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

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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 AOU 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 (Voogt & 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 AOU, 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 AOU 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 AOU's 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’s 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 |
|--------|------|----|-----|
| **Standards** | | | |
| 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 | | | |
| **Assessment** | | | |
| 6) high-quality standardized testing along with effective formative and summative assessments | 6, 10 | 6, 7 | 6, 8 |
| 7) useful feedback on student performance embedded into everyday learning | | 8, 7 | |
| 8) technology-enhanced, formative, and summative assessments to measure students’ mastery of the skills | | 8, 8 | 8 |
| 9) development of portfolios of student work | | | |
| 10) assessment of the education system’s effectiveness in reaching high levels of student competency | | | |
| **Curriculum and instruction** | | | |
| 11) discreteness in the key subjects and interdisciplinary themes | 13, 14 | 12, 13 | 11, 12 |
| 12) application of skills across content areas and competency-based approach | 14, 15 | 13, 14 | 12, 13 |
| 13) learning methods with the supportive technologies, inquiry- and problem-based approaches and higher thinking skills | | | |
| 14) integration of community resources beyond school | | | |
| **Professional development** | | | |
| 15) ways to integrate skills, tools, and teaching strategies into classroom practice | 15, 16 | 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 | | | |
| **Learning environments** | | | |
| 20) learning practices, human support, and physical environments | 25, 26 | 21, 22 | 20, 21 |
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                               |                                   |
|                                    | 4) ELT professional development                                         |                                   |
| Professional development           |                                                                          |                                   |
| Learning environments              | 5) more resource supports                                               | Slapac (2021)                     |
|                                    | 6) long-lasting international and local partnerships and collaborations  |                                   |
| Curriculum and instruction         | 7) language teacher leadership                                          | Shah (2017)                       |
| Standards                          | 8) empowering instructors as professionals                              | Whitehead and Greenier (2019)     |
|                                    | 9) significant changes made to the pedagogy, the practice and the        | Wyse and Moon (2014)              |
|                                    | 10) the research team’s engagement with the instructional leader        |                                   |
| Professional development           |                                                                          |                                   |
| Learning environments              | 11) establishing the identity as an instructional leader                | Lesley et al. (2021)              |
|                                    | 12) training teacher leaders                                           |                                   |
|                                    | 13) developing a broader professional thinking                          |                                   |
|                                    | 14) working with the crisis                                            |                                   |
|                                    | 15) having the decision-making authority in the curricular               |                                   |
|                                    | 16) persisting a long-term instructional vision                          |                                   |
| Standards                          | 17) giving considerations to the situations and contexts                | Chan (2021)                       |
| Curriculum and instruction         | 18) aligning the ELT content, methods, and the assessments with the      | Ni (2017)                         |
|                                    | 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’s. 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’s 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’s 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’s 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 AOUs. 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 AOUs, their comments on the results of the questionnaires, and specific suggestions to the supporting leadership factors for mastering core competencies of CE learners in AOUs.

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 \( t(445) = -6.700, p = .006 \) (enabling to learn in the relevant and real-world contexts); \( t(445) = -7.13, p = .004 \) (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 more 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

| Identity | N     | Mean | Std. Deviation |
|----------|-------|------|----------------|
| 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           |
| Item  | Learners | Instructors |   |   |
|-------|----------|-------------|---|---|
| Item 17 | 428      | 19          | 3.61 | 1.077 |
| Item 18 | 428      | 19          | 3.74 | 1.035 |
| Item 19 | 428      | 19          | 3.66 | 1.054 |
| Item 20 | 428      | 19          | 3.70 | 1.049 |
| Item 21 | 428      | 19          | 3.67 | 1.043 |
| Item 22 | 428      | 19          | 3.71 | 1.061 |
| Item 23 | 428      | 19          | 3.43 | 1.140 |
| Item 24 | 428      | 19          | 3.64 | 1.074 |
| Item 25 | 428      | 19          | 3.56 | 1.090 |
| Item 26 | 428      | 19          | 3.59 | 1.097 |
| Item 27 | 428      | 19          | 3.66 | 1.078 |
| Item 28 | 428      | 19          | 3.73 | 1.055 |
| Item 29 | 428      | 19          | 3.78 | 1.042 |
| Item 30 | 428      | 19          | 3.59 | 1.111 |
| Item 31 | 428      | 19          | 3.70 | 1.083 |
| Item 32 | 428      | 19          | 3.70 | 1.056 |
| Item 33 | 428      | 19          | 3.67 | 0.995 |
| Item 34 | 428      | 19          | 3.58 | 1.100 |
| Item 35 | 428      | 19          | 3.57 | 1.041 |
| Item 36 | 428      | 19          | 3.60 | 1.044 |
| Item 37 | 428      | 19          | 3.60 | 1.070 |
| Item   | Learners | Instructors |
|--------|----------|-------------|
| 38     | 428      | 19          |
|        | 3.62     | 4.11        |
|        | 1.070    | .658        |
| 39     | 428      | 19          |
|        | 3.55     | 3.84        |
|        | 1.082    | .688        |
| 40     | 428      | 19          |
|        | 3.65     | 4.05        |
|        | 1.071    | .780        |
| 41     | 428      | 19          |
|        | 3.77     | 4.26        |
|        | 1.057    | .653        |
| 42     | 428      | 19          |
|        | 3.73     | 4.16        |
|        | 1.041    | .688        |
| 43     | 428      | 19          |
|        | 3.68     | 3.74        |
|        | 1.058    | .933        |
| 44     | 428      | 19          |
|        | 3.63     | 3.74        |
|        | 1.058    | .991        |
| 45     | 428      | 19          |
|        | 3.69     | 3.79        |
|        | 1.056    | .787        |
| 46     | 428      | 19          |
|        | 3.71     | 3.79        |
|        | 1.068    | .918        |
| 47     | 428      | 19          |
|        | 3.65     | 3.74        |
|        | 1.014    | .872        |
| 48     | 19       | 19          |
|        | 3.67     | 3.89        |
|        | .970     | 1.132       |
| 49     | 19       | 19          |
|        | 4.00     |              |
|        | .907     |              |
| 50     | 19       | 19          |
|        | 4.00     |              |
|        | .840     |              |
| 51     | 19       | 19          |
|        | 4.00     |              |
|        | .907     |              |
| 52     | 19       | 19          |
|        | 4.17     |              |
|        | .786     |              |
| 53     | 19       | 19          |
|        | 4.00     |              |
|        | .907     |              |
| 54     | 19       | 19          |
|        | 4.00     |              |
|        | .907     |              |
| 55     | 19       | 19          |
|        | 3.78     |              |
|        | 1.003    |              |
| 56     | 19       | 19          |
|        | 3.94     |              |
|        | .998     |              |
| 57     | 19       | 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  | 9.128 | .003 | -3.524 | 445 | .000 | -.904 | .256 | -1.408 | -.400 |
| assumed          |      |      |    |     |                |                |                          |
| Equal variances  | -7.050 | 26.446 | .000 | -.904 | .128 | -1.167 | -.640 |
| not assumed      |      |      |    |     |                |                |                          |
| Item  | Equal variances assumed | Equal variances not assumed |
|------|-------------------------|----------------------------|
| 9    | 11.254 .001 -4.283 445 .000 -1.064 .248 -1.552 -.576 | -8.508 26.285 .000 -1.064 .125 -1.321 -.807 |
| 10   | 9.484 .002 -4.005 445 .000 -.988 .247 -1.473 -.503 | -8.155 26.853 .000 -.988 .121 -1.321 -.739 |
| 11   | 3.144 .077 -2.844 445 .005 -.709 .249 -1.198 -.219 | -4.733 23.281 .000 -.709 .150 -1.018 -.399 |
| 12   | 3.343 .068 -2.759 445 .006 -.694 .252 -1.189 -.200 | -3.863 21.499 .001 -.694 .180 -1.068 -.321 |
| 13   | 1.536 .216 -2.156 445 .032 -.536 .249 -1.025 -.047 | -2.376 20.027 .028 -.536 .226 -1.007 -.065 |
| 14   | 4.769 .030 -3.101 445 .002 -.775 .250 -1.266 -.284 | -4.254 21.337 .000 -.775 .182 -1.153 -.397 |
| 15   | 1.892 .170 -2.252 445 .025 -.572 .254 -1.071 -.073 | -2.891 20.863 .009 -.572 .198 -.983 -.160 |
| 16   | 2.113 .147 -2.800 445 .005 -.656 .234 -1.116 -.196 | -3.991 21.645 .001 -.656 .164 -.997 -.315 |
| 17   | 3.569 .060 -1.543 445 .124 -.388 .251 -.882 .106 | -1.743 20.144 .097 -.388 .222 -.852 .076 |
| 18   | .032 .859 -1.306 445 .192 -.317 .243 -.793 .160 | -1.316 19.660 .203 -.317 .241 -.819 .186 |
| 19   | 2.197 .139 -1.818 445 .070 -.446 .246 -.929 .036 | -2.155 20.388 .043 -.446 .207 -.878 -.015 |
| 20   | 5.036 .025 -2.761 445 .006 -.670 .243 -1.147 -.193 | -4.584 23.252 .000 -.670 .146 -.972 -.368 |
| Item  | Equal variances assumed | Equal variances not assumed |
|-------|-------------------------|-----------------------------|
| Item 21 | 3.237 .073 -1.573 445 .116 -.382 .243 -.859 .095 |                  |
| Item 22 | 6.315 .012 -2.913 445 .004 -.713 .245 -1.194 -.232 |                  |
| Item 23 | 7.223 .007 -1.763 445 .079 -.467 .265 -.988 .054 |                  |
| Item 24 | 5.809 .016 -1.429 445 .154 -.357 .250 -0.849 .134 |                  |
| Item 25 | 11.201 .001 -2.361 445 .019 -.595 .252 -1.090 -.100 |                  |
| Item 26 | 6.658 .010 -1.005 445 .316 -.256 .254 -.756 .245 |                  |
| Item 27 | 4.375 .037 -2.204 445 .028 -.552 .250 -1.044 -.060 |                  |
| Item 28 | 6.686 .010 -2.202 445 .028 -.537 .244 -1.015 -.058 |                  |
| Item 29 | 4.700 .031 -2.232 445 .056 -.538 .241 -1.011 -.064 |                  |
| Item 30 | 1.619 .204 1.482 445 .139 .383 .258 -.125 .891 |                  |
| Item 31 | 2.876 .091 -.370 445 .712 -.093 .252 -0.588 .402 |                  |
| Item 32 | 3.777 .053 -.799 445 .425 -.196 .245 -.679 .286 |                  |

**Equal variances assumed**

**Equal variances not assumed**
| Item | Equal variances assumed | Equal variances not assumed |
|------|-------------------------|-----------------------------|
| 33   | 5.609 .018 -978 445 .329 -227 .232 -682 .229 | -1.181 20.494 .251 -227 .192 -626 .173 |
| 34   | 7.994 .005 -2.276 445 .023 -581 .255 -1.082 -.079 | -3.168 21.449 .005 -581 .183 -962 -.200 |
| 35   | 11.908 .001 -1.801 445 .072 -435 .241 -909 .040 | -2.699 22.101 .013 -435 .161 -768 -.101 |
| 36   | 6.580 .011 -1.665 445 .097 -404 .243 -881 .073 | -2.084 20.701 .050 -404 .194 -808 .000 |
| 37   | 2.306 .130 -.538 445 .591 -.134 .249 -624 .355 | -.649 20.481 .524 -.134 .207 -564 .296 |
| 38   | 9.772 .002 -1.945 445 .052 -481 .248 -968 .005 | -3.018 22.459 .006 -481 .160 -812 -.151 |
| 39   | 10.289 .001 -1.151 445 .250 -288 .251 -781 .204 | -1.734 22.154 .097 -288 .166 -633 .056 |
| 40   | 7.079 .008 -1.630 445 .104 -405 .249 -894 .083 | -2.177 21.134 .041 -405 .186 -793 -.018 |
| 41   | 3.548 .060 -2.002 445 .046 -490 .245 -971 -.009 | -3.093 22.412 .005 -490 .158 -818 -.162 |
| 42   | 7.009 .008 -1.787 445 .075 -431 .241 -906 .043 | -2.602 21.835 .016 -431 .166 -775 -.087 |
| 43   | 2.644 .105 -2.250 445 .803 -.062 .247 -547 .424 | -.280 20.108 .782 -.062 .220 -521 .398 |
| 44   | 1.708 .192 -.429 445 .668 -.106 .247 -592 .380 | -.455 19.864 .654 -.106 .233 -592 .380 |
### 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 AOUs 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 AOUs in similar contexts, and other stakeholders in corresponding institutions and organizations. Meanwhile, it also provides reference for the AOUs 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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