Challenges of Implementing Inquiry-based Learning in Chinese Secondary school EFL Classrooms: A Review of Teachers' and Students' Perceptions

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Abstract

This article explores the dilemma of implementing inquiry-based learning (henceforth IBL) in Chinese secondary school English as a foreign language (EFL) classrooms. The social context for implementing IBL is under the influence of rigid, traditional language learning approaches like rote learning. As a result, many Chinese secondary school EFL learners lose interest in English learning and do not consider it fun or helpful. Many of these secondary school students spend most of their language learning time on the memorization of vocabulary, grammar rules, and phrases to deal with English tests. However, they have few opportunities to use English as a powerful tool to help them. Instead, most Chinese secondary school EFL teachers and students do not perceive EFL learning as an interesting exploratory journey which could be embarked on via inquiry in lieu of knowledge-based lectures. This review article attempts to explain the emergence of this phenomenon by reviewing literature on teachers' and students' perceptions towards IBL in the hope of providing a better picture of the implementation of IBL in Chinese secondary school EFL classrooms.

Keywords: Inquiry-based learning, Challenges of inquiry-based learning, Chinese secondary school EFL teachers and students, Perceptions

For a long time, language educators have criticized knowledge-based, test-driven, and teacher-led pedagogy. This is especially true in discussion of the Chinese secondary school English as a foreign language (EFL) context, where curriculum and pedagogy have been said to fail to cultivate students with essential higher-learning abilities, like critical thinking, independent thinking, and problem-solving skills (Chu et al., 2017; Dai et al., 2011; Lee, 2014). One possible result is that most secondary school students find EFL learning boring—or worse, useless—because they find it hard to relate English use to their daily life (Chu et al., 2017). Under this circumstance, some educators (e.g., Lee, 2014) have argued that inquiry-based learning (IBL) could be an effective teaching and learning strategy to ignite students' EFL learning passion and equip them with necessary learning abilities. Here, IBL generally refers to a constructivist and learner-centered approach that aims to encourage students to actively engage with the learning process through the use of inquiry (questions) while emphasizing "critical thinking and productive use of knowledge for real-life problem-solving" (Dai et al., 2011, p. 142).

Since it emerged in the 1970s, IBL has become prevalent in many Western schools' content course curricula, for example, in the teaching and learning of science (Edelson et al., 2011). Similarly, some progress has been made regarding the implementation of IBL in the Chinese secondary school science classrooms (An & Thomas, 2021). However, it tends to be under-implemented in the Chinese secondary school EFL teaching practices (Kan, 2007), though a small number of science teachers have reported adopting IBL, usually

located in big cities, like Beijing and Shanghai (Dostál, 2015). Some research has indicated that many secondary school EFL teachers in China, especially the teachers in rural schools, appear to lack knowledge of or are reluctant to adopt IBL (Zhu, 2014). Further, there is a paucity of academic discourse that explores the reasons why many Chinese secondary school EFL teachers and students resist IBL or have a low opinion of it. Therefore, this article seeks to explore some obstacles of its difficult implementation in Chinese secondary school EFL learning. As such, it will explore some possible reasons why many Chinese secondary school EFL teachers resist adopting IBL and elaborate on potential reasons why their students tend to show less active participation in IBL in their EFL classes.

Context

Relevant policy documents

The policy documents in this section were identified using the official website of the Chinese Ministry of Education. The search terms "secondary school education", "English", "inquiry-based learning", and "inquiry" were used in the search function, resulting in five official governmental documents pertaining to advocating for inquiry-based learning in the English-language curriculum. Curriculum reforms were found in documents from 2001 to 2021. No relevant policy documents with these key words were found before 2001.

Guidelines for Basic Education Curriculum Reform, released by the Chinese Ministry of Education in 2001(a) is the first policy document that called for inquiry-based learning. According to these guidelines, transforming students' passive learning into active learning and making a shift from teacher-led learning to inquiry-based and problem-based learning to help students develop practical skills (i.e., critical thinking ability and cooperation) are long-term goals of future

educational reforms (Ministry of Education, 2001a). In the same year, the Chinese Ministry of Education (2001b) published another guide called *Implementation Guide (for trial implementation) for Research-based Learning in General High Schools*. This guide set research-based learning as a compulsory course for high school students and offered numerous specific, detailed implementational principles and suggestions for high school teachers to organize research-based learning in all subject teaching (Ministry of Education, 2001b). However, it stated research-based learning, like scientific research, might be suitable for Chemistry, Physics, and Math, but it might not be appropriate for English-language learning since English learning emphasizes more on practical skills.

Later, inquiry-based learning started to replace research-based learning after 2011 in relevant policy documents on English-language learning (Ministry of Education, 2011a; Ministry of Education, 2011b; Ministry of Education, 2017). According to the Ministry of Education (2011a), secondary school EFL teachers should adopt a variety of methods such as "case-based, inquiry-based, participatory, situational, and discussion-based training" (p. 2). Specifically, secondary school EFL teachers should "encourage students to discover language laws through experience, practice, participation, inquiry, and cooperation under the guidance of teachers, gradually master language knowledge and skills, constantly adjust their emotional attitudes, form effective learning strategies, and develop autonomous learning capabilities" (p. 4). Nevertheless, these policy documents did not provide specific guidance on how to integrate these teaching methods into teachers' pedagogical practices.

Regardless of policies and opinions from Chinese educational departments during the past 20 years, the implementation of IBL has some achievements, but the result has not been as satisfactory as policymakers had imagined. Namely, the proposal from the 2001

Education Curriculum Reform fails to advise secondary school EFL teachers on how to practically adopt IBL in their daily teaching practices. Even after two decades, it seems insufficient to have policies from the Chinese government to promote the implementation of IBL in secondary school schools in China, and more grassroots efforts are needed for the successful implementation of IBL in EFL teaching.

Relevant social challenges

IBL is not a ubiquitous teaching approach in EFL contexts like China, as in many other countries, like Thailand (Bunwirat & Boonsathorn, 2018) and Spain (Romero-Ariza et al., 2020), for example. Without essential social support for designing an effective inquiry-based curriculum and textbooks, as well as an inquiry-based language assessment system, it would be difficult for IBL to have deep roots in language education (Acar & Tuncdogan, 2019). One rural middle school language arts teacher in China in Dai et al.'s (2011) study commented on the implementation of IBL, "Even though individual teachers may be appreciative of this approach, it is hard to create a climate in classroom for effective reform; there is a lack of guidance and support from the administrators, which renders reform efforts fruitless" (p. 152).

Researchers have identified some key social challenges for IBL implementation in Chinese secondary school EFL learning, including the Chinese exam-driven education system (Dai et al., 2011); insufficient curriculum and pedagogical support from the Chinese Ministry of Education policymakers, and schools; as well as teachers' and students' resistance towards IBL (Kim et al., 2013; Zhu, 2014).

Moreover, most secondary school textbooks are not inquiry-based, making secondary school teachers less equipped with lesson

materials to adopt IBL (Shao, 2018). There are few inquiry-based EFL textbooks and few inquiry-based tasks in EFL textbooks. As a result, most Chinese secondary school teachers have to stick to traditional less-inquiry-based EFL textbooks in their teaching (Marshall & Horton, 2011). Changing this can be difficult in contexts where the EFL textbook also serves as a makeshift syllabus. The lack of an effective inquiry-based assessment system which should be used to evaluate students' learning and competency development is another problem that might impede the implementation of IBL by Chinese English teachers. A secondary school physics teacher in Zhu's (2014) study claimed that:

> In our country, it is almost impossible to use IBL to foster students' sense of creativity, or independent ideas… The biggest constraint… on the surface, it is a problem of the examination and assessment system. Fundamentally, it is the problem of the country system. (p. 96).

There are no specific assessment tools or methods about practical abilities and skills developed during IBL in the Chinese secondary school EFL evaluation system. This, hence, might be another major obstacle for why IBL has been under implemented in the Chinese secondary school EFL learning.

Relevant academic pressure from exams

The secondary school EFL curriculum in China appears to be more test-driven than skill oriented. Getting high scores in standardized tests rather than cultivating practical abilities and skills appears to be regarded as the aim of language learning by teachers and students (Sari, 2020). One typical case relates to the Chinese College Entrance Exam (Gaokao). Zhang et al. (2005) claim that to some extent, Gaokao is widely accepted as a fair exam in China because Gaokao provides every secondary school student with equal access to college

education. However, under academic pressure from Gaokao, most secondary school students were taught the seemingly effective rote learning method for EFL, because this method could effectively help them remember vocabulary and grammar rules needed for tests in short periods. As long as these students can remember the English words and grammatical rules, they will achieve high scores on tests; they do not have to worry about effectively using English in real life since most of the secondary school students have little chance to speak English in their daily life. In addition, Kan (2007) asserts that Gaokao and other tests during the secondary school stage mainly evaluate students by scores. Hence, teachers and students should not be blamed for their score-oriented motives.

Further, secondary school teachers and students believe IBL might be time-consuming and offer little help in achieving high grades in English exams. Admittedly, the process of IBL seems to be situated, personal, action-based, and reflective, thus requiring students to think about the inquiry, spend more time in the classroom to communicate and collaborate with their partners (Zhu, 2014). However, the view mentioned by Zhu (2014) overlooks one popular, over-arching aim of learning exposed by Vygotsky (1978) and many others: “It is more than the acquisition of the ability to think; it is the acquisition of many specialized abilities for thinking about a variety of things” (p. 83). Thus, Chinese secondary school EFL teachers’ and students’ understanding of such a goal of learning seems to be influenced—or, perhaps, misguided—by test-based language education.

How do Chinese Secondary School EFL Teachers Perceive IBL in EFL classrooms?

Role changing: from knowledge providers to facilitators

Another issue arises because most Chinese secondary school teachers might emphasize knowledge transmission over learning strategies and skill development in secondary school schools. Huang et al. (2020) suggest that secondary school EFL teachers seem to be in the grasp of test-based education and follow the "spoon-fed styles of teaching" in classrooms (p. 252). The reason might be that secondary school language education appears to be more test-oriented, and teachers should instill as much knowledge as they can through lectures to help students get high scores to go to prestigious universities (Kan, 2007). However, this kind of perspective seems to overlook the significance of learning strategies and skill development for future study and careers in lieu of immediate content knowledge acquisition. Thus, score-oriented perceptions that Chinese secondary school EFL teachers have might prevent students from exercising practical learning strategies/skills in IBL, like critical thinking and problem-solving ability (Chu, 2017).

Is it easy for teachers' role in EFL classes to shift from providers to facilitators in IBL (Moore, 2012; Wells, 2000)? My short answer would be "no". Traditionally, in Chinese secondary school EFL classrooms, teachers are often considered to be "a knowledge transmitter, an authority, an expert, a nurturer" (Kan, 2007, p. 179). In this regard, teachers are expected to play a dominant role in the classroom. From a survey conducted by Dai et al. (2011), 92% of the 696 high school teachers in 16 Chinese cities reported that they lectured "often" or "very often" (p. 150). In inquiry-based classrooms, however, teachers are facilitators who can assist students when they need help or support (Witt & Ulmer, 2010). To achieve this,

facilitators (teachers) monitor students in their efforts to tackle problems, evaluate the relevance and effectiveness of questions, and offer timely diagnostic feedback when needed (Laxman, 2013). Furthermore, instead of putting too much emphasis on rote learning, IBL teachers aim to inspire students to think critically thinking when addressing problems and unravelling puzzles (Witt & Ulmer, 2010). Acar and Tuncdogan (2019) also suggest that teachers in IBL should have a clear idea of when, how, and how much to help each learner, instead of randomly interrupting students' learning at any time. Moreover, teachers should know how to provide different amounts of support that students might need when exploring answers to active questions (Dao & Iwashita, 2018), as students may have discrepancies in cognitive abilities, attention span, verbal articulation ability, and cultural background (Acar & Tuncdogan, 2019).

However, regardless of the potential benefits these actions may bring, some teachers have argued that if they are facilitators, they may lose their control of students' learning, and they might be too distant from their students (Zhu, 2014). Nevertheless, I, like many others, believe this shift is essential for progressing education, creating space for students to engage more actively with their learning. For teachers, role-changing can be difficult and is unlikely to occur in a short period if they have always been used to their dominant roles in the classroom. This is why proposals such as Thomas and Rose's (2019) conceptualization of learning control (i.e., the regulation of learning) on a continuum from *other* to *self* and vice versa are important for both teachers and students. While teachers may want to offload some regulation of learning to students, students may strive to develop even more control of their own. Successfully shifting and managing these roles takes time.

Insufficient skills and abilities

A large proportion of Chinese secondary school EFL teachers resist IBL because they lack necessary skills and abilities required by IBL in EFL learning. Firstly, these secondary school teachers might not be confident in implementing IBL because they feel they are not well equipped with adequate pedagogical content knowledge related to IBL (Zhu, 2014). Secondly, they feel that it might be more difficult to manage contextual factors when using IBL than other teaching approaches, including "the class size, the nature of students, classroom culture, school environment, collegial influences, and the wider sociocultural context" (Zhu, 2014, p. 97). Thirdly, IBL often requires them to invest more time and energy compared with other teaching approaches like Presentation-Practice-Produce (PPP) or Task-Teach-Task (TTT) (Ahmad, 2020). However, the English class time does not expand for secondary school EFL teachers, and they are more likely to unable to complete all the curriculum tasks if they choose IBL as their pedagogical approach (Chu, 2017). Fourth, even if Chinese secondary school EFL teachers could see the value of IBL in their teaching practices, they may still resist adopting this innovative pedagogical approach because they have received little training on how to implement it (Ministry of Education, 2011b), thus, making IBL a risky plan for them. Fifth, creating meaningful and manageable IBL may be challenging for Chinese secondary school EFL teachers in terms of formulating good inquiries. IBL often starts with questions, which act as the core of any inquiry in dialogic interaction in the EFL classrooms (Lee, 2014; Wells, 2000; Wood & Levy, 2015). In support, constructivist pedagogy advocators, such as Vygotsky, suggest that questions should be designed to give chances for learners to participate in meaning-making activities (Moore, 2012), which could lead to the incremental growth of knowledge (Lee, 2104). Qashoa (2013) mentions that, through communicative

interaction, questions in IBL are expected to prompt students to think creatively and critically; otherwise, these questions are of less value to students' competency development. However, these expectations for meaningful questions are hard to achieve for every teacher. This is partly due to the insufficient pedagogic support in devising meaningful questions in pre-service and in-service teacher training programs (Wood & Levy, 2015). Without excellent questioning skills, Chinese secondary school teachers would simply choose to play the role of a "baton" and give drill training in the classroom instead of guiding students to learning through inquiries.

How do Chinese Secondary School EFL Students Perceive IBL in EFL?

Active participation

IBL requires learners to direct their own leaning with less support and help from teachers and peers, which could be a challenging task for Chinese secondary school EFL learners. Specifically, Wood and Levy (2015) indicate that IBL emphasizes self-authorship with students positioning themselves as the owners of their learning. Social constructivism provides theoretical underpinnings for IBL, surmising that learners would take the initiative in constructing their knowledge through meaning-making activities (Chu et al., 2017). Also, from Vygotsky's (1978) sociocultural perspective, learning is a social activity between the learner and the environment. Learners, as independent meaning-makers, construct knowledge and deepen their understanding through interactions with the environment. This perspective implies that the kind of education a person receives, and what knowledge, skills, competency they can develop, relies largely on what activity he or she takes part in, how he or she engages with learning activities and the degree to which he or she engages with

learning activities (Wells, 2000). Here, engagement refers to a kind of learning condition, in which students are "paying attention, being on the task, and participating throughout the lesson; they are not merely sitting and listening" (Wheatley, 2018, p. 3). Similarly, Piaget (1896/1980) emphasizes the role of learners' active engagement in the learning process (Wells, 2000), and Buchanan et al. (2016) suggest that if learners could fully engage in IBL, they will enjoy better knowledge retention. An important implication could be gained here: the degree to which Chinese secondary school students engage in learning activities, especially group learning, in IBL has implications for implementing IBL (Jiang, 2021).

However, due to their previous education experience, Chinese secondary school EFL students may be unwilling to actively engage with a task or engage less in inquiry-based tasks compared to traditional ones. This is explained by Kan's (2007) research findings that few secondary school EFL students are motivated by IBL or willing to learn through inquiry because most of them define the success of learning as achieving high scores rather than the active engagement in activities. They would be more likely to show increased interest in learning approaches to improve their scores and might be reluctant to "waste time" with IBL. Edolson et al. (2011) also believe that if students are insufficiently motivated, they tend to show a disengaged attitude towards inquiry-based activities. As such, the attitude and disposition learners exhibit when interacting with teaching and learning activities greatly influence inquiry-based learning engagement (Buchanan et al., 2016).

Pressure from a test-based curriculum

After twenty years since the call for education reform, conventional didactic pedagogy still dominates Chinese secondary school EFL classrooms. According to Chu et al. (2017), many Chinese

secondary school students in the 21st century, unfortunately, are still bogged down and overwhelmed by seemingly endless testing. They further suggest that few students tend to embrace IBL in their real teaching practice, and most students are afraid to adopt innovative learning approaches, like IBL. Kan (2007) explains that secondary school EFL students feel IBL seems not to be efficient in improving their scores in exams compared with the traditional approach (i.e., listing key words on the board and then asking students to remember those words before they start reading English tests). Secondary school EFL teachers tend to highlight what students should take note of in what they say in class and recite important excerpts from textbooks since the students need these excerpts to answer questions in exams. Most Chinese secondary school students do similar things in EFL lessons in the hopes of gaining high marks to get into a good university without knowing how these marks could prepare them for future challenges. Consequently, the academic pressure from score-oriented secondary school education appears to drive students to favor an approach that could help them perform well in EFL exams and resist accepting other approaches, including IBL.

The lack of mental resilience

Apart from the stress from exams, IBL is demanding for Chinese secondary school EFL students since students are expected to learn English via trial and error. According to Acar and Tuncdogan (2019), students need to be equipped with the necessary mindset for facing mistakes in IBL. Specifically, IBL requires secondary school EFL students to test potential assumptions, many of which may be incorrect. If students have never received training about how to view errors and how to develop a growth mindset (Dweck, 2017), they may be very easily discouraged and demotivated by their mistakes during the learning process. In reality, many Chinese secondary school

students have never received such training. That is to say, students might have low levels of resilience towards their language errors and would experience negative mental affect from their mistakes. Therefore, they may be more likely to turn to teachers for help instead of figuring out solutions to their problems. Thus, it is understandable why most Chinese secondary school EFL students might not be eligible learners in IBL because most of them might be not well prepared to face their progressive mistakes during IBL (Acar & Tuncdogan, 2019).

Language proficiency differences

Since collaboration and cooperation are stressed in IBL, EFL learners would be assigned group tasks and learn with others. However, given language ability variations between Chinese secondary school EFL students, less able students might resist IBL more strongly than able students in the classroom (Kan, 2007). In some ways, IBL appears to be more interesting, helpful, and inspiring for "good pupils" than students who are weaker in English (Kan, 2007, p. 149; for a similar argument, see Thomas & Brereton, 2019). Kan (2007) further mentions that teachers seem to be more interested in assisting able learners, thus allowing high-attaining pupils to benefit more from IBL than traditional learning approaches. Accordingly, Dobber et al. (2017) claim that low-attaining learners state that IBL is too challenging for them to address the question with insufficient support or supervision. The potential reason is that IBL may place greater knowledge-memorization pressure on weak learners than strong learners since weak learners are expected to remember facts as well as flexibly use their knowledge to identify solutions simultaneously. Sari (2018) implies that low language proficiency learners are more likely to generate bias and confusion towards language learning. For example, a Chinese secondary school student

in Kan's (2007) study argued that "it [IBL] is a more suitable way of learning for them, not for me, as those guys with academic competitions, and they just like these chances to show their ability" (p. 148). This is evidence that weak students would have very low self-confidence towards learning through inquiries and have negative feelings towards strong students. Kan (2007) also claims that some less able Chinese secondary school EFL students often feel marginalized by able students in group discussions and collaborative tasks. Considering the ability gap between able EFL students and less able students in IBL, weaker EFL students may show more resistance towards IBL.

Conclusion

Socrates once said, "Education is the kindling of a flame, not the filling of a vessel", implying that education should serve to enlighten humans rather than passing on knowledge in a top-down way. As a question-driven pedagogy that nurtures students' motivation and sustains their learning needs, inquiry-based learning has great value in shaping future generations to become active critical thinkers and problem solvers.

However, the existing test-based secondary school curriculum and resistance from teachers and students have been the main obstacles for the implementation of inquiry-based learning in EFL in China. To a great extent, the importance of IBL is devalued in Chinese secondary schools. At the initial stage of implementing IBL in secondary schools in China, these challenges seem to be inevitable. Taken together, they reflect some conflicts towards secondary school education: test-based education versus ability-based workplace requirements, rote memorization versus meaning-making through inquiry, and teaching knowledge versus teaching the way to acquire knowledge. Therefore, putting Chinese secondary school students in

the driving seat of their learning in IBL teaching practices might not be a good idea because Chinese secondary school students might resist being active learners who could fully engage in inquiry-based tasks under the influence of test-oriented education.

However, this is not to say IBL can never be rigorous or effective in Chinese secondary school EFL learning. Rather, it needs time to prove its value for language education and lifelong learning. The implementation of IBL requires collaborative efforts from governments, schools, and teachers. Along with the efforts towards social context, inquiry-based curriculum and teaching materials need to be in place. The insights gained from the evaluation of challenges may be of assistance to help Chinese educational policymakers, educators, and language teachers explore what kind of learning pedagogy should be promoted in secondary school EFL classes. More information on the lasting effect of inquiry-based learning on secondary school learners' future development would help us to establish a deeper degree of understanding on this matter. The future must surely be in the hands of active learners who possess essential learning skills in addition to content knowledge.

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