Chapter 3
Chinese Lecturers' Pedagogical Position and Instructional Practice in EMI Teaching

Abstract This Chapter reports the pedagogical alignment and instructional practices contributing to the Chinese lecturers' EMI implementation as evidenced in this research data. It counters a predominance in the current literature highlighting EMI research on language with less concern on pedagogy. Evidence of the EMI lecturers' actual classroom instructions and their pedagogical positions were collected and analyzed. Their instruction was identified as being on the continuum between expository and constructivist teaching, with more leaning towards an expository approach in their teaching. The data disclose that the reasons for this prevalence of expository teaching are based on the lecturers' rational choice rather than any overall attribution to their educational culture. Perceiving undergraduate education as the foundational stage of tertiary education and their self-assessment of their role as the main knowledge resource contributed to their distinctive pedagogical view and instructional practices in EMI teaching.

Keywords Pedagogy · Instruction · Expository teaching · Constructivist teaching

3.1 Introduction

As briefed in the introductory Chapter, the prevalence of English monolingualism in EMI has been extensively studied, however studies concerned with instruction and pedagogy have been reported more marginally. Those studies reporting EMI pedagogy or teaching strategies, do so, primarily at the level of discussion, with suggestions and calls for pedagogical training to improve EMI programs. Some suggested developing thoughtfully designed workshops or structured short courses (Macaro et al., 2018), and others stressed the significance of pedagogical training with a dual focus – language and content (Blosser, 2000; Doiz et al., 2013; Han et al., 2019; Phan, 2021). Additional studies contend pedagogy or instruction as predominantly consisting of language learning (Jiang et al., 2019), and language strategies such as backchannelling (Jawhar, 2012) and codeswitching (Sahan, 2020; Tarnopolsky & Goodman, 2014). Universities as the key stakeholders in EMI

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programs, are yet to play an important role in EMI pedagogical and instructional development (O'Dowd, 2018; Phan, 2021). A study by O'Dowd (2018) reports the findings of a survey of EMI programs in Europe, concluding that most universities offering a significant number of subjects through EMI, admitted they did not provide pedagogical training or guidance for their EMI lecturers. This lack of leadership on the part of the institutions resulted in lecturers and teachers in the field being left to their own devices for professional learning (PL), which apart from improving their own English, left little or no direction for improving EMI programs (O'Dowd, 2018; Phan, 2021).

Within the literature, two 'successful' EMI pedagogical programs have been reported. Guarda and Helm (2017) reported an EMI professional learning intervention (part of a project called *Learning English for Academic Purpose*) in Italy. Through interview and survey data, the participant lecturers suggested a range of strategies that were addressed in the PL and subsequently considered useful in their teaching. These included student-centered approaches, encouraging moments for students to lead, engaging students through group work, using technology such as video clips to activate students' participation and facilitate lecturers' information transmission. The second report is from Taiwan where a researcher, Chuang (2015) reported one lecturer's 'successful' EMI teaching strategies in an EMI course. This lecturer's strategies included slowing the teaching pace, embedding student activities in class, switching to L1 for key terms and concepts, using simplified English, and incorporating group tasks. These two studies could be considered 'successful' pedagogical research to a degree as both focused on specific teaching strategies and the dedication to include and reflect on students' needs. Whilst claiming to be research investigating pedagogy, these reports highlight a descriptive approach to the strategies of instruction, rather than foregrounding 'pedagogy' and its influence on this instruction.

This review of EMI research studies suggests that EMI and/or Content and Language Integrated Learning (CLIL) pedagogy has plateaued at the level of rich discussion but lacks a body of systematic and in-depth research. Instruction, as a focused research area in EMI, is yet to be rigorously investigated and reported in the literature. This Chapter attempts to address this paucity in the literature by examining the pedagogical approaches of the EMI lecturers' in this research, to investigate how this informed their instructional practice. In order to do so, it is important to examine the lecturers' construction of pedagogy and instruction outside of their EMI teaching as a benchmark from which to reflect on actual EMI teaching episodes. This approach also aims to advance the importance of analyzing evidence-based practice to improve EMI teaching and learning.

3.2 Pedagogy and Approaches to Instruction

As a concept, pedagogy has been contested. In this research its definition and purpose is not to address the many forms contributing to its understanding but rather to provide one perspective on pedagogy to assist in the examination in what is termed in this book, EMI pedagogy. Watkins and Mortimore (1999) provide a suitably complex model to conceptualize pedagogy, specifying the relationships between its key elements: the teacher, the classroom or other context, content, the view of learner and learning. Firstly, when considering 'the teacher' questions such as, what is the teachers' role or their view of their role can assist in understanding their pedagogy. For example, whether they act as an 'authoritarian' or democratic agent. Some literature on Western and Asian or Chinese teachers' roles has been found around this polarized division (Biggs, 1996, Biggs & Watkins, 2001; Hofstede, 2011). Secondly, 'the context' as a defining element of pedagogy lays bare the life in the classroom and the complex, dynamic teacher-student interactions, along with the teachers' managerial and organizational aspects in classroom teaching. Thirdly, 'the content' contributes to an understanding of pedagogy as 'how to teach' is often influenced by 'what to teach' which links to teachers' subject knowledges. Finally, notions of 'the learner' take a central position in defining and understanding pedagogy. Views on learners' cognition and motivation directly influence the conceptualization of pedagogy. Watkins and Mortimore (1999) particularly emphasize the learner and contend that educators need to be increasingly conscious of the learner as an active co-constructor of knowledge.

Pedagogy has no absolute certainty and predictability due to these four subjective intermingled dimensions. This conceptualization further confirms that pedagogy cannot be a simple "set of strategies and skills used to teach and test for pre-specified subject matter" (Giroux, 2016, p. 60). It cannot be treated as "fixed principles and practices that can be applied indiscriminately" (Giroux, 2016, p. 65). As the science or art of teaching, it embraces and reflects contextually (social, political and cultural) adjusted practices resulting from negotiations between teachers, learners and the content. Further, Mason (1998) and Morais (1999) claim pedagogic discourse can be identified as being on a continuum between two extremes – the knowledge transmission-oriented expository pedagogy and knowledge development focused constructivist pedagogy. However, it needs to be noted that research has not provided sufficient empirical evidence to attest to the effectiveness of one over the other (Struyven et al., 2010). Constructivism, as a learning theory, holds that learners do not just 'take in' information, but actively engage in constructing their own new knowledge in a sense-making process to engage with the world. It is exemplified in discovery learning classrooms where teachers and learners engage in the co-construction and transformation of knowledge into real-world applications and skills development (Hyun, 2006). Other scholars have similarly identified a continuum of approaches to pedagogy in practice, with a dichotomy of end points. For example, Giroux (2016, p. 60) identifies a similar dichotomy of positions as "conservative and progressive".

Watkins and Mortimore (1999) maintain that pedagogy is the basis from which the teacher or lecturer views their role which then translates into their instruction and their personal teaching style. Therefore, an educator's pedagogical stance should and will necessarily align with and be reflected in their instructional methods. Accordingly, expository pedagogy driven by a positivist learning theory may view knowledge as scientific in nature and transmittable through sequence-based (step locked) instruction. Expository pedagogy may be reflected in teaching styles that designate the role for teachers as dominant and learners as passive, where instruction is subject matter-driven, and focuses on direct teaching of subject facts and truths. Learners receive knowledge as information and are instructed in specific skill development. Alternatively, instruction informed by constructivist pedagogy, will be a learner-driven exercise, and the learners' previous experience and capability will be considered in the planning for learning.

Merrill's (2002) First Principles of Instruction and Salvin's (1995) QAIT Instruction Models outlined in Chap. 2, together with the conceptualization of pedagogy proposed by Watkins and Mortimore's (1999) provides the framework for analyzing the EMI lecturers' data collected throughout this research. Based on the above, a number of questions can be proposed to assist with identifying the pedagogical and instructional position of the EMI lecturers as demonstrated in their teaching. These include: Do the lecturers dominate the class, demonstrating their leaning towards authoritativeness, or do they integrate and engage students in teaching exhibiting a more democratic approach? How does the context, their institution, influence their understanding of an established pedagogy? How do they manage and organize the students and what types of teacher-student interactions are established? What do they know and how do they address their students' cognitive level, for example, prior knowledge and learning styles? The answers to these questions polarize pedagogical orientations, however can assist in understanding what drives actual EMI lecturing practices.

3.3 Literature of Pedagogical Positioning and Instructional Practice in China

As the research informing this chapter was conducted in a Chinese university, it needs to be acknowledged that much research reported in the literature on teaching and learning in general, not EMI specifically, has made claims that in Confucius heritage countries, expository pedagogy is the tradition and widely practiced (Biggs, 1996; Biggs & Watkins, 2001; Hofstede, 2011; Lee, 1996; Nguyen et al., 2005; Saravanamuthu, 2008; Tran, 2013; Watkins & Biggs, 2001). More recently, research has reported that China has been influenced by the educational philosophies of the West (Zhao et al., 2016). Constructivism is identified and accepted as a dominant theory in the West and is experiencing a trial from idea to practice in current pedagogical reforms (Tan, 2017). However, research reporting examples of expository

teaching abound. For example, the study by Zhao et al. (2016) analyzed classroom observations across three high schools and found an expository approach was dominant, being identified in 16 of the 27 lessons observed, with only two lessons being taught through a constructivist, inquiry and transformative approach. Yan (2015) investigated a group of high school teachers' responses to a reform of English curriculum and noted a considerable mismatch between the teachers' perceptions of the new curriculum and their classroom practices. The data revealed that the methods of instruction were teacher-centred, textbook-based and test-driven despite advanced pedagogies introduced in the new curriculum. This resonates with the previous research mentioned above. The findings also acknowledged the challenges for teachers and lecturers to adopt a constructivist pedagogical approach in the current educational context in China. These included critiques by teachers that constructivism undermined content mastery, was incompatible with the traditional knowledge-transmission approach, and was misaligned with the prevailing assessment system in China (Tan, 2017). These studies indicate that without changing the examination-oriented system and increasing teacher's agency and autonomy, constructivist teaching will not be achieved (Yan, 2015).

Using one university as the case, this research sought to investigate: What are the prevailing instructional methods implemented by EMI lecturers? and Will these lecturers implement expository teaching and topic-based instruction unanimously as predicated by previous research studies? Therefore, the pedagogical position and instructional practices of the EMI lecturers in this research are central in this Chapter. In addition to the questions posed above, this Chapter also aims to answer: What are the identifiable features of these Chinese EMI lecturers' instructional practice? and How does their instruction reflect their pedagogy?

3.3.1 The EMI Lecturers' Perception of Teaching and Learning

To gauge the EMI lecturers' pedagogical positioning a survey was administered (N = 69) which sought to collect the lecturers' responses to questions on lecturer-student reciprocity in their interactions, their understanding of learning and knowledge, their control of the content and the role of students' knowledge. The statements (Table 3.1) were listed in pairs with the left statement denoting an Expository position, whilst the statement on the right was couched in Constructivist terms. The participants were asked to tick the box next to the statement that best represented their view. Alternatively, a third choice was offered – Balance of the Two if both statements in the same row were considered equally true or should be combined. The final row of the end of the survey allowed participants to provide any additional information. The raw data tallies, and overall percentages are displayed in the table below.

Table 3.1 EMI lecturers' pedagogical standing (Survey data)

	Expository		Balance of the Two	Constructivist	
Teacher & students' role	Teacher should be given the authority	26	32	11	Students should be given the democracy.
	Teacher is knowledge holder	29	29	11	Students are co-constructor of meaning.
	Teacher should cover the teaching.	19	34	16	Students themselves should be given time to explore their learning in class.
Context and classroom dynamics	Teacher should dominate class time.	41	20	8	Students should dominate the class time.
	Learning should occur through teacher's presentation	19	36	14	Learning should occur through interaction and activities.
	Lecturer should focus on individual learning.	48	18	3	Lecturers should create opportunities for students to learn from each other.
Control of the content	Textbook should be the only resource in teaching.	17	30	22	Multiple other resources should be equally included in teaching.
	Learning should be arranged topic by topic following text.	39	19	11	Learning should focus on problem solving.
	Assessment should focus on checking textbook knowledge.	34	18	17	Assessment should focus on checking problem solving and critical thinking.
Understanding of learning and knowledge	Learning factual knowledge and information should be the focus.	17	40	12	Content understanding and conceptual development should be the focus.
	Learning should focus on cognitive development.	30	33	6	Learning should focus on meta-cognitive development.
	Learning should focus on knowledge retention.	19	38	12	Learning should focus on solving real problems.
	338 = 40.8%		347 = 41.9%	143 = 17.3%	
Comments and clarifications (e.g. general pedagogical issues)[a]	Please include here any comment or clarification				

[a]Note: Data from comments are presented in a following section

The survey data reveal that the number and relative percentage of responses supporting each category was: Expository Statements N = 338 (40.8%), Constructivist Statements N = 143 (17.3%), and the number for agreeing to a Balance of the Two N = 347 (41.9%). It can be argued from these results, that a purely constructivist pedagogical position is held by very few of these Chinese EMI lecturers. Most responses were recorded in the middle ground category, arguably the safe space, however, only slightly less were those consistently predisposed to statements revealing an expository pedagogy.

On closer examination, the individual statements, 12 in all, revealed differences of opinion across the four survey themes. Within the scores for statements considering 'lecturers and students' roles', a large number of the lecturers were willing to consider the balance between sharing the authority in the classroom with their students (32/69) in order to allow students some space to explore their learning. However, a considerable number of EMI lecturer's (29/69) believe the teacher should maintain the position of power in their classes. In terms of the 'context and classroom dynamics', more than half of the lecturers (36/69) agree that lectures should be based on the lecturers' presentation integrated with interaction and students' activities. On the other hand, the majority recorded scores that lecturers should control the class time (41/69) and should focus on individual learning rather than create opportunities for teamwork (48/69). The responses from this category indicate the predisposition of these EMI lecturers to teach within a one-way teacher-centered classroom environment – expository pedagogy.

Regarding the lecture 'content' statements, nearly half of the participants (30/69) believe multiple resources (textbooks and other resources) should be drawn upon in teaching. When viewing teaching content and assessment, many lecturers (39/69) were less flexible, believing subject matter should be systematically covered topic by topic according to a textbook. When considering 'assessment' processes, half the respondents supported knowledge checking in the textbook (34/69), a quarter believe that assessment should focus on problem solving and critical thinking (17/69), and the last quarter revealed the view that assessment should include both approaches (18/69). With the statements investigating responses to an 'understanding of learning itself', the middle ground option (combining both the statements for constructivist and also expository pedagogy), was the most prominent response across all three statements. The only statement where the expository view almost equalled the combination of both, was that learning should focus on cognitive development (30/69), whereas the majority thought meta-cognition and cognition were both important (33/69). With the remaining two statements the majority view was clearly that learning should be a combination of factual knowledge acquisition and conceptual development (40/69), and that knowledge retention and real-life problem solving (38/69) were most important.

3.3.2 EMI Lecturers' Additional Comments

The qualitative data gathered in the commentary box at the conclusion of the survey provided a voice for the EMI lecturers to justify their responses and to flag issues that were important to them. These commentaries provided additional details for their survey responses thus enabling a deeper understanding of their pedagogical position. Data indicate that the lecturers' pedagogical view is situated within their convictions around the foundational nature of undergraduate education, institutional expectation to achieve learning outcomes, and students' predisposition towards an expectation of the learning environment provided at university level. A snapshot of comments is presented below as representative of EMI lecturers' opinions (EMI lecturers have been de-identified as E, X, Y, Z).

> Making the students at the center of the classroom is all so ideal. Practically they rely on the teacher's explanation so much for content knowledge. The teacher's explanation is still the most efficient way to make them understand the subject knowledge in the minimum timeline (Lecturer X).

> Students' self-learning ability is so weak. If you give them a task to work out between them, they won't go too far. Most were previously not trained to work or solve a problem in a team. The learning habit was inherited from their high school and even primary schooling. They are so comfortable to be fed information most of the time. (Lecturer Z).

> Classroom time is so short and so valuable. Letting students play in class would be primary school's business. Students feel that I waste their time if I don't teach but let them work between themselves. I ask them to work on the exercises after class. They are in class to listen to me because I believe I have a lot to offer (Lecturer E).

> I would allow more discussion or self-exploration for my postgraduate students. They are undergraduate. I need to cover the whole book topic by topic. They need solid and consistent knowledge in the textbook. To pass this subject and to eventually graduate, they need to have this foundational knowledge before they do anything else (Lecturer Y).

A lecturers' role in any university is to fulfill the mission of their institution and teach students successfully towards graduation. The identity of a lecturer and the development of his/her pedagogical position is shaped within this context as the data excerpts above demonstrate.

Lecturer Z reiterates the view that the students themselves are not independent learners as progressing through an education system based on 'teacher-as-the-sage' classroom practices, they are "so comfortable to be fed [information] most of the time". This lecturer contends that students have inherited a dependency on the teacher as knowledge provider from their early stages of schooling – primary and secondary. Although other lecturers recorded that encouraging students' own exploration in their learning was preferred, it was a finding that lecturers saw the students' expectation of a certain method of instruction as informing their practice.

Whilst the point was made that students at university expect the same type of instruction as they experienced previously in their primary and secondary schooling, Lecturer Y made a distinction between undergraduate and postgraduate

education. This lecturer commented that within a postgraduate or research degree study there were possibilities to encourage 'discussion or self-exploration', however in the undergraduate space the focus needed to be the accumulation of subject knowledge. Lecturer Y's view is supported by the institutional expectation for students to achieve the listed 'graduate attributes' before they complete their degrees.

Another theme identified across comments provided by the lecturers was that of time efficiency and trust (Lecturers X, Y, Z, E). The students, according to these lecturers, and the lecturers themselves have an expectation and trust in the expert knowledge they will impart in a systematic and efficient way (E). By efficient, there is the belief that class time is short and valuable; students exploring their own learning is more time consuming (E). This foregrounding of trust and efficiency assigns the lecturers into a position of leading the responsibility for students' learning. Comments such as 'play in class' (E), 'waste of time' (E), 'foundational knowledge first' (Y); 'teacher's explanation is the most efficient', 'students at the center is so ideal' (X) indicate expository pedagogy is central for these participant EMI lecturers.

3.3.3 The Design Features of EMI Lecturers' Instruction

The data collected in this section of the research was gathered through direct observations of the actual classroom teaching of 19 EMI lecturers. The researcher was present in the classroom (a space accommodating 60–80 students) as an observer and note taker throughout the 90 min of the scheduled lecture for all 19 lectures. The observational data were then collated and reported as findings from the participating EMI lecturers as a group. Individual differences in EMI lecturer's designs and features of their instruction was not the focus. The concern was to map the 'volume' or the trend in the observational data against Merrill's (2002) Principles of Instruction which are couched in a constructivist pedagogical vein. As the researcher observed the teaching, the number of times an episode within the lesson reflected one of the five principles, a tally mark was made in the relevant column against that principle. In this way it could be identified how closely the EMI lecturers' instructional features aligned with constructivist pedagogy.

Data revealed the majority of EMI lecturers were implementing instruction reflective of an expository pedagogy as outlined in Table 3.2.

3.3.4 Topic-Based Versus Problem-Centered Instruction

The first principle of Merrill's (2002, p. 45) instructional model is whether the instruction is topic-based or problem-centered which answers the critical question: Are learners engaged in finding solutions to real-world problems? Similarly, in

Table 3.2 Observation of EMI lecturers' instruction

Classes observed N = 19 (90 min/ lesson)	1. Problem raised	2. Engaging prior knowledge (# times)	3. New knowledge presented by lecturers with examples and/or practical explanation (minutes)	4. Activities for learners to apply learning (minutes)	5. Activities for real world problem solving
Engineering	No	Yes, 5–10	>60 Yes	<15	No
Engineering	No	Yes, <5	>60 Yes	<15	No
Engineering	No	Yes, 5–10	>60 Yes	<15	No
Computer science	No	Yes, <5	>60 Yes	<15	No
Computer science	No	Yes, 5–10	>60 No	<15	No
Computer science	No	Yes, <5	>60 Yes	<15	No
Computer science	No	Yes, <5	>60 Yes	<15	No
Computer science	No	Yes, <5	>60 Yes	<15	No
Finance	No	No	>60 No	<15	No
Biology	Yes	Yes, >10	30–60 Yes	>30	Yes
Biology	No	Yes, 5–10	>60 Yes	<15	No
Medical science	Yes	Yes, >10	30–60 Yes	>30	Yes
Maths	No	Yes, >10	>60 No	<15	No
Physics	No	Yes, 5–10	>60 No	<15	No
Biochemistry	Yes	Yes, 5–10	30–60 Yes	>30	Yes
Philosophy	Yes	Yes, 5–10	<30 No	>60	No
French	No	Yes, >10	30–60 Yes	>30	No
International relationship	Yes	Yes, >10	30–60 Yes	>30	No
Physical education	Yes	Yes, >10	30–60 Yes	>30	Yes

Adapted from Merrill's First Principles of Instruction (2002, pp. 44–45)

Slavin's (1995) QAIT model, the term 'incentive' is used to address the degree to which the teacher should engage and motivate the learners to work on instructional tasks. The observational data reveal that one third of the lecturers (6/19) posed problems and explored solutions as central to their lectures. They tended to emphasize an holistic task as the focus for the entire lesson. Learning objectives were specifically outlined to students at the beginning, with clear teaching plans designed to achieve these objectives. Student participation was predominantly their prepared presentations. The remaining two thirds (13/19) of the lecturers were observed implementing topic-centered instruction. In these classes, a lesson commenced with an introduction to the teaching topic, and after presenting new knowledge or information, concluded with a component of demonstration. There were limited

observable activities or interactions organized as the instruction was overwhelmingly teacher talk. Teaching components were in isolation rather than related to a task to complete or a problem to solve. As recorded in Table 3.2 above, the fields of study with a 'No' response in column 1, were dominantly the STEM fields (Science Technology Engineering and Mathematics) whereas the teaching in the Social Sciences fields demonstrated a problem-centered approach. Overall, the co-existence of the two modes of instruction exemplifies the division in this group's pedagogical position, with the majority reflecting an expository pedagogy.

3.3.5 Instruction Linking Prior and New Knowledge

The second principle of Merrill's (2002) model applied in this data collection and analysis translates to: Do lecturers purposively activate learners' "relevant previous experience" (p. 45) as the basis for connecting with new knowledge? Similarly, with the QAIT Model of Instruction (Slavin, 1995) the connection between new content and students' background knowledge is emphaized. The observational data in this research revealed that during their teaching, 18/19 lecturers directed students to recollect some previously taught and learned knowledge. The lecturers were noted moving back and forth between an explanation of new knowledge and requiring students to recall the information from previous lessons however the number of times this principle was implemented varied. The numerical data were then collapsed into three categories of frequency with reference to links to pre-existing knowledge: more than 10 times; between 5 and 10; and less than 5 times (including 0).

An analysis of these data revealed one third of the lecturers explicitly linked students' existing and new knowledge, more than 10 times during the 90 min of class time. Another third emphasized the links between prior and new knowledge 5–10 times and an additional six lecturers (one third) very rarely used this principle of instruction (0–5 times) (see Table 3.2: Column 2). As 18/19 lecturers initiated this principle of instruction to some degree, no matter what pedagogical position the lecturers held, there was recognition that this principle was important. We could extrapolate from the frequency with which this principle was used, that those lecturers connecting prior and new knowledge over ten times during a lesson, are explicitly using this approach as it reflects their constructivist pedagogy. Likewise, those lecturers moving the new knowledge forward in isolation or with a quick review of the content of the previous lesson, are displaying a commitment to an expository pedagogy. The data show the number of lecturers in each category as being almost equal in numbers 6/19 and 7/19. Those in the middle category are not overly committed to activating prior knowledge as the foundation for new knowledge but given the frequency of use is 5–10 times, realize it has merit.

3.3.6 Teacher Talk and Knowledge Demonstration/ Explanation by the Lecturer

Merrill's (2002, p.45) third instructional principle is demonstrating new knowledge to the learner. In Slavin's (1995) QAIT (Quality, Appropriateness, Incentive, Time) Model, quality instruction is specified as needing to have information presented through clear and simple language, so lessons are easy to follow, and often accompanied with images and examples and facilitated with transitional language between topics. The significance lecturers placed on instruction such as 'remember-what-you-were-told' or 'here are examples, and this is how this new knowledge can be applied' was revealed in the observational data. 60% of the lecturers dominated the talk for more than two thirds (60 min) of the class time, and whilst 30% of lecturers spoke for a lesser amount of time, the total was still in the 30–60 min range (see Table 3.2: Column 3). Outliers to these data were two lecturers who operated flipped classrooms, having the class time dominated by students, who on the particular day of observation, occupied the lecture time with their individual presentations**.**

In terms of how new knowledge was presented to the students most lecturers structured their teaching by commencing with the new knowledge, theories or concepts, with some subject fields including formulae or rules, followed by further explanations using reasoning and/or examples to illustrate the new knowledge. Data have recorded, not only the time spent in teacher talk, but also whether the lecturer did or did not demonstrate the new knowledge through examples and explanations. Data across the two variables in this principle are presented in Fig. (3.1).

The observation data reveal that five lecturers (5/19–26%) did not include any demonstration for students to support their learning of the new knowledge (combined orange bars). The graph above shows that four of these lecturers were also in the group occupying the most teacher talk (over 60 min) across the 90-min lecture. Their lectures were observed as being structured around PowerPoint slides with little 'unfolding' illustrations, examples or explanations. This resulted in content that was abstract and isolated. These four lecturers were conveying the message to students analogous with 'you need to remember this now and you will understand it later'. It was also observed that these four lecturers were conscious of their English expression which appeared to be an obvious barrier in their teaching. This is the group arguably holding an expository pedagogy as evidence indicates the teacher is the center of knowledge distribution, with little space for student participation and no accounting for the need to explain or provide workable examples to support the learning of all students.

The lecturers observed making concerted efforts to demonstrate new knowledge were 14 in number (14/19–73.5%) (combined blue bars). Of these it is argued that those who spent less time on teacher talk (6/19–31%) would be those reflecting a constructivist pedagogy, with the other 8 lecturers whose talk dominated the lecture time, but yet included demonstrations of the new knowledge, would be on the continuum between expository and constructivist (42%).

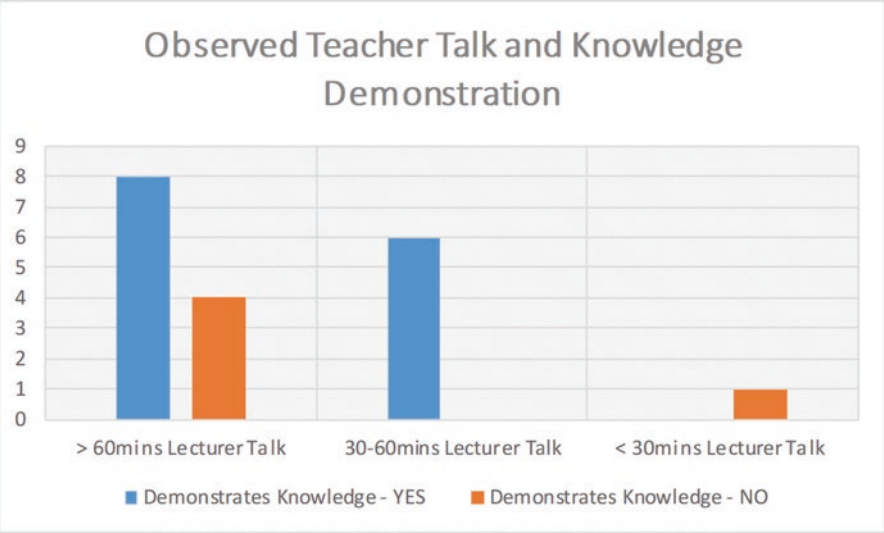

Fig. 3.1 Teacher talk and knowledge demonstration

3.3.7 New Knowledge Application and Integration by the Students in the Real World

Merrill's fourth and fifth instructional principles emphasize opportunities and guidance for learners "to use their new knowledge or skill to solve problems" and "to integrate [transfer] the new knowledge or skill into their everyday life" (Merrill, 2002, p. 46). These two principles shift the responsibility for learning from lecturers to students. From a slightly different angle, Slavin (1995) used the concept of time to measure instruction. That is, how to distribute engagement time for students to apply the learned knowledge in practice.

From the data, the amount of time allocated to student application and integration of knowledge ranged from a maximum of 15 min, more than 30 min and greater than 60 min (which was an outlier). In these practice and application sessions it was also observed as to whether the activities were related to real-life situations or more abstract practice examples. The graph below indicates the results (Fig. 3.2).

The frequency data show in 12 out of the 19 classes observed, students' activities were limited to a maxiumum of 15 min within a 90-min lecture (16% of lecture time). In 7 classes students were actively engaged in upward of 15 min, above 30 min and in one instance over 60 min.

Within the lectures where 15 min or less was allocated to student-focused time, the content was observed to be 'digesting' and 'reflecting' on what the lecturer had presented, basically a question and answer opportunity for clarification. There were fewer activities providing opportunities for group work and/or discussion. The

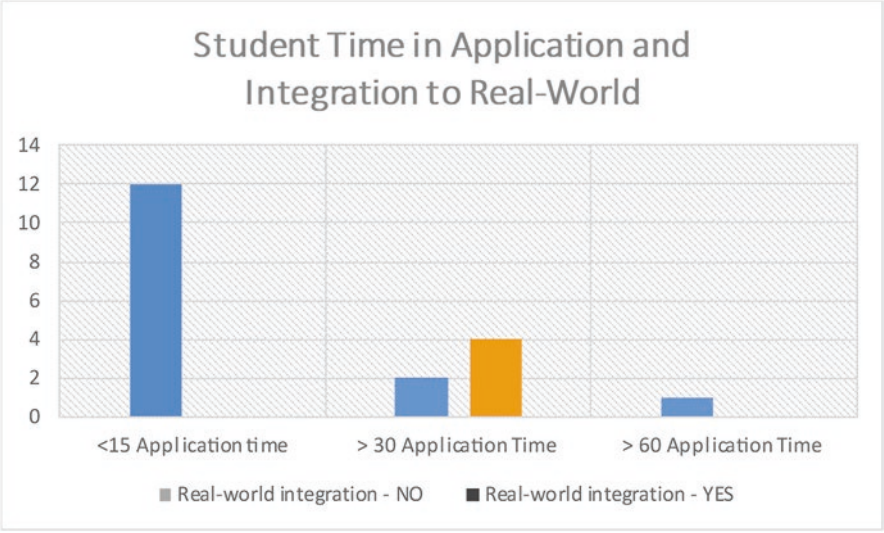

Fig. 3.2 Student time in knowledge application into the real-world

focus was on direct understanding and/or memorization of the new knowledge rather than application or problem solving.

For those classes where more than 30 min of lecture time was apportioned to students, including the two flipped classes, students were not empowered to apply the learned knowedge in new contexts or to solve real-world problems. Instead, they presented or practiced their understaning of the learned knowledge, theories, concepts, and/or formula. A phenomenon oberved was that during allocated student-based or practice time, students were not working collaboratively with peers. The planned activities required students to work indivdually.

In summary, the survey data indicate, each statement revealing a constructivist pedagogical tone received less than 20% of lecturers' scores. An average of 40% of lecturers agreed with statements reflecting an expository mindset with a further 40% opting for a position somewhere between the two. The observation data reveal the co-existence of topic-based and problem-centered instruction modes which indicates the lecturers varied in their pedagogical positioning. However there was a tendency towards topic-centered instruction as this was implemented by at least two thirds of the lecturers. The majority of the lecturers focused on presenting information and demonstration following the textbook. The application of the learned knowledge in practice and solving real life problems was absent in the practice of all but four lecturers. A final observation was that students' activities were all at an individual level with no group work observed.

3.4 The Chinese Lecturers' Pedagogical and Instructional Choice – Cultural or Rational?

From the analysis of the survey and observational data mapped against Merrill's (2002) five key principles of instruction, the finding is that more lecturers hold an expository pedagogical view reflected in their instructional practice, compared to the number of advocates for a constructivist pedagogy and those who attest to an integrated, middle ground approach.

Previous research has explained this phenomenon in terms of cultural determinism, by arguing that culture is the prevailing reason for the prevalence of particular pedagogical views. For example, Biggs (1996), Carroll and Ryan (2005), Merriam and Associates (2007) and Nguyen et al. (2006) contend that in Confucius heritage countries such as China, teachers/lecturers unanimously embrace a teacher-centered pedagogy. These researchers allocate a kind of 'mysticism' to culture as having an all-encompassing effect on pedagogy. Nguyen et al. (2006. p. 1) substantiate this argument further outlining that educational approaches are socially and culturally constrained, with any attempts to adopt educational theories and practices from outside that context, without considering learners' cultural heritage and/or making rigorous adaptations, will be destined to failure. Other researchers, such as Saravanamuthu (2008) and Tran (2013) claim that rather than being purely determined by culture, pedagogy is situated in, and contingent upon, the specific learning requirements reflecting the institution's mission statements on teaching objectives and student learning outcomes.

The premise from the literature cited above is that the EMI lecturers in this study, from the same institution and within a 'Confucius Heritage Culture' could be expected to all hold a similar pedagogical view and instructional practice. This was not the case as the data show their pedagogical views and instructional practices were diverse. The inference from these data is that cultural rationalism is at play. This rationalism can be seen through the lecturers' views, of themselves and their students, around subject knowledge, teaching and learning.

3.5 Lecturers' Discipline Knowledge and Teaching

The data indicate that most lecturers believe undergraduate study, as opposed to post-graduate and PhD research training, is foundational education. The majority of the lecturers viewed their role as the primary source of knowledge, their expertise reflected by their qualifications at PhD level and years of experience in their fields. These lecturers would agree with the work of Fernando and Marikar (2017, p. 111) who state a lecturer "possesses more knowledge about the subject he/she is teaching than the average student" and in order to impart this knowledge "teaching must involve transmission of expert knowledge from the teacher to the student". In this study, directing students' learning systematically assisted by textbooks was

important to the EMI lecturers especially in the fields of engineering, computer science and mathematics. Observational data in STEM classes revealed teaching episodes dominated by topic-based instruction whereas the teaching in the social sciences, philosophy and international studies, a problem-centered approach was more frequent. Each of the fields lends itself to a different paradigm in teaching and learning.

Fernando and Marikar (2017, p. 111) also argue that "teaching involves both the transmission of knowledge and the facilitation of learning". The majority of these lecturers enacted instruction emphasizing knowledge demonstration/acquisition. Knowledge application in practice and real-world problem-solving contexts were far less frequent. However, the 'facilitation of learning' around cognitive outcomes, was not an aim of this research. It does need to be acknowledged that a quiet, seemingly 'passive' class should not be confused with a lack of cognitive engagement or active thinking on the part of students.

3.6 Learners–Passive in Behavior but Active in Thinking

According to the stimulated recall interview data some lecturers in this study, recounted that their students' view of pedagogy and instruction aligned with their own. The lecturers felt comfortable in the belief that their students expected and trusted them to lead the learning and share their expertise in the content knowledge – the most time efficient method of instruction. This view is captured in the quote: "Students feel that I waste their time if I don't teach but let them work between themselves." Thirty-five years ago, a Hong Kong based research study also reported that tertiary students preferred this mode of learning, not because they were incapable, but were demonstrating a rational preference, that is, they would learn more quickly rather than investing their own time in exploring and negotiating the content knowledge when the outcome may not be assured (Biggs, 1996). This research did not engage with students' views, so no claims are made, other than learning styles between students vary and some may prefer to study in a teacher-centered class/lecture room, as described by some lecturers in this study.

Chinese students are often described as passive and rote learners. However, data in this study indicate that most of the lecturers made concerted efforts (18/19) to connect students' prior knowledge, with the new learning to engage learners' cognition. The quiet students may not necessarily be passive and are actually engaging in understanding as well as memorization when processing the new knowledge. Literature supports this argument as Chinese students' academic performance tend to outperform Western students (Saravanamuthu, 2008, p. 152). This result could not be achieved if all learning was rote without understanding and application. Similarly, if the Chinese education system follows Confucianism, then we should expect that Chinese students' learning is intertwined with active thinking. This learning principle is recorded in the Analects II.15 as "seeking knowledge without thinking is labour lost; thinking without seeking knowledge is perilous" (Lee, 1996,

p. 34). Students' quietness should not be confused with passiveness, nor memorization with rote learning as both may equally be demonstrating active thinking and understanding (Tran, 2013).

3.7 Conclusion

This research found that EMI lecturers' pedagogical positioning and subsequent teaching practices were based on rational decisions such as teaching in the most efficient way in terms of time and subject matter to cover, and who has more expertise in the subject knowledge – lecturers or students. An overriding claim that culture is the sole determinate of pedagogy and instruction is not supported by the findings in this research. Culture as a monolithic entity, cannot explain the variety or range of pedagogical views and instructional practices observed in this research. Some have argued that economic and social, as well as cultural contexts impact on the development of a teacher's pedagogy. In this research, agreement between a lecturer's understanding of knowledge and learning, and how s/he perceived students' expectations and cognition contributed to the rationality behind their decision making around pedagogical positioning and instructional practice.

With the liberal subjects such as the social sciences, humanities and education, elements of constructivism such as negotiating the curriculum and sharing the leadership in learning is feasible and was observed in these EMI lecturers' teaching. In contrast, in the 'hard' disciplines such as engineering and mathematics, a learning environment couched in constructivism including hands-on activities, collaboration between students and a more informal lecturer-student relationship was not observed in these EMI lecturer's classrooms.

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