color+Layout		
5	Speech+Image+Color+Layout		
6	Speech+Writing+Image+Typography+Color+Layout		
7	Speech+Facial Expression+Gaze	Body+PS	Visual+Aural
8	Speech+Gesture+Facial Expression+Gaze		
9	Speech+Movement+Facial Expression+Gaze		
10	Speech+Gesture+Movement+Facial Expression+Gaze		
11	Speech+Music+Image	PS+AF	
12	Music+Image+Sound		

Note: Body=Teachers' bodies; PS=Projection screen; AF=Audio Facility

In Table 6, the first three combinations are usually used when students are asked to read text and teachers are silent. As for the last two kinds of combinations, they are usually used for playing audio or video clips. It is found that combinations four to ten are most frequently used. These combinations are dominated by speech, and accompanied with writing and image. Most of the time,

teachers talk with visual representations in projection screen.

Furthermore, our analysis of the above mode combinations reveals that mode combinations are governed by two principles. First, the combination pattern could be represented as: **Obligatory mode** + (**Optional mode**) + **Accompanied mode**. Of all the mode combinations in Table 5 and 6, one or more mode from the obligatory group must be present, mode or modal ensemble from the optional group may be present, and relevant modal ensemble from the accompanied group is always present (for the three groupings, see **Table 7**). If writing is used, color, layout and typography always accompany it. If image is selected, color and layout always accompany it. If any embodied mode is utilized, gaze and facial expression are always co-present. If music is present, so is sound. This indicates that the main functional load is carried by the modes in the obligatory group. This also implies that in the selection of modes, teachers first select one or more modes from the obligatory group, then decide whether to make choices from the optional group (the unused modes from obligatory group will automatically fall into the optional group), and there is no need to make decisions on the accompanied group because they always accompany modes from the first two groups.

Table 7. Groupings of modes in textbook and teaching

Obligatory	Optional	Accompanied
Writing	Movement	Color
Speech	Gesture	Layout
Image	Music	Typography
		Gaze
		Facial Expression
		Sound

The combinations of mode are also constrained by media. As shown in Table 5 and 6, if the main functional load is carried by visual modes, the modes must be provided by the same medium. Otherwise, the visual representation of meaning would be contradictory. Students could not simultaneously engage with projection screen and book, no matter whether the signs are writing, image or both writing and image. Similarly, if the main functional load is carried by aural modes, the modes should also be provided by the same medium. In classroom teaching, if teachers speak while the audio facility is on or while students are speaking, their words could not be clearly heard nor understood. In our data, it is found that some teachers tried to play background music while they were speaking. It turns out that the music actually distracted students' attention and decreased the clarity of teachers' voices.

Comparing the mode combinations in the textbook and in teaching, it is obvious that many more combinations are available in teaching than in textbook. With a closer look, it is found that the extra combinations are primarily provided by the media of teachers' bodies and projection screen. Although these two media offer a variety of modes, it is found that the main functional loads are carried by speech, image, and writing (see Table 7).

4.2.2 Translation categories

According to the analysis of modes and media above, the accompanied modes actually do not

carry the main functional load. Therefore, in our discussion of translation categories, we focus on the intramodal and intermodal translations among those obligatory and optional modes. As shown in **Table 8**, within the four categories of translation, there are 11 specific types. The capitalized types are frequently deployed. It is found that there are more intermodal translations than intramodal translations, as writing is frequently transducted into speech, body language, or image.

The shift from writing to other modes will inevitably result in the issue of epistemological commitment. As we have illustrated earlier, different modes offer different modal resources. Writing and speech share lexical and grammatical resources, but they have quite different graphic and phonological resources. Graphic resources like space and punctuation are not available in speech. Phonological resources like stress, pitch and intonation are not afforded by writing. In image, the differences are even more obvious. Image provides resources like spatial position, size, color, shapes, and so on. These are totally different from linguistic resources. Each mode demands specific epistemological commitment be satisfied. If meaning is transducted from writing to image, sign makers have to meet the commitment of position, size, shape, and color that are demanded by the mode of image. Such epistemological commitment increases creativity of meaning making.

Table 8. Categories of translation from EFL textbook to classroom teaching

Intra-monomodal	Intra-multimodal	Inter-mononmodal	Inter-multimodal
WRITING	Writing+Image	WRITING→SPEECH	WRITING→SPEECH+GESTURE
Image		Writing→Image	WRITING→WRITING+IMAGE
			Writing→Speech+Image
			WRITING→SPEECH+GESTURE+MOVEMENT
			Writing→Speech+Writing+Image
			WRITING+IMAGE→WRITING

4.2.3 Semiotic strategies for realizing multiliteracies pedagogy

As illustrated above, the multiliteracies pedagogy of textbook and teaching include the four knowledge processes of experience, conceptualization, analysis and application. In the analysis of data, the following semiotic strategies are found to be utilized for realization of these processes (see **Table 9**).

In terms of experience, to create a real communicative environment, teaching translates textbook contents into various sensory experiences by utilizing linguistic, image, music, sound, and embodied modes like gaze, facial expression and movement. Apart from these, textbook declaratives are often translated into interrogatives to create a real communicative situation between the teacher and students. In terms of the experience of old and new information, teaching expands textbook by incorporating familiar information to activate students' previous knowledge. These are usually achieved by relating textbook contents to students' life experience through linguistic association or discussion. If the textbook topic is far from students' life, some teachers choose to incorporate films, songs or images familiar to students.

Table 9. Semiotic strategies for realizing multiliteracies pedagogy

Experience	Create real communicative environment	Activate previous knowledge
	Provide various sensory experiences: linguistic, image, music, sound, embodied; linguistic interrogative transformation	Bridge with students' life experience through language; incorporate familiar films, songs, images
Conceptualization	Generalization	
	Generalize and abstractize through intralingual and interlingual translation	Generalize and abstractize through image and linguistic translation, gesture and speech translation, 3D artefacts demonstration, linguistic conceptualization.
Analysis	Analyzing text	
	Linguistic: reasoning and identifying relations and patterns	Image and writing: analyzing logical structures, orders, relations
Application	Create opportunities for knowledge output	
	Linguistic interrogatives: Q & A, discussion, dialogue	Multimodal role play, presentations, performance

In terms of conceptualization, intralingual and interlingual translations are the most frequently used means for translation. The most common method is to replace source words with synonyms in English or translation into Chinese. With the assistance of modern media, teachers also use image to translate English nouns, use audios to translate the pronunciation of words, use videos or gestures to translate verbs from textbooks. Such intersemiotic translation delinguistify (Habermas, 1987) the original texts. As shown in **Figure 2**, the word "clone" is conceptualized through image and writing. The linguistic words illustrate that the key elements in the concept of clone is "100%", "genetic information" and "from one individual", and the image shows vividly the result of clone through cartoon figures. Through such translation, students get to know the method and result of clone in an impressive way.
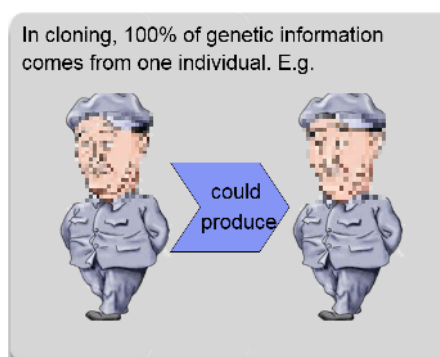

Figure 2. Conceptualizing "clone" with image and writing

Gestures are also used to illustrate words. As shown in **Figure 3**, the teacher uses hand gesture to translate the word "range". This gesture consists of three phases: preparation (picture 1 in Figure 3), the stroke (picture 2 & 3 in Figure 3), and retraction (picture 4 in Figure 3). In preparation, the teacher raises his two palms to his chin so as to catch students' attention. During the stroke, the teacher uses his right arm to form an arc, showing students the meaning of "range". After that, the teacher retracts his right arm back. Through such transduction, the teacher fulfills the

epistemological commits of gesture by specifying the position and scope of "range". As the teacher does not further explain the intensions of the concept through speech, this gestural translation develops the concept of range by specifying the scope of one range, and at the same time, transforms the abstract concept into a concrete instance.

Figure 3. Gestural illustration of "range"

Occasionally, teachers use 3D artefacts to demonstrate concrete words and also use speech to further explain the words. As shown in **Figure 4**, the teacher takes out a card from his pocket and illustrates to students: "I have an E-card here. Everybody has an E-card, right? You can get money and buy food with this thing. OK, very easy, very convenient". Through this translation, the card shows what an E-card may look like, the speech illustrates the key elements of the concept of E-card as "get money", "easy" and "convenient".

Figure 4. Translation with a 3D artefact

In terms of analysis, teachers often use speech to explain to or discuss with students about the structure of texts, the main idea of each part in texts, the rhetoric strategies of texts, the relations between sentences, and the patterns of lexis and grammar. Apart from these, there are increasing uses of image and writing to translate the structure of texts, the orders or sequences of teaching stages, or the cause and effect relations in texts. Text components are usually summarized into simple words. Imagery shapes are used to represent components and arrows are used to indicate the relations between components. In terms of application, teachers usually create opportunities for students to use what they have learned. This is usually known as language competency practices. In the investigated data, teachers emphasize the listening and speaking applications. To achieve this, teachers usually translate textbook contents into interrogatives so as to interact with students through questions and answers. To help students appropriately apply language knowledge, the

pattern of question initiation, student response and teacher evaluation (IRE) are often utilized. In this research, a range of variations of IRE is found in teaching, including IDRE (initiation-discussion-response-evaluation), GCE (guidance-complete-evaluation), and GAE (guidance-all students answer-evaluation). Apart from teacher-student interaction, group discussion and paired dialogue are also deployed in classrooms for application of knowledge. In addition, some teachers design multimodal role-play, presentation and performance to help students apply their knowledge. In such applications, teachers often emphasize more on creativity and less on the appropriateness of language.

4.3. Translation effects

From EFL textbook to classroom teaching, the translation effects could be examined from the aspects of pedagogy, sentient perception, cognitive process, physical features, and dissemination quality.

In terms of pedagogy, the shift from transmission to enquiry softens the power difference between teachers and students. The interrogative transformation of textbook contents creates a learning environment more like real communication. Through such translation, knowledge is negotiated and co-constructed by teachers and students. The increase of conceptualization and the balance of application among teaching stages produce better pedagogical design of multiliteracies.

Concerned with sentient perception, classroom teaching deploys many more semiotic modes than textbook and creates visual-aural perceptions throughout lessons. In terms of visual perception, teaching incorporates various images into classroom. The use of diagrams is a special feature in teaching that helps students understand abstract logical relations in reading texts. In terms of aural perception, teaching translates most of the visual language in textbook into aural signs in teaching. This increases listening practices for students.

From the cognitive processes aspect, the multiliteracies pedagogy utilized in teaching provides students with more opportunities of conceptualization, analysis and application. Cognitive processes of attention, memory, retrieval, judgment, evaluation, comprehension, analysis, induction and comparison are required at various teaching stages.

With regard to physical features, the frequent uses of multimedia facilities display screen-oriented physical features to students. The constant use of aural speeches makes the learning environment more like real communications. However, due to the volatile nature of face-to-face communication, the dissemination of embodied signs (speech, gesture, gaze, facial expression, movement) is troublesome because it is very hard to keep and review those embodied signs. The medium of PPT may come to compensate but it is impossible to keep the teaching as a whole.

5. Conclusion

This research on translation from EFL textbook to classroom teachings in China demonstrates that teaching requires a transformative recreation of source texts from the perspectives of pedagogy and semiosis. In this article, the redesign of pedagogy is discussed from the multiliteracies perspective and found that in the translation process, 1) teachers incorporate lifeworld experience to activate students' previous knowledge, in which they use the "old" to facilitate the "new"

and this transformed the original "situated practice" designed in textbooks; 2) teaching actually redesign some the "situated practice" in textbook into "overt construction" aiming at help students conceptualize the topics in class; 3) teaching added "critical analysis" to the "functional analysis" on textbook; 4) teachers create more chances for students to not only appropriately apply what they've learned, but also creatively apply knowledge.

Approaching translation from the social semiotic framework, this article compares the mode and medium available in textbook and classroom, analyzes their functional loads and discovered patterns for mode combinations. Based on these semiotic analysis, it is found that there are 11 specific translation categories, covering intra-monomodal, intra-multimodal, inter-monomodal and inter-multimodal types. Semiotic strategies for realizing multiliteracies pedagogy are explored from the perspectives of experience, conceptualization, analysis and application. Finally, effects of translation are discussed in terms of pedagogy, sentient perception, cognitive process, physical features, and dissemination quality. Hopefully, these findings may contribute to the understanding of EFL textbook, classroom teaching, and their relations and they may also produce implications for EFL classroom teaching and textbook design.

Conflict of interest

No conflict of interest was reported by the author.

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