

Creating Culture of Thinking in Language Classrooms: An Interpretive Inquiry Into Saudi University EFL Instructors' Beliefs and Practices

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Abstract—Guided by sociocultural theory (SCT) perspectives, this mixed-methods study investigated Saudi university EFL instructors' beliefs and teaching practices regarding the creation of culture of thinking (CoT) in language skills classrooms, and the factors affecting this process. Research data were gathered from 169 EFL university instructors through a self-report questionnaire. Among the participants, 12 instructors participated in a semi-structured interview. Additionally, classroom observations were conducted in seven classrooms. Questionnaire data were analyzed quantitatively using descriptive statistics while interview and classroom observation data were analyzed qualitatively. Instructors' beliefs were examined in terms of their conceptions of thinking skills, and their perceptions of the importance of creating and sustaining a CoT in EFL classrooms. Their beliefs and reported practices were then compared to their actual classroom practices. Data analysis revealed several key findings. Firstly, there was an obvious incongruence between instructors' stated beliefs, reported practices, and actual classroom teaching practices. Though most instructors were favorable toward the CoT, they did not apply it to their classrooms. Secondly, several factors were identified to have mediated instructors' beliefs and practices pertaining to the CoT. These factors were related to cultural values (e.g., individual thinking, obedience, and respect for adults) as well as institutional and classroom contexts (e.g., workload, examination system, students' thinking habits, and language proficiency). Finally, instructors lacked the strategies necessary to effectively implement CoT. Based on these findings, pedagogical implications and future research studies are proposed.

Index Terms—Culture of Thinking, teacher beliefs, Teaching practices, sociocultural theory, university EFL instructors

I. INTRODUCTION

In today's technical society, there is a need for students who are curious, inquisitive, responsible, and capable of thinking critically. Therefore, promoting students' thinking skills has become an integral goal of higher education worldwide, as these skills are considered critical for both professional and personal success (Li, 2016; Wilson, 2016). This requires instructors to have a sense of curiosity and be active, reflective, and knowledgeable about thinking-provoking practices. Scholars and researchers differ in their definitions of thinking skills, but most focus on central aspects such as mental processes, knowledge, dispositions, cognition, and metacognition (Ashman & Conway, 1993). For Moseley et al. (2004), thinking skills represent proficiency, facility, and practicality in thinking processes, including remembering, reasoning, forming concepts, planning, questioning, making decisions and judgments, and creating new perspectives. In the field of language teaching, there is an established close interrelationship between language development and thinking, as language proficiency incorporates both linguistic and cognitive constituents (Chamot, 1995; Li, 2016). Cognitive aspects of thinking, such as analysing, questioning, and reasoning, are essential for understanding content in the language classroom and enhancing students' learning autonomy (Dong, 2006; Zhang, 2020). Therefore, integrating thinking skills in language classrooms has become one of EFL instructors' main responsibilities (Li, 2016; Ritchhart, 2015).

Ritchhart (2002) introduced culture of thinking (CoT) as a teaching approach to incorporate thinking skills into classroom teaching and learning. It means "a place where a group's collective and individual thinking is valued, visible, and actively promoted as part of the regular, day-to-day experience of all group members" (Ritchhart et al., 2011, p. 219). According to Ritchhart and Perkins (2005, p. 775), effective integration of thinking skills into classroom practice necessitates instructors asking themselves some key questions, including "Why do we want students to think?", "When is it useful?" And what objectives does it serve?" Over the past decade, many western educational contexts have given

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considerable attention to CoT. Moreover, it has been the subject of many textbooks to support its role and value in classroom instruction (e.g., Ritchhart, 2015; Richhart et al., 2011), as elaborated in section 2.4.

Despite the significant role of thinking skills in EFL learning, little is known about the actual classroom practices of integrating these skills into the teaching and learning process (Li, 2016; Tabačková, 2015). In the Saudi context, for example, though developing students' thinking skills is among the learning outcomes (ILOs) of university study programs, there are no salient guidelines that support instructors' practices in this area. As a result, promoting thinking skills in Saudi university EFL classes is largely dependent on instructors' personal conceptions of thinking, previous educational backgrounds, and experiences (Al Zahrani & Elyas, 2017; Al-Seghayer, 2014).

Educational research, over the last three decades, has highlighted the effect of instructors' beliefs on their instructional decisions and practices (Borg, 2001, 2011) as well as their acceptance and adoption of novel teaching approaches (Barbier et al., 2022; Li, 2020; Li & Walsh, 2011). Teacher beliefs incorporate instructors' thoughts, knowledge, and beliefs regarding diverse issues influencing teaching and learning as well as instructors' and learners' identities and roles, and "serve as a guide to thought and behaviors" (Borg, 2001, p. 186). According to numerous studies, instructors' beliefs and classroom practices are reciprocal, with beliefs shaping practices and practices shaping beliefs (Yang & Gao, 2013; Zheng, 2013). Sociocultural theory (SCT) acknowledges the role of societal and cultural contexts in shaping teacher cognition (Vygotsky, 1978). Taking a sociocultural perspective on cognition and social activity, Lantolf and Johnson (2007, p. 878) argued that social activity not only affects cognition but also acts as "the process through which human cognition is formed." In essence, instructors' practices can serve as a manifestation of both their intentional strategies and purposefully chosen methods, as well as their professed beliefs that may have been shaped by their prior experiences. Li (2020) illustrated the social nature of instructors' beliefs at two main levels: first, how cultural heritage influences instructors' beliefs and practices. Second, instructors construct knowledge, concepts, and understandings of accepted practices based on their professional interactions. In this regard, understanding the congruence or incongruence between instructors' mental constructs and classroom teaching practices is crucial. Through a comprehensive investigation of what instructors know, believe, and think, we can gain valuable insight into their cognitive processes, which can ultimately inform strategies for improving teaching effectiveness.

However, there is a shortage of empirical research on EFL instructors' beliefs about thinking skills and to what extent they are integrating them into their instructional practices (Li & Walsh, 2011; Li, 2016) compared to empirical studies on the development of thinking skills among students in general (Dong, 2006; Hung, 2019) or certain thinking skills as critical thinking (Al Zahrani & Elyas, 2017; Tabačková, 2015). Moreover, most studies in this area focused on investigating instructors' beliefs based on self-report instruments to collect instructors' reflections and descriptions (Barbier et al., 2022; Hong et al., 2020; Zhang et al., 2020) rather than exploring their actual classroom practices in depth, which may not always align with their reported beliefs. According to Oranje and Smith (2018, p. 313), though this gives a deeper perception of instructors' own interpretations and elucidations of their previous experiences with their distinct context, individual instructors may not necessarily impute equal significance to their beliefs, and beliefs may regulate practice in an inconsistent way.

Guided by sociocultural theory, the present study aimed to investigate Saudi university EFL instructors' beliefs and teaching practices concerning the creation of CoT in their language skills classrooms, and the factors contributing to this process. Despite being a study of Saudi university EFL instructors, the findings of this study may be relevant to other similar contexts and disciplines since CoT is a foundational element of effective teaching (Ritchhart et al., 2011). By exploring the extent to which university instructors perceive and practice CoT in their teaching, this study could help to bridge the gap between desired learning outcomes and actual teaching practices in EFL contexts more broadly. Additionally, the study's findings shed light on how sociocultural factors, such as cultural values and norms, as well as classroom and institutional contexts, impact CoT implementation. These insights could inform the design of teacher education and professional development programs aimed at supporting EFL instructors in promoting CoT in their classrooms, thereby improving students' learning outcomes.

II. LITERATURE REVIEW

A. *Culture of Thinking (CoT) and Language Teaching and Learning*

With the increased awareness of the significant role of classroom culture in shaping learning, over the past two decades, teaching thinking using programmed strategy instruction that targets students as individuals has been replaced with broad-based approaches that attempt to create classroom cultures that support the active social creation of knowledge in groups, such as developing thinking patterns (González et al., 2001), fostering a community of learners (Brown & Campione, 1994), and group knowledge building (Bereiter & Scardamalia, 2014). CoT as a teaching approach was introduced by Ritchhart (2002). Pohl (2011) stated that CoT is "a supportive environment in which specific factors work together in a synergetic fashion to bring about and reinforce the enterprise of productive thinking in a critical, creative, and caring sense" (p. 8). Ritchhart et al. (2011, p. 221) highlighted that CoT definitions are meant to provide educators with a goal to strive for rather than a state that will ever be "perfectly achieved".

In a comprehensive study of CoT, Ritchhart (2015) identified eight cultural forces at play in classrooms that aid the process of enculturation in thinking or what is known as CoT. He defined these forces as "the shapers of classroom

cultures" (p. 6). These forces include instructors' expectations for their students, the language of the classroom, management of teaching time, modeling (teacher modelling of thinking and dispositions), opportunities created for deep and meaningful learning, thinking routines (routines and structures for thinking), interactions (interactions and relationships that are supportive of thinking) and classroom environment (messages from the physical and emotional environment about thinking). These cultural factors serve as both direct and indirect teaching tools (Ritchhart & Perkins, 2005). For example, by implementing "thinking routines," instructors give students highly transferable thinking tools that they can pick up in one context and use in a variety of other contexts over time (Ritchhart, 2002). On the other hand, using the language of thinking with its four constructs, process (questioning, analysing, and justifying), product (summation, presumption), stance (concur, challenge), and state (intrigued, confused), represents an indirect method of fostering thinking by providing students with language for discussing thoughts. Moreover, CoT is constructed and sustained by connecting both the direct forces (routine, opportunities) and the indirect forces (expectations, interactions, modelling, time, language, and environment). In the present study, classroom observations and interviews with instructors were analyzed using these eight forces.

Although several studies have examined the CoT approach in language classrooms (e.g., Dajani, 2016; Hooper, 2016), there appears to be a gap in the literature devoted to investigating instructors' beliefs and classroom practices in this context from a sociocultural lens. Existing studies have primarily focused on the impact of this approach on students' engagement and language skills rather than how instructors' beliefs and practices can affect its implementation. There is a need for further research into the sociocultural factors that influence instructors' beliefs and practices regarding the CoT approach, and how these factors affect the adoption of the approach in language classrooms, which is the focus of the present study.

The present study maintained a relativistic perspective, believing everything to be interdependent and inseparable, along with the sociocultural perspective in discussing the study's main findings.

B. Questions of the Study

The study aimed to answer the following questions:

RQ1 What are the beliefs of EFL instructors about CoT in terms of their conceptions of thinking skills and their perceptions of the usefulness of establishing and sustaining CoT in EFL classrooms in Saudi Arabia?

RQ2 How do EFL instructors incorporate CoT into their classrooms, and what teaching practices do they use to develop students' thinking skills?

RQ3 To what extent are Saudi university EFL instructors' beliefs and self-reported CoT practices align with their actual classroom practices?

RQ4 What are the factors that mediate the implementation of CoT in EFL classrooms in Saudi Arabia, and how do instructors deal with them in their teaching practices?

III. METHOD

A. Design of the Study

This study used a mixed methods approach to reach a more comprehensive and nuanced understanding of the research topic by examining multiple aspects and utilizing different data sources to triangulate the findings. The study collected both quantitative and qualitative data concurrently, and both types were analyzed simultaneously. This design allowed us to integrate both types of data to gain a more complete understanding of EFL instructors' beliefs and practices related to the establishment of CoT in language skills classrooms, and the factors mediating this process.

B. Participants

Based on the purposive sampling technique, 169 EFL university instructors (36 Male-133 Female) from four Saudi universities voluntarily completed the study questionnaire (see Table 1 for Participants' demographic information). Recruitment criteria for this study included being a full-time staff member at a Saudi public university, having at least 3-year teaching experience, and availability to take part in the study. Seeking voluntary participation, emails/WhatsApp messages were sent to the participants, explaining the aim, significance, and procedures of the study along with CoT definition and main forces. Then, 12 instructors were randomly selected from the main research group to participate in a semi-structured interview. In stage three, seven instructors from the 12 who participated in the interview participated in the classroom observation.

TABLE 1
PARTICIPANTS' DEMOGRAPHIC INFORMATION

Variables	Categories	Number	%
	Gender	Male	36
Female		133	79%
Teaching experience	5 years and less	27	16%
	More than 5 and less than 15	76	45%
	More than 15 years	66	39%
Professional title	Teaching Assistant	11	7%
	Lecturer	51	30%
	Assistant Professor	85	50%
	Associate Professor	16	9%
	Professor	6	4%
Academic degree	BA	3	2%
	MA	54	32%
	PhD	112	66%

C. Data Collection Instruments

(a). The Questionnaire

The questionnaire consisted of four sections: Section One included eight items about the participants' demographic information, Section Two included 12 items about their conceptions of thinking skills, Section Three included 11 items about their perceptions of the usefulness of practicing CoT in EFL skills classrooms, and Section Four included 14 items about their practices of CoT. For sections two and three a 5-point Likert-attitudinal scale was used: "1" strongly disagree, to "5" strongly agree. In section four a 5-point Likert scale was used with frequency categorizations as follows: "1" never to "5" always.

To ensure the face validity of the questionnaire, it was submitted to three jury members; based on their comments some items were rephrased to make the meaning clear for the reader. Afterward, the researchers piloted the questionnaire with a group of 15 instructors who shared similar characteristics to the main study participants. The four sections of the questionnaire had high internal consistency at .0.90, 0.92, and 0.92.

(b). Semi-Structured Interview

A semi-structured interview was conducted following a guide that included some open-ended questions and probes that covered four specific domains. The interview was conducted in English according to the participants' preferences. However, to ensure a meaningful exchange of ideas regarding the research topic, they were allowed to switch to their L1 (Arabic) whenever they wished. The interview lasted 30 to 45 minutes. Audios of the individual interviews were transcribed verbatim and checked by the interviewees to ensure their views had not been misunderstood.

(c). Classroom Observation

Seven classes (2 listening and speaking, 2 reading, and 3 writing) were observed to gain a deeper understanding of how CoT was practiced. The observation allowed us to experience and see what takes place in the classroom. For effective observation, a predetermined observation scheme was used based on Ritchhart's (2015) eight cultural forces of CoT along with audio recordings to back up the field notes.

D. Data Analysis

The questionnaire data were analyzed quantitatively using descriptive statistical analysis through SPSS (Version 28.0). Analysis of the data was primarily designed to locate general trends and "summarize findings by describing general tendencies in the data and the overall distribution of scores" (Dörnyei, 2007, p. 213). Variables with normally distributed numerical values were expressed as means and standard deviations (SDs), while qualitative variables were expressed as frequencies and percentages.

The interview and classroom observation data were analyzed quantitatively using a structural coding method (Strauss & Corbin, 1990) to facilitate fast access to data and generate emerging themes. Ritchhart's (2015) eight cultural forces of CoT served as a basis for developing a coding scheme to categorize participants' CoT practices. Data were coded manually in three phases: descriptive coding (preparing and describing the data), pattern coding (reducing the data, arranging nodes into hierarchical categories, and refining coding decisions), and theorizing (interpreting the data). The coding process involved multiple cycles to ensure accurate identification and description of participants' perceptions and practices. Members verified transcripts and interpretations of data for accuracy and authenticity. The data were read and analyzed by the two researchers to identify initial codes; general themes were identified subsequently. Further discussions between the two researchers were conducted to attain "inter-coder agreement" (r= .89) and thus enhance the credibility of the findings (Nunan & Bailey, 2009, p. 428).

IV. RESULTS

A. *The Questionnaire Results*(a). *Participants' Conceptions of Thinking Skills*

To answer the first research question regarding participants' conceptions of thinking skills, the questionnaire second-section data were analysed using descriptive statistics, as shown in Table 2.

TABLE 2
PARTICIPANTS' CONCEPTIONS OF THINKING SKILLS

No	Items	M	SD	%
4	Thinking skills are reasoning (combining and utilizing available knowledge to address unfamiliar situations)	4.12	0.85	82%
5	Thinking skills are being critical (comparing and contrasting knowledge gained from different perspectives)	4.11	0.91	82%
8	Thinking skills are problem-solving	4.05	1.03	81%
12	Thinking skills are being creative	4.04	0.91	81%
3	Thinking skills are logics (processing existing knowledge)	4.02	0.91	80%
7	Thinking skills are making appropriate argument	3.89	0.95	78%
11	Thinking skills are Open-mindedness and flexibility to accept new ideas and different perspectives	3.89	1.00	78%
6	Thinking skills are being aware of one's learning process	3.79	0.91	76%
9	Thinking skills are changing perspectives	3.75	0.94	75%
10	Thinking skills are learning to learn together	3.61	0.98	72%
1	Thinking skills are co-construction of knowledge	3.47	1.11	69%
2	Thinking skills are memorization skills	2.68	1.11	54%

Table 2 shows that the means for all items, except Item No. 2, are over 3.00, which indicates that the participants had clear conceptions of thinking skills. The mean scores also show that none of the conceptions were universally held by all the participants. Interestingly, the highest means were found for Items Four ($M = 4.11$), Five ($M = 4.11$), and Eight ($M = 4.05$), which suggests that participants held a 'cognitivist' view of thinking. Another significant finding was the lowest mean for Item No. 2 ($M = 2.68$), with the majority choosing "uncertain".

(b). *Participants' Perceptions of the Usefulness of Practicing CoT*

The results revealed that most participants (79%) supported integrating CoT into Language classrooms ($M = 3.93$, $SD = 0.76$). As shown in Table 3, the strongest sentiments were expressed about Items Five ($M = 4.20$, $SD = 0.99$) and Four ($M = 4.18$, $SD = 0.95$), with participants strongly agreeing that practicing CoT in EFL classrooms is especially important in developing students' personalities, and that English textbooks should include activities for practicing thinking. Items One and Ten also produced relatively strong responses, with respondents agreeing with the notion that it is necessary to integrate language competence with thinking skills in the EFL curriculum ($M = 4.11$, $SD = 0.95$) and that it is essential to provide EFL students with various opportunities to practice their thinking skills ($M = 4.11$, $SD = 0.89$). However, only a slight majority agreed that university EFL instructors are responsible for teaching thinking skills ($M = 3.58$, $SD = 1.10$). On the other hand, most of the participants (67%) were uncertain whether students with a high language proficiency level would benefit more from CoT ($M = 3.37$, $SD = 1.13$).

TABLE 3
PARTICIPANTS' PERCEPTIONS OF THE USEFULNESS OF PRACTICING CoT

No	Items	M	SD	%
5	CoT is important in developing students' personalities (e.g., having an inquisitive open mind, self-efficacy)	4.20	0.99	84%
4	English textbooks should include activities for practicing CoT	4.18	0.95	84%
1	It is necessary to integrate language competence with thinking skills in university EFL curriculum	4.11	0.95	82%
10	EFL students should be given a variety of opportunities to practice their thinking skills	4.11	0.89	82%
8	Developing thinking skills for university EFL students should start from the first study levels	4.05	1.05	81%
6	CoT helps students get involved in complex and interactive experiences, solving real problems, and considering new ideas	4.03	0.88	81%
7	CoT establishes the social and cultural contexts of collaborative learning	3.98	0.91	80%
3	CoT is essential for mastering English language skills	3.86	0.93	77%
9	Thinking skills can be developed for all students	3.73	1.08	75%
2	It is the responsibility of university EFL instructors to teach thinking skills in their classrooms	3.58	1.10	72%
11	Students with high language proficiency level benefit more from CoT	3.37	1.13	67%

(c). *Participants' Reported Practices of CoT*

Table 4 shows that the most frequently reported practices were encouraging students to actively participate in various thinking-provoking and collaborative problem-solving activities (M = 3.97, SD = 1.00), using critical thinking language (M = 3.93, SD = 1.03), varying question types (M = 3.91, SD = 0.97), and using supportive language (M = 3.88, SD = 0.98). However, only 67% of the participants expressed confidence in rearranging classroom physical settings to foster meaningful collaboration (M = 3.34, SD = 1.20).

TABLE 4
PARTICIPANTS' REPORTED PRACTICES OF CoT

No	Items	M	SD	%
10	I encourage my students to actively participate in various thinking provoking and collaborative problem-solving activities.	3.97	1.00	79%
4	I use critical thinking language (e.g., open questions- higher order questions) to engage and motivate students to think beyond the surface.	3.93	1.03	79%
11	I vary my question types to encourage unexpected responses and maximize learning opportunities.	3.91	0.97	78%
7	I use supportive language to help students value the benefits of the topic discussed	3.88	0.98	78%
1	I consciously train my students' thinking skills	3.77	1.07	75%
3	Knowledge and comprehension questions are dominant types in my class	3.73	1.00	75%
5	I use strategy-based instruction to raise students' awareness of cognitive learning strategies	3.73	0.99	75%
6	I assign enough class time for in-depth discussions and interactions	3.67	1.07	73%
2	I spend much of class time fostering students' linguistic knowledge	3.63	1.12	73%
8	I effectively use wait-time technique to cultivate deep and meaningful learning	3.62	1.02	72%
9	Interactive, reflective, and collaborative teaching techniques are essential part of my class routine	3.60	1.12	72%
12	I arrange class seats for meaningful collaboration and interaction	3.34	1.20	67%

B. *The Interview Results*

(a). *Participants' Perceptions of the Usefulness of CoT*

Qualitative analysis of participants' responses to questions about their beliefs regarding the expected benefits of integrating CoT into EFL skills classrooms resulted in several themes. The most frequent theme was "promoting deep

and meaningful learning," with all participants using various terms that refer to it, including "true and meaningful learning" (n = 12), "deep understanding" (n = 8), and "deep learning" (n = 6). One participant stated, "This classroom culture helps students think deeply about the topic they are reading or writing about," while another added that "students will be able to put what they have learned into practice through interactive activities and in-depth study". The second most frequent theme (n = 10) was coded by the term "engaging students in the learning process." Participants believed that CoT might promote students to be more engaged in learning by stimulating their cognitive and affective abilities, with references to this theme including "cognitively engaged," "get involved," and "more enthusiastic". One participant commented that "students will become more committed; they will learn beyond the ILOs," while another added that "as long as students feel that their thinking is visible and valued, they will try to express their ideas and arguments convincingly and clearly". The third frequent theme was "improving students' cognitive abilities," with participants (n = 7) agreeing that CoT would promote students' critical thinking, problem-solving, and reasoning skills. According to one participant, "it would help students be open-minded," while another stated that "CoT-based classrooms would be mental gymnastics for students!".

The fourth common theme was "enhancing students' educational achievement" (n = 6), with terms such as "achieving the intended objectives," "developing the targeted skills," and "boosting their learning outcomes" introduced as part of this theme. A participant commented that "the inherent practices of CoT can help raise students' achievement levels if sufficient practice is provided". One final theme was "building students' character" (n = 3), with references to this theme including "self-esteem," "having a voice," and "confidence". Participants believed that CoT can positively impact students' lives over time, allowing them to develop the character traits necessary to succeed "not only in their studies but also in their lives," according to one participant. Another participant opined, "In such an environment, self-esteem can be created by making students tap into their past experiences; that's how it really helps.

(b). Participants' Practices of CoT

The analysis of the participants' reported classroom practices resulted in eight themes. The most frequently reported theme was instructors' expectations for students, with most participants (n=8) highlighting their efforts to prepare students as active learners who "participate" and "interact" with what they learn. They believed that such an interactive role should be represented in the form of producing knowledge rather than just consuming it. According to a participant, "Students have to do something, produce something in each lecture". However, four participants reported following only the syllabus's ILOs without setting expectations for students, suggesting a misunderstanding of how instructors contribute to learning by challenging students and holding them accountable.

The second theme was class time distribution, which represents how instructors allocate time for group and/or individual thinking. All participants reported spending most of the class time practicing the targeted language skill, providing feedback mostly on comprehension and language rather than learning strategies. Six participants prioritized individual work in their classrooms over group work so that students could practice on their own. They also pointed out that time limitations force them to concentrate only on the basics in their presentations, so they maintain an informative tone and do not usually include open discussion or higher-order thinking questions.

The third theme was language of the classroom, with most participants (n=8) reporting employing informative language the most. They believed that by using informative language, they could help students understand concepts and assignments more easily. Two participants reported using more than one language type in the same class (e.g., thinking, community, initiative, and feedback). They believed that using a variety of languages would help establish a safe and comfortable classroom environment, with one participant emphasizing that this would "help students feel more comfortable and build rapport".

As part of the fourth theme, engaging and meaningful learning opportunities, some participants (n=5) reported integrating discussion, group/pair work, examples, and reflection activities into their teaching practices. However, most of the participants stated that they do not depend much on group work since it takes a lot of time and is not fair to everyone. Additionally, they reported that it can be difficult to monitor student participation in group work, making it difficult to ensure that all students are engaged and learning.

The fifth theme was routines for stimulating thought, with most of the participants (n=9) mentioning they employed open discussion (n=7) and questioning (n=6). Only one participant reported using "group discussions" in her writing classes as a pre-and post-writing activity. The sixth theme was interaction patterns, with the most frequent pattern among all participants being teacher-student dialogue in both directions. Most participants (n=10) viewed that students benefit the most when actively engaged in "a back-and-forth dialogue". However, two participants reported using a one-way interaction pattern (from the teacher to the students) most of the time, agreeing that this pattern was more efficient at getting students to focus on the task and controlling the classroom environment.

The seventh theme was classroom environment, with most of the participants (n=9) reporting that they rarely ask students to alter their places for certain tasks. They instruct them to work with their elbows if there is group or peer work, doing so to save time and avoid distracting students as they change places or move. Meanwhile, all participants reported setting a safe and supportive learning environment in their classes by accepting students' ideas and using encouraging language. A participant stated that "I welcome their ideas, answers, and arguments without judgment. I keep repeating, we are here to learn from one another".

(c). *Contributing Factors to Participants' Beliefs and Practices of CoT*

Participants' beliefs and practices regarding CoT establishment in their classrooms were mediated by six factors: first, 'lack of experience'; although participants recognized the significance of CoT in promoting learning, they expressed difficulty in implementing it in their classrooms. They attributed this to their schooling and university education, which were dominated by structure-based classroom settings and absolute obedience and respect for adults as cultural values. One participant stated, "Unfortunately, we couldn't dare question either the content we studied or instructors' explanations... The textbook used to be sanctified as well." Participants believed that teaching is primarily a matter of experience, and they identified "fear of failure" as a barrier to trying something totally different. They viewed it as risky to try something new without knowing how it would turn out, and most participants (n=10) reported not attending any professional training on integrating thinking into EFL classrooms or engaging students cognitively. They believed that such training programs are theoretically based and lack classroom practice. The second factor was 'workload', with all participants feeling they did not have enough time to explore and experiment with novel pedagogical approaches. One participant stated, "Time is the problem! Designing and implementing CoT activities in class is time-consuming." The third factor was 'students' inadequate thinking habits', represented by their passive attitudes towards practicing their thinking skills. Participants attributed this to students' school education, which is teacher centered. One participant stated, "The majority of students tend to follow others' viewpoints instead of sharing theirs".

The fourth factor was the 'dominance of traditional lecturing styles and exam-oriented education systems'. Participants believed that this educational style limits creativity and independent thinking in students and makes them less confident in expressing their opinions. The fifth factor was the 'power dynamic between instructors and students,' raised by some participants (n=6). They noted that the hierarchical relationship between instructors and students discouraged students from asking questions and thinking critically. Additionally, they suggested that students' perception of their role in the learning process is affected by the position of power and authority associated with the traditional lecture format. According to them, teacher-student rapport increases student motivation and encourages them to practice thinking skills. Finally, 'students' low language proficiency and large classes' were mentioned by four participants. They reported that these two factors made it difficult to provide individual feedback and guidance, which could hinder students' development of thinking skills.

C. *Classroom Observations Results*

The overall results of the observation indicated that instruction in most classes primarily focused on completing the content, rather than promoting and challenging students' cognitive abilities. An in-depth analysis of the data based on the observation scheme showed that, in terms of teaching approach and style, most of the observed classrooms (n=4) were teacher-centered, with the teacher setting goals and instructions for achieving them. Only three participants appeared more willing to try a student-centered approach by encouraging students to inquire beyond textbook questions and practice group/pair brainstorming as a prewriting/speaking activity. Moreover, in most classes (n=5), instructors adopted the demonstrator teaching style, focusing on what they wanted their students to do to complete the given exercise. Instructors repeatedly asked, "Do you understand these instructions?" (T2, observation) and "Are these steps clear?" (T5, observation). The facilitator teaching style was prevalent in only one class, where some genuine questions and a case study were used to stimulate inquiry-based learning.

In terms of classroom interaction patterns, initiation-response-evaluation (IRE) sequences were the most common pattern in almost all classes (n = 6), with students' role limited to responding to instructors' display questions. Regarding classroom organization, most classes (n = 4) utilized individual activities. Guided group work activities were used in some classes (n = 3), while interactive group work was implemented in only one class. In that class, students worked in small groups to prepare and deliver a presentation on an assigned part of a reading text, including main and sub-ideas and the meaning of keywords. Each presentation included a Q&A section, allowing groups to respond to the teacher's and classmates' clarifications and comments.

The most frequently used classroom language types were informing and feedback. Examples included "That's to the point, just try to support it with an example" (T1) and "Amazing, I really liked your detailed and expressive description" (T3). The second most prevalent language type was community language (n=5), such as "Let's share our ideas on the topic first" (T7) and "That's what we have to elaborate on" (T5). Thinking language appeared in only two classes, with examples including "think over this point", "categorize these ideas", and "monitor your reading comprehension". While some techniques were used to promote deep and meaningful learning, most of the class time was devoted to introducing linguistic features and testing comprehension. Active engagement and meaningful interaction were not given adequate time. To create a safe and motivating learning environment, most instructors (n=6) used students' names. Additionally, some instructors (n=4) repeatedly emphasized that there was no right or wrong answer. Others (n=2) prioritized general feedback rather than highlighting each student's mistakes. Comprehension questions were frequently used in most classes to stimulate students' thinking, although many assessed only literal comprehension. In only three classes, outlines, charts, or visual cues (such as images in the reading textbook) with prompts were used to make students' thinking visible.

The promotion of deep and meaningful learning was practiced through some techniques, with the most common being questioning students' prior knowledge by revising previous lessons (n=6) and asking display questions about the

topic of the lesson ($n=5$). For example, T6 began her reading class by asking her students, "What is VR?" However, this reflected a strictness rather than openness in the expected answer. Only three participants used intriguing questions and conditional language to encourage students to share their thoughts and build on their ideas. Another technique observed in only two classes was the use of various educational resources, including audio-visual aids, images, and written texts. Wait time was observed in only one classroom (T6, reading), where T6 paused for 3-5 seconds before asking a question and soliciting an answer.

V. DISCUSSION

Guided by the sociocultural perspectives, the findings of the study are presented by comparing and contrasting the participants' beliefs and pedagogical practices of CoT, along with the contributing factors in their working context in an attempt to identify the actual beliefs and practices of CoT within the Saudi universities' context.

Results about the participants' conceptions of thinking skills and perceptions of the usefulness of practicing CoT in EFL classrooms (RQ 1), revealed that most participants hold a cognitivist-based conception of thinking; they believed that students' thinking skills are mental constructs that are represented in individual perceptual and cognitive experiences rather than group and collaborative activity; the items that represented this social aspect of thinking received less agreement among the participants. This conception of thinking was reflected in the participants' pedagogical practices, as observed in the classroom. Most instructors used literal comprehension questions and informing language, suggesting that they perceived language teaching as a process of transforming information and providing corrective feedback. Additionally, some instructors detached language skills from their contexts as social practices by focusing primarily on the product, namely linguistic knowledge. This finding may be mediated by the dominant individual thinking style and cognitive learning in the participants' cultural context, which may have influenced their teaching philosophy (Alrabai, 2014; Fareh, 2010; Hamouda, 2013). Additionally, in Saudi EFL English classrooms, instructors emphasize knowledge transmission rather than teaching skills, which is a major obstacle to English education in Saudi Arabia (Al-Seghayer, 2014).

Regarding the participants' reported CoT practices (RQ 2), several practices were mentioned. These included engaging and motivating students through various thinking-provoking, collaborative problem-solving activities, using varying question types to encourage unexpected responses, and employing supportive language. Almost all the responses (from the interview and questionnaire) indicated that participants focused on establishing a safe and supportive classroom learning environment. They did this by accepting students' ideas and encouraging them to share their answers without judgment. However, participants were unsure about rearranging classrooms to foster meaningful collaboration. From a sociocultural perspective, these reported practices reflect the participants' cultural and societal context. The Saudi culture places a strong emphasis on the value of collaborative learning, which is evident in the participants' reported practices that involve active participation, group work, and varied question types that encourage unexpected responses. Furthermore, the reported use of supportive language reflects the Saudi Arabian culture's emphasis on politeness and respect.

It is noteworthy that, while using collaborative learning activities and allocating sufficient class time for in-depth discussions and interactions were frequent practices according to questionnaire responses, half of the interview participants reported prioritizing individual work and avoiding group discussions and high-order thinking questions due to time constraints. This highlights the impact of contextual factors on instructors' beliefs, as the Saudi educational context places a strong emphasis on content completion and exam-oriented instruction (Al-Seghayer, 2014).

Regarding the congruence or incongruence between participants' reported CoT practices and their actual classroom practices (RQ3), it was evident that despite acknowledging the importance of thinking skills, having positive perceptions of CoT usefulness, and reporting multiple CoT practices, the actual classroom practices reflected only a few of these beliefs and practices. For example, while encouraging students to actively participate in various thinking-provoking and collaborative problem-solving activities, utilizing various questions and language types, and discussions were the most frequent endorsed practices, observation results revealed that most classes were teacher-centered with a prevailing demonstrator teaching style and only feedback and informing languages were the most frequent types. Again, while strategy-based instruction was among the reported CoT practices in the questionnaire results, this type of practice was missed in all the observed classrooms. Finally, while most participants reported using wait time to cultivate deep and meaningful learning, this technique was barely observed in only one class.

This finding is consistent with sociocultural theory's emphasis on the role of social and cultural contexts in shaping individual beliefs and behaviors. The prevalence of teacher-centered and demonstrator teaching styles in most classes suggests that the participants' teaching practices reflect their beliefs about the roles of the teacher and the student in the learning process, which are also shaped by their cultural and social context. In this context, instructors have significant control over the classroom environment and use authoritarian communication styles.

A significant finding is how the participants internalized the cultural and societal elements in their context, shaping their beliefs and guiding their practices. STC concepts of internalization and the role of language in shaping one's cognition and behavior are relevant here. This was evident in the language they used to describe their learning experiences, including keywords such as "dare", "fear of failure", and "comfort zone", which may explain their limited CoT practices. These keywords suggest a reluctance to break away from the status quo and low self-confidence.

Research has shown that Saudi university instructors find integrating thinking skills into EFL classrooms challenging (Alrabai, 2016; Al Zahrani & Elyas, 2017). This indicates that efforts need to be made to foster an educational environment where failure is seen as an opportunity for growth.

This limited practice of CoT can be attributed to the inadequate educational and professional background among Saudi EFL university instructors. The interview results revealed that participants did not have the opportunity to experience CoT in their school and university education due to the prevalence of rote learning, structure-based classroom settings, and cultural values that emphasize absolute obedience and respect for adults. Some researchers (e.g., Atkinson, 1997; Fox, 1994) have suggested that practicing thinking is culturally bounded. In other words, individuals whose cultures advocate a particular type of thinking are more likely to practice that type of thinking. According to Fareh (2010), the traditional teaching philosophy in the Saudi context involves providing lesson plans and materials to instructors to present in class, with the expectation that students will memorize the information without deeply thinking about it. As a result, students are often unaccustomed to pursuing knowledge for themselves (Al-Seghayer, 2014).

Several institutional and classroom factors influenced participants' beliefs and practices regarding CoT integration in Saudi EFL classrooms (RQ 4), and these factors elicited different responses from the instructors. Based on the observation results, participants attempted to incorporate their beliefs about integrating thinking into language classrooms. However, their practices were more closely guided by local contextual factors and the classroom context. For example, while some instructors tried to integrate cognitive engagement activities, they did so in a simplified and controlled way, with students simply responding to prompts and questions in a teacher-centered classroom. This was an attempt to adapt to local contextual challenges, such as students' linear thinking style, large class sizes, heavy workloads, the power dynamic between instructors and students, and the pressure of examinations.

The majority of participants also reported a lack of strategies needed to implement CoT effectively, as well as a need for practical training rather than just theoretical training. This suggests that professional training is less effective at changing instructors' beliefs and practices if it fails to acknowledge their prior beliefs (Borg, 2001).

VI. CONCLUSION

This study explored the dynamic and sophisticated relationship between Saudi university EFL instructors' beliefs and classroom practices of CoT by comparing their reported beliefs and practices with their actual classroom practices. It was found that Saudi Arabian EFL instructors hold a cognitivist view of thinking and consider CoT an appropriate approach in language skills classrooms. However, participants reported CoT practices were not consistent with their classroom practices owing to some cultural and contextual mediating factors.

Some practical implications for incorporating CoT into university EFL classrooms can be derived from these findings: First, the study indicates that Saudi Arabian EFL instructors perceive CoT as an effective approach in language skills classrooms for various reasons. However, they lack the professional skills and experience to implement it in the classroom. Accordingly, there should be professional development programs that focus on developing instructors' knowledge and skills regarding the creation of CoT in EFL classrooms. Through such training, EFL instructors can change their own conception of thinking, as a collaborative activity rather than an individual cognitive ability. They can also develop and use CoT practices to promote interactive and thought-provoking teaching and learning environments. Creating CoT could also be incorporated into the curriculum of EFL preservice teacher education as well as reinforced during their practicum so that it becomes part of their preparation. Second, the study shows that cultural and societal norms shape EFL instructors' beliefs and practices of CoT. Therefore, it is imperative to consider these norms when designing and implementing CoT in Saudi EFL classrooms. Finally, the study identifies some institutional and classroom challenges EFL instructors in Saudi Arabia may encounter when applying CoT. Addressing these challenges requires a collaborative effort among EFL instructors, department administrators, and policymakers to provide the necessary support and resources for effective CoT implementation.

The study has two main limitations: first, it was conducted in a specific context (Saudi Arabia) and with a specific group of participants (EFL university instructors), which limits its generalizability. Second, only seven classrooms were observed, which may limit the generalizability of the findings and the representativeness of the observed practices. Follow-up interviews could have been conducted to provide participants with the opportunity to reflect on their teaching and clarify any unclear information found in the classroom observations. This study could be replicated in different cultural and institutional contexts to further investigate the factors that impact EFL instructors' beliefs and practices regarding CoT integration into their classrooms.

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