Critical Thinking & Lifelong Learning: An ADKAR Model-Based Framework for Managing a Change in Thinking & English Language Learning Styles at the Secondary Stage

التفكير الناقد والتعلم المستمر: تصور مقترح لإدارة تغيير أساليب التفكير وتعلم اللغة الانجليزية بالمرحلة الثانوية في ضوء نموذج أدكار

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Abstract.

The general secondary stage in Egypt is a vital educational phase since it plays an essential role in developing students' thinking and learning styles to prepare them for life in general and higher education in particular. Accordingly, it has become urgent and persistent to develop secondary-stage students' critical thinking styles while acquainting them with self-learning skills that would facilitate lifelong learning to guarantee meaningful learning and active participation in public life. This will eventually qualify them to do their future careers, especially when it is connected with mastery of the English language, which has become a pre-requisite for many jobs in Egypt. Therefore, English language teaching (ELT) at the secondary stage should be given priority since language teachers can act as agents of change. The aim of ELT to secondary-school students is to equip them with the necessary language, thinking and study skills to communicate effectively and to understand spoken and written English competently. The current exam-oriented language learning/teaching mode dominant at the secondary stage does not allow for developing critical thinking and lifelong learning - new skills reinforced by 'Hello for Secondary Schools', the currently used English Teaching Series. Therefore, the present study aims at proposing a framework based on ADKAR Change Management Model to improve secondary-stage students' learning and thinking styles by fostering their critical thinking and lifelong learning skills while learning English as a foreign language. This involves: (1) investigating the real thinking and lifelong language learning needs of secondary-stage students from expert teachers' perspectives (i.e. through conducting some structured interviews online with 20 secondary-stage expert

teachers); (2) identifying the language-teaching competencies needed by secondary-school language teachers (i.e. through administering a questionnaire to 60 expert teachers); and (3) employing and triangulating the obtained data to fit them in within the pivots of ADKAR Model to reach a final framework based on empirical evidence. To reach these objectives, a qualitative survey research methodology was employed by triangulating both questionnaire and interview results to fit in within the proposed model. The study mainly suggests that in order for the secondary-stage language teachers to be effective agents of change, they have to lead a drastic change in teaching/learning methods and styles and managing students' learning inside the classroom by consistently implementing the phases proposed by ADKAR Model.

***Keywords*.** English Language Learning; Secondary Education; Lifelong Learning; Critical Thinking; Learning and Thinking Styles; ADKAR Change Management Model.

مستخلص الدراسة باللغة العربية

تعد مرحلة التعليم الثانوي العام في مصر من المراحل الدراسية الحيوية ، نظرا لأنها تلعب دورا أساسيا ومهما في إعداد الفرد للحياة بشكل عام ، وإعداده لمرحلة التعليم العالي على وجه الخصوص وذلك بتنمية أساليب التفكير وطرق التعلم لديه. ومن هذا المنطلق ، أصبح لزاما على المدرسة تنمية أساليب التفكير الناقد Critical Thinking لدى طلاب هذه المرحلة خلال إكسابهم مهارات التعلم الذاتي التي تضمن تحقق التعلم المستمر مدى الحياة Lifelong Learningلديهم ، وذلك لضمان حدوث تعلم حقيقي ذي معنى يؤهلهم للمشاركة النشطة في الحياة العامة ؛ وهذا سيؤهلهم في نهاية المطاف للقيام بأعبائهم ومهامهم الوظيفية في المستقبل على أكمل وجه ، خاصة إذا تعلق الأمر بإتقان اللغة الإنجليزية التي أضحت متطلبا أساسيا من متطلبات سوق العمل في مصر. لذا ، وجب إعطاء تعليم اللغة الإنجليزية بالمرحلة الثانوية أولوية خاصة ، لا سيما وأن معلمي اللغة الإنجليزية يمكن أن يكونوا عملاء ووسائط في حدوث عملية التغيير المطلوب Agents of Change. ويتمثل الهدف الرئيس من تعليم اللغة الإنجليزية لطلاب المرحلة الثانوية في إمدادهم بمهارات التفكير والدراسة واللغة اللازمة والمطلوبة من أجل التواصل الفعال وكذا الفهم الدقيق الكافي للغة المنطوقة والمكتوبة. وتتمثل مشكلة الدراسة في أن طرق التعليم والتعلم السائدة حاليا في التعليم الثانوي تتمركز حول الإمتحان Exam-Oriented بشكل لا يسمح بتنمية التفكير الناقد Critical Thinking والتعلم المستمر مدى الحياة Lifelong Learning – وهي مهارات جديدة متضمنة في سلسلة تعليم اللغة الإنجليزية المستخدمة حاليا بالمدارس الثانوية *'Hello for Secondary Schools'*، وهو وضع جدير بالدراسة من أجل التغيير والتطوير. لذا تهدف الدراسة الحالية إلى إقتراح تصور مبني على نموذج "أدكار" في إدارة التغيير ADKAR Change Management Model بهدف تغيير وتحسين أساليب التفكير والتعلم لدى طلاب المرحلة الثانوية ، وذلك بتعزيز مهارات التفكير الناقد والتعلم المستمر لديهم أثناء تعلم اللغة الإنجليزية كلغة أجنبية (EFL). وهذا يتضمن الأهداف الفرعية والإجراءات التالية: (1) تقصي وتعرف إحتياجات

طلاب المرحلة الثانوية الفعلية فيما يخص مهارات التفكير الناقد والتعلم المستمر – مدى الحياة – للغة الإنجليزية من منظور موجهيها ومعلميها الخبراء بالمرحلة الثانوية ، وذلك عن طريق إجراء المقابلات الشخصية المنظمة عبر الإنترنت Online Structured Interviews مع 20 مشاركا ؛ (2) تعرف كفايات تعليم اللغة الإنجليزية المطلوبة لمعلمي المرحلة الثانوية في ضوء مراحل نموذج أدكار ، وذلك من خلال تطبيق إستبيان Questionnaire – بنسختين: ورقية وإلكترونية – على 60 مشاركا من معلمي اللغة الخبراء بالمرحلة الثانوية ؛ (3) توظيف البيانات السابقة بعد الحصول عليها – جنبا إلى جنب مع الأدبيات ذات الصلة – بشكل بيني تحت مظلة المراحل الخمسة لنموذج أدكار في وضع التصور النهائي Final Framework لتغيير أنماط التفكير وأساليب التعلم في اللغة لدى طلاب المرحلة الثانوية بناء على الشواهد الإمبريقية Empirical Evidence المستخلصة من الدراسة الميدانية. ولتحقيق هذه الأهداف ، استخدمت الدراسة المنهج الوصفي القائم على الدراسة المسحية Qualitative Survey-Based Research Methodology والذي تضمن جمع البيانات الكمية Quantitative Data (من الإستبيان) والكيفية Qualitative Data (من المقابلات الشخصية) ودمجها معا بشكل إنتقائي selective لصياغة التصور المقترح. ويقوم التصور على خمس مراحل ومحاورهي: (1) كفايات المعلم المرتبطة ببناء الوعى لدى الطلاب بالحاجة إلى تغيير أساليب التفكير والتعلم ؛ (2) **كفايات المعلم المرتبطة ببناء الرغبة لدى الطلاب فى تغيير أساليب التفكير والتعلم** ؛ (3) كفايات المعلم المرتبطة بتقديم المعرفة للطلاب بكيفية حدوث تغيير أساليب التفكير والتعلم ؛ (4) **كفايات المعلم المرتبطة ببناء القدرة لدى الطلاب على تنفيذ أنشطة تغيير أساليب التفكير والتعلم** ؛ **و** (5) كفايات المعلم المرتبطة بتعزيز استمرارية تغيير أساليب التفكير والتعلم لدى الطلاب. وتشير الدراسة إلى أنه حتى يتسنى تنفيذ التغيير المطلوب ، يجب على المعلمين – كعملاء للتغيير - قيادة تغيير جذري بتطبيق هذه المراحل الخمسة داخل وخارج حجرة الدراسة.

1. Introduction & Research Problem

1.1 Introduction

The intensification of globalisation presents many new opportunities as well as challenges for society today, compelling individuals to attain different sets of skills and knowledge base to secure a job in an increasingly competitive labour market. Education plays a key role in preparing students to be capable citizens, who are able to think critically and act within a wider global context. Thus, a shift in teaching paradigm for secondary schools is needed, with educational reforms prioritising a change in teaching and learning approaches in classrooms. Besides assessing students' academic

development, there is a pressing need to develop individual key skills, such as technological literacy, critical thinking, problem solving and lifelong learning, which are seen to be valuable in today's global techno-centric system (Nasr, 2008; Abdelhafez, 2014; Caesar, et al., 2016).

Philosophy of any educational system in any human society is usually derived from a set of historical, religious, cultural and economic factors/forces that formulate its existence and predict its future. Accordingly, the Egyptian Ministry of Education (MOE) has recently issued some national educational goals as a basis of the educational movement in Egypt and its futuristic orientation (e.g. achievement of total quality of education). This can be accomplished through improving inputs and processes, which will eventually improve outputs – especially, efficient graduates who are competent enough to deal with new changes and challenges at this age (Nasr, 2008: pp121-123).

The general secondary stage in Egypt is regarded as a vital educational phase since it plays an essential role in developing students' thinking and learning styles to prepare them for higher education (Cochran, 2012). Generally, teaching at the secondary stage might be somehow challenging in Egypt. Novice teachers meet new types of students with different orientations, attitudes and abilities.

The courses taught there look more advanced and complicated compared with those taught at the preparatory stage. Further, secondary-school students start to think seriously about their future tertiary education which is sharply determined by the total scores they get in the 3rd and final year. In other words, in this exam-oriented system, students' results are becoming decisive for each student's future career opportunities. Therefore, EFL teachers should take these conditions into consideration while dealing with those learners by – for example – extending their professional and practical knowledge to involve a wider range of students' competencies and learning needs (Abdelhafez, 2014; Sobhy, 2012).

Instructional approaches that facilitate reflective, critical dialogue provide students with more opportunities for meaningful learning (Guthrie, 2010; Wegerif, 2009). More specifically, the methods by which reflection is taught to students within a lifelong learning context have been of specific focus over the last several decades. Thus, many educators have identified critical inquiry, engaged dialogue and reflective practice as essential to furthering substantive learning (Guthrie, 2010).

Current and vast changes in technology and the workplace have made the ability to think critically more important than ever before. Instruction designed to help college and/or secondary-stage students think critically should take into consideration the wide range of (online) resources available for learners. It should also focus more on these skills that are widely applicable across domains of knowledge, along with the transferability of such skills to other problems and contexts (Halpern, 1999; Wegerif, 2009; Yasin, 2009; Guthrie, 2010). In this regard, Lee (2008) stressed on the importance of moulding students' critical thinking skills when dealing with technology tools such as the Internet to ensure a careful and analytical approach is adopted by students to make critical decisions while selecting resources.

Moreover, Lifelong Learning has been gaining ground with the beginning of the 21st century. The new cultural, technological and pedagogical reality globally dominant has called for a more realistic, experiential and meaningful learning at all educational stages (Knapper & Cropley 2000; Leu et al, 2005; Coiro & Dobler, 2007). Learning at schools in general - and secondary schools in particular - is other-directed, structured, unmotivated, and often does not prepare students for real learning in life. In order to prepare students for active and self-directed learning, teaching needs to become oriented toward self-management in learning. Control must be shifted from teachers to learners, and thus secondary schools need to increase the opportunities for active and lifelong learning for students (Bolhuis, 1996).

Currently, change leadership has become a pressing issue in today's world. Teachers are expected to lead a change by teaching their students how to manage a change: e.g.

changing their learning habits and skills (Wagner, 2012). In this regard, many change management models were devised to guide both teachers and students into how to induce the desired change. One of those interesting models of change is ADKAR Change Management Model which can be adopted in educational settings to guide and enforce an organised, sequenced change.

1.2 Research Problem

The current teaching methods employed by English language teachers do not allow for developing critical thinking and lifelong learning, the new skills reinforced by series (see also *literature review* below). As also mentioned, the aim of ELT at the secondary stage is to equip students with the necessary language, thinking and study skills to *communicate* effectively and to understand spoken and written English competently. This involves giving students chances to apply these skills both inside and outside the classroom and beyond school in their current and future lives. Unfortunately, this – as noticed by the researchers in their field observations – is not the main focus of teachers at schools. Moreover, although critical thinking skills contribute to the development of a more autonomous learner and build confidence in learners, they are not given due attention – as noticed by the researchers.

In this regard, Al-Sisi's (2009: p363) study concludes that Egyptian secondary-stage teachers perform their roles moderately in the fields of self-learning, cooperative learning and teaching thinking. This is consistent with results reached by another study conducted by Al-Taani (2011): the two teaching practices of using dialogue and discussion for developing students' critical thinking and using purposive logical thinking got means of 3.97 and 3.95, respectively. These scores were considered moderate when compared with those of other administrative classroom practices made by secondary-school teachers.

In the same vein, Fakhrou (2001: pp103-106) indicates the existence of a set of factors leading to increasing the efficacy and competency of secondary education, which are related to teachers' roles. These include presenting facts to students in a critical fashion that would allow them to handle topics and problems in a logical/scientific way of

thinking. They also include treating learners as effective positive elements in the knowledge acquisition process – i.e. viewing them as capable of mastering the critical thinking skills if prompted by the teacher to criticise themselves, issue judgements and highlight environmental and social problems.

In order to lead a change in secondary students' thinking and learning styles, language teachers should be aware of how change managements can be conducted (e.g. by reviewing models). ADKAR (i.e. Awareness – Desire – Knowledge – Ability – Reinforcement) model can act as a framework to guide what teachers can do to help learners change their thinking and learning styles in a way that allows for adopting and practising critical thinking and lifelong learning. This model involves five main stages, including some sub-components that should be delineated by the researchers based on the specific goals (e.g. fostering critical thinking and lifelong language learning at the secondary stage), target of change, audience and – of course – the target context.

Many studies were conducted to relate the five stages of ADKAR model with learning (e.g. Mackenzie-Robb, 2004; Budiwati & Langi, 2013; Aceto & Dondi, 2015). Mackenzie-Robb (2004) tackled the relationship between e-learning and ADKAR model. Aceto and Dondi (2015) dealt further with lifelong learning in relation to ADKAR model.

However, what distinguishes the present study is dealing with how to utilize the stages of change proposed by the model in changing secondary students' thinking styles and English language learning in a way that enables them to practice critical thinking and lifelong language learning.

Based on the above argument, the main problem of the study might be represented in the fact that secondary-stage students need to think critically and do lifelong learning practices while learning English in the classroom. Although the Hello series calls for more critical thinking and lifelong learning practices, both teachers and students do not cooperate together to do the required advanced language-learning tasks properly, mainly because of the dominant exam-oriented teaching styles discussed above. In particular,

teachers employ some traditional methods that hinder deployment of critical thinking and lifelong learning. This needs an investigation into both students' real/current language learning needs and the secondary-stage teachers' teaching and linguistic competencies that would lead students' change based on the five stages proposed by ADKAR Change Management Model, to eventually suggest a working framework based on obtained data.

In a nutshell, the problem of the study can be stated as follows: The current examination system used at the secondary stage is hindering the accomplishment of the aims of secondary education represented in developing students' scientific thinking (logical reasoning) as well as acquainting them with the needed self-learning skills. Therefore, the present study aims at identifying the most important competencies that should be available in secondary English-language teachers so as to help their students with acquiring critical thinking and lifelong learning skills in the light of ADKAR Change Management Model.

1.3 Research Objectives & Questions

Based on the problem stated above, the present study aims mainly at reaching a suggested framework that involves a set of teaching competencies sequenced in the light of ADKAR model, which should be possessed by secondary English language teachers in order to lead students' change of thinking and learning styles. This involves: (1) investigating the real thinking and lifelong language learning needs of secondary-stage students from expert teachers' perspectives; (2) identifying the language-teaching competencies needed by secondary-school language teachers; and (3) employing and triangulating the obtained data to fit them in within the pivots of ADKAR Model to reach a final framework based on empirical evidence.

In other words, the study aims at answering the following ***research questions***:

1. What are the main philosophy and goals of secondary education in Egypt?
2. What are those shortcomings in secondary education - as indicated by literature - which hinder reaching the specified goals?

3. Which are the real thinking and lifelong language learning needs of secondary-stage students from expert teachers' perspectives?
4. Based on ADKAR Change Management Model, which language-teaching competencies are needed by secondary-school language teachers to lead a change in students' thinking and language learning styles by fostering critical thinking and lifelong learning?
5. What will a suggested framework of change in secondary language learning - based on both pivots of ADKAR Model and empirical evidence from data be like?

1.4 Significance of the Study

This research study is important and significant in many ways: First of all, it deals with changing thinking and learning styles, a drastic requirement in this age in Egyptian secondary schools. Secondary-stage students need a transitional period before joining tertiary education in order to get acquainted with critical thinking and self-paced (lifelong) learning. They need to learn how to revise facts and provide a convincing argument, and how to check resources and ascertain the credibility of information

Second, it is the only study – to the best of the researchers' knowledge – that addresses the change management process at the classroom level. Other studies have dealt with the process at wider educational levels.

Third, a significant applicatory aspect of the study is that teachers in general can take the suggested framework further by applying it at the classroom level in their attempts to conduct any changes related to their specific academic disciplines.

1.5 Theoretical Background & Literature Review

A-Secondary Education in Egypt: Philosophy & Goals

Secondary education in Egypt lasts for three years, and aims at enabling students to achieve some goals, such as: (Nasr, 2008: p131)

1. Continuing lifelong learning in an active, self-paced fashion;

2. Being able to work productively in the future work market after mastering the needed academic and practical competencies as well as the required communication and negotiation skills.

In this regard, based on the most recently updated laws (Educational Law no 139/1981) (Yasin, 2009: pp112-113; Azazi, 2012: pp99-100), the main goal of secondary education is represented in preparing students for life in general (e.g. participating in public life), and the tertiary education stage in particular, and also reinforcing in them religious, national and moral values.

Unfortunately, the Egyptian secondary education certificate system is extremely tiresome and exhausting to learners who are placed under great pressure to get the highest scores in the final exams (Hargreaves, 1997; Yasin, 2009). This status-quo has not allowed for accomplishing the desired objectives, which failed to become tangible outcomes. This drove responsible figures at MOE to hold preparatory meetings for a national conference on developing secondary education in Egypt that resulted in a suggested reformation vision. It entails the preparation of students' creative mental possessing and intellectual-analystical skills, which would lead them to creativity and innovation as well as development of self-learning skills (Azazi, 2012: p100).

One of the shortcomings of this exam-oriented system is that assessement is too cognitive to include students' attitudes, tendencies, skills, interests and thinking styles. Focusing basically on memorisation and learning by heart, language assessent at the secondary stage lacks deployment of critical thinking and reflective learning (El-Tawil, 2009: p10; Sobhy, 2012).

This, of course, goes contray with the MOE futuraistic vision of providing a high-quality education to everyone, a strategic goal that can be accomplished throughout a quantum leap inside the classroom that involves the integration of the three main quality components: exams, curiculum & instruction and technology (Nasr, 2008: pp124-125). It also goes contrary with a global orientation to transform schools by equiping students

with a set of competencies that should enable them to handle the profound and rapid economic and social changes (Wagner, et al., 2012).

As far as English language learning (ELL) at the secondary stage is concerned, there are many challenges that language teachers face, which can be summarised in the following points (see also: Hargreaves, 1997; Cochran, 2012; Latif & Mahmoud, 2012):

- The *exam-oriented nature* that highly controls (and influences) the process of handling the English language courses at this stage, and which prevents full utilisation of learners' advanced thinking skills;
- The *traditional methods* preferred and used by senior teachers of English (old generation) who neither follow the stipulated teacher's guide adequately, nor conduct the learning activities in the required communicative/interactive fashion that would develop self-paced, lifelong learning skills;
- The *private lessons/tutorials* provided by English teachers outside schools in return for big sums of money, which make regular attendance of English classes at school a very peripheral or minor practice. In this regard, Sobhy (2012) noted that a large proportion of students have stopped attending school altogether due to their reliance on private tutoring.
- The *cultural and growth problems* that make some students inactive and reluctant to participate during the English class;
- The growing number of students' *populations* in classrooms, which have become unsuitable places for proper language learning and practice since the ideal language class should include no more than 25 students;
- Some students' *negative attitudes* towards the English language itself, and their focus on a set of linguistic and knowledge aspects that always appear in the final exam, at the expense of those human and communicative aspects that should enable them to use the target language properly and effectively (purposive learning).

Achieving quality in education has become a real challenge that imposes on educational institutions the responsibilities of preparing highly competent and well-informed

individuals who are capable on global competition. Accordingly, this requires teachers able to lead a shift from: (1) a receptive information-memorisation culture into a productive information-making culture; (2) a memory culture into a creativity culture; and (3) dependence on others into a self-dependence culture. Hence, one of the teacher's roles as a classroom leader is represented in developing ability on creative thinking, objective criticism, rational choice and awareness of both premises and conclusions (El-Sisi, 2009: pp332-333).

In their study on standards-based English language courses taught at the secondary stage, Latif and Mahmoud (2012) argue that despite this standards-based curricular reform in Egypt, a parallel reform has not been made to the examination system of general secondary school. The written exams students sit for in each of the three years of this stage mainly test their abilities in grammar, vocabulary, reading comprehension, pragmatics, paragraph or letter writing and translation. These exams completely neglect testing students' listening and speaking abilities

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Among the most noticeable weak points in the secondary education system are:

- Limited learning resources, which are confined to only textbooks and teachers. This does not encourage self study and research by learners, and thus undermining their creativity, research capacities and pursuit of knowledge.
- Making exams an end in themselves, not a means to an end. It is natural to aim for advancing education prior to developing examination methods/techniques (Azazi, 2012: p127).

Traditional view of teacher as the fountain (and main source) of knowledge has become obsolete. Therefore, reformulating teachers' roles in the classroom in the light of modern and futuristic perspectives has become necessary so as to turn them into active agents of change (Wagner, et al., 2012). This involves being able to facilitate interactive and motivating learning environments and establish class interactions that would extend students' learning. Therefore, teaching should change from a knowledge-implanting process into a critical-reflective one in which a teacher would reflect on his/her personal

convictions and teaching methods, and revise them in the light of his/her experiences and interactions (Nasr, et al., 2008).

The information revolution and ITCs developments as new challenges imposed by globalisation have recently required teachers to develop those basic skills that would help students to be autonomous self-learners. Teachers are no longer the sole source of knowledge, and consequently they have to perform the roles of guides and directors throughout learners' journey of discovery as well as being organisers, facilitators, managers and reviewers (El-Sisi, 2009: p330).

B-Language Teaching/Learning Methods at Secondary Schools

Therefore, it sounds necessary for secondary-school English teachers to spend some time to **revise** the methods and/or techniques they usually use while teaching, especially in terms of objectives, scope and sequence, students' learning and thinking styles, and the broad range of language functions that those courses might stimulate.

Generally, the language teaching-learning approaches at the secondary stage should focus on the whole development of the learner, and develop the language and cognitive skills creatively. In particular, they should be translated into some interactive activities and tasks that should help learners with developing advanced language knowledge, skills and competencies. Thus, those approaches/methodologies should: (Abdallah, 2011; Wagner, et al., 2012)

1. address the *main language skills* (i.e. listening, speaking, reading and writing) interactively;
2. employ *communicative* and *cooperative* language learning strategies/techniques;
3. employ *self-study* and *reflective* learning (e.g. writing personal journals and posting on blogs);
4. creates a *community-based* learning environment;
5. employ *different techniques* of student-student and teacher-students *interaction* (e.g. individual work, pair work and group work);

6. employ *new technologies* (e.g. academic websites and social networking websites) and different teaching-learning aids for realistic language learning purposes;
7. allow for more *extensive reading* to be done by students (especially at home) and more *extra-curricula* activities; and
8. allow for both cooperative learning and independent study.

This state of affairs does not allow for developing critical thinking and lifelong learning, new skills reinforced by the current English series: 'Hello for Secondary Schools'. The aim of teaching English to secondary-school students (especially in the first year) is to equip students of secondary school age with the necessary language, thinking and study skills to *communicate* effectively and to understand spoken and written English competently. It aims to give students the necessary experience and confidence to apply these skills both inside and outside the classroom and beyond school in their current and future lives. New language, skills and topics are introduced gradually and practiced thoroughly, so that students have the chance to learn and use the language before they move on. Critical thinking skills and awareness of strategies to improve language and learning skills support the learning of language and contribute to the development of a more autonomous learner (Stannard, 2009).

C-Critical Thinking & Lifelong Learning in Secondary Education

Critical thinking is a purposeful, reasoned and goal-oriented practice that involves self judgment and insightful evaluation (Halpern, 1999). Thus, it is formed as a result of interpretation, analysis, evaluation and deduction. Pascarella and Terenzini (1991: p118) define *critical thinking* in the context of secondary education as the individual's ability to do some or all of the following: (1) Identify central issues and assumptions in an argument; (2) recognise important relationships; (3) make correct inferences from data; (4) deduce conclusions from information or data provided; (5) interpret whether conclusions are warranted on the basis of the data given; and (6) evaluate evidence or authority.

Thus, critical thinking needs particular skills and attitudes, which include: (1) Identifying other people's positions, arguments and conclusions; (2) Evaluating the evidence for alternative points of view; (3) Weighing up opposing arguments and evidence fairly; (4) Being able to read between the lines, seeing behind surfaces, and identifying false or unfair assumptions; (5) Recognizing techniques used to make certain positions more appealing than others, such as false logic and persuasive devices; (6) Reflecting on issues in a structured way, bringing logic and insight to bear; (7) Drawing conclusions about whether arguments are valid and justifiable, based on good evidence and sensible assumptions; and (8) Presenting a point of view in a structured, clear, well-reasoned way that convinces others (Cottrell, 2005; Anwar, K., & Iramawaty, L. (2015)

Halpern (1999) concludes that there are identifiable critical thinking skills that can be taught and learned, and when students learn these skills and apply them appropriately, they become better thinkers. In order to strengthen students' learning of critical thinking, they introduced in their study four main changes: (1) reduced course material; (2) improved teacher preparation; (3) tighter project structure; and (4) more project-focused teaching (Pascarella & Terenzini, 1991).

Recently, improving critical thinking skills has been a noticeable focus in educational research, and many studies were conducted – especially at secondary schools – with this focus in mind (e.g. Anwar & Iramawaty, 2015; Kurniawan, 2016; Lathifah, & Susilo, 2016). For example, while Kurniawan (2016) sought improving students' critical thinking through implementation of problem-based learning (PBL), Lathifah & Susilo (2016) implemented Socio-scientific Issue Learning through symposium method in a biological course.

Moreover, Goggin, et al. (2016) have recently studied the process of transitioning students from secondary school to university, suggesting that the teacher contributes to students' cognitive development through a range of scaffolding strategies and collaborative learning approaches. These include: leading questions, demonstrations and modelling, dialogic problem-solving and direct instruction concerning the qualities of

critical thinking such as: (1) judging the quality of evidence and the credibility of sources; (2) asking appropriate questions; (3) being open minded; (4) being aware of assumptions; and (5) seeing things from the other's point of view.

According to Wozencroft, Pate, & Griffiths (2014), secondary-school teachers can employ experiential learning as a valuable tool in education because through engagement, it promotes an atmosphere for critical thinking and problem solving. In the field of English language learning, Anwar & Iramawaty (2015) investigated writing factual reports in EFL classes as a potential way to enhance students' critical thinking ability.

There are many ways that teachers can use to enhance students' critical thinking in EFL teaching, such as cooperative learning strategy, discussion, using question, and writing assignments (Anwar & Iramawaty, 2015).

Lifelong learning according to Longworth (2003: p11) refers to that learning which occurs throughout the person's whole life including adult education and continuous professional development (CPD). Stenfors-Hayes et al. (2008) defines ***lifelong learning*** as the continuous development of the skills, knowledge, and understanding essential for today's job and personal fulfilment. It can either refer to the learning process which spans the whole of one's life, or that learning based on real-life experiences or experiential learning (Field & Leicester, 2003). Lifelong learning has always been closely connected with concepts such as the 'learning society'. Knapper and Cropley (2000: pp4-5) argue that the shortcomings that the existing education encounters and the new challenges it faces call for the adoption of an alternative comprehensive and flexible approach of learning.

At present, the process of learning itself has become more important than the learning content. In this sense, self-directed learning is more efficient than formal learning (Field & Leicester, 2003; Stenfors-Hayes et al., 2008). Modern educational trends, such as the present transition from training to lifelong learning, have guided the adoption of lifelong learning as an educational philosophy (Abdallah, 2011).

D-Change Management & ADKAR Model

Change management is a field of study that has been developed to a wide range of theories from different points of view. People side of the change process is the most recent interest of study (Truong & Swierczek, 2009: p69).

Change management can be defined as:

> *"the process, tools and techniques to manage the people-side of change to achieve the required business outcome…Change management incorporates the organizational tools that can be utilized to help individuals make successful personal transitions resulting in the adoption and realization of change"* (Creasey, 2007: p3).

The success or failure of organizational change depends on the unique contributions of people involved. Human resources are not only inputs of a change process but also affect the other inputs such as change objectives, budget, and facilities. They decide the implementation of the change project. Organizational members can be either beneficiaries or sufferers of the change outcomes no matter who have conducted that change. Process orientation addresses people side of the change. It concerns employees' ability, values, attitudes, and relationships with the organization. (Truong & Swierczek, 2009: p70)

In this regard, many studies – whether dealing with educational or non-educational institutions – adopted change management as an administrative approach due to its strong contribution in changing members' values and attitudes towards change (e.g. Truong & Swierczek, 2009; Hassan, 2010).

However, the present study tackles change management as a *classroom management approach/technique,* viewing teachers as agents of change inside the classroom throughout possessing some competencies that would enable them to lead a change in thinking and learning styles.

Many educators weigh teacher's role inside the classroom greatly in the educational change process, which depends highly on teachers' beliefs and practices – i.e. what the teacher thinks and does (Fullan, 2014). High-quality education is mainly about the competent teacher who possesses those personal, technical and professional competencies that would enable him/her to render high-quality education (Al-Anzi, 2007; Wagner, 2012). Teachers possessing these competencies along with some features - such as clarity of vision, coolness, risk-taking, and mastery of a specific school discipline – are important for school management (Tortop, 2012: p19)

Prosci's ADKAR model is a widely used goal-oriented approach that would facilitate individual change by allowing change management teams to focus their activities on specific results (Adhikari, 2007). The model is based on the premise that organisations do not change; it is the people within organisations who change. Thus, ADKAR describes successful change at the individual level and outlines the goals or outcomes of successful change. It is an effective tool for planning change management activities, diagnosing gaps, developing corrective action, and supporting managers and supervisors (Bourda, 2013, p5).

The model consists of five main parts/stages (Hiatt, 2006): (1) Awareness of the need for change; (2) Desire to participate and support the change; (3) Knowledge on how to change; (4) Ability to implement required skills and behaviours; and (5) Reinforcement to sustain the change.

Those steps show the milestones an individual must achieve for change to be successful, and which were initially identified through Prosci research. The model has its origins in a movement to align traditional change management activities with a project's results or goals. Thus, the Prosci ADKAR Model was first used to identify if certain change management activities (such as communication and training) were achieving desired organizational change results. Thus, the model is that link between individual performance, organizational change management and business results (Hiatt, 2006; Adhikari, 2007).

The researchers define *change management* operationally as:

> *That administrative approach adopted by secondary English language teachers, which is based on some competencies sequenced into five stages in the light of ADKAR model with the goal of acquainting students with critical thinking and lifelong learning.*

2. Methods & Procedures

2.1 A Qualitative, Survey-Based Research Methodology

In order to accomplish the research objectives, the researcher employed a qualitative, survey-based methodology. This means that the research mode is mainly qualitative as it starts with literature review and content analysis, and ends with relating together different pieces of data (i.e. data from: literature, interviews and questionnaires) to provide a deep meaningful understanding of them while suggesting a framework of change in secondary language learning - based on both pivots of ADKAR Model and empirical evidence from data.

More specifically, a qualitative analysis of literature was employed to answer the 1st and 2nd research questions (see *literature review* above); then, a survey-based research methodology was employed to collect data from participants, both qualitatively (i.e. through structured interviews) and quantitatively (i.e. through questionnaires).

Typically, surveys gather data at a particular point in time with the intention of describing the nature of existing conditions, or identifying standards against which existing conditions can be compared, or determining the relationships that exist between specific events (Cohen, et al., 2007). Thus, surveys include wide-scale tools, such as questionnaires and interviews. According to Shaughnessy, Zechmeister, & Jeanne (2011: pp161–175), survey research is often used to assess thoughts, opinions, and feelings. With the development of communication with target populations through the Internet, it has become possible to do survey by accessing participants online (Fowler Jr, F. J., 2013), and this would save much time and effort.

2.2 Sampling & Participants

While conducting the structured interviews, 20 participants (secondary language expert teachers, supervisors, and TESOL/TEFL specialists interested in secondary education) were purposively selected based on some criteria. These include: (1) availability; (2) experience; (3) interest in the topic; and (4) mastery of the English language. While conducting the questionnaire, 60 participants (secondary-stage language expert teachers and supervisors) were randomly selected, both face-to-face and online. ELT experience of those participants ranged between 2 – 40 years (see Table 1 below)

Table 1: Information about Participants

Gender	Males 31 (51.7%)	Females 29 (48.3%)	
Profession	***Senior & Expert Teachers at Secondary Schools*** ***40 (66.7 %)***	***Other Interested Language Teacher Educators & TESOL/TEFL Researchers*** ***20 (33.3 %)***	
Teaching Experience	***>10 years*** 10 (17.7 %)	***<10 years*** 50 (83.3 %)	***From 20-40 years*** 28 (46 %)

2.3 Data Collection Tools

Data collection tools included:

1-*Content analysis*: This was conducted while reviewing literature on 70 academic documents (e.g. research articles, theses and books).

2-*Structured interviews*: These were conducted online using SurveyMonkey website to reach participants all over Egypt (see Appendix A). Each interview consisted of 4 introductory (optional) questions requesting personal data, and 4 main (obligatory) questions.

3-*Questionnaires*: These were directed to expert teachers at the secondary stage to request their viewpoint on the 53 items based on ADKAR model (i.e. to what degree each statement/item is currently required in the target context to force a change in secondary language learning (see Appendix B). Thus, the questionnaire items fall under 5 main pivots/stages based on ADKAR model (see Table 3 below & Appendix A). E-Teaching Competencies Related to Activities Presented to Students to Reinforce Change Sustainability. To check reliability and internal consistency of the items and dimensions within the questionnaire, Cronbach's Alpha was used, and its total value for all items found to be 0.94 indicating a very strong degree of reliability and consistency (see Table 2 below for values of the 5 dimensions).

Table 2: Reliability Coefficients of the Questionnaire Based on Cronbach's Alpha for All Dimensions

Dimensions	R

A-Teaching Competencies Related to Building Students' ***Awareness*** of the Need for Changing Their Thinking & Learning Styles.	0.72
B-Teaching Competencies Related to Building Students' ***Desire*** for Change.	0.78
C-Competencies Related to Acquainting Students with ***Knowledge*** about How to Change Thinking & Learning Styles	0.80
D-Teaching Competencies Related to Improving Students' ***Abilities*** to Implement Change in Their Thinking & Learning Styles	0.79
E-Competencies Related to Providing Students with Activities to **Reinforce** change Sustainability.	0.85
Total Value	**0.94**

3. Results & Discussion

3.1 Interview Results

The main purpose of the conducted structured interview was to answer the 3rd research question, *"What are the real thinking and lifelong language learning needs of secondary-stage students from expert teachers' perspectives?"* Based on the interviewees' accounts, the following conclusions were made:

The *thinking and lifelong learning skills* that the series aims at acquainting students with:

Theoretically, the Hello series aims at acquainting students with listening, speaking, reading and writing skills/sub-skills with the purpose of developing their abilities to effectively communicate in English, both inside and outside the classroom. This involves developing students' critical thinking skills and creating real-life situations for active

learning. This also involves pronunciation skills (distinguishing between vowels), writing sentences, reading stories and conversations about important people and famous events, reading passages for comprehension (identifying the gist), and defining new vocabulary. This communicative course introduces students to new areas of vocabulary with a functional use of the English language. It reviews the skills which students have learnt in the primary and preparatory stages. Also, it has paid special attention to the following areas: dictionary work, critical thinking, communicative competence, and grammar review.

The *new thinking skills/abilities* that secondary-stage students need to develop:

In addition to the thinking skills targeted by the course, secondary students need to develop other skills such as:

- Reviewing the way the British English contradicts the American English.
- Choosing their own way of expressing themselves, and leaving aside all the memorized patterns.
- Developing higher-order thinking skills.
- Developing critical thinking, imaginary thinking, and creativity.
- Developing strategic reasoning.
- Developing innovative thinking.
- Developing critical thinking.
- Developing creative thinking skills.
- Developing reflective thinking skills.
- Conveying their ideas in correct sentences and structure.
- Extending their language communication skills.
- Practising thinking and drafting skills during writing composition.
- Develop reflection on what they learn

Those *new lifelong learning skills/abilities* that secondary-stage students need to develop while learning English at this age:

1. Developing independent learning habits;

2. Developing courage and motivation to learn;
3. Getting involved in team work and developing networking skills;
4. Bearing responsibility to learn;
5. Developing Web searching skills to locate relevant information resources;
6. Planning their learning;
7. Evaluating their knowledge and skills;
8. Monitoring their progress;
9. Adjust their learning strategies as needed;
10. Develop their creative writing skills: e.g. they need to know how to write a short story, construct a magazine, write a poem title, and write about a film;
11. Free extensive reading and translation skills;
12. Using the English language functionally to accomplish real-life objectives (pragmatic language skills).
13. Using projects to develop lifelong learning skills in English;
14. Using authentic task-based learning to learn language more effectively;
15. Using and practising situated language learning.

The *new, real challenges* that secondary-stage students currently face in English language learning, especially as far as critical thinking and lifelong learning are concerned:

There are many challenges in this regard, which can be summarised in the following points: First of all, the topics discussed in the English class are not strongly related to their real life. Second, those students cannot listen or speak very well in English. Thus, before asking them to do or practise more advanced skills – such as critical thinking - they need to learn how to develop their oral skills in the English language. Third, the time of the English period is very limited, and four periods a week are not sufficient. This challenge – as reported by all interviewees – stands as an obstacle in the way of language development and thorough practice. Fourth, there is – as some interviewees reported – a challenge related to lack of both materials and the supporting environment needed to speak and communicate in English. Learning aids are still traditional, with no labs or computers in many schools to allow for more effective language learning and practice.

Fifth, good training of the tutors/teachers is not always applied. Subsequently, English language teachers at the secondary stage are not qualified or competent enough to enforce a change in students' thinking and learning styles. Sixth, the evaluation or examination system lies as a big challenge: Language exams depend on grammar rather than on listening or oral communication in general. Thus, less focus is placed on speaking, and this shortcoming is doubled by shyness of many learners who are always reluctant to speak up and express themselves.

In this regard, a teacher notes:

> *In my opinion, there are a lot of challenges that students face such as: time specified for teaching grammar is not enough. SB doesn't cover all the grammatical points. So, the teacher has to look for other aids to explain their lessons. There is no time for practice as the specified lesson time is short. Not all students are able to answer the critical thinking Qs because of individual differences among them.*

Also another teacher notes:

> *I think that those challenges are: lack of aids - the traditional ways of evaluation (written tests) - lack of experience - lack of time specified for teaching - lack of planning - long syllabus and limited time to do all required tasks and practise all skills - focus of teachers on finishing loads in any way without paying much attention to what students should be learning.*

3.2 Questionnaire Results

The 53 items of the questionnaire were grouped into their corresponding pivots (based on ADKAR model). Using descriptive statistics in SPSS, the new grouped variables were arranged descendingly according to means (see Table 2 below). Thus, the resulting order of those pivots indicates the degree of importance that all participants (n=60) attached to each of the 53 items. This resulted in the order indicated in the table below.

Table 3: Descriptive Statistics of Pivots of ADKAR Model Based on Descending Means

Pivots/Dimensions	N	Minimum	Maximum	Mean	Std. Deviation
A-Teaching Competencies Related to Building Ss' Awareness…	60	3.30	5.00	4.2600	.43538

B-Competencies Related to Building Students' Desire...	60	3.20	5.00	4.2517	.49420
D- Competencies Related to Improving Students' Abilities to …	60	3.08	5.00	4.1472	.46217
E-Competencies Related to Activities to Reinforce Change Sustainability	60	2.86	5.00	4.0821	.52684
C-Competencies Related to Acquainting Students with Knowledge about …	60	2.14	5.00	4.0690	.64774
Valid N	60				

It is clear from the results that – based on participants' viewpoints - the proposed stages (pivots of ADKAR model) are needed in the same order suggested prior to questionnaire administration. The only exception is the 3rd stage (Pivot C) which came as the last one in order. This might indicate the necessity of the need to encourage teachers realise the importance of acquainting students with knowledge about how to change their thinking and learning styles.

Moreover, the questionnaire items (53 teaching competencies) were also ordered descendingly based on means (see Appendix C). The mean goal of this was to inform the design of the suggested framework (see section 3.3 below). In other words, the higher the means were for the items, the more likely they were viewed as important and relevant, and thus could stand as a point of departure for the proposed framework.

3.3 The Suggested Framework

This section is devoted to answering the 5th research question, which is related to presenting a proposed framework for changing secondary-stage students' thinking and learning styles in the light of ADKAR Change Management Model. The proposed model is based on empirical evidence from results reached by the conducted field study. It is also illustrated with consideration of some points of departure, principles, goals, guarantees, and pivots. Here is a detailed illustration of the main components of this framework:

A-Points of Departure

The proposed framework relies on many points of departure; some of which are based on literature review, while others are derived from results of the field study:

- The whole world currently faces a variety of changes and challenges (e.g. globalisation and IT revolution);
- These current world changes have led to the emergence of multi-national entities and companies as well as a tendency towards privatisation. Subsequently, job market requirements have changed in a way that changed the previous concept of the university graduate with high degrees as the sole requirement for securing a job; instead, possessing other professional competencies and skills, such as mastery of a foreign language, has recently become necessary as a major requirement for university graduates;
- Since one main goal of education in general - and secondary education in particular - is related to preparing individuals for life and one target is to make educational outputs compatible with the job market, educational institutions are currently required to work hard to produce competent learners with high performance. This also drove those institutions to target accreditation, especially academic accreditation that is closely related to educational efficacy.
- The educational efficacy aspect is in turn closely related with the target learning outcomes – such as acquainting students with critical thinking styles and self-learning skills as requirements for lifelong learning. The current educational system is unable to acquaint learners with those skills because it is drastically focused on memorisation and using information retrieval strategies.
- To reach those desired learning outcomes, teachers have to change teaching and learning styles; this cannot be accomplished without possessing some teaching competencies that would enable them to lead the desired change throughout classroom management.
- Change management is one of the modern administrative approaches that can be used by teachers at the classroom level to force a change in students' thinking and learning styles by acquainting them with critical thinking and lifelong learning.

- ADKAR change management model naturally includes 5 successive phases or stages starting with students' awareness of the importance of changing thinking and learning styles. This is followed by stimulating their motivation and formulating their desire for change, and then acquainting them with the necessary knowledge on how to change; followed by fostering their real abilities to change, and finally reinforcing their practices to sustain this change.
- Moreover, results of the field study indicate the existence of some linguistic needs related to critical thinking and lifelong learning for those students.

B-Principles

- Critical thinking and lifelong learning skills are part of the life skills necessary for confronting the challenges of the age;
- English language learning has become an essential requirement for the job market;
- Critical thinking and lifelong learning skills are among the target English language learning outcomes at the secondary stage;
- As a classroom leader, the teacher is responsible for acquainting students with critical thinking and lifelong learning skills; an English language teacher has an additional responsibility of acquainting students with English language skills;
- Acquainting students with critical thinking and lifelong learning skills is done through the teacher's possession of a group of steps sequenced in the light of ADKAR model;
- Considering students' linguistic needs as they relate to critical thinking and lifelong learning is a very important issue that should not be ignored.

C-Goals of the Suggested Framework

The main goal of the suggested framework is represented in accomplishing the secondary education main goal: preparing students for life – not just for university education. This goal can be reached throughout accomplishing the following minor objectives:

1. Achieving the target learning outcomes of teaching English language courses at the secondary stage;
2. Helping teachers in general, and English language teachers in particular, with possessing a set of teaching competencies that would enable them to change students' thinking and learning styles;
3. Establishing interdisciplinary collaboration among teachers to do the desired change;
4. Encouraging secondary-stage course planners and designers to include some classroom activities that would acquaint students with critical thinking and lifelong learning;
5. Drawing the attention of the secondary-stage principals to the fact that students' assessment should not be confined to written exams; alternative forms of assessment that cater for critical thinking and lifelong learning are needed.

D-Guarantees of Implementing the Suggested Framework

In order to implement the suggested framework, some guarantees need to be made available:

1. Course designers must reduce cognitive loads existing in all courses in general, and in the English language courses in particular.
2. Holding a group of intensive training workshops and programmes at the Professional Academy of Teachers (PAT) to be provided to secondary English expert teachers and supervisors to acquaint them with some teaching competencies that would in turn help their students with acquiring critical thinking and lifelong learning skills.
3. Heading towards activating teacher’s roles through giving them some authority that would enable them to share opinion with decision makers at MOE, especially while assigning studied courses and designing classroom activities to reach the target learning outcomes related to critical thinking and lifelong learning skills.
4. Changing those secondary education laws, rules and regulations that make the written exam system the only means of assessment for evaluating general secondary stage students.

5. Changing Egyptian university coordination system and admission policies from total dependence on scores obtained by secondary-stage students into conducting performance, talents and ability tests on university applicants to be considered along with their main scores.

E-Fundamental Language Learning Needs

The framework is based on the most important language learning needs (critical thinking and lifelong learning skills) of secondary-stage students based on interview data. Those are:

(a) Those needs which are related to critical thinking:

- Choosing their own way of expressing themselves, and leaving aside all the memorized patterns.
- Developing higher-order thinking skills.
- Developing critical thinking, imaginary thinking, and creativity.
- Developing strategic reasoning.
- Developing creative thinking skills.
- Developing reflective thinking skills.
- Conveying their ideas accurately in English.
- Extending their language communication skills.
- Practising thinking and drafting skills during writing composition.

(b) Those new lifelong learning skills/abilities that secondary-stage students need to develop:

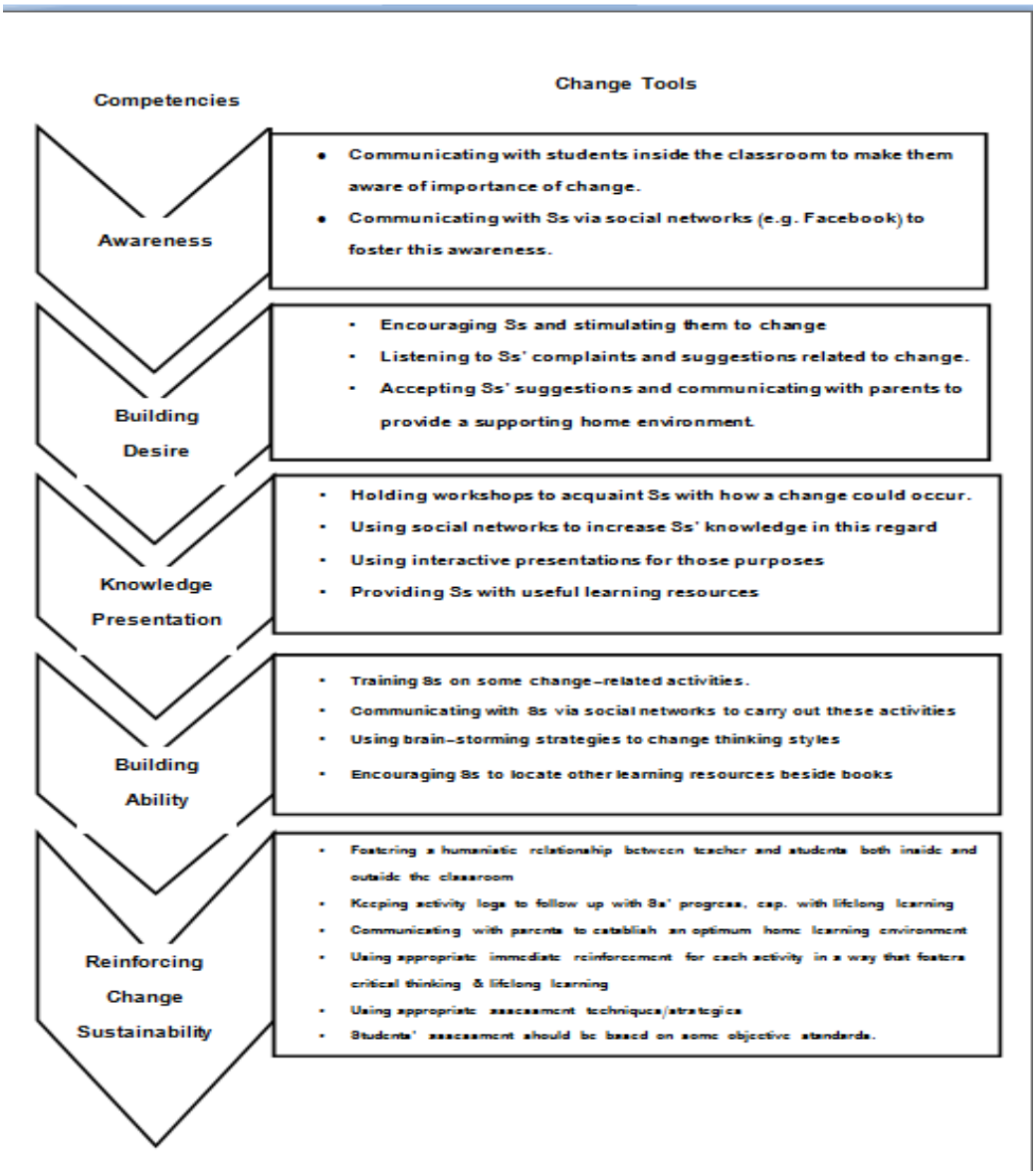
- Developing independent learning habits and courage to learn;
- Getting involved in team work and developing networking skills;
- Bearing responsibility to learn;
- Developing Web searching skills to locate relevant information resources;
- Planning their learning;
- Evaluating their knowledge and skills;
- Monitoring their progress;

- Adjust their learning strategies as needed;
- Develop their creative writing skills;
- Developing free extensive reading and translation skills;
- Using English functionally to accomplish real-life objectives (pragmatic language skills).
- Using projects to develop lifelong learning skills in English;
- Using authentic task-based learning to learn language more effectively;
- Using and practising situated language learning.

F-Pivots of the Suggested Framework

While building the main milestones or pivots of the suggested framework, both the ADKAR five stages and secondary students' linguistic needs mentioned above– as far as critical thinking and lifelong learning are concerned – were considered. Based on the new order of items (competencies) under each pivot (see Appendix D), the suggested pivots and relevant competencies are (see also Figure 1 below):

Figure 1: Teaching Competencies & Change Tools



1-Teaching Competencies Related to Building Students' Awareness of the Need for Changing Their Thinking & Learning Styles:

In order for the secondary language teacher to be able to build students' awareness of the important need for changing their thinking and English language learning styles, s/he needs to master some teaching competencies ordered - based on participants' views - from the most important competencies to the least important ones (see Appendix D) as follows: (English language teachers should be capable of…)

1. Illustrating the importance of team work inside the classroom to accomplish the desired language communicative goals.
2. Clarifying to students the importance of referring to varied learning resources in addition to the English language textbook.
3. Helping students to recognize the importance of the need for using self-learning styles while learning English as a foreign language to face current-age challenges related to language use, especially in terms of increasing cognitive overload of vocabulary, terms and idioms.
4. Guiding students into a recognising the importance of English language learning as an essential requirement for joining the job market.
5. Showing to students the importance of establishing language learning communities – both inside and outside the classroom (e.g. through social networks) – in practicing English functionally and pragmatically.
6. Showing the importance of self-learning in facing current-age challenges (e.g. globalization and ICT revolution).
7. Enabling students to be aware of the importance of using critical thinking for facing challenges related to cognitive overload, especially when it comes to the increasing linguistic input (e.g. new vocabulary, idioms, and terms).
8. Showing the importance of employing critical thinking for functional language learning in qualifying them to join the job market.
9. Drawing students' attention to the important need to using critical thinking while facing current-age challenges (e.g. globalization and ICT revolution).

10. Highlighting the bad need for critical thinking so as to review and evaluate varied information resources, especially the electronic ones during English language learning.

2-Teaching Competencies Related to Building Students' Desire for Change;

In order for the secondary language teacher to be able to build students' desire for changing their thinking and English language learning styles, s/he needs to master some teaching competencies ordered - based on participants' views - from the most important competencies to the least important ones as follows: (English language teachers should be capable of…)

1. Listening to students' complaints about the obstacles that stand in the way of using self-learning in language acquisition, especially those related to availability of learning resources.
2. Encouraging students to pose questions in order to develop the linguistic and communicative skills that would assist them with mastering the English language.
3. Listening carefully to students to identify the problems and/or difficulties that might hinder their use of critical thinking while learning English.
4. Encouraging students – especially during oral and written expression tasks/exercises in their English language course - to generate as many ideas as possible about a certain topic.
5. Prompting learners to be more creative and innovative by answering questions in more than one way.
6. Encouraging talented students to help their peers with using new language learning styles/strategies, such as: active learning, reflective learning, shared reading and cognitive apprenticeship.
7. Accepting students' suggestions for English language self-learning techniques.
8. Promoting talented peers to assist their peers with accessing different language learning resources.
9. Bridging gaps with home environment to sustain availability of time and resources needed for self-learning.

3-Competencies Related to Acquainting Students with Knowledge about How to Change Thinking & Learning Styles:

In order for the secondary language teacher to be able to acquaint students with the necessary knowledge related to changing their thinking and English language learning styles, s/he needs to master some teaching competencies ordered - based on participants' views - from the most important competencies to the least important ones as follows: (English language teachers should be capable of…)

1. Teaching students how to make self-evaluation and judgments after studying a specific linguistic content (e.g. a reading comprehension passage).
2. Providing students with English websites that include data on how to change thinking modes and English language learning styles.
3. Providing students with samples/models and examples of varied language learning resources.
4. Holding orientation workshops and meetings with students at the beginning of the academic year to illustrate the thinking modes and types which they can use while studying English.
5. Establishing an online Community of Practice (e.g. via a common social network) to answer students' queries on using critical thinking in language learning (i.e. concept, fields, procedures, timing, etc.).
6. Holding orientation meetings with students at the beginning of the academic year to illustrate (through interactive presentations) the learning modes and types which they can use while studying English.
7. Establishing an online Community of Practice (e.g. via a common social network) to answer students' queries on language self-learning (i.e. types, modes, resources, procedures, etc.).

4-Teaching Competencies Related to Improving Students' Abilities to Implement Change in Their Thinking & Learning Styles:

In order for the secondary language teacher to be able to improve students' abilities to implement a change in their thinking and English language learning styles, s/he needs to master some teaching competencies ordered - based on participants' views - from the most important competencies to the least important ones as follows: (English language teachers should be capable of…)

1. Preparing some linguistic applications that are based on brainstorming strategies during warming-up so as to generate as many ideas as possible within a limited period of time.
2. Mastering computer and Internet competencies necessary for accessing English data sources to transfer this practice to learners.
3. Giving students incorrect phrases and sentences to correct/amend linguistically (i.e. grammatically, semantically, contextually, etc.).
4. Finding out situations related to students' real-life problems and training them on how to scientifically resolve them as part of their language expression tasks/exercises.
5. Assigning students to search for (and locate) information/knowledge related to an English language course.
6. Mastering logical dialogue with students so as to train them on using critical thinking.
7. Connecting the English language course with other courses with the goal of establishing a common ground that would assist developing critical interdisciplinary thinking and self-learning.
8. Training students – using social networking websites – on improving ability on self-expression more freely.
9. Dividing students into heterogeneous groups with the purpose of training them on how to share ideas among themselves to produce creative linguistic outputs.
10. Training students on how to criticize and evaluate credibility of English language course they are studying and self-learning resources.
11. Interfering appropriately in time to resolve any obstacles that might hinder critical thinking.

12. Training students on how to plan debates among them on some argumentative topics during oral expression in English.

5-Teaching Competencies Related to Activities Presented to Students to Reinforce Change Sustainability:

In order for the secondary language teacher to be able to present activities to students with the purpose of reinforcing change sustainability in thinking and English language learning styles, s/he needs to master some teaching competencies ordered - based on participants' views - from the most important competencies to the least important ones as follows: (English language teachers should be capable of…)

1. Providing immediate feedback to students so as to overcome any obstacles hindering English language self-learning in the future.
2. Reminding students about using self-learning as a life skill to be practised in different life situations.
3. Always reminding students about importance of continuing self-learning in English language courses as well as other courses.
4. Guiding students into writing down personal diaries and records to monitor their academic progress and language competency levels.
5. Providing immediate feedback to students so as to overcome weaknesses related to using critical thinking in the future while learning the English language.
6. Allowing students opportunities of contacting him/her outside the classroom to answer their queries.
7. Providing appropriate immediate reinforcement for each student while proposing new ideas related to the English language.
8. Assessing students based on some logical and objective standards so as to encourage them to sustain using critical thinking and self-learning styles.
9. Providing appropriate immediate reinforcement for each student while consulting different knowledge sources related to the English language.
10. Showing the importance of continuously criticising and reviewing emergent issues so as not to take things for granted.

11. Keeping activity logs as a means of following-up students, and discussing some language learning-related issues accordingly.
12. Drawing students' attention to the negative outcomes resulting from ignoring the use of various data sources.

4. Recommendations & Suggestions for Further Research

In the light of the study results, the researchers present some recommendations as follows:

1. Applying ADKAR Change Management Model with other courses and educational stages;
2. Introducing change management models to schools so as to enable teachers to conduct the desired changes at the classroom level;
3. Focusing more on critical thinking while teaching scientific concepts and abstract subjects such as Maths;
4. Fostering a lifelong learning approach at higher education, especially in pre-service teacher education programmes;
5. Connecting school subjects together in an interdisciplinary fashion so as to create a common ground based on which critical thinking can be developed;
6. Encouraging secondary-stage teachers to promote a stimulating English language learning environment to enable students to learn freely and practise new learning strategies;
7. Guiding course designer into including an appropriate linguistic content that would stimulate students' thinking and facilitate learning.
8. Finding a way through which teachers of different school subjects can cooperate together to sustain a change in secondary-stage students' critical thinking and lifelong learning.
9. The Professional Academy of Teachers should arrange some intensive training programmes and workshops for secondary-stage teachers with the goal of enabling them to developing the needed competencies which will help them to lead a change in their students' learning.

10. Fostering connections between secondary-school teachers and parents so as to help students overcome any family problems that might hinder the use of learning resources.
11. Teachers should preserve and sustain good relationships with their students so that future communication would be possible.
12. A teacher himself/herself should be a knowledge seeker and critical thinker so as to be a good example for his students.
13. Teachers should present content in a logically sequenced fashion so that learners thinking skills can be developed.
14. Teachers should prepare learning activities in line with ADKAR model to change their students' learning and thinking styles.
15. Teachers need to use assessment strategies and techniques that draw on critical thinking and lifelong learning.

In addition, future research can be conducted on the following topics:

1. Investigating the use of ADKAR Change Management Model to lead a change in language learning at primary and preparatory schools;
2. Using other change management models in secondary education;
3. Investigating students' experiences with changing their thinking styles and language learning;
4. Using ADKAR model to lead a change in other school subjects, such as Maths and Science.
5. Exploring the alternative assessment strategies and tools that language teachers can use to lead a change in language learning.
6. Measuring the effect of using intensive reading programme in English language learning on developing students' critical and creative thinking.
7. Researching the specific lifelong learning skills and strategies that language learners need to develop so as to achieve authentic language learning.
8. A suggested programme for acquainting teachers with the competencies needed for changing students' critical thinking and lifelong learning.

9. Job satisfaction of secondary teachers and its relationship with effective classroom management for changing thinking and learning styles.
10. A suggested framework for activating the role of school administration to acquaint students with some life skills using ADKAR Model.

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Appendix A

Structured Interviews for Identifying English Language Learning Needs at Egyptian Secondary Schools (Thinking & Lifelong Learning)

Introduction:

Secondary-Stage Students' Thinking & English Language Learning Needs

Invitation Letter

To secondary-stage English language (expert) teachers:

Hello dear friends! I wonder if you could help me with something. As part of a research project, a colleague and I are investigating the real thinking and lifelong language learning needs of secondary-stage students from expert teachers' perspectives..I'll be grateful if you could help us with any useful suggestions related to those real needs based on your wide and long experience in this area. Please kindly add your useful input in the appropriate places below. If you've got any questions, please send an e-mail message to: msayed40@yahoo.com

I do really appreciate your kind cooperation and support!

Mahmoud

Investigation of Secondary-Stage Students thinking and lifelong learning needs

(Online Interview)

Prepared by

Dr Mahmoud M. S. Abdallah
Dr Marwa M. Mohammad

Dear respected English Language Teaching Specialist (supervisor, expert teacher, teacher, etc.),

The researcher is currently conducting a research study on critical thinking and lifelong learning in the context of English language teaching at the secondary stage. This online interview aims at identifying your personal opinion on the real language learning needs of secondary-stage students, especially as far as critical thinking and lifelong learning skills are concerned.

Please kindly write in the allocated spaces below as much as you can because your insightful input is very important to us. Besides, your opinion as a teacher, teaching practitioner and/or secondary English teaching expert is so valuable to us. We think you can have a vital role in improving the whole process by providing your own insightful input.

*Please note that

- This is an online interview which is not intended to be a test or exam;
- There is no right or wrong answer; you're free to write whatever you like in the allocated boxes;
- Take your time while dealing with the interview questions;
- Don't skip any section/question;
- 6-Write as much as you can! Every single word you write will be considered.

Sincerely,

The researchers

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1. ***Full name***: .....

2. ***E-mail address***: .....

3. ***Job & Affiliation*** (e.g. school, educational administration, directorate and city/town): .....

4. ***Number of Years of Teaching Experience*** (For how many years have you been working as a teacher, for example?): .....

5. Throughout your personal experience with the Hello! Secondary English series, please indicate - in detail - the thinking and lifelong learning skills that the series aims at acquainting students with.

……

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……

6. Please list those new thinking skills/abilities that - in your opinion - secondary-stage students need to develop while learning English at this age.

……

……

……

……

7. Please list those new lifelong learning skills/abilities that - in your opinion - secondary-stage students need to develop while learning English at this age.

……

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8. In your opinion, what are the new, real challenges that secondary-stage students currently face in English language learning, especially as far as critical thinking and lifelong learning are concerned?

……

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……

……

College of Education

Curriculum & Instruction Dept.

Appendix B

Secondary-Stage English Language Teachers' Needed Competencies Questionnaire in the Light of ADKAR Change Management Model

Prepared by

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College of Education, Assiut University

Dr Marwa M. Mohammad

Lecturer of Educational Administration at Foundations of Education Dept.

College of Education, Assiut University

2016

Dear English Language Teaching Expert/Inspector

This questionnaire aims at identifying which ELT competencies are needed for secondary-stage English language teachers to foster critical thinking and lifelong learning in the classroom. Your viewpoint is extremely important for accomplishing our research objectives. Any information you provide is very confidential and won't be used for any purposes other than research.

Please note that

1. This questionnaire (openionnaire) is not intended to be a test or an exam;
2. There is no right or wrong answer;

3. You should tick (click) ONE response only for each statement without skipping any;

4. Allocated time ranges between 15-20 minutes;

5. You have to answer each item by ticking (clicking) one of 5 available response options (graded from: 1=Strongly Disagree to 5=Strongly Agree), ***based on your opinion on the extent to which each item (competency) should be available in the target teachers to accomplish the desired change***:

No	Statement	Strongly Disagree 1	Disagree 2	Undecided 3	Agree 4	Strongly Agree 5
1			√			

Name & E-mail address (Optional): ----------

Gender: Male - Female

Job & Affiliation (Place): ----------

Number of Years of Teaching Experience: ----------

The ELT Competencies Questionnaire

No	Statement		Response				
			Strongly Disagree 1	Disagree 2	Undecided 3	Agree 4	Strongly Agree 5
A-Teaching Competencies Related to Building Students' Awareness of the Need for Changing Their Thinking & Learning Styles							
1	Clarifying to students the importance of referring to varied learning resources in addition to the English language textbook.						
2	Highlighting the bad need for critical thinking so as to review and evaluate varied information resources, especially the electronic ones during English language learning.						
3	Guiding students into a recognising the importance of English language learning as an essential requirement for joining the job market.						
4	Showing the importance of employing critical thinking for functional language learning in qualifying them to join the job market.						
5	Enabling students to be aware of the importance of using critical thinking for facing challenges related to cognitive overload, especially when it comes to the increasing linguistic input (e.g. new vocabulary, idioms, and terms).						
6	Drawing students' attention to the important need to using critical thinking while facing current-age challenges (e.g. globalization and ICT revolution).						
7	Showing the importance of self-learning in facing current-age challenges (e.g. globalization and ICT revolution).						
8	Illustrating the importance of team work inside the classroom to accomplish the desired language communicative goals.						
9	Helping students to recognize the importance of the need for using self-learning styles while learning English as a foreign language to face current-age challenges related to language use, especially in terms of increasing cognitive overload of vocabulary, terms and idioms.						
10	Showing to students the importance of						

No	Statement		Response				
			Strongly Disagree 1	Disagree 2	Undecided 3	Agree 4	Strongly Agree 5
	establishing language learning communities – both inside and outside the classroom (e.g. through social networks) – in practicing English functionally and pragmatically.						
B-Teaching Competencies Related to Building Students' Desire for Change							
11	Listening carefully to students to identify the problems and/or difficulties that might hinder their use of critical thinking while learning English.						
12	Listening to students' complaints about the obstacles that stand in the way of using self-learning in language acquisition, especially those related to availability of learning resources.						
13	Encouraging students to pose questions in order to develop the linguistic and communicative skills that would assist them with mastering the English language.						
14	Accepting students' suggestions for English language self-learning techniques.						
15	Encouraging students – especially during oral and written expression tasks/exercises in their English language course - to generate as many ideas as possible about a certain topic.						
16	Prompting learners to be more creative and innovative by answering questions in more than one way.						
17	Stimulating talented students to help their peers with using new thinking modes and styles in language learning, while providing them with any needed guidance and support.						
18	Encouraging talented students to help their peers with using new language learning styles/strategies, such as: active learning, reflective learning, shared reading and cognitive apprenticeship.						
19	Promoting talented peers to assist their peers with accessing different language learning resources.						
20	Bridging gaps with home environment to sustain						

No	Statement		Response				
			Strongly Disagree 1	Disagree 2	Undecided 3	Agree 4	Strongly Agree 5
	availability of time and resources needed for self-learning.						
C-Competencies Related to Acquainting Students with Knowledge about How to Change Thinking & Learning Styles							
21	Teaching students how to make self-evaluation and judgments after studying a specific linguistic content (e.g. a reading comprehension passage).						
22	Holding orientation workshops and meetings with students at the beginning of the academic year to illustrate the thinking modes and types which they can use while studying English.						
23	Establishing an online Community of Practice (e.g. via a common social network) to answer students' queries on using critical thinking in language learning (i.e. concept, fields, procedures, timing, etc.).						
24	Holding orientation meetings with students at the beginning of the academic year to illustrate (through interactive presentations) the learning modes and types which they can use while studying English.						
25	Establishing an online Community of Practice (e.g. via a common social network) to answer students' queries on language self-learning (i.e. types, modes, resources, procedures, etc.).						
26	Providing students with samples/models and examples of varied language learning resources.						
27	Providing students with English websites that include data on how to change thinking modes and English language learning styles.						
D-Teaching Competencies Related to Improving Students' Abilities to Implement Change in Their Thinking & Learning Styles							
28	Training students on how to plan debates among them on some argumentative topics during oral expression in English						
29	Training students on how to criticize and evaluate credibility of English language course they are studying and self-learning resources.						
30	Giving students incorrect phrases and sentences						

No	Statement		Response				
			Strongly Disagree 1	Disagree 2	Undecided 3	Agree 4	Strongly Agree 5
	to correct/amend linguistically (i.e. grammatically, semantically, contextually, etc.).						
31	Preparing some linguistic applications that are based on brainstorming strategies during warming-up so as to generate as many ideas as possible within a limited period of time.						
32	Assigning students to search for (and locate) information/knowledge related to an English language course.						
33	Training students – using social networking websites – on improving ability on self-expression more freely.						
34	Dividing students into heterogeneous groups with the purpose of training them on how to share ideas among themselves to produce creative linguistic outputs.						
35	Interfering appropriately in time to resolve any obstacles that might hinder critical thinking.						
36	Mastering computer and Internet competencies necessary for accessing English data sources to transfer this practice to learners.						
37	Finding out situations related to students' real-life problems and training them on how to scientifically resolve them as part of their language expression tasks/exercises.						
38	Mastering logical dialogue with students so as to train them on using critical thinking.						
39	Connecting the English language course with other courses with the goal of establishing a common ground that would assist developing critical interdisciplinary thinking and self-learning						
E-Teaching Competencies Related to Activities Presented to Students to Reinforce Change Sustainability							
40	Always reminding students about importance of sustaining the use of critical thinking in different life issues/affairs.						
41	Always reminding students about importance of continuing self-learning in English language						

No	Statement		Response				
			Strongly Disagree 1	Disagree 2	Undecided 3	Agree 4	Strongly Agree 5
	courses as well as other courses.						
42	Providing appropriate immediate reinforcement for each student while consulting different knowledge sources related to the English language.						
43	Providing appropriate immediate reinforcement for each student while proposing new ideas related to the English language.						
44	Assessing students based on some logical and objective standards so as to encourage them to sustain using critical thinking and self-learning styles.						
45	Allowing students opportunities of contacting him/her outside the classroom to answer their queries.						
46	Providing immediate feedback to students so as to overcome weaknesses related to using critical thinking in the future while learning the English language.						
47	Providing immediate feedback to students so as to overcome any obstacles hindering English language self-learning in the future.						
48	Reminding students about using self-learning as a life skill to be practised in different life situations.						
49	Drawing students' attention to the negative outcomes resulting from ignoring the use of various data sources.						
50	Showing the importance of continuously criticising and reviewing emergent issues so as not to take things for granted.						
51	Keeping activity logs as a means of following-up students, and discussing some language learning-related issues accordingly.						
52	Guiding students into writing down personal diaries and records to monitor their academic progress and language competency levels.						
53	Communicating with parents to help them with devising means of encouraging their sons and daughters to speak English and build self-confidence while using it.						

Appendix C: Order of Teaching Competencies Based on Descending Means

Descriptive Statistics of All Questionnaire Items

Teaching Competencies (Questionnaire Items)	N	Min	Max	Mean	Std. Deviation
13. Encouraging students to pose questions…	60	3	5	4.48	.701
12. Listening to students' complaints about…	60	2	5	4.48	.676
8. Illustrating the importance of team work inside the class…	60	2	5	4.45	.790
1. Clarifying to Ss importance of referring to varied learning resources	60	3	5	4.42	.645
15. Encouraging Ss...to generate as many ideas as possible…	60	1	5	4.37	.938
11. Listening carefully to Ss to identify the problems hindering their use of critical thinking	60	3	5	4.37	.637
16. Prompting learners to be more creative by answering questions…	60	2	5	4.35	.840
31. Preparing linguistic applications based on brainstorming strategies during warming-up to generate as many ideas as possible	60	2	5	4.33	.837
48. Reminding students about using self-learning as a life skill…	60	2	5	4.32	.676
47. Providing immediate feedback to Ss to overcome any obstacles hindering self-learning in the future.	60	1	5	4.32	.873
9. Helping Ss to recognize the importance of need for using self-learning styles while EFL learning to face current-age…	60	2	5	4.32	.748
36. Mastering IT competencies necessary for accessing English data sources to transfer this practice to learners.	60	2	5	4.30	.743
3. Guiding Ss into a recognising importance of ELL as an essential requirement for joining job market.	60	2	5	4.28	.922
18. Encouraging talented Ss to help their peers with using new language learning styles – active & reflective learning....	60	1	5	4.28	.904
14. Accepting Ss' suggestions for English language self-learning techniques.	60	1	5	4.27	.936
30. Giving Ss incorrect phrases and sentences to correct	60	1	5	4.27	.918
10. Showing to Ss the importance of establishing ELL communities	60	2	5	4.27	.660
41. Always reminding Ss about importance of continuing self-learning in English courses as well as other courses.	60	2	5	4.23	.945

7. Showing the importance of self-learning in facing current-age challenges	60	2	5	4.23	.945
5. Enabling Ss to be aware of the importance of using critical thinking for facing challenges related to cognitive overload…	60	2	5	4.23	.722
37. Finding out situations related to Ss' real-life problems and training them on how to resolve them…	60	2	5	4.22	.715
21. Teaching Ss how to make self-evaluation and judgments after studying a specific …	60	1	5	4.22	1.027
32. Assigning Ss to search for info related to an English language course.	60	1	5	4.20	.898
52. Guiding Ss into writing down personal diaries and records to monitor their academic progress.	60	1	5	4.17	.847
39. Connecting the English language course with other courses with the goal of establishing a common ground that …	60	2	5	4.17	.806
38. Mastering logical dialogue with students so as to train them on using critical thinking.	60	2	5	4.17	.806
4. Showing the importance of employing critical thinking for functional ELL in qualifying them to join the job market.	60	1	5	4.17	.847
27. Providing Ss with English websites that include data on how to change thinking modes and ELL styles.	60	2	5	4.17	.867
46. Providing immediate feedback to Ss to overcome weaknesses related to using critical thinking in the future while ELL	60	1	5	4.15	.860
6. Drawing Ss' attention to the important need to using critical thinking while facing current-age challenges (e.g. globalization and ICT revolution).	60	2	5	4.15	.880
26. Providing Ss with samples/models and examples of varied ELL resources.	60	1	5	4.13	.947
17. Stimulating talented Ss to help their peers with using new thinking modes and styles in ELL.	60	1	5	4.13	.982
40. Always reminding Ss about importance of sustaining the use of critical thinking in different life issues/affairs.	60	1	5	4.12	.865
22. Holding orientation workshops and meetings with Ss to illustrate the thinking modes and types…	60	1	5	4.12	.783
45. Allowing Ss opportunities of contacting him/her outside the classroom to answer their queries.	60	2	5	4.12	.904
33. Training Ss– using social networking websites – on improving ability on self-expression more freely.	60	1	5	4.10	.838

53. Communicating with parents to help them with devising means of encouraging their sons to speak English and build self-confiden.	60	1	5	4.10	.915
43. Providing immediate reinforcement for each while proposing new ideas related to the English language.	60	2	5	4.10	.838
19. Promoting talented peers to assist their peers with accessing different language learning resources.	60	2	5	4.10	.775
2. Highlighting the bad need for critical thinking to review and evaluate varied info resources	60	1	5	4.08	.907
29. Training Ss on how to criticize and evaluate credibility of English language course they are studying and self-learning resources.	60	1	5	4.05	.811
34. Dividing Ss into heterogeneous groups with the purpose of training them on how to share ideas among themselves to produce creative linguistic outputs.	60	2	5	4.05	.811
35. Interfering appropriately in time to resolve any obstacles that might hinder critical thinking.	60	2	5	4.03	.688
44. Assessing Ss based on some logical and objective standards to encourage them to sustain using critical thinking and self-learning styles.	60	2	5	4.02	.892
23. Establishing an online CoP (e.g. via a common social network) to answer Ss' queries on using critical thinking in language learning	60	1	5	4.00	.991
42. Providing appropriate immediate reinforcement for each student while consulting different knowledge sources related to the English language.	60	1	5	3.98	.892
50. Showing the importance of continuously criticising and reviewing emergent issues so as not to take things for granted.	60	1	5	3.97	.920
24. Holding orientation meetings with Ss at the beginning of the academic year to illustrate (through interactive presentations) the learning modes and types which they can use while studying English.	60	1	5	3.93	.989
25. Establishing an online CoP (e.g. via a common social network) to answer Ss' queries...	60	1	5	3.92	1.062
28. Training Ss on how to plan debates among them on some argumentative topics during oral expression in English	60	1	5	3.88	1.075
51. Keeping activity logs as a means of following-up Ss, and discussing some ELL-related issues accordingly.	60	1	5	3.83	1.028

49. Drawing Ss' attention to the negative outcomes resulting from ignoring the use of various data sources.	60	1	5	3.73	1.039
20. Bridging gaps with home environment to sustain availability of time and resources needed for self-learning.	60	1	5	3.68	1.066
Valid N	60				

Appendix D: Order of Competencies under Each Pivot Based on Participants' Views

Pivot A: Awareness

Item no	Mean	Order
1	4.42	2
2	4.08	10
3	4.28	4
4	4.17	8
5	4.23	7
6	4.15	9
7	4.23	6
8	4.45	1
9	4.32	3
10	4.27	5

Pivot B: Desire

Item no	Mean	Order
11	4.37	2
12	4.48	1
13	4.48	1
14	4.27	5
15	4.37	2
16	4.35	3
17	4.13	6
18	4.28	4
19	4.10	7
20	3.68	8

Pivot C: Knowledge

Item no	Mean	Order
21	4.22	1
22	4.12	4
23	4.00	5
24	3.93	6
25	3.92	7
26	4.13	3
27	4.17	2

Pivot D: Ability

Item no	Mean	Order
28	3.88	10
29	4.05	8
30	4.27	3
31	4.33	1
32	4.20	5
33	4.10	7
34	4.05	8
35	4.03	9
36	4.30	2
37	4.22	4
38	4.17	6
39	4.17	6

Pivot E: Reinforcement

Item no	Mean	Order
40	4.12	5
41	4.23	2

42	3.98	8
43	4.10	6
44	4.02	7
45	4.12	5
46	4.15	4
47	4.32	1
48	4.32	1
49	3.73	11
50	3.97	9
51	3.83	10
52	4.17	3
53	4.10	6