Metacognitive awareness and skills of ELT students regarding the "Structure of English" course[1]

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Abstract

In this study, the metacognitive awareness, and skills of English Language Teaching Department (ELT) students regarding their course achievement of the structure of English is aimed to be investigated specifically. For this purpose, the participants were composed of the 1st grade ELT students at a state university taking the course of Structure of English in the spring semester of 2018-2019 academic year in Turkey. Hence, both the metacognitive awareness and skills of 1st grade ELT department students and to what extent they convey their metacognitive awareness and skills to the structure of English course are taken into consideration among the research questions of this study. In data collection procedure, 52-item Metacognitive Awareness Inventory (MAI) consisting of two facets named as knowledge about cognition with three sub-sections and regulation of cognition with 5 sub-sections, and 30-item Metacognitive Skills Scale (MSS) were used. With the collected data, the relation of cognitive awareness and skills with the achievement of the structure of English course were investigated. In data analysis part of the method, both qualitative and quantitative research methods were applied to the data. The results showed that the metacognitive awareness and skills of ELT department student studying at one of the state university in Turkey differ from each other and have effects on the achievement of the structure of English course which is one of the courses they need to take during their faculty education. Thus, metacognitive awareness and skills should be taken into consideration in ELT departments since they provide as pre-conditions for course achievement of teacher candidates and equip them better for their future teaching career, which requires intellectual development as well.

Keywords: ELT; metacognitive awareness; metacognitive skills; structure of English course.

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1. Introduction

In today's world, it is vital for learners and students to be aware of the strengths and limitations of themselves. Parallel to this, cognitive psychology has directed a great attention to the studies focused on the constructs that fill the gap between the cognition and its role in the developmental process of individuals (Lucangeli & Cornoldi, 1997; Carrell, Gajdusek, & Wise, 1998). According to many theorists, metacogniton itself may help the learning process of individuals instead of increasing the achievement levels of them (Braten, 1991; Bruning, Schraw, & Ronning, 1995). On that account, metacognitive awareness and skills increase the *"planning, managing information, monitoring, debugging, and evaluation"* abilities of individuals, which make them highly metacognitive people (Anderson & Walker, 1991; Schraw & Dennison 1994).

Metacognitive awareness such as thinking styles, learning, and teaching styles is also one of the aspects of educational psychology which received more attention throughout recent decades and deserves to be supported by up-to-date studies. According to the literature, Heidari (2012) claimed that the language learning materials and methods, the EFL students are expected to experience, do not fit the needs of them disregarding the cognitive, affective characteristics of them without fitting into the natural intelligences or individual preferences they have implicitly, which can be accepted as an urgent call for noticing the need of overlapping such kinds of aspects with the qualifications of teacher candidates in ELT.

Moreover, EFL learners are pushed into the learning process of which language is observed as discreet bits of knowledge, and, unfortunately, do not take the advantages of metacognition or harmonize their process with the benefits of metacognitive abilities or capacities they may have and bring to this area. The terms of metacognitive/metacognitive awareness terms are associated with and defined as:

- ➢ knowledge about cognitive issues according to Flavell (1987),
- ➢ a bridge between the areas of learning and motivation, thinking and memory, and learning and cognitive development as Metcalfe and Shimamura (1994) suggested,
- ➢ thinking about thinking proposed by Livingston (2003).

The emergence of metacognition as a concept was led by Flavell (1975) in his studies of children's' memory ability and described as "knowledge and cognition about cognitive phenomena". At the same time, metacognition is explained as "person's knowledge of his cognitive processes" (Flavell, 1985) and refers the information that enhance the control of their own cognitive processes. The theory of information processing that requires to elicit knowledge about cognition and take control over cognitive processes interferes with metacognition. The movement of the information through one information repository to another is directed and under the control of metacognition. In this sense, the self-

regulation endeavors of individuals address the metacognition. Although there is not a precise definition of metacognition in the literature, there is a common agreement on the classification of metacognition that are named as *"knowledge about cognition"* and *"regulation of cognition"* (Forrest-Pressley & Waller, 1984; Brown, 1987; Flavell, 1987; Nelson & Narens, 1990; Metcalfe & Shimmura, 1994; Schraw & Dennison, 1994; Everson & Tobias, 1998; Mazzoni & Nelson, 1998). Knowledge about cognition which comprises of *"declarative, procedural, and conditional knowledge"* dealing with knowing *"about, how, why, and when"* refers to the knowledge the individuals are expected to know about their general cognition (Brown, 1987; Jacobs & Paris, 1987; Kumar, 1998; Kyllonen & Woltz,1989; Schraw & Moshman, 1995). On the other hand, regulation of cognition consists of *"planning, monitoring, and evaluation"*, which refers to *"selection of appropriate strategies, allocation of recourses"*, *"awareness of comprehension and task performance",* and *"appraising the products and efficiency of one's learning"* (Fraenkel & Wallen, 2000; Jacobs & Paris, 1987; Schraw, 1998).

Metacognitive and metacognitive awareness highlight the importance of metacognitive skills (Kaya, 2008). According to Kaya (2008), "metacognitive skills" serve as an umbrella term including critical and creative thinking, decision making and problem-solving processes of individuals. Thus, such kinds of mental processes referring to reasoning and assessment are parts of critical thinking. In addition, decision making requires getting away from the doubts to be closer to the certainties and having the ability of choosing the best option among the many presented ones. As for Belkıs (2006), in decision making, instead of eradicating the options, decreasing the possible ones, and increasing the fine-tuning abilities are the expected strengths that the individuals need to have or develop. On the other hand, problem solving process requires developing solutions to clarify what would be the best for reaching the desired outcome (Sternberg & Grigorenko, 2000). This process is defined as the most complicated mental skill because it needs to carry out different operations of trials, cause, and effect relations (Gagne, 1975; Gagne, Briggs, & Wager, 1992), and it combines the previous learning with the current state of learning activities the individuals perform. Related to these, metacognitive skills are seen as very important for professional lives of people, since the metacognitive skills may help individuals present effective performance. In their professional life, metacognitive skills provide individuals a better understanding for the nature of the problems they may encounter and sort out appropriate explanations that will convey proper solutions for those problems.

More recently, has been much research dealing with metacognition, the literature reflects that the metacognitive awareness and skills of ELT students have taken little attention. Furthermore, metacognitive awareness and skills of the 1st grade ELT students and how they affect the structure of English course specify the nature of the problems of

this study. In this aspect, the answers to the following focused research questions were investigated:

- What are the metacognitive awareness levels of the 1st Grade ELT students?
- What are the metacognitive awareness levels of the 1st Grade ELT students for sections and sub-sections of MAI?
- What are the metacognitive skills levels of the 1st Grade ELT students?
- Are there significance differences between the metacognitive awareness, skills, and achievement scores of the 1st Grade ELT students?
- How do the metacognitive skills of the 1st grade ELT students effect the metacognitive awareness of them regarding the Structure of English course?

Since specifying the metacognitive skills and awareness of ELT department students in combination with the results of the course achievement labelled as the "Structure of English Language" taken as compulsory, the current study deserves importance and value by unearthing and interrelating the metacognitive potential of ELT students with the pre-condition skills they are expected to have in Faculty of Education and ELT department.

2. Method

2.1. Design

Mixed method, which is the core assumption in order to provide a more complete understanding of a research problem than either approach alone and involves the collection and/or integration of both quantitative and qualitative data in a target study, was utilized as a research design method in the current study.

2.2. Participants

The 1st Grade ELT students studying at a state university in Turkey during the spring semester of 2018-2019 academic year constitutes the total participants of the study. Convenient sampling which gives chance for no selection of the participants as for the limitation in the number of the students was applied as a sampling method for this study. Moreover, voluntary participation of the students was taken into consideration. The ages of the participants range between 18-26. The following table (Table 1) shows the demographic profiles of the participants in terms of sex and preparatory class education:

Table 1. Preparatory class education (PCE) and sex crosstabulation features of the participants

Participants' Answers				Sex		Total
				Male	Female	
PCE	Yes		Count	3	24	27
			% within PrepClass	11.1%	88.9%	100.0%
			% within Gender	20.0%	63.2%	50.9%
	No		Count	12	14	26
			% within PrepClass	46.2%	53.8%	100.0%
			% within Gender	80.0%	36.8%	49.1%
Total			Count	15	38	53
			% within PrepClass	28.3%	71.7%	100.0%
			% within Gender	100.0%	100.0%	100.0%

Preparatory Class Education and Gender Crosstabulation shows that 15 and 38 participants representing 28.3% *(f= 15)* and 71.7% *(f= 38)* of the total participants of the study consist the total male and female students included in the study. 27 and 26 of the total number out of 53 (50.9% and 49.1%) represent the participants who declare that they attended and did not attend the preparatory class. Among the participants who attended the preparatory class, 3 males and 24 females consist (11.1% and 88.9%) who attended the preparatory class education while 12 males and 14 females share (46.2% and 53.8%) the background of not having the PCE in the total sample. Hence, 12 males out of 15 (80%) state that they did not attend the preparatory class though 3 of them (20%) declare that they attended the preparatory class. Furthermore, 24 females out of 38 (63.2%) inform that they attend the preparatory class while 14 of them (36.8%) assert that they did not attend the preparatory class.

2.3. Data collection tool

Schraw and Dennison (1994), developed the Metacognitive Awareness Inventory (MAI), including 52 items that assesses sub-dimensions of metacognition referring to:

- ➢ **KNOWLEDGE ABOUT COGNITION** which has the following sub-sections:
  - • Declarative Knowledge (8 Items)
  - • Procedural Knowledge (4 Items)
  - • Conditional Knowledge (5 Items)
- ➢ **REGULATION OF COGNITION** which includes the sub-sections of:

of which has following sub-sections:

- Planning (7 Items)
- Information Management Strategies (10 Items)
- Comprehension Monitoring (7 Items)
- Debugging Strategies (5 Items)

and Metacognitive Skills Scale (MSS) consisting of 30 items in the type of Likert scale developed by Altındağ and Senemoğlu (2013) were used to reflect the achievement predictors for the Structure of English course signaling the metacognitive awareness and skills of the participants. The following table (Table 2) displays the reliability levels of the scales:

Table 2. Reliability levels of the scales

Scale	n	α
MAI	52	.97
MSS	30	.93

Taking into account the accepted levels of reliabilities for the scales used in social and education sciences, the Cronbach Alpha reliability levels presented in Table 2 are accepted as significant and satisfying because MAI has .97 and MSS has .93 reliability levels.

2.3. Data analysis

The obtained data was coded, and required statistics were applied via the package program of SPSS 20.00 utilized in social and education sciences. The participants were expected to answer the statements in:

1= "never"	1= "strongly disagree"
2= "seldom"	2= "disagree"
3= "sometimes"	3= "undecided"
4= "often"	4= "agree"
5= "always"	5= "strongly agree"

for the MAI and MSS. Instead of the 'true' and 'false' version which is suggested in the original format of the Metacognitive Awareness Inventory scale, the researcher preferred to use the 5-point Likert-type format of the scale that is used in many research. Considering the number of the participants, parametric and non-parametric statistics were implemented to the obtained data (n>30, n<30) sequentially for the inter-group and intra-group analyses.

3. Results

Table 3. Descriptive statistics of MAI scores

	n	X	SD	Min	Max
Overall Metacognitive Awareness	53	68.91	12.88	28.08	96.92

Table 3 presents the descriptive statistics of overall metacognitive awareness scores of the participants of which mean value is found as 68.91 with minimum 28.08 and maximum 96.92 scores. The standard deviation for these 53 overall metacognitive awareness scores was calculated as 12.88.

Table 4. The frequencies and percentages of MAI items

Items	Never		Seldom		Sometimes		Often		Always	
	f	%	f	%	f	%	f	%	f	%
I 1	1	1.9	11	20.8	22	41.5	13	24.5	6	11.3
I 2	1	1.9	7	13.2	12	22.6	27	50.9	6	11.3
I 3	1	1.9	8	15.1	17	32.1	18	34	9	17
I 4	3	5.7	10	18.9	15	28.3	18	34	7	13.2
I 5	0	0	0	0	10	18.9	21	39.6	22	41.5
I 6	1	1.9	7	13.2	12	22.6	24	45.3	9	17
I 7	1	1.9	9	17	16	30.2	19	35.8	8	15.1
I 8	2	3.8	13	24.5	20	37.7	13	24.5	5	9.4
I 9	4	7.5	14	26.4	14	26.4	12	22.6	9	17
I 10	1	1.9	4	7.5	16	30.2	26	49.1	6	11.3
I 11	1	1.9	7	13.2	20	37.7	13	24.5	12	22.6
I 12	1	1.9	16	30.2	14	26.4	13	24.5	9	17
I 13	1	1.9	3	5.7	15	28.3	24	45.3	10	18.9
I 14	1	1.9	18	34	14	26.4	14	26.4	6	11.3
I 15	0	0	2	3.8	11	20.8	20	37.7	20	37.7
I 16	2	3.8	6	11.3	18	34	19	35.8	8	15.1
I 17	1	1.9	11	20.8	16	30.2	20	37.7	5	9.4
I 18	1	1.9	10	18.9	14	26.4	19	35.8	9	17
I 19	2	3.8	9	17	12	22.6	20	37.7	10	18.9
I 20	1	1.9	4	7.5	23	43.4	17	32.1	8	15.1
I 21	2	3.8	15	28.3	21	39.6	11	20.8	4	7.5
I 22	3	5.7	20	37.7	12	22.6	11	20.8	7	13.2
I 23	3	5.7	5	9.4	22	41.5	17	32.1	6	11.3

I 24	2	3.8	14	26.4	10	18.9	14	26.4	13	24.5
I 25	3	5.7	7	13.2	13	24.5	18	34	12	22.6
I 26	2	3.8	11	20.8	15	28.3	17	32.1	8	15.1
I 27	2	3.8	4	7.5	18	34	21	39.6	8	15.1
I 28	1	1.9	10	18.9	18	34	14	26.4	10	18.9
I 29	1	1.9	8	15.1	15	28.3	21	39.6	8	15.1
I 30	1	1.9	6	11.3	17	32.1	20	37.7	9	17
I 31	2	3.8	4	7.5	21	39.6	18	34	8	15.1
I 32	1	1.9	10	18.9	18	34	14	26.4	10	18.9
I 33	3	5.7	14	26.4	16	30.2	14	26.4	6	11.3
I 34	2	3.8	12	22.6	16	30.2	12	22.6	11	20.8
I 35	2	3.8	7	13.2	16	30.2	17	32.1	11	20.8
I 36	2	3.8	11	20.8	19	35.8	13	24.5	8	15.1
I 37	14	26.4	16	30.2	10	18.9	10	18.9	3	5.7
I 38	3	5.7	11	20.8	17	32.1	13	24.5	9	17
I 39	1	1.9	4	7.5	17	32.1	16	30.2	15	28.3
I 40	3	5.7	7	13.2	21	39.6	15	28.3	7	13.2
I 41	3	5.7	5	9.4	15	28.3	21	39.6	9	17
I 42	2	3.8	10	18.9	16	30.2	11	20.8	14	26.4
I 43	3	5.7	3	5.7	15	28.3	17	32.1	15	28.3
I 44	1	1.9	7	13.2	18	34	14	26.4	13	24.5
I 45	2	3.8	15	28.3	12	22.6	14	26.4	10	18.9
I 46	1	1.9	4	7.5	10	18.9	15	28.3	23	43.4
I 47	3	5.7	11	20.8	13	24.5	14	26.4	12	22.6
I 48	1	1.9	9	17	12	22.6	16	30.2	15	28.3
I 49	1	1.9	10	18.9	18	34	14	26.4	10	18.9
I 50	3	5.7	4	7.5	16	30.2	19	35.8	11	20.8
I 51	7	13.2	10	18.9	14	26.4	10	18.9	12	22.6
I 52	0	0	6	11.3	14	26.4	15	28.3	18	34

The I1 *"I ask myself periodically if I am meeting my goals."* has the frequency of 22 for "sometimes" with 41.4% while the I2 *"I consider several alternatives to a problem before I answer."* has the frequency of 27 for "often" with 50.9%. The I3 *"I try to use strategies that have worked in the past."* and the I4 *"I pace myself while learning in order to have enough time."* shares the same frequency of 18 for "often" with 34% though the I5 *"I understand my intellectual strengths and weaknesses."* has the frequency of 22 for "always" with 41.5%. The I6 *"I think about what I really need to learn before I begin a task."* and the I7 *"I know how well I did once I finish a test."* have the frequencies of 24 and 19 for "often" with 45.3% and 35.8%. The I8 *"I set specific goals before I begin a task."* has the frequency of 20 for "sometimes" with 37.7% while the I9 *"I slow down when I encounter important information."* shares the frequency of 14 for both "seldom"

and "sometimes" with 26.4%. The I10 *''I know what kind of information is most important to learn.''* has the frequency of 26 for "often" with 49.1% but the I11 *''I ask myself if I have considered all options when solving a problem.''* has the frequency of 20 for "sometimes" with 37.7%. The I12 *''I am good at organizing information.''* has the frequency of 16 for "seldom" with 30.2% while the I13 *''I consciously focus my attention on important information.''* has the frequency of 24 for "often" with 45.3%. The I14 *''I have a specific purpose for each strategy I use.''* has the frequency of 18 for "seldom" with 34% but the I15 *''I learn best when I know something about the topic.''* has the frequency of 20 for "often" and "always" with 37.7%. The I16 *''I know what the teacher expects me to learn.''* and the I17 *''I am good at remembering information.''* have the frequencies of 19 and 20 for "often" with 35.8% and 37.7% in addition to the I 17 *''I am good at remembering information.''* and the I18 *''I use different learning strategies depending on the situation.''* that share the same frequencies and percentages in the same order. The I19 *''I ask myself if there was an easier way to do things after I finish a task.''* share the frequency of 20 for "often" with 37.7% and the I20 *''I have control over how well I learn.''* share the frequency of 23 for "sometimes" with 43.4%. The I21 *''I periodically review to help me understand important relationships.''* has the frequency of 21 for "sometimes" with 39.6% while the I22 *''I ask myself questions about the material before I begin.''* has the frequency of 20 for "seldom" with 37.7%. The I23 *''I think of several ways to solve a problem and choose the best one.''* has the frequency of 22 for "sometimes" with 41.5% while the I24 *''I summarize what I've learned after I finish.''* has the frequency of 14 for "seldom" and "often" with 26.4%. The I25 *''I ask others for help when I don't understand something.''* and the I26 *''I can motivate myself to learn when I need to.''* have the frequencies of 18 and 17 for "often" with 34% and 32.1%. The I27 *''I am aware of what strategies I use when I study.''* has the frequency of 21 for "often" with 39.6% while the I28 *''I find myself analyzing the usefulness of strategies while I study.''* has the frequency of 18 for "sometimes" with 34%. The I29 *''I use my intellectual strengths to compensate for my weaknesses.''* and the I30 *''I focus on the meaning and significance of new information.''* have the frequencies of 21 and 20 for "often" with 39.6% and 37.7% but the I31 *''I create my own examples to make information more meaningful.''* and the I32 *''I am a good judge of how well I understand something.''* have 21 and 18 frequencies for "sometimes" with 39.6% and 34%. The I33 *''I find myself using helpful learning strategies automatically.''* The I34 *''I find myself pausing regularly to check my comprehension.''* and the I35 *''I know when each strategy I use will be most effective.'', and* the I36 *''I ask myself how well I accomplish my goals once I'm finished.''* have the frequencies of 16 and 19 for "sometimes" with 30.2% and 35.8. The I37 *''I draw pictures or diagrams to help me understand while learning.''* has the frequency of 16 "seldom" with 30.2% but the I38 *''I ask myself if I have considered all options after I solve a problem.''* has the frequency of 17 for "sometimes" with 32.1%. The I39 *''I try to translate new information into my own words.''* and the I40 *''I change strategies when I fail to understand.''* share the

frequencies of 17 and 21 for "sometimes" with 32.1% and 39.6% though the I41 *"I use the organizational structure of the text to help me learn."* and the I42 *"I read instructions carefully before I begin a task."* have the frequencies of 21 and 16 for "sometimes" and "often" with 39.6% and 30.2%. The I43 *"I ask myself if what I'm reading is related to what I already know."* has the frequency of 17 for "often" with 32.1% but the I44 *"I revaluate my assumptions when I get confused."* has the frequency of 18 for "sometimes" with 34%. The I45 *"I organize my time to best accomplish my goals."* has the frequency of 15 for "seldom" with 28.3% while the I46 *"I learn more when I am interested in the topic."* has the frequency of 23 for "always" with 43.4%. The I47 *"I try to break studying down into smaller steps."* and the I48 *"I focus on overall meaning rather than specifics."* have the frequencies of 14 and 16 for "often" with 26.4% and 30.2% while the I49 *"I ask myself questions about how well I am doing while I am learning something new."* and the I50 *"I ask myself if I learned as much as I could have once I finish a task."* have the frequencies of 18 and 19 for "sometimes" and "often" with 34% and 35.8. The I51 *"I stop and go back over new information that is not clear."* and the I52 *"I stop and reread when I get confused."* represent the highest frequencies of 14 and 18 for "sometimes" and "always" with 26.4% and 34% of the total participants.

Table 5. One-sample statistics for sections and sub-sections

Sections/Sub-sections	n	X	Std. Dev.	Sd	t	p
Declarative	53	72.08	13.41	52	39.14	.000
Procedural	53	66.32	15.69		30.77	.000
Conditional	53	71.77	14.62		35.74	.000
Plan	53	66.04	16.04		29.97	.000
Info Man. Strat.	53	68.94	13.54		37.07	.000
Compre. Mont.	53	67.12	14.42		33.88	.000
Debug Strat.	53	69.89	15.66		32.49	.000
Evaluation	53	68.62	13.83		36.13	.000
KAC	53	70.63	13.50		38.09	.000
ROC	53	68.08	13.02		38.06	.000

According to one sample statistics for sections and sub-sections of the scale, the mean values of main sections of the scale named as KAC and ROC differ significantly from each other with t(52)= 38.09, 38.06, p<.01. Furthermore, 72.08, 66.32, 71.77, 66.04, 68.94, 67.12, 69. 89, 68.62 mean values of "*declarative, procedural, conditional, planning, information management strategies, comprehension monitoring, and debugging strategies*" sub-sections differ meaningfully with t(52)= 39.14, 30.77, 35.74, 29.97, 37.07, 33.88, 32.49, 36.13, p<.01

Table 6. Correlation coefficiency for sections and sub-sections of MAI

	Declarative	Procedural	Conditional	Plan	Info	Compreh	Debug	Evaluation	KAC	ROC
Declarativ										
Procedura	.84(**)									
Condition	.83(**)	.82(**)								
Plan	.79(**)	.80(**)	.80(**)							
Info	.82(**)	.77(**)	.79(**)	.77(**)						
Compreh	.82(**)	.83(**)	.85(**)	.83(**)	.83(**)					
Debug	.58(**)	.58(**)	.57(**)	.64(**)	.72(**)	.60(**)				
Evaluation	.71(**)	.72(**)	.76(**)	.74(**)	.81(**)	.72(**)	.67(**)			
KAC	.96(**)	.93(**)	.93(**)	.84(**)	.85(**)	.88(**)	.61(**)	.77(**)		
ROC	.85(**)	.84(**)	.85(**)	.90(**)	.94(**)	.90(**)	.80(**)	.88(**)	.90(**)	
Mean	72.08	66.32	71.77	66.04	68.94	67.12	69.89	68.62	70.63	68.08
S.d	13.41	15.69	14.62	16.04	13.54	14.42	15.66	13.83	13.50	13.02

** Correlation is significant at the 0.01 level (2-tailed).

Although the mean values of the sections and sub-sections of the MAI differ significantly differ from each other, table 3.4. illustrates the relations of each sections and sub-sections in terms of the participants' preference for the options they were suggested in the scale. Regarding their preferences, it is seen that the "*declarative*" has high correlation with "*procedural*" (r (51)= .84, p<.01) while it has low correlation with "*debugging strategies*" (r (51)= .58, p<.01). "*Procedural*" has high correlation with "*conditional*" (r (51)= .83, p<.01) and low correlation with "*debugging strategies*" (r (51)= .58, p<.01). "*Conditional*" has high correlation with "*comprehension*" (r (51) = .85, p<.01) though it has low correlation with "*debugging strategies*" (r (51)= .57, p<.01). "*Planning*" has high correlation with "*comprehension*" (r (51)= .83, p<.01) and low correlation with "*debugging strategies*" (r (51)= .64, p<.01). "*Information management*" has high correlation with "*comprehension*" (r (51)= .83, p<.01) while it has low correlation with "*debugging strategies*" (r (51)= .72, p<.01). "*Comprehension*" has high correlation with

"*evaluation*" (r (51)= .72, $p<.01$).and low correlation with "*debugging strategies*" (r (51)= .60, $p<.01$). "*Debugging strategies*" has high correlation with "*Information management*" (r (51)= .72, $p<.01$) and low correlation with "*conditional*" (r (51)= .57, $p<.01$). "*Evaluation*" has high correlation with "*information management*" (r (51)= .81, $p<.01$) and low correlation with "*debugging strategies*" (r (51)= .67, $p<.01$). In addition to these relations, KAC has high correlation with "declarative" (r (51)= .96, $p<.01$) and low correlation with "*debugging strategies*" (r (51)= .61, $p<.01$); however, ROC has high correlation with "*information management*" (r (51)= .94, $p<.01$) and low correlation with "*procedural*" (r (51)= .84, $p<.01$).

Table 7. Descriptive statistics of metacognitive skills scale scores

	N	X̄	SD	Min	Max
Overall Metacognitive Skills Scale	53	69.09	12.02	32.67	94

Table 7 shows the descriptive statistics of overall metacognitive skills scores of the participants of which mean value is found as 69.09 with minimum 32.67 and maximum 94 scores. The standard deviation for these 53 overall metacognitive skills scores was calculated as 12.02.

Table 8. The frequencies and percentages of MSS

Items	Strongly Disagree		Disagree		Undecided		Agree		Strongly Agree	
	f	%	f	%	f	%	f	%	f	%
I 1	2	3.8	0	0	9	17	26	49.1	16	30.2
I 2	2	3.8	1	1.9	14	26.4	25	47.2	11	20.8
I 3	2	3.8	5	9.4	17	32.1	19	35.8	10	18.9
I 4	1	1.9	7	13.2	12	22.6	23	43.4	10	18.9
I 5	2	3.8	7	13.2	10	18.9	22	41.5	12	22.6
I 6	7	13.2	15	28.3	18	34	9	17	4	7.5
I 7	4	7.5	20	37.7	10	18.9	13	24.5	6	11.3
I 8	1	1.9	9	17	12	22.6	21	39.6	10	18.9
I 9	3	5.7	4	7.5	17	32.1	18	34	11	20.8
I 10	2	3.8	4	7.5	14	26.4	25	47.2	8	15.1
I 11	2	3.8	13	24.5	16	30.2	14	26.4	8	15.1
I 12	6	11.3	15	28.3	18	34	12	22.6	2	3.8
I 13	5	9.4	20	37.7	12	22.6	14	26.4	2	3.8
I 14	1	1.9	9	17	13	24.5	22	41.5	8	15.1

I 15	6	11.3	21	39.6	10	18.9	11	20.8	5	9.4
I 16	4	7.5	6	11.3	15	28.3	22	41.5	6	11.3
I 17	1	1.9	4	7.5	10	18.9	26	49.1	12	22.6
I 18	2	3.8	6	11.3	14	26.4	21	39.6	10	18.9
I 19	1	1.9	9	17	9	17	24	45.3	10	18.9
I 20	4	7.5	8	15.1	12	22.6	20	37.7	9	17
I 21	3	5.7	10	18.9	9	17	25	47.2	6	11.3
I 22	2	3.8	3	5.7	20	37.7	20	37.7	8	15.1
I 23	2	3.8	7	13.2	10	18.9	23	43.4	11	20.8
I 24	1	1.9	4	7.5	10	18.9	22	41.5	16	30.2
I 25	2	3.8	14	26.4	16	30.2	15	28.3	6	11.3
I 26	2	3.8	9	17	18	34	18	34	6	11.3
I 27	3	5.7	5	9.4	17	32.1	22	41.5	6	11.3
I 28	0	0	5	9.4	10	18.9	21	39.6	17	32.1
I 29	3	5.7	10	18.9	15	28.3	16	30.2	9	17
I 30	0	0	6	11.3	11	20.8	20	37.7	16	30.2

The I1 *"I use my previous experiences while organizing my new learning."* shares the highest 16 frequency with "strongly agree" (30.4%), the I2 *"It is important for me to overview my learning from time to time to determine how much and what I learned."* has 25 frequency for "agree" (47.2%), the I3 *"I plan how and when to use the resources that will help me learn a subject well."* has 17 frequency for "undecided" (32.1%), the I4 *"I recognize my errors during learning process."* and the I5 *"If the learning could not be accomplished, I search for other strategies that could be effective."* have 23 and 22 frequencies for "agree" (43.4% and 41.5%), the I6 *"I do not have an exact idea of how to organize my learning."* has 18 frequency for "undecided" (34%), the I7 *"While learning a subject, I am not aware of employing which strategy and how to use it."* has 20 frequency for "disagree" (37.7%), the I8 *"I know how much time I need to learn a subject"* and the I9 *"I revise my study plan that I used in learning and make necessary corrections."* have the frequencies of 21 and 18 for " agree" (39.6% and 34%), the I10 *"I check if I understood a subject during learning."* has 25 frequency for agree (47.2%), the I11 *"When learning strategy that I used fails in learning process, I employ new one."* and the I12 *"I have difficulty in understanding the reason of the trouble I experienced during learning."* have 16 and 18 frequencies for "undecided" (30.2% and 34%), the I13 *"I have difficulty in planning my learning a subject in accordance with my own learning qualities."* has the frequency of 20 for "disagree" with 37.7%, the I14 *"I check if I effectively use my time during learning."* has the frequency of 22 for "agree" with 41.5%, the I15 *"I have difficulty in distinguishing important parts about a text or a learning unit."* has 21 frequency for "disagree" with 39.6), the I16 *"I search for the reasons of the failure while learning a subject."* and the I17 *"It is important for me to build meaningful relations*

between learned subjects during learning.'' have 22 and 26 frequencies for "agree" with 41.5% and 49.1%, the I18 *''I search for how I learned a subject most effectively while learning.''* and the I19 *''I prepare the learning environment that is necessary for learning process.''* have the frequencies of 21 and 24 for "agree" with 39.6% and 45.3%, the I20 *''I critically make a plan before beginning to study a text.''* and the I21 *''I revise and correct the learning strategies while studying a subject.''* have the frequencies of 20 and 25 for "agree" with 37.7% and 47.2%, the I22 *''I asses if the cognitive strategy that I employ has been successful or not.''* represents 20 frequency for "undecided" and "agree" with 37.2%, the I23 *''Till I reach a result, I organize the conditions for keeping my attention.''* and the I24 *''I know which subjects I can learn easily and which I will have difficulty in learning.''* have the frequencies of 23 and 22 for "agree" with 43.4% and 41.5%, the I25 *''I do not spare much time for monitoring how much I learned about the subject during learning process.''* has 16 frequency for "undecided" with 30.2%, the I26 *''I know the other subject matters that I can use an effective learning strategy in a subject.''* has 18 frequency for "undecided" and "agree" with 34%, the I27 *''I determine which learning strategy I should employ before I start studying.'' and* the I28 *''I know when I need to ask for help.''* share the frequencies of 22 and 21 for "agree" with 41.5% and 39.6%, the I29 *''During learning process, I have difficulty to determine in which conditions I can learn and those I have failed to learn.''* and the I30 *''I determine what I will learn about a subject before I start studying it.''* occur with 16 and 20 frequencies representing 30.2% and 37.7% of the total participants.

Table 9. Descriptive statistics of ANOVA results of metacognitive awareness, skills, and course achievement scores

| Scores	N	$\overline{\text{X}}$	S
Course Achievement	53	56.68	9.92
Metacognitive Awareness	53	68.91	12.88
Metacognitive Skills	53	69.09	12.02

Descriptive statistics of ANOVA results show that the mean values of course achievement, metacognitive awareness and skills scores of the 1st grade students who are taking the structure of English course are calculated as 56.68, 68.91, and 69.09 with the standard deviations of 9.92, 12.88, and 12.02. Although the mean values of metacognitive awareness and skills are close to each other, the course achievement scores of the participants are lower than them. Hence, course achievement scores differ from the scores of metacognitive awareness and skills of the participants.

Table 10. One-way ANOVA results of metacognitive awareness, skills and course achievement scores

Source of Variation	Sum of Squares	Sd	Mean Squares	F	p	Significant Difference
Between Subjects	10476.77	52	201.48	31.39	.000	2-1, 3-1
Measure	5367.05	2	4084.57			
Error	10770.09	104	130.12			
Total	26613.91	158				

One-way ANOVA, one of the parametric statistics, was used to investigate how compatible were the metacognitive awareness, skills, and course achievement scores of the participants occurring as repeated measures in the current study. According to the findings, it is clear that there are significant differences between metacognitive awareness and course achievement in addition to the metacognitive skills and course achievement, $F(2, 104) = 31.39$, $p < .01$.

Diagram 1. The scatterplot diagram for metacognitive awareness and metacognitive skills relations
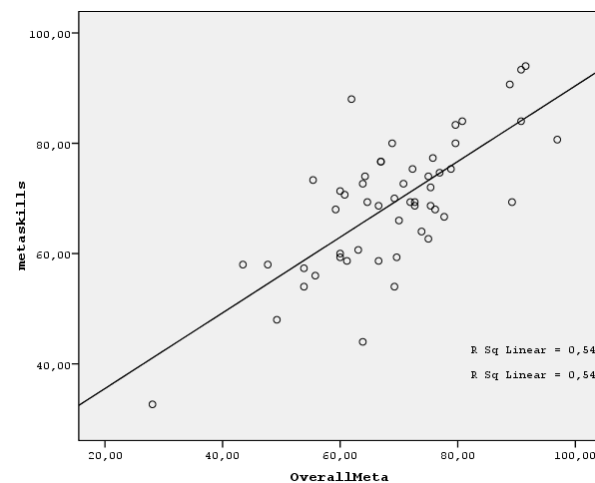
The scatterplot diagram illustrates how the variables of metacognitive awareness and skills disperse in terms of the relation they have with each other. In terms of their relation, the diagram reflects high correlation of metacognitive awareness and skills of the participants since the variables fall along the line.

Table 11. The results of simple linear regression for the effect of metacognitive skills on metacognitive awareness regarding course achievement

Variables	B	ShB	Beta	t	p	Zero-order	Partial
Constant	14.48	7.13	-	2.03	.047	-	-
Metacognitive Skills	.79	.10	.74	7.75	.000	.74	.74
R=.74	R²=.54	F(1,51)=59.98		P=.000			

The simple linear regression results of the collected data explain that the metacognitive awareness and metacognitive skills scores of the participants for the Structure of English course have significant high-level relation with each other, R= .74, R²=.54, p p<.01. The regarded variables of metacognitive awareness and skills scores explain 54% of the total variation in terms of the course achievement.

4. Discussion and Conclusion

This study provides important insights into general and specific metacognitive awareness and skills of ELT students in one of the state university of Turkey by taking into consideration both the overall and sub-section of the scales applied to them. Meanwhile, how the effect and/or the relation of the participants' metacognitive awareness and skills on their course achievement referring to the Structure of English course took an important part of the study.

In respect to the overall scale results, the metacognitive awareness levels of prospective teachers reflect normal distribution with minimum 28.08 and maximum 96.92 scores. Moreover, there is significant difference between the sub-sections of the metacognitive awareness inventory which supports the significance values of p< 0.05 or 0.01. This finding highlight that the metacognitive awareness levels of ELT students may develop and increase in time because Metcalfe and Shimamura (1994) assign it as a connection through such kind of *"thinking and memory, learning and motivation, learning and cognitive development"* areas in terms of the mean values of MAI that should be taken into consideration.

The correlation coefficiencies for sections and sub-sections of MAI unveil that all the sections and subsections of the scale are correlated with each other in a higher or lower degree. In this aspect, it supports at first the *"knowledge about cognition"* and the *"regulation of cognition"* are overlapped in a strong way in that the facets of one will develop and increase the metacognitive sides and abilities of the students and individuals. As Flavell (1987) pioneered in associating the metacognitive knowledge and regulation in his taxonomy, controlling the desired knowledge or information about

something, and employing the sequential strategies during the process of applying metacognitive skills may result in an outstanding way while learning English as a foreign language.

Regarding the metacognitive skills scale scores of the 1st grade ELT students, even they show normal distribution with minimum 32.67 and maximum 94 scores, it could be concluded that the mean values of the overall metacognitive skills score calculated as 69.09 can be developed during their faculty education. As Altındağ and Senemoğlu (2013) reflected in their studies, educators need to define the metacognitive skills of students for the purpose of measuring the deficiencies of the students in this regard and develop the quality of educational practices. Moreover, Yüce (2019) supports the idea of designing the language learning environment for the purpose of fostering the self-regulation abilities of the learners in which the metacognitive abilities or skills of them may have influential roles.

In terms of the ANOVA results of the metacognitive awareness, skills, and the structure of the English course, the findings highlight the importance of the relation between the metacognitive conditions and academic achievements of the learners in that the students who demonstrate high metacognitive abilities or skills have inclinations to show good performance in their courses or lessons (Kruger & Dunning, 1999). The current study provides an example for the low metacognitive awareness and skills of the students who take the structure of the English course, and they have significant differences between the course achievements of the students. Accordingly, Tok, Özgan, and Döş (2010) declare that the metacognitive awareness and skills of the learners could be instructed and enhanced so that they discover and manage the potential they have in their academic and personal lives.

The findings for the effect of metacognitive skills on metacognitive awareness in terms of course achievement explain that 54% of the variance in the statistics applied for this study provide foundation for what Borkowski (1992) states in that "the potential students who are identified as exhibiting less metacognitive awareness could be instructed and given practice in activities to develop their knowledge and regulation of cognitive activity" to cultivate them professionally and individually since the development of one area is directly or indirectly interrelated to one another phases that have traces in a person's life. All in all, metacognitive skills have an essential influence on metacognitive awareness which may result in high academic or personal development on behalf of the students and individuals.

Depending on the findings of this target study, metacognitive awareness and skills of learners should be regarded in a way that they are life-long developmental process of individuals. Hence, Sarıçoban and Kırmızı (2020, p. 1048) underline and remark the importance of classroom activities providing "problem-solving, task-based, cooperative learning…ect." opportunities for learners that will increase the creativity and result in

the cultivation of metacognitive awareness and skills during the regular classroom practices. Therefore, the importance of the roles of teachers and educators have emerged as vital once again. Particularly, with the outbreak of Covid-19 pandemic in these days, the scaffolding roles of the teachers and educators in regular classes should be glorified and their missions on the personal development of the learners need to be applauded and announced sincerely. Because all their actions have diverse impacts on the learners forever.

Another essential point that should be granted under the scope of this study is that metacognitive awareness and skills of the learners are very important predictors of their academic achievement in that metacognitive awareness should be provided for the learners to make them more successful in their academic life because there is positive correlation between metacognition and reaching goals (Çubukçu, 2008; Öz, 2014, 2015; Bursalı & Öz, 2018). Thus, it is accepted that metacognitive awareness and skills have such influences on learners that the natural outcomes of developing these skills pave the way for more successful language learning settings and more autonomous language learners.

With the current study, the integration of metacognitive awareness and skills to the pre-service English language teacher education process were highlighted evidently because they also familiarize the student teachers or the prospective teachers themselves with the motivational aspect of their teaching and learning responsibilities (Balçikanli, 2011; Anderson, 2012) As teacher education is a dynamic process, it also requires to follow systematic directions that include both monitoring and evaluating the practices in different settings of learning and teaching. In accordance with these, the English Language Teacher Education programs and regulations need to be updated and incorporated with such curricular activities and practices that foster the desired metacognitive awareness and skills of future professional English as foreign language teachers.

5. Suggestions and Limitations

As for suggestions, this study could be repeated with more university students (or courses) in number or to make the findings comparable, and it would be better to include EFL students studying at different universities in Turkey to reach a general conclusion and belief about the metacognitive awareness levels of this kind of learners and how they reflect this ability to their learning and teaching settings or courses. In addition to the suggestions, the following limitations of the current study should be regarded in detail, which will shape the features of the future studies dealing with metacognitive awareness

and/or skills of the learners or different kind of participants. Here, the limitations are ordered as:

- ➢ The sample of the study consists of one group of English language teaching students studying at a state university in Turkey.
- ➢ Only the course achievement of the "Structure of English Language" is included in the study because the students are expected to reflect their metacognitive awareness and skills that convey the practices of the aimed course.
- ➢ The results of MAI, MSS and the scores of the "Structure of English Language" are under the scope of the findings of this research.
- ➢ The MAI is adapted into a common 5-point Likert-type format instead of its original format as the statements need to be responded as "true" or "false".

Acknowledgements

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