

# Supporting Leadership Factors for the Mastery of Core Competencies for College English Learners in Application-Oriented Universities in Shanghai: A Pilot Study

Jun Liu<sup>1</sup>

<sup>1</sup> Research Center for Languages and Cultures, Shanghai Publishing and Printing College, Shanghai Research Institute of Publishing and Media, Shanghai, China

Correspondence: Jun Liu, No. 101 Yingkou Road, Yangpu District, Shanghai City, 200093, China.

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## Abstract

Based on the theory of Synergistic Leadership (Irby et al., 2002), as well as the Framework for 21st Century Learning (P21, 2019) and related research, this research applied mixed methods with questionnaire surveys and interviews to propose the supporting leadership factors for the mastery of core competencies for College English (CE) learners in one of the application-oriented universities (AOUs) in Shanghai, China. The research objectives included: 1) to identify the elements of support systems desirable for supporting the mastery of core competencies for CE learners; 2) to determine the leadership factors expected to support the mastery of core competencies for CE learners in AOUs in Shanghai, China. The quantitative analysis was applied on the data from literature, as well as the questionnaire surveys with 428 learners and 19 instructors, whereas qualitative method analyzed the data from the interviews with one instructional leader and two professors in this AOU. In terms of the educational elements coded from literature, 39 supporting leadership factors were synthesized and proposed, categorized into synergistic leadership factors of stakeholders' perception, leadership behavior, and external forces.

**Keywords:** synergistic leadership, supporting leadership factors, core competencies, College English, application-oriented universities

## 1. Introduction

Over the past few decades, some changes have been transforming into challenges for educators. These changes require a dynamic set of core competencies, which is the combination of necessary key knowledge, skills, attitudes and values, for individuals to cater to the present social, economic, cultural, and ecological requirements, as well as to get well prepared for the future development (Voogt & Roblin, 2012, P21, 2019; EU, 2019; CMOE, 2020). The required core competencies have also been named as key competencies (OECD, 2018) or key competences (EU, 2019), as well as 21st century skills (P21, 2019) or 21st century competences (Vogt & Roblin, 2012), etc. Consequently, a far-reaching shift in education system has been called for to support learners' mastery of these core competencies in terms of various contexts and backgrounds.

In China, English language teaching (ELT) is implemented from the primary schools to universities, whereas College English (CE) is taught in all types and levels of higher education (CMOE, 2020). With the development of frameworks for core competencies, it is essential for educators to have effective leadership in ELT to support the mastery of core competencies for CE learners from different types of universities, including the application-oriented universities (AOUs), one of university types in China sharing something in common with cooperative education (Coll & Zegwaard, 2011; Reinhard & Pogrzeba, 2016; Liu & Chen, 2021) and specifically to cultivate applied, compound and skilled talents engaging in specific workplace. University A is one of AOUs, acting as the authorized member in the educational reform for constructing a modern university system in Shanghai, which makes it feasible to conduct this research as the pilot for CE educational reform in the AOUs of Shanghai.

### 1.1 Background of the Study

Frameworks for core competencies have been developed in the form of required core competencies in the context of significant changes across the world (Voogt & Roblin, 2012; Lucas & Venckutė, 2020). To make

learners successful in today's world and well-prepared for the future life and work, education systems must be adapted to equipping them with such higher level of competencies (WEF, 2020) as critical thinking, problem-solving, collaboration, creativity, computational thinking, communication, learning to learn (P21, 2019; EU, 2019; OECD, 2018; WEF, 2020; Lucas & Venckutė, 2020; CMOE, 2020), etc. In recent five years, several frameworks have been revised and increasingly adopted as the helpful tools for policy makers, education providers and learners regionally or internationally. With these frameworks, some organizations and researchers have attempted to promote the integration of these competencies into the learning process, thus to frame the support systems in the meantime.

In the second half of the 2010s, developing the framework for core competencies attracted overwhelming attention in the education field of China (Wang, 2019; Wei et al., 2020). In 2020, China officially issued the National College English Teaching Requirements (2020), which proposes that CE teaching consist of three levels, i.e. fundamental, advanced, and extended levels, with three sets of courses, i.e. EGP (English for general purposes), ESP (English for specific purposes), and Intercultural Communication; and encourages that the universities or colleges select one of the three levels to start with the CE teaching and self-design the CE learning objectives based on learners' previous learning experience and the teaching contexts. Basically, the competencies included in the requirements (CMOE, 2020) are divided into four domains: 1) language competencies, focusing on the English communication competencies, especially the ESP communication skills, applied in the professional learning, social life and future career; 2) cultural competencies, focusing on the intercultural competencies; 3) thinking competencies, focusing on the critical thinking; and 4) learning competencies, focusing on the self-directed learning.

### *1.2 Research Objectives*

The following objectives were expected to be achieved:

- 1) to identify the educational elements likely to support the mastery of core competencies for CE learners;
- 2) to propose the leadership factors expected to support the mastery of core competencies for CE learners in AOUs in Shanghai, China;

## **2. Literature Review**

### *2.1 Synergistic Leadership Factors*

Synergistic leadership (Irby et al., 2002) was originally developed with the intention of including the voice from female in leadership to promote equity and to obtain the social justice (Brown & Irby, 1995). As Irby et al. (2000, 2002) analyzed, the Synergistic Leadership Theory emphasized that female' leadership behaviors may be influenced by other leadership factors of external forces, organizational structures, or perceptions in a different way from those of males. From their perspective, all these factors are at the respective apexes of a tetrahedron in six pairs, connecting each other directly (e.g. the direct connection between the organizational structure and the leadership behavior or the external forces), or indirectly (e.g. the indirect connection between the organizational structure and the beliefs, attitudes, and values). No matter directly or indirectly connected, all the four stellar points (factors) of the tetrahedron are interactive one another.

Some researchers have conducted studies to validate the Synergistic Leadership Theory and generalized it to both male and female leaders. Taking Holtkamp et al. (2007) as an example, they applied quantitative method to conduct two confirmatory factor analyses on the data gathered from the Organizational and Leadership Effectiveness Inventory (Irby et al., 2000), validating the constructs of the Synergistic Leadership. The theory itself was developed by means of qualitative method. Therefore, the validation via empirical research guaranteed the implementation of the theory and generalized it to all the leaders, not just giving consideration to females in leadership.

### *2.2 Learning Frameworks for Core Competencies*

The research on the learning frameworks for core competencies and the implementation was originated in linguist Chomsky's syntax theory (1969). From 1970 to 1990, the term "competence/competency" was applied in the theory and practice of language teaching, management, leadership, etc. Between 1990 and 2010, the research on core competencies came to a booming era in the education field. As EU (2006) summarized and defined in details, competences or competencies were extended to a combination of knowledge (including the established concepts, facts, figures, ideas and theories), skills (the abilities to put processes and existing knowledge in effect), and attitudes (disposition and mindset). Since the beginning of 2010, the sustainable development of the systematic frameworks and the implementation in curriculum or disciplines have facilitated

the research on core competencies into a new era. The learning frameworks from several organizations have been taken into practice for decades, updated for several versions, and well accepted in the international education sectors, such as the frameworks from US P21 (2019), OECD (2018), WEF (2020), EU (2019), etc.

With the latest version of the well-recognized frameworks, some similarities are shared in the support systems, which have been defined as a systematic construction of supporting educational elements for the mastery of these competencies (P21, 2019). As seen in Table 1, the similar elements include technology-enhanced, formative, and summative assessments, inquiry- and problem-based approaches in the curriculum and instruction, educators' professional learning communities, real-world contexts and expanded community and international involvement. All the frameworks consider external forces as part of educational open system (Senge, 2006), described as community beyond institutions (P21, 2019; EU, 2019), cross-sectoral cooperation (EU, 2019), industry partners (WEF, 2020), etc. The description "stakeholder engagement" (OECD, 2018) indicates the educational leadership is shared among stakeholders of the system, e.g. parents, employers, communities and students, which is in line with the Synergistic Leadership Theory (Irby et al., 2002).

Table 1. Educational Elements in the Support Systems of the Frameworks

US P21	OECD	EU	WEF
<b>Standards</b>			
1) the focus on skills, content knowledge, and expertise	--	--	--
2) understanding across and among key subjects as well as interdisciplinary themes			
3) deep understanding rather than shallow knowledge			
4) active engagement in the real-world data, tools, and experts, and in solving meaningful problems			
5) multiple measures of mastery			
<b>Assessment</b>			
6) high-quality standardized testing along with effective formative and summative assessments	6, 10	6, 7,	6, 7,
7) useful feedback on student performance embedded into everyday learning		8	8,
8) technology-enhanced, formative, and summative assessments to measure students' mastery of the skills			9
9) development of portfolios of student work			
10) assessment of the education system's effectiveness in reaching high levels of student competency			
<b>Curriculum and instruction</b>			
11) discreteness in the key subjects and interdisciplinary themes	13,	12,	11,
12) application of skills across content areas and competency-based approach	14	13,	12,
13) learning methods with the supportive technologies, inquiry- and problem-based approaches and higher thinking skills		14	13, 14
14) integration of community resources beyond school			
<b>Professional development</b>			
15) ways to integrate skills, tools, and teaching strategies into classroom practice		15	15
16) balance between direct instruction and project-oriented teaching methods			
17) deeper understanding of subject matter to enhance learners' skills			
18) professional learning communities to model the classroom learning			
19) ability to identify students' particular learning styles, intelligence, strengths, and weaknesses			
<b>Learning environments</b>			
20) learning practices, human support, and physical environments	25	21,	20,

21) educators' professional learning communities	22,	21,
22) relevant, real-world contexts (e.g., through project-based or other applied work)	25	22, 23,
23) quality learning tools, technologies, and resources		25
24) architectural and interior designs		
25) expanded community and international involvement		

### **More considerations**

#### **OECD (2018)**

26) non-linear learning progression but not standardized

#### **EU (2019)**

27) cross-sectoral cooperation

28) professional networks and communities beyond institutions

#### **WEF (2020)**

29) personalized learning but not standardized

30) game-based learning

31) multiple options for students to show their knowledge (presentation, songs, video, etc.)

32) public-private sectors' collaboration; online platform enabling students to track the progress

33) training on teachers' ICT skills

34) digital platform with teaching resources

35) professional development offered by industry partners

### **2.3 Leadership in ELT**

Effective leadership practices in ELT have been explored in recent research, some educational elements in which has been summarized in Table 2. For instance, McGee et al. (2015) investigated the practices to support teaching and learning for English learners, whereas Slapac (2021) conducted an exploratory case study on how to enhance learners' global competency via ELT. Some research dealt with language teacher leadership to improve learners' outcomes and empower teachers or instructors as professionals in ELT. Shah (2017) elaborated the competencies teachers should possess and indicated the lack of empirical research in the field of ELT to identify the leadership knowledge and skills required for teacher leadership. From learners' perspectives, Whitehead and Greenier (2019) attempted to establish a more complete conceptualization of teacher leadership in ELT.

Since instructors play a critical role in learners' outcomes, professional development has been a research focus over time (Day, 2012; Wyse & Moon, 2014; Shah, 2017; Whitehead & Greenier, 2019; Lesley et al., 2021; Slapac, 2021). Wyse and Moon (2014) found that significant changes could be made and the professional development mainly went in for the research team's engagement with the head teacher of the school. Lesley et al. (2021) summarized the approach to the change of the learning environment for the English curriculum. As to the assessment in ELT, Chan (2021) examined the development of listening test papers in Hong Kong from 1986 to 2018, indicating the importance of considerations in the assessment, thus to assure the authenticity in language testing.

Besides, Ni (2017) dealt with CE in China's context, trying to take the situation and the interdisciplinary learning into consideration while designing and implementing CE curriculum. However, it is obviously insufficient for ELT to only involve communication skills and learning abilities in the objectives, thus influencing the subsequent design and implementation. Meanwhile, generally and obviously, the studies on the leadership in ELT is not sufficient.

Table 2. Educational Elements in Leadership in ELT

Dimension	Elements	Literature
Curriculum and instruction	1) clear goals	McGee et al. (2015)
	2) taking leaders as the role models	
	3) empowering teaching and learning in ELT	
Professional development	4) ELT professional development	Slapac (2021)
Learning environments	5) more resource supports	
	6) long-lasting international and local partnerships and collaborations	Shah (2017)
Curriculum and instruction	7) language teacher leadership	
Curriculum and instruction	8) empowering instructors as professionals	Whitehead and Greenier (2019)
Standards	9) significant changes made to the pedagogy, the practice and the understanding of ELT	Wyse and Moon (2014)
Professional development	10) the research team's engagement with the instructional leader	Lesley et al. (2021)
Learning environments	11) establishing the identity as an instructional leader	
	12) training teacher leaders	
	13) developing a broader professional thinking	
	14) working with the crisis	
Standards	15) having the decision-making authority in the curricular	Chan (2021)
Assessment	16) persisting a long-term instructional vision	
Curriculum and instruction	17) giving considerations to the situations and contexts	Ni (2017)
	18) aligning the ELT content, methods, and the assessments with the national policy	
	19) changing CE curriculum design to the learning situation	
	20) adapting teaching content to internationalization and the development of the applied disciplines	

#### *2.4 Leadership for Supporting the Mastery of Four Domains of CE Core Competencies*

China's scholars also made contributions to the framework study in local context (Wei, 2020), and attempted to make changes in education by integrating the core competences into national curriculum policy and providing descriptions of the core competencies combined with the objectives of the curriculum (CMOE, 2020). According to the National Requirements for CE Teaching in China (2020), with reference to the English descriptions in 21st century skills (P21, 2019) and other well-recognized frameworks (OECD, 2018; EU, 2019; WEF, 2020), four domains in core competencies of CE learners in China are described.

Table 3. Educational Elements in Supporting the Mastery of Four Domains of CE Core Competencies

Competencies	Dimension	Elements	Literature
Language competencies	Professional development	1) mastering the instructional criteria and basic digital ELT operations	Xiao-Pang et al. (2021)
	Curriculum and instruction	2) integrating modern ICT with ELT	
Cultural competencies	Curriculum and instruction	3) being active listeners, by means of team interview, relay review, round table, to name just ten, etc.	Kivunja (2015)
		4) involving in the activities of team-building, information sharing and communication, etc.	
		5) working effectively in diversely-cultural teams with an open mind and the appreciation of diversity	
Thinking competencies	Curriculum and instruction	6) including individual practice, such as self-evaluation, with collaborative engagement, such as critical discussion	Bağ & Gürsoy (2021)
		7) relating the learning materials to learners' personal experiences and cultural backgrounds	
Learning competencies	Learning environments	8) goals management, consisting of five steps with the acronym SMART, i.e. to set specific, measurable, achievable and realistic goals, and make the goals timely	Kivunja (2015)
		9) independent working, which is to encourage learners to prioritize the tasks, to respond to the changes timely, to be flexible while the new change occurs, to take responsibility for the change management and self-evaluate the progress, to independently provide and justify effective proposals	
		10) self-directed learners, who should have persistent motivation and drive in spite of occasional mistakes, as well as opportunities to engage in higher-order cognitive process and proactive actions	

To date, little related research has been conducted on how to support learners' core competencies in China's AOU. Similar to the leading role in economics, finance, trade, logistics, and Sci-tec innovation in China, Shanghai always stands at the frontier of education reform and attracts abundant educational resources, which makes it feasible to conduct this research as the pilot for CE educational reform in the AOU of the whole nation. In such situation, this research is aiming at developing a proposed leadership model to be applied by the CE instructional leaders or the instructors in the AOU in Shanghai to support learners' mastery of core competencies effectively.

### 3. Methodology

Based on the Synergistic Leadership Theory (Irby et al., 2002), the Framework for 21st Century Learning (P21, 2019) and related research, this research attempts to propose the supporting leadership factors for the mastery of core competencies for CE learners in one AOU in Shanghai of China, with population of 2,100 CE learners and 20 CE instructors, giving big say to the perspectives from stakeholders, like learners, instructors, professors, instructional leaders.

#### 3.1 Research Design

In order to achieve the research objectives, the exploratory mixed research design was employed in one of the AOU as the pilot study. The quantitative analysis was applied on the data from literature and questionnaires, whereas qualitative method analyzed the data from the interview surveys.

For Objective 1), to identify the educational elements likely to support the mastery of core competencies for CE learners, the data was collected from the literature which provide the information or implications. Most of the resources were collected from the official websites of the international or regional organizations, and the best

accepted index databases in the world and China as well, such as Web of Science, ScienceDirect and CNKI. With the content analysis, the educational elements were synthesized for supporting the mastery of core competencies of CE learners with specific dimensions and behavioral indicators.

For Objective 2), data was from the questionnaire surveys respectively on the CE learners and instructors in the sample university, and the semi-structured interviews with one instructional leader and two professors in this university.

In Shanghai, CE is the curriculum implemented for freshmen and sophomores in 17 AOU. The respondents were randomly chosen from these CE learners, including 428 learners, i.e. 214 freshmen as well as the equivalent number of sophomores, and 19 instructors from the population. Then, simple random sampling was applied to have one instructional leaders (Interviewee A, the head of the School of Foreign Languages), and snowball sampling to have two professors (Interviewees B and C), all of whom were willing to be interviewed online.

### 3.2 Instrumentation

The instruments included the Questionnaires A for CE learners and B for instructors, as well as the questions for the semi-structured interviews with the instructional leaders and professors.

The questionnaires were designed in English and with Chinese directly machine-translated by Microsoft Word 2019, which was double checked by being translated back into English. The introduction part included the framework for CE learners' core competencies explained with the labels of four domains and some examples for each. The body of questionnaires consisted of three sections. The first section was the background including personal information, and language learning background (Questionnaire A) or CE teaching experience (Questionnaire B). The second and third sections of the questionnaires were both with reference to the 5-point Likert scale (Likert, 1932) ranging from 1 (not important), 3 (moderately important), to 5 (very important). All items in Section Two were worded positively. This section consisted of three sets of items, i.e. stakeholders' perceptions, leadership behaviors and external forces, with the descriptions treated based on the coding of educational elements in Table 1, 2, and 3. Each of the three set was respectively composed of 10, 25 (Questionnaire A) or 35 (Questionnaire B), and 5 items, totally 40 (Questionnaire A) or 50 (Questionnaire B) items in this section, rated on a five-point scale. The third section was an open-ended question for more ideas or suggestions to support the mastery of the core competencies. Overall, the pilot study were excellent with an alpha coefficient (Cronbach, 1951) of .988 for Questionnaire A and .97 for Questionnaire B.

The interviews were designed with the baseline questions on basis of the literature review, and further questions extended according to the interviewees' position, experience, and professional expertise. All the questions were for investigating the in-depth considerations from instructional leaders or professors to the differences between support systems for core competencies of CE learners in research-oriented universities and those in AOU, their comments on the results of the questionnaires, and specific suggestions to the supporting leadership factors for mastering core competencies of CE learners in AOU.

### 3.3 Data Analysis

For questionnaires, applying means analysis, the important elements were investigated respectively from perspectives of instructors and learners. Independent samples t-test was applied to distinguish the consensus and significant differences in supporting leadership factors between the learners and instructors, respectively with the educational elements from assessments, curriculum and instruction, and learning environment categorized into leadership factors of stakeholders' perceptions, leadership behavior and external forces.

The data from the interviews with instructional leaders and professors were analyzed by means of content analysis again to provide factors for professional development and detailed judgement, as well as reasons.

## 4. Results and Discussion

### 4.1 Stakeholders' Perceptions

According to the results from the questionnaire survey (Tables 4 and 5), learners and instructors showed little consensus on the perceptions of CE core competencies (Items 8 to 11) and the integration into the learning objectives (Item 12), assessment (Item 13), and curriculum and instruction (Items 14-17). The only consensus existed on Item 17, which showed no significant difference between learners and instructors in the perceptions that CE instruction should make change to current learning materials, pedagogy, and instructors' understanding of ELT at a significance level of .05.,  $t(445) = -1.543$ ,  $p = .124$ . However, learners were not so positive to supporting the mastery of CE core competencies compared to instructors. In the four domains of core

competencies, learners held most positive attitudes to learning competencies (Item 11), least to cultural competencies (Item 9), whereas instructors thought thinking competencies were the most important (Item 10). Though both learners and instructors believed CE should set the clear objectives focusing on the development of core competencies (Item 12), there existed difference at a significance level of .05.,  $t(445) = -2.759, p = .006$ . Instructors highlighted, more than learners, the importance of interdisciplinary competences (Item 14), the engagement of the real-world information, tools, and experts in CE learning (Item 15), and multiple measures (Item 16) in the instruction to support the mastery of core competencies.

In the interviews, all three interviewees emphasized the importance of integrating the four domains of core competencies into the objectives, as well as curriculum and instruction. Based on the results from the questionnaires, Interviewees A and C suggested to develop learners' cultural awareness and positive attitudes to higher-level thinking competencies. Interviewee B stressed stakeholders' perceptions of professional and practical learning in the instruction to present the characteristics of CE in AOU, both of whom mentioned the importance of involving industrial partners into the stakeholders.

Thus, from the respect of stakeholders' perceptions, it may be reasonable to take the following leadership factors into consideration:

- 1) stakeholders' values of the four domains of CE core competencies, especially learners' cultural awareness and their perceptions of higher-level thinking competencies;
- 2) the significant different perceptions between learners and instructors of the integration the core competencies into CE learning objectives, assessment, and curriculum and instruction;
- 3) stakeholders' attitudes to making change to current CE instruction and instructors' understanding of ELT;
- 4) stakeholders' perceptions, including those from industrial partners, of professional and practical learning;

#### 4.2 Leadership Behavior

In Tables 4 and 5, it indicated that both learners and instructors agreed on 18 leadership behaviors illustrated in the literature about the instructional behaviors likely to support CE learners' mastery of core competencies, at a significance level of .05., including supporting leadership behaviors in CE curriculum and instruction, assessment, and learning environment. From learners' point of view, the most important factors were to facilitate learners' persistent learning motivation and proactive behaviors (Item 29), to allow the equitable access to quality learning environment (Item 41), and to adapt the teaching content to the development of internationalization (Item 18). For instructors, the important leadership factors included selecting the learning materials with authentic, meaningful, and job-related language tasks (Item 22), enabling to learn in the relevant and real-world contexts (Item 20), and facilitating learners' persistent learning motivation and proactive actions (Item 29). Meanwhile, there existed significant difference in the importance of five factors at a significance level of .05., respectively  $t(445) = -.670, p = .006$  (enabling to learn in the relevant and real-world contexts);  $t(445) = -.713, p = .004$  (selecting the learning materials with authentic, meaningful, and job-related language tasks);  $t(445) = -.595, p = .019$  (including individual thinking practice);  $t(445) = -.552, p = .028$  (requiring learners to set specific, measurable, achievable and realistic goals, and make the goals timely);  $t(445) = -.537, p = .028$  (encouraging learners to independently manage the process of completing learning tasks); and  $t(445) = -.490, p = .046$  (allowing equitable access to learning environment). Additionally, though no significant difference between learners and instructors was found in their perspectives to the importance of promoting game-based learning approach (Item 30), instructors thought such leadership behavior was much less important, whereas learners were more positive to it.

In the interviews, interviewees analyzed that the most important leadership behaviors favored by both learners and instructors showed that their concerns with the learning content (Interviewee A), e.g. adapting the learning content or selecting the learning materials, learners' motivation and actions (Interviewees A, B and C), as well as learning environment (Interviewee A, C), all of which should be significant factors in instructors' leadership behaviors. Then, the disagreement on the five factors made it necessary for instructors to master the basic educational competences, e.g. how to influence or change learners' attitudes (Interviewee B), and understand the way in which learning content can actually enhance learners' core competencies (Interviewee C). Moreover, applying ICT in the instruction and assessment should be stressed (Interviewees A, B, and C), and digital competences may be critical in instructors' professional development, especially in Shanghai, the city with advanced ICT development in higher education (Interviewee A). As to promote game-based learning approach, it



may be better to involve such innovative approach into professional development of instructional competences prior to classroom practice (Interviewee A).

Considering the results from questionnaires and interviews, it may be proposed the leadership factors be valued respectively from the following aspects:

From aspect of curriculum and instruction:

- 1) adapting the teaching content to the development of internationalization;
- 2) developing learners' core competencies discretely in the context of interdisciplinary learning;
- 3) enabling learners to learn in relevant and real-world contexts, e.g. through project-based or other practical work;
- 4) providing more opportunities to apply core competencies in the interdisciplinary areas and the competency-based approach in learning.
- 5) selecting the learning materials with authentic, meaningful, and job-related language tasks;
- 6) developing active listeners by means of team interview, peer review, etc.;
- 7) encouraging learners to involve in the activities of information sharing and communication, etc.;
- 8) including individual thinking practice, e.g. self-evaluation, with collaborative engagement, e.g. critical discussion;
- 9) relating the learning materials to learners' personal experiences and cultural backgrounds.
- 10) requiring learners to set specific, measurable, achievable and realistic goals, and make the goals timely;
- 11) encouraging learners to independently manage the process of completing learning tasks;
- 12) instructing learners to have persistent learning motivation and proactive actions in spite of occasional mistakes;
- 13) providing multiple options for learners to show their knowledge, e.g. presentation, songs, video, etc.

From aspect of assessment:

- 1) supporting a balance of assessments, including high-quality standardized testing along with effective formative and summative classroom assessments;
- 2) developing portfolios of learners' work that demonstrate mastery of core competencies;
- 3) emphasizing useful feedback on learners' performance embedded into everyday learning;
- 4) applying technology-enhanced assessments that measure learners' mastery of core competencies.

From aspect of learning environment:

- 1) integrating ICT with CE instruction;
- 2) establishing online platform for providing instruction resources, tracking the learning progress, etc.
- 3) providing workplace practical English language training base;
- 4) allowing equitable access to physical and soft learning environments.

From aspect of instructors' professional development:

- 1) training instructors to master the basic and innovated instructional competences and digital operations for ELT;
- 2) engaging the research team with the instructional leader in the instructors' professional development;
- 3) training instructional leaders first;
- 4) highlighting the ways for instructors to integrate core competencies, modern tools, and teaching strategies into the classroom practice;
- 5) illustrating the deeper understanding of the way in which learning content can actually enhance learners' core competencies;
- 6) supporting professional development communities that enable educators to collaborate, share best classroom practices, and integrate core competencies into classroom practice;

- 7) providing professional development programs cooperated with industrial partners.

#### 4.3 External Forces

Seen in Tables 4 and 5, learners and instructors made consensus on all the leadership factors about the external forces at a significance level of .05., respectively  $t(445)=-.062, p=.803$ ;  $t(445)=-.106, p=.668$ ;  $t(445)=-.084, p=.736$ ; and  $t(445)=-.085, p=.720$ . In addition, some learners suggested in the responses to the open question that learners international study experience, no matter online or face to face, should be valued in CE curriculum and instruction.

All the interviewees agreed with the results from the questionnaire survey, especially emphasizing the importance of supporting external resources which may enhance job-related skills, e.g. education-industry collaboration in practical learning (Interviewee A), industrial leaders' involvement (Interviewees A and C), etc., and develop learners' multi-competencies, e.g. international collaboration in online learning to support learners' mastery of all the core competencies (Interviewee A), and the access to the resources in city museums (Interviewee A), libraries (Interviewee B), local cultural heritage (Interviewee C) to facilitate learners' cultural and learning competencies, etc.

From respect of external forces, it may be synthesized that the following supporting leadership factors deserve consideration:

- 1) community and city resources beyond campus, e.g. museums, libraries, cultural heritage, etc.;
- 2) long-lasting international and local partnerships and collaborations cross universities;
- 3) expanded learning community and international involvement in learning;
- 4) international learning opportunities, e.g. learners' outcomes in the international study tour as part of CE assessment;
- 5) practical learning opportunities with industrial partners;
- 6) opportunities for demonstrating learning outcomes to educators and industrial partners;
- 7) establishing instructors' virtual professional development communities nationwide, and internationally as well.

Table 4. Means Analysis

	<b>Identity</b>	<b>N</b>	<b>Mean</b>	<b>Std. Deviation</b>
Item 8	Learners	428	3.68	1.112
	Instructors	19	4.58	.507
Item 9	Learners	428	3.57	1.077
	Instructors	19	4.63	.496
Item 10	Learners	428	3.70	1.070
	Instructors	19	4.68	.478
Item 11	Learners	428	3.82	1.078
	Instructors	19	4.53	.612
Item 12	Learners	428	3.62	1.085
	Instructors	19	4.32	.749
Item 13	Learners	428	3.62	1.065
	Instructors	19	4.16	.958
Item 14	Learners	428	3.59	1.077
	Instructors	19	4.37	.761
Item 15	Learners	428	3.80	1.092
	Instructors	19	4.37	.831
Item 16	Learners	428	3.71	1.010
	Instructors	19	4.37	.684

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Item 17	Learners	428	3.61	1.077
	Instructors	19	4.00	.943
Item 18	Learners	428	3.74	1.035
	Instructors	19	4.05	1.026
Item 19	Learners	428	3.66	1.054
	Instructors	19	4.11	.875
Item 20	Learners	428	3.70	1.049
	Instructors	19	4.37	.597
Item 21	Learners	428	3.67	1.043
	Instructors	19	4.05	.848
Item 22	Learners	428	3.71	1.061
	Instructors	19	4.42	.507
Item 23	Learners	428	3.43	1.140
	Instructors	19	3.89	.875
Item 24	Learners	428	3.64	1.074
	Instructors	19	4.00	.882
Item 25	Learners	428	3.56	1.090
	Instructors	19	4.16	.602
Item 26	Learners	428	3.59	1.097
	Instructors	19	3.84	.765
Item 27	Learners	428	3.66	1.078
	Instructors	19	4.21	.787
Item 28	Learners	428	3.73	1.055
	Instructors	19	4.26	.562
Item 29	Learners	428	3.78	1.042
	Instructors	19	4.32	.582
Item 30	Learners	428	3.59	1.111
	Instructors	19	3.21	.855
Item 31	Learners	428	3.70	1.083
	Instructors	19	3.79	.855
Item 32	Learners	428	3.70	1.056
	Instructors	19	3.89	.809
Item 33	Learners	428	3.67	.995
	Instructors	19	3.89	.809
Item 34	Learners	428	3.58	1.100
	Instructors	19	4.16	.765
Item 35	Learners	428	3.57	1.041
	Instructors	19	4.00	.667
Item 36	Learners	428	3.60	1.044
	Instructors	19	4.00	.816
Item 37	Learners	428	3.60	1.070
	Instructors	19	3.74	.872

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Item 38	Learners	428	3.62	1.070
	Instructors	19	4.11	.658
Item 39	Learners	428	3.55	1.082
	Instructors	19	3.84	.688
Item 40	Learners	428	3.65	1.071
	Instructors	19	4.05	.780
Item 41	Learners	428	3.77	1.057
	Instructors	19	4.26	.653
Item 42	Learners	428	3.73	1.041
	Instructors	19	4.16	.688
Item 43	Learners	428	3.68	1.058
	Instructors	19	3.74	.933
Item 44	Learners	428	3.63	1.058
	Instructors	19	3.74	.991
Item 45	Learners	428	3.69	1.056
	Instructors	19	3.79	.787
Item 46	Learners	428	3.71	1.068
	Instructors	19	3.79	.918
Item 47	Learners	428	3.65	1.014
	Instructors	19	3.74	.872
Item 48	Instructors	19	3.67	.970
Item 49	Instructors	19	3.89	1.132
Item 50	Instructors	19	4.00	.907
Item 51	Instructors	19	4.00	.840
Item 52	Instructors	19	4.17	.786
Item 53	Instructors	19	4.00	.907
Item 54	Instructors	19	4.00	.907
Item 55	Instructors	19	3.78	1.003
Item 56	Instructors	19	3.94	.998
Item 57	Instructors	19	3.83	.985

Table 5. Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means		95% Confidence Interval of the Difference				
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Item 8	Equal variances assumed	9.128	.003	-3.524	445	.000	-.904	.256	-1.408	-.400
	Equal variances not assumed			-7.050	26.446	.000	-.904	.128	-1.167	-.640

Item 9	Equal variances assumed	11.254	.001	-4.283	445	.000	-1.064	.248	-1.552	-.576
	Equal variances not assumed			-8.508	26.285	.000	-1.064	.125	-1.321	-.807
Item 10	Equal variances assumed	9.484	.002	-4.005	445	.000	-.988	.247	-1.473	-.503
	Equal variances not assumed			-8.155	26.853	.000	-.988	.121	-1.237	-.739
Item 11	Equal variances assumed	3.144	.077	-2.844	445	.005	-.709	.249	-1.198	-.219
	Equal variances not assumed			-4.733	23.281	.000	-.709	.150	-1.018	-.399
Item 12	Equal variances assumed	3.343	.068	-2.759	445	.006	-.694	.252	-1.189	-.200
	Equal variances not assumed			-3.863	21.499	.001	-.694	.180	-1.068	-.321
Item 13	Equal variances assumed	1.536	.216	-2.156	445	.032	-.536	.249	-1.025	-.047
	Equal variances not assumed			-2.376	20.027	.028	-.536	.226	-1.007	-.065
Item 14	Equal variances assumed	4.769	.030	-3.101	445	.002	-.775	.250	-1.266	-.284
	Equal variances not assumed			-4.254	21.337	.000	-.775	.182	-1.153	-.397
Item 15	Equal variances assumed	1.892	.170	-2.252	445	.025	-.572	.254	-1.071	-.073
	Equal variances not assumed			-2.891	20.863	.009	-.572	.198	-.983	-.160
Item 16	Equal variances assumed	2.113	.147	-2.800	445	.005	-.656	.234	-1.116	-.196
	Equal variances not assumed			-3.991	21.645	.001	-.656	.164	-.997	-.315
Item 17	Equal variances assumed	3.569	.060	-1.543	445	.124	-.388	.251	-.882	.106
	Equal variances not assumed			-1.743	20.144	.097	-.388	.222	-.852	.076
Item 18	Equal variances assumed	.032	.859	-1.306	445	.192	-.317	.243	-.793	.160
	Equal variances not assumed			-1.316	19.660	.203	-.317	.241	-.819	.186
Item 19	Equal variances assumed	2.197	.139	-1.818	445	.070	-.446	.246	-.929	.036
	Equal variances not assumed			-2.155	20.388	.043	-.446	.207	-.878	-.015
Item 20	Equal variances assumed	5.036	.025	-2.761	445	.006	-.670	.243	-1.147	-.193
	Equal variances not assumed			-4.584	23.252	.000	-.670	.146	-.972	-.368

Item 21	Equal variances assumed	3.237	.073	-1.573	445	.116	-.382	.243	-.859	.095
	Equal variances not assumed			-1.901	20.494	.071	-.382	.201	-.801	.037
Item 22	Equal variances assumed	6.315	.012	-2.913	445	.004	-.713	.245	-1.194	-.232
	Equal variances not assumed			-5.608	25.627	.000	-.713	.127	-.975	-.452
Item 23	Equal variances assumed	7.223	.007	-1.763	445	.079	-.467	.265	-.988	.054
	Equal variances not assumed			-2.244	20.807	.036	-.467	.208	-.900	-.034
Item 24	Equal variances assumed	5.809	.016	-1.429	445	.154	-.357	.250	-.849	.134
	Equal variances not assumed			-1.711	20.443	.102	-.357	.209	-.793	.078
Item 25	Equal variances assumed	11.201	.001	-2.361	445	.019	-.595	.252	-1.090	-.100
	Equal variances not assumed			-4.023	23.596	.001	-.595	.148	-.900	-.289
Item 26	Equal variances assumed	6.658	.010	-1.005	445	.316	-.256	.254	-.756	.245
	Equal variances not assumed			-1.395	21.431	.177	-.256	.183	-.636	.125
Item 27	Equal variances assumed	4.375	.037	-2.204	445	.028	-.552	.250	-1.044	-.060
	Equal variances not assumed			-2.934	21.114	.008	-.552	.188	-.942	-.161
Item 28	Equal variances assumed	6.686	.010	-2.202	445	.028	-.537	.244	-1.015	-.058
	Equal variances not assumed			-3.870	24.045	.001	-.537	.139	-.823	-.250
Item 29	Equal variances assumed	4.700	.031	-2.232	445	.056	-.538	.241	-1.011	-.064
	Equal variances not assumed			-3.766	23.463	.001	-.538	.143	-.833	-.243
Item 30	Equal variances assumed	1.619	.204	1.482	445	.139	.383	.258	-.125	.891
	Equal variances not assumed			1.883	20.796	.074	.383	.203	-.040	.806
Item 31	Equal variances assumed	2.876	.091	-.370	445	.712	-.093	.252	-.588	.402
	Equal variances not assumed			-.459	20.649	.651	-.093	.203	-.516	.329
Item 32	Equal variances assumed	3.777	.053	-.799	445	.425	-.196	.245	-.679	.286
	Equal variances not assumed			-1.019	20.818	.320	-.196	.193	-.597	.205

Item 33	Equal variances assumed	5.609	.018	-.978	445	.329	-.227	.232	-.682	.229
	Equal variances not assumed			-1.181	20.494	.251	-.227	.192	-.626	.173
Item 34	Equal variances assumed	7.994	.005	-2.276	445	.023	-.581	.255	-1.082	-.079
	Equal variances not assumed			-3.168	21.449	.005	-.581	.183	-.962	-.200
Item 35	Equal variances assumed	11.908	.001	-1.801	445	.072	-.435	.241	-.909	.040
	Equal variances not assumed			-2.699	22.101	.013	-.435	.161	-.768	-.101
Item 36	Equal variances assumed	6.580	.011	-1.665	445	.097	-.404	.243	-.881	.073
	Equal variances not assumed			-2.084	20.701	.050	-.404	.194	-.808	.000
Item 37	Equal variances assumed	2.306	.130	-.538	445	.591	-.134	.249	-.624	.355
	Equal variances not assumed			-.649	20.481	.524	-.134	.207	-.564	.296
Item 38	Equal variances assumed	9.772	.002	-1.945	445	.052	-.481	.248	-.968	.005
	Equal variances not assumed			-3.018	22.459	.006	-.481	.160	-.812	-.151
Item 39	Equal variances assumed	10.289	.001	-1.151	445	.250	-.288	.251	-.781	.204
	Equal variances not assumed			-1.734	22.154	.097	-.288	.166	-.633	.056
Item 40	Equal variances assumed	7.079	.008	-1.630	445	.104	-.405	.249	-.894	.083
	Equal variances not assumed			-2.177	21.134	.041	-.405	.186	-.793	-.018
Item 41	Equal variances assumed	3.548	.060	-2.002	445	.046	-.490	.245	-.971	-.009
	Equal variances not assumed			-3.093	22.412	.005	-.490	.158	-.818	-.162
Item 42	Equal variances assumed	7.009	.008	-1.787	445	.075	-.431	.241	-.906	.043
	Equal variances not assumed			-2.602	21.835	.016	-.431	.166	-.775	-.087
Item 43	Equal variances assumed	2.644	.105	-.250	445	.803	-.062	.247	-.547	.424
	Equal variances not assumed			-.280	20.108	.782	-.062	.220	-.521	.398
Item 44	Equal variances assumed	1.708	.192	-.429	445	.668	-.106	.247	-.592	.380
	Equal variances not assumed			-.455	19.864	.654	-.106	.233	-.592	.380

Item 45	Equal variances assumed	4.838	.028	-.418	445	.676	-.103	.245	-.585	.380
	Equal variances not assumed			-.546	20.983	.591	-.103	.188	-.493	.288
Item 46	Equal variances assumed	3.931	.048	-.337	445	.736	-.084	.249	-.573	.406
	Equal variances not assumed			-.387	20.226	.703	-.084	.217	-.536	.368
Item 47	Equal variances assumed	1.263	.262	-.359	445	.720	-.085	.237	-.550	.380
	Equal variances not assumed			-.413	20.224	.684	-.085	.206	-.514	.344

## 5. Conclusion

This research was conducted as a pilot study, focusing on the leadership factors to support CE learners' mastery of core competencies in one of the AOU in Shanghai, China. With the questionnaire surveys and interviews, in terms of the educational elements coded from literature, 39 supporting leadership factors were synthesized and proposed, categorized into synergistic leadership factors of stakeholders' perception, leadership behavior, and external forces. This research mainly benefits instructional leaders and instructors of CE in this AOU in Shanghai of China, as well as being beneficial to researchers in related fields, administrators or supervisors of CE instruction, heads of AOU in similar contexts, and other stakeholders in corresponding institutions and organizations. Meanwhile, it also provides reference for the AOU in other cities of China to figure out the leadership factors fitting into their own contexts. However, since this research deals with the leadership factors at the instructional level, the factors of organizational structure, in terms of the Synergistic Leadership (Irby et al., 2002), still require further study from a broader perspective.

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