The use of cognitive domain in questions: The perception of students and lecturers of public universities in Aceh

Siti Sarah Fitriani [a] [1] , Yunisrina Qismullah Yusuf [b] , Ayu Zumara [c]

[a] Universitas Syiah Kuala, Banda Aceh, Indonesia
[b] Universitas Syiah Kuala, Banda Aceh, Indonesia
[b] Universitas Syiah Kuala, Banda Aceh, Indonesia

Abstract

The purpose of this study is to investigate the cognitive domain of Bloom's taxonomy used in questions asked by lecturers to their students at two public universities in Banda Aceh, Indonesia. The data for the study were gathered from both the students' and lecturers' perceptions. There are 218 students and 19 lecturers involved in this survey as the respondents. This study found that both lecturers and students from these public universities perceived that the lecturers frequently used all levels of the cognitive domain of Bloom's taxonomy. The students perceived that the most frequent cognitive domain used by the lecturers in questions is the domain of create, followed by the cognitive domain of understand, remember, evaluate, apply and lastly the cognitive domain of analyze. On the other hand, the lecturers believed that they use the cognitive domain of remember as the most frequent cognitive domain in questions. In the second place, the lecturers perceived the use of domain of understand while in the third, and fourth place there are the domain of create and the domain of evaluate, followed by the cognitive domain of analyze and apply. Therefore, lecturers are recommended to maintain the quality of questions in classrooms to promote students' critical thinking by using all cognitive domains of Bloom's taxonomy. Universities should frequently survey to have a reliable and valid record of lecturers' performance based on students' and lecturers' opinions to consistently improve the quality of teaching and learning.

Keywords: cognitive domain; question; perceptions; lecturers; students

1. Introduction

Generally, a teaching-learning activity in classrooms is an activity which requires good communication between lecturers and students in order to deliver and receive messages accurately so that they can achieve the goals and objectives of the lesson (Johnson, 1999), and at the same time provide the lecturers with clear information about students' need, their current achievement and their deficiency (Brown, 2016). The communication itself can take different forms or techniques. One of the most prominent

---

[1] Corresponding author.
  E-mail address: ssfitriani@unsyiah.ac.id

techniques is by using questions (Tofade, Elsner & Haines, 2013; Ma, 2008). It is one of the common tools used by lecturers to build good communication in the classrooms. Moreover, a question as a kind of input and stimulant provided by lecturers (Hasan, 2006) forms an integral part of classroom interaction (Ho, 2005). It allows lecturers to engage with students and to sustain the active style of learning (Gast, 2014). Thus, the process of teaching and learning in the classroom does not merely depend on lecturer-based activities, but also students' active responses. Besides, a question is historically known as the measurement by which lecturers challenge and gauge students' learning (Diaz, Whitacre, Esquierdo, & Ruiz-Escalante, 2013; Tofade et al., 2013) and measure the academic progression (McCarthy, Sithole, McCarthy, Cho, & Gyan, 2016). It helps lecturers to notify the development of students' achievement as the result of learning experiences when questions are the most logical tools to measure it (Bloom, 1956). Additionally, a question is also hoped to foster and impede opportunities for students' learning about social interaction (Chafi & Elkhouzai, 2014) so that they will gain experience on how to communicate and to change information within a small social community (classroom).

One of the methods to ask quality questions is by employing the cognitive domain of Bloom's taxonomy. To build up good communication, for example, lecturers could ask questions with the cognitive domain of remember (Ma, 2008; Xi, Li & Lei, 2010). This kind of question is important to create classroom communication (David, 2007). Moreover, the cognitive domain used in questions could prepare students to not only learn the knowledge but also apply the knowledge in real-life situations. As Bloom (1956) and Krathwohl (2009) mentioned, one of the aims of the cognitive domain is to help students apply and carry out their prior knowledge to the given situations. Another advantage of questions with the cognitive domain is to help develop students' critical thinking skills and inquire about attitude (Cotton, 1988, 2001). By giving appropriate and effective questions, lecturers can stimulate their students to think in a higher cognitive domain. As a result, students do not only recall their knowledge but also critically think for the answer. It indirectly encourages students to solve their problems (Hu, 2015). In addition, Ma (2008) mentioned that the questions in classes can foster students' ability to analyze and create something.

In Indonesia, particularly in the Aceh context, however, the questions usually asked by lecturers at universities are the ones that belong to the low level of the order of thinking and only cover some purposes (Wahyuni, Qamariah, Syahputra, Yusuf & Gani, 2020). It is characterized as a low-level in the cognitive domain (Chafi & Elkhouzai, 2014). Hence, the questions do not stimulate students to think critically. The lack of promoting higher order of thinking in questions has been proven as one of the factors causing students' achievement problems (Diaz et al., 2013). It also leads to students' tendency to only memorize the information and illustration from the textbooks (Viechnicki & Kuipers, 2006); thus, when in one condition their answers disagree with the theory, they choose to manipulate the answer without thinking critically (Kira, Komba, Kafanabo & Tilya, 2013). Consequently, the effectiveness of questions is depended on how intentionally lecturers ask questions to achieve a certain goal (Strother, 1989). If the questions were asked unsystematically and the purposes of questions are not determined beforehand, the results of questions will be chaos and not optimized (Döş et al., 2016).

Ample studies have discussed their findings related to the benefits of questioning strategy in classrooms. Mufanti (2014) argued that students can be more focused and are more motivated to follow a lesson when they are asked appropriate questions. Tuaputty (2016) found questioning as a strategy that sharpens university students' intelligent and creative thought. Meanwhile, Hidayati (2014) and Yurnelis, Hasanuddin and Ermanto (2013) added that questioning strategy improves classroom achievement and students' awareness respectively. Moreover, in one of Aceh universities, Rusmiati (2013) found that students who are not taught with questions had lower performance compared to students who learn with questions in class. Syahabuddin, Fhonna and Maghfirah (2020) further believed that questions asked in

the classroom is another form of good communication to build good relationships between lecturers and students in the teaching and learning process. In short, questioning can be investigated from different cases and studies before the benefit and advantages of the implementation of the question are proven to help lecturers to make the class be more active and critical.

Due to this gap, this research needs to investigate how lecturers' questions are asked in classes at Aceh universities to support students' ability to think critically. The objectives of this study are to find out the dominance and frequencies of the cognitive domain in questions asked in classrooms based on students' and lecturers' perceptions at public universities in Banda Aceh, the capital city of Aceh province, Indonesia.

The result of this study is expected to raise lecturers' awareness of how questioning strategy is generally implemented in university classrooms especially in English as Foreign Language (EFL) classrooms. It is also hoped that it could contribute useful feedbacks specifically for EFL lecturers to improve their knowledge and skill in asking quality questions to develop students' critical thinking.

1.1. Literature review

1.1.1. Cognitive domain of bloom's taxonomy

The cognitive domain of Bloom's taxonomy has been vastly used as the foundation in creating teaching-learning activities in the classroom since decades ago (Collins, 2014). Its emphasis on cognitive objectives is proven to help lecturers create meaningful learning events, and consequently, worthwhile learning outcomes (Anderson et al., 2001). The taxonomy was firstly discussed because back in the forties, educators had difficulties with the standard to assess students' improvement and abilities in the classroom (Anderson et al., 2001; Haghshenas, 2015). So, Bloom and the Associate Director of the Board of Examinations of the University of Chicago initiated the idea to establish the framework in creating the objectives and test items to assess students (Krathwohl, 2002). In the original form of Bloom's taxonomy (1956), there are six major categories in the cognitive domain: knowledge, comprehension, application, analysis, synthesis, and evaluation (Wilson, 2016). Then in 2001, Anderson et al. revised the structure of old taxonomy by changing nouns and verbs in the categories into verbs form only in the reflection of thinking as an active process (Tankersley, 2005). In their new version, Anderson et al. (2001) proposed to remember, understand, apply, analyze, evaluate, and create as the instructional verbs (Krathwohl, 2002).

It is noticeable that the Bloom's taxonomy is arranged from simple recalls or recognition of facts, as the lowest level, through increasingly more complex and abstract mental levels, to the highest order, which is classified as evaluation (Anderson et al., 2001; Collins, 2014; Gast, 2014). In addition, each level in Bloom's taxonomy - both the old and revised version - is more sophisticated than the previous level and requires more cognitive skills to complete (Anderson et al., 2001). It means that students need to master the lowest level of cognitive skills to move on to a higher level. So that when students are in the highest level of skill, they already accumulate all other lower levels.

1.1.2. Bloom's taxonomy and higher order thinking

Education's focus has been shifted to the students' orientation which put higher-order thinking forward. Brookhart (2010) defines higher-order thinking as three major categories including those that define higher-order thinking in terms of the transfer, those that define it in terms of critical thinking, and those that define it in terms of problem-solving. It means that students who can be categorized as higher-order thinkers are those who are able to transfer their knowledge into the application and make the meaning of it.

Besides, students must be able to analyze and evaluate the problem critically with the solutions as the result of the problem. Meanwhile, when lecturers talk about higher-order thinking, they actually talk

about empowering students to think independently (Smith & Darvas, 2017). In other words, lecturers should only provide enough (not too much, not too less) support so that learners can sharpen their thinking skill (Kauchak & Eggen, 1998, as cited in Collins, 2014), for example, by employing scaffolding which forms various instructional verbs (Bloom's taxonomy) in different levels of thinking (Slavin, 1995).

One of the frameworks which can help lecturers to encourage students to learn in higher-order thinking is Bloom's taxonomy (Rahman & Manaf, 2017). Even though the taxonomy has its own critics which deny its advantages (Case, 2013; Wineburg & Schneider, 2010), its aim to promote higher forms of thinking in education from a classroom activity to the curricula is widely known (Collins, 2014). Thus, Davis (2011) in his article emphasized the utilization of Bloom's Taxonomy to teach higher-order thinking to students. He said that by installing Bloom's taxonomy in their teaching, lecturers are able to create a framework with the complexity of skill that initiates students' metacognitive skills. The roles of lecturers here are very important since it is their decision and responsibility to interpret the taxonomy into meaningful classroom activities and tests (McBain, 2011).

Moreover, Noble (2004) argues that Bloom's taxonomy also facilitates each student's success; the taxonomy helps lecturers to program tasks at an appropriate level of thinking for different students. To achieve this success, Tankersley (2005) suggested that the employment of Bloom's taxonomy must be a routine and not only at the low level of its domain. In addition, the taxonomy gives an advantage to students in discovering their learning intrinsic motivation and self-regulated (Smith & Darvas, 2017). Thus, students' autonomy is encouraged with a high level of positive interaction towards the social environment as the result. These advantages of Bloom's taxonomy will be able to prepare students to face real-life problems and solve them critically.

1.1.3. Questions in teaching and learning activities

Historically, the foundation of using a question as a tool of learning began years ago when Socrates engaged his students in the rhetorical inquiry and discourse requiring critical thinking regarding various social life problems (Döş et al., 2016; Gross, 2002; Robitaille & Maldonado, 2015). Since then, the employment of questions in class has been widely known and considered as the measurement which challenges lecturers' teaching and gauge students' learning (Diaz et al., 2013). Many studies claim the long period of questions in class utilization is proven that it is a prominent tool for building communication between lecturers and students (Hamiloğlu & Temiz, 2012), powerful instructional strategy (Ontario Ministry of Education, 2011) and a natural process which indicates the process of critical thinking (Mazzola, 2009).

Moreover, Cotton (1988, 2001) defined question as any sentence which has interrogative form or function. He also specified that lecturers' question is instructional cues or stimuli that convey the content or element of subject and directions to students. So that students are able to know what to do and how they have to do it. Besides, Ma (2008) stated that questioning is a skill of the elicitation method of teaching that is student-oriented, which advocates giving an incentive in classroom communication. It means that when lecturers need responses from students, they need to ask questions as the stimulation.

Furthermore, lecturers get great advantages from the employment of questions in teaching and learning activities. McCarthy et al. (2016) mentioned that lecturers are more aware of students' knowledge if they ask questions in class. It means that to be able to discern the range and depth of students' thinking, lecturers should effectively ask questions at various levels within the cognitive domain (Moyer & Milewicz, 2002). Additionally, lecturers also use questions as part of the assessment of learning in order to determine how they best structure, organize, and present new learning (Gast, 2014). In the end, there are more advantages to get from the utilization of questions in class which underline its importance.

1.1.4. Cognitive domain of Bloom's taxonomy in questions to promote higher order thinking

In the general context, pedagogical interaction is very crucial to provoke students' cognitive engagement and understanding when lecturers employ challenging and various order questions to train students' skills and habits to think critically (Chafi & Elkhouzi, 2014). Thus, the questions can be considered as the powerful stimulant which activates students' cognitive skill (Aydemir & Çiftçi, 2008). One way to produce this powerful stimulant is by engaging Bloom's taxonomy in questions asked in class. Diaz et al. (2013) mentioned that since its creation in 1956, Bloom's taxonomy has been proven in facilitating the creation of questions that promote all levels of thinking skills. Marzano, Pickering, and Pollock (2001) also argued questions as one of the essential instructional practices which are closely linked to critical thinking and Bloom's taxonomy (Burton, 2010).

In various classes, the employment of Bloom's taxonomy is vividly visible. Even though the display and convergent questions are dominant (David, 2007; Diaz et al., 2013; Hamiloğlu & Temiz, 2012; Ragawanti, 2009; Rahman & Manaf, 2017; Shomoossi, 2004; Sujariati, Rahman & Mahmud, 2016; Sunggingwati & Nguyen, 2013; Tofade et al., 2013; Yang, 2010), but the higher-order thinking questions are encouraged to develop and promote thinking. Researchers agreed that Bloom's taxonomy in questions is essential to encourage, extend and challenge students' abilities so that they think critically (Diaz et al., 2013; Klenn & Connell, 2004; Marzano et al., 2001). In other words, these questions make students speculate and evaluate their answers before they decide it as the final solution (Cotton, 1988, 2001; Döş et al., 2016). Furthermore, the application in classes at the college level makes higher-order thinking questions help students' adaptation to the mental world, such as the cognitive elements and emotional elements that adapt to the physical world and adapt to the social world like social relationships, social roles, students' face awareness, classroom atmospheres, etc. (Xi et al., 2010).

However, the benefit of higher-order thinking questions cannot overshadow the importance of lower-order thinking questions. The questions which were asked to students should be appropriate in terms of subject progress and students' comprehension. Kira et al. (2013) said that some questions should be asked in a certain level of students' intelligent ability so that the passiveness of students' response argued by Rahman and Manaf (2017) and Case (2013) as the unfortunate effect of Bloom's taxonomy higher-order thinking can be avoided. Moreover, David (2007) said that in the low order thinking, questions are very useful to engage classroom interaction, while Ragawanti (2009) added that uncomplicated required-answer of these questions made interaction in class more easily engaged.

Moreover, Anderson et al. (2001) found that low order thinking questions are important as the fundamental of higher-order thinking. It means that students can master the level thinking order more easily when lecturers use pre-dominant low-level questions to develop the skill to design and use questions that engage students in the higher-level instructional process (Burton, 2010). Similarly, Döş et al. (2016) indicated that low-level questions should be asked to see if students can make inferences, find the cause and effects of an issue, and make generalizations. Further, Cotton (1988, 2001) added that low cognitive questions in classes ask students to recall the verbatim or information in their own words about materials previously taught or told by lecturers.

1.2. Research questions

The research question of our study is created based on the objective that we have mentioned in the introduction section of this paper. The research question that we posed is "What are the dominance and frequencies of the cognitive domain in questions asked in classrooms based on the perceptions of students' and lecturers' at public universities in Banda Aceh, Indonesia?"

2. Method

This research used quantitative research to establish the overall tendency of responses from individuals to note how the tendency varies among people (Creswell, 2012). Moreover, this research employed a cross-sectional survey (Cohen, Manion & Morrison, 2011). The questionnaire was employed as the instrument. We developed the questionnaire by measuring six constructs of the cognitive domain of Bloom's taxonomy, namely remember, understand, apply, analyze, evaluate, and create. Each item was mainly developed from Anderson et al.'s (2001) revision and explanation of the previous form of Bloom's taxonomy (1956). Thus, some articles are also used as additional reading and literature sources to support and strengthen the questionnaire. Likert's scale was used as the measurement in the questionnaire. As its setting, this research took place in Banda Aceh, at Universitas Syiah Kuala (Unsyiah) and Universitas Islam Negeri Ar-Raniry (UIN Ar-Raniry). There were 218 students and 19 lecturers from the English Education Department of both universities participated as convenient respondents. The data of this research were analyzed using the Statistical Package for Social Science (SPSS) application. The procedure of data analysis was descriptive statistics based on Cohen et al. (2011). In addition, the result from the lecturers' open-ended questions was added to strengthen the lecturers' opinion. Thus, the result was interpreted from numbers to be descriptive explanations so that the result is comprehensible.

3. Results

This research found that the most frequent cognitive domain employed in the questions asked by the lecturers based on students' perception at Unsyiah and UIN Ar-Raniry in Banda Aceh is the domain of create (M = 3.9). It was followed by the cognitive domain of understand (M = 3.815) which is slightly different from the cognitive domain of remember (M = 3.81). The fourth place is the cognitive domain of evaluate with 3.770 as the Mean value, and cognitive domain of apply in the fifth place (M = 3.76). The last position is that the lecturers asked the questions with the cognitive domain of analyze (M = 3.592).

On the other hand, this research also found that the lecturers perceive the cognitive domain of remember as the most frequent cognitive domain used in questions in the classroom (M = 4.053). In the second place, the lecturers perceive the domain of understand with Mean value of 3.908, while in the third and fourth place there are the domain of create (M = 3.895) and domain of evaluate (M = 3.8), respectively. Moreover, the lecturers believe that they themselves do not so frequently use the cognitive domain of analyze (M = 3.684) and apply (M = 3.631) in questions. Since these two middle levels of critical thinking domain only score the Mean value of around 3.6, which is the bottom line of the frequency of frequently, they could not be categorized in the level of sometimes because it should be rounded to 4. The following figure concludes the results of data analysis from questionnaire.
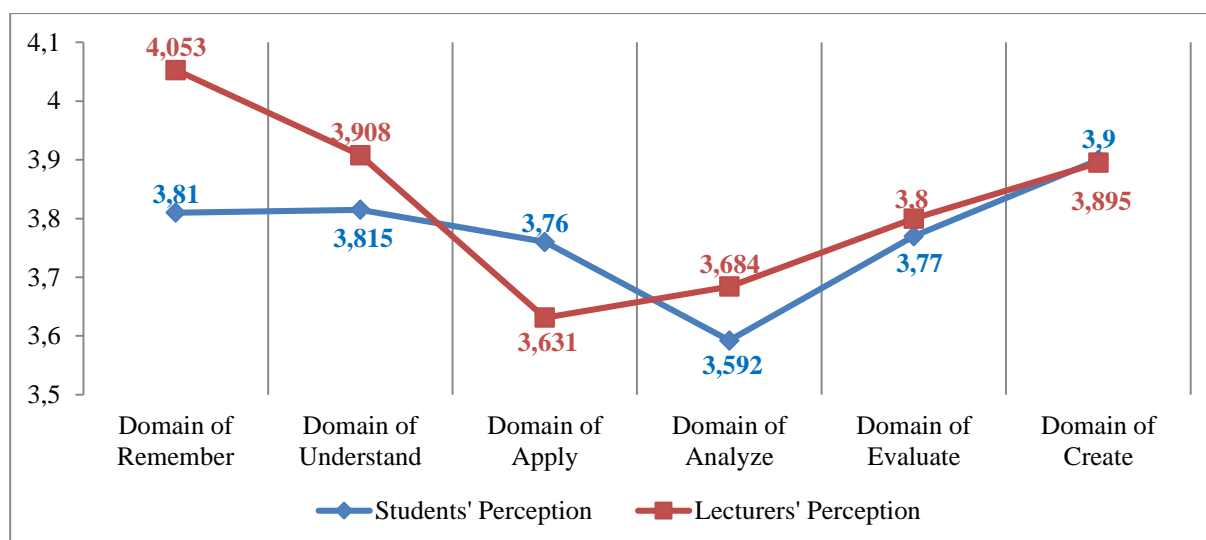
Figure 1. Students' and lecturers' perception of cognitive domain asked in question by the lecturer's at Unsyiah and UIN Ar-Raniry

4. Discussion

The result of the research has indicated that most of the students (M = 3.775) and the lecturers (M = 3.828) perceive that the lecturers frequently ask the questions that use all levels of the cognitive domain of Bloom's taxonomy. It can be seen from the average value of the Mean of six constructs rounded nearer to four which represent frequently in Likert's frequency scale. It means that this research agreed with Collins' (2014) argument who stated that Bloom's cognitive domains are the vastly used foundations in the classroom. The notion was also in line with Anderson et al. (2001), who said that cognitive objectives are proven to help lecturers create meaningful learning events and, consequently, worthwhile learning outcomes. Besides, the average result of the six domains that point to frequent level give a picture about the balanced employment of each stage of Bloom's cognitive domain, starting from the low level of order thinking to the high level of order thinking. In other words, the lecturers at public universities in Banda Aceh use all six cognitive domains in questioning students in classes. It is in line with scholars who argued that the use of Bloom's cognitive domain starts from lower-order thinking, and then enhances to a more sophisticated level of thinking (Anderson et al., 2001; Haghshenas, 2015; Krathwohl, 2002).

Further, the students perceived that the most frequent cognitive domain employed in the questions asked by the lecturers in two Banda Aceh public universities is the cognitive domain of create. It was followed by the cognitive domain of understand, cognitive domain of remember, cognitive domain of evaluate, cognitive domain of apply, and lastly cognitive domain of analyze. On the contrary, the lecturers perceived the cognitive domain of remember as the most frequent cognitive domain used in questions in the classroom. In the second place, the lecturers perceived the domain of understand while in the third and fourth place there are the domain of create and domain of evaluate. Moreover, the lecturers believed that they did not so frequently use the cognitive domain of apply and analyze in questions.

The interesting part of the answer for research question is that the lecturers perceived higher Mean value on the low level of cognitive domain and high level of the cognitive domain but not in the middle level. It showed that the lecturers at the two public universities in Banda Aceh used a more low and high level of cognitive domains in their questions rather than the other domain. This situation was on the contrary with Case's (2013) situation where the employment of high-level Bloom's taxonomy to empower critical thinking prohibited students' abilities in low-level order thinking. However, how the lecturers at the two public universities in Banda Aceh used the cognitive domain of Bloom's taxonomy in questions

was similar to the statements of other scholars. For instance, David (2007) said that the low order thinking questions are useful to engage classroom interaction, and Ragawanti (2009) argued that uncomplicated required-answer of these questions made interaction in class more easily engaged. Moreover, also Cotton (1988, 2001) and Döş et al. (2016) added that the questions lead students to speculate and evaluate their answers before they decide it as the final solution that it is important to students' ability to think critically. Therefore, the finding of this study agreed with Tankersley (2005) who suggested the employment of Bloom's taxonomy must be a routine and not only the low level of its domain but also in the high level of the domain.

4.1. Match and mismatch of students' and lecturers' perceptions on different cognitive domain

4.1.1. Cognitive domain of remember

In this study, the students perceived the domain of remember as the third dominant domain employed by their lecturers in questions, whereas the lecturers believed this domain got the first place as the most dominant domain used in questions. The students and lecturers believed that questions with the domain of remember must be asked since observing and recalling information are needed by the students to master the subject matter given to them when they want to move to the next stages of Bloom's taxonomy. The lecturers mentioned that by asking questions that require observation, it would help students recall the information and master the subject matter and previously learned material. These types of questions met the purpose of the cognitive domain of remember which provides students with the skills of observation and recall the information to master subject matter, and factual recall (Bloom, 1956). Moreover, Anderson et al., (2001) and Krathwohl (2002) also underlined the skills of remembering and retrieving information as the main students' abilities in the domain of remember. Besides, the use of the cognitive domain of remember in questions will increase students' understanding of the teaching-learning process (Tofade, et al., 2013). The lecturers mentioned that they frequently ask the students to recall information to make sure that the students understand the subject matter or what they already have taught. Besides, the lecturers also believed that the students need to be trained to communicate their ideas in the classroom between lecturers and students. This finding was in line with Ma's (2008) and Xi et al.'s (2010) ideas. This argument is also in line with David (2007) who said that low order thinking questions are useful to engage classroom communication. To be more specific, Cotton (1988, 2001) added that low cognitive questions in classes asked students to recall the verbatim or information in their own words about the materials previously taught or told by lecturers.

4.1.2. Cognitive domain of understand

The cognitive domain of understand was placed in the low stage of Bloom's taxonomy. However, this study found that the students and the lecturers perceived this domain as the second domain which was frequently used by the lecturers in questioning their students. Moreover, the students believed that the lecturers put more of their attention toward the questions that ask to understand information so that they could grasp the meaning behind it. As Wilson (2016) said, the competency of this domain is to make students construct meaning from different types of functions whether they are written or in graphic messages or activities. Whereas the lecturers reasoned that this stage of questions would provide students with the skill to understand new knowledge to use their skills to unveil the fact, information, problems that are provided in the text they read. Krathwohl (2002) also said that students need to determine the meaning of information from various sources such as instructional messages, or oral, written, and graphic communication to master this cognitive level. Furthermore, to agree with Bloom's (1956) argumentation, both the students and lecturers also voted that the lecturers required the students to predict the consequence of problems, interpret facts, compare and contradict the cause and the effect through questions so that they are able to translate new knowledge into a new context. In addition, the lecturers mentioned that this low level of Bloom's taxonomy domain helped them to gain students' focus

to pay attention in the classroom. Thus, they could make sure that the students understand the lectures. It is as suggested by Athanassiou, McNett, and Harvey (2003) that Bloom's taxonomy is able to help students gain increased awareness of the responsibilities of their learning in the classroom. Thus, as a result, the students pay more attention to classroom activities.

4.1.3. Cognitive domain of apply

The cognitive domain of apply is believed by the students as the fifth dominant domain employed by the lecturers at public universities in Banda Aceh. Theoretically, in this domain, Bloom's taxonomy requires lecturers to design and conduct more complex classroom activities based on lower-level skills (Anderson et al., 2001). It was proved in this study that the students argued that in the class they did not merely get questions that recall information, but also got the questions that required them to use information, and execute problems using required skills of knowledge even though they argued that the lecturers put less attention on the questions that asked them to implement methods and concepts in new situations. This is in contrast with the situation underlined by Wilson (2016) who said that students must be equipped with the ability of applying or referring situations where learned material is used.

Almost similarly, the lecturers believed this was the least domain they employed in questioning in classroom activities. However, the lecturers had positive opinions toward this domain. They believed that the students need to get the questions that use the cognitive domain of apply so that they would able to use, apply and implement the knowledge and critical skills taught to them both in their future career as teachers and their real life. The lecturers' opinions are in line with Bloom (1956) who said that this domain aims to make students actually apply, or use the knowledge they have learned. Later, Krathwohl (2009) also added that the aim is to make students able to carry out or follow the procedure in a given situation. Nevertheless, the lecturers also voiced out their reason why this domain got quite low attention compared to the other domains. They said that using the domain of apply in questions is difficult because this domain is not easy to be evaluated and the width range of the syllabus did not provide enough time to make real application of skill and knowledge.

4.1.4. Cognitive domain of analyze

Almost similar to the previous result, this study found that the other middle-level domain of Bloom's taxonomy, which is the cognitive domain of analyze, was not used much by the lecturers based on both the students' and lecturers' perceptions. The students perceived that the least domain asked in questions in the classroom by lecturers in Banda Aceh public universities is the domain of analyze. On the other hand, the lecturers perceived this domain as the fifth dominant domain they used in questioning students in the class. As mentioned in Bloom (1956), in this domain students were mentioned that their lecturers asked questions that are related to activities which involved seeing and differentiating pattern and organization of parts, recognizing the hidden meaning and identifying component of information. Moreover, Krathwohl (2009) remarked that here the students are expected to be able to break material into its constituent parts and detect how the parts relate to one another and an overall structure or purpose.

On the other side, although the lecturers only perceived this domain as the fifth dominant domain used in questions, they had good opinions toward this domain. Most of the lecturers who participated in this research mentioned that the skills of analyzing are important and needed by the students in their lives. The importance of analysis skills is also stressed by Ferris and Tagg (1996). They mentioned that lecturers want students to be able to analyze and synthesize the assigned course so that they ask advanced questions rather than questions in the low level of cognitive skill. This motion was in line with the reasons behind the employment of the cognitive domain of analysis where lecturers considered the skills in this domain could represent students' intellectual level, for example, their ability to distinguish the differentiation pattern between English and Bahasa Indonesia. Besides, lecturers also argued that the

students tend to be able to develop their critical thinking skills by answering questions in the cognitive domain of analyze. The students are motivated to be able to look at middle facts and info and discuss such facts to develop their critical thinking skills. Students also need to understand the pattern in speaking and writing in English which is different from that in Bahasa Indonesia. Additionally, Ma (2008) stated that with proper questions, students will be able to develop their ability in analysis and creation, as it was one of the purposes in the cognitive domain of analyze, within results that students obtain assistance in developing their critical thinking and inquiring attitude (Cotton, 1988, 2001).

4.1.5. Cognitive domain of evaluate

This domain was the domain where the students and the lecturers agreed with each other. In this domain, both the lecturers and the students agreed that the fourth domain used questions at Banda Aceh public universities was the domain of evaluate. In this domain, the lecturers were believed to ask questions that include comparing and discriminating between ideas, verifying the value of the evidence, and making choices based on reasonable argument. Thus, their students were able to assess and criticize the values of theories and presentations in their reports. These classroom interactions are related to the description given by Krathwohl (2002) that lecturers have to make sure that students are able to make a judgment based on criteria and standards; while critiques, recommendations, and reports are some of the products from demonstrating the process of evaluation (Wilson, 2016).

In addition, the lecturers perceived more specific reason in the answer to their open-ended questions; they wrote that the use of a cognitive domain is to measure and check the students' judgment on the value of the material and their ability to solve problems based on the theory taught to them. The questions also can assist lecturers to know whether or not the students can grasp the material well. It means that the lecturers believed that the questions that use the cognitive domain were not only as one of the assessments for students' knowledge but also as a tool to train students' ability to evaluate problems given to them with solutions as the products. As said by Huitt (2004), the cognitive domain of evaluate asked students to appraise, assess, or criticize on a basis of specific standards and criteria. Furthermore, the lecturers also added that they thought the domain of evaluate was needed since it highly promotes students' ability to think critically. Besides, the domain of analyze is the first phase of the high order of thinking of Bloom's taxonomy. Thus, it was argued that evaluating needs to come before creating as it is often a necessary part of the precursory behavior before students create something (Wilson, 2016).

4.1.6. Cognitive domain of create

As the highest level of Bloom's taxonomy cognitive domain which promotes critical thinking, this domain got quite a lot of attention from the lecturers. They believed that they already frequently used this domain so that they perceived it as the third dominant domain in questions. The most basic purpose of this domain which served the lecturers well was that it was used as the indicator of students' highest level of understanding about the lesson taught to them. The lecturers believed that by asking these types of questions, the students could relate theories to practice (i.e. facts), which means they grasped the lesson well. Moreover, the students would able to draw a conclusion that can be used as an indicator that they understand what they learn.

According to Walker (2003), by summarizing the information, a student is allowed to demonstrate whatever he or she listens to the previous lessons, has digested the information, and understand it enough to put it into his or her own words with the skill taught in other stages beforehand. The opinions above are in line with Bloom who said that lecturers should be able to notify the change of students' achievement as the result of learning experiences when questions are the most logical tools to measure it (Robitaille & Maldonado, 2015). Besides, the lecturers also said that the students needed the skills in the domain of create because it can open opportunities for students to solve their problems when learning English and to produce new things. As it was said that to provide the greatest benefit to students, teachers

should provide many opportunities for students to engage in the upper levels of Bloom's taxonomy where critical thinking takes place (Duron, Limbach, & Waugh, 2006). However, since the products of the cognitive domain of create were hardly finished during classroom activities, the lecturers tended to transform the instruction into questions for a project or outside classroom assessment.

Furthermore, the cognitive domain of create is the most frequent of the cognitive domain which was employed in the lecturers' questions at Unsyiah and UIN Ar-Raniry in Banda Aceh based on the students' perceptions. These opinions showed that the lecturers in these universities put favor in this cognitive domain. Since this domain was considered appropriate for advanced students, such as at the university level, they already had prior knowledge accompanied by the remaining five lower-level skills as said by Anderson et al. (2001). Here, the students agreed that their lecturers frequently asked the questions that required them to generate ideas from given facts or to relate knowledge from several facts. So that the students were able to predict and draw conclusions to produce new ideas or plan solutions for various cases. This notion is similar to Fisher (2005) and Forehand (2010) who described the skill of creating in the cognitive domain as a metacognitive knowledge that produces the skill of actualizing the knowledge. Moreover, Krathwohl (2002) also added that this level of higher-order thinking compels students to have the ability to put elements together to form a novel, coherent whole, or make an original product.

In the classrooms where teaching and learning activities are conducted, teachers and lecturers become the primary stakeholders. Both stakeholders should have the same goal(s). The discussions above have shown that both the lecturers and students participated in this research have the same perceptions for the second and fourth frequently used cognitive domains in questions posed by the teachers in the classrooms; these are the cognitive domain of understand in the second place and the cognitive domain of evaluate in the fourth place. However, the lecturers and students have different perceptions for the first, third, fifth and sixth frequently used cognitive domains. The mismatch between lecturers' and students' perceptions has indicated that both stakeholders experienced different activities, objectives and achievements in the teaching and learning process in the classrooms. Take for example, the students' perceived learning experience is different to the lecturers' perceived teaching experience in relation to the domains of questions given by the lecturers. The students feel that they answer and do a lot of questions and tasks that require them to create a product for example an essay, a summary, a synopsis, a speech, a conversation, a mini project, a visualization, etc. Consequently, the students assume that their lecturers ask them to answer questions or to finish tasks within the domain of create. On the contrary, the lecturers are certain that they ask a lot of questions to review students' understanding and memory of the teaching materials they have given. Accordingly, the lecturers mention the domain of remember as the most frequently domain they have used in the questions. This example has also indicated that there is a difference between what the lecturers expect as the objective of the subject, and what the students achieve from the subject. This has also suggested that there is a need for the lecturers to engage with the students in a short intensive classroom discussion regarding the rationale behind the implementation of certain domains in lecturers' questions (Brown, 2009). The discussion is important to minimize the differences between the lecturers' and the students' perceptions; because the differences may indicate a challenge for students to improve their performance on the active and critical thinking skills (Könings, Seidel, Brand-Gruwel & van Merriënboer, 2014). Therefore, both stakeholders should ensure that the activities in the classroom are directed to the same objectives to enhance teaching and learning atmosphere.

5. Conclusions

The lecturers from Unsyiah and UIN Ar-Raniry in Banda Aceh used all cognitive domains of Bloom's taxonomy when asking questions in their classroom teaching-learning activities. Among all Bloom's cognitive domains, the lecturers and students agreed that the lecturers used low order thinking domain and high order thinking domain more often, than the middle order thinking domain. Based on the lecturers' reasons, the domains of middle-order thinking are hardly used in questions in class since it needs a longer length of time compared to the other two domains. Thus, the lecturers preferred to make it as homework or outside class assessment.

It is recommended that lecturers maintain the quality of questions in classrooms to promote students' critical thinking by keeping using all cognitive domains of Bloom's taxonomy. Moreover, it is suggested that universities frequently survey to have a reliable and valid record about lecturers' performance based on students' and lecturers' opinions. Thus, it could use to improve the quality of teaching and learning at the university level, particularly in Unsyiah and UIN Ar-Raniry's classes in Banda Aceh.

Furthermore, this research can be enhanced by the employment of other research instruments such as open-ended questions for students as the reason platform of their perception, or the usage of the interview to get a deeper understanding. Besides, future researchers could also use a more sophisticated research method and analysis such as correlation or comparison between groups of respondents. Lastly, wider generalization could be made in the future when other researchers involve more population in their study.

6. Ethics Committee Approval

The authors confirm that ethical approval was obtained from Universitas Syiah Kuala Banda Aceh – Indonesia (Approval Date: 10/01/2021).

References

Anderson, L. W., Krathwohl, D. R., Airasian, P. W., Cruikshank, K. A., Mayer, R. E., Pintrich, P. R., Raths, J., & Wittrock, M. C. (2001). *A taxonomy for learning, teaching, and assessing: A revision of Bloom's taxonomy*. New York: Longman Publishing.

Athanassiou, N., McNett, J. M., & Harvey, C. (2003). Critical thinking in the management classroom: Bloom's taxonomy as a learning tool. *Journal of Management Education*, *27*(5), 533-555.

Aydemir, Y. & Çiftçi, Ö. (2008). A research on asking question ability of literature teacher candidates. *Yüzüncü Yıl Eğitim Fakültesi Dergisi, 5*(2), 103-115.

Brookhart, S. M. (2010). *How to assess higher-order thinking skills in your classroom*. Alexandria: ASCD.

Bloom, B. S. (Ed.). (1956). *Taxonomy of educational objectives: Cognitive domain.* Harlow: Longman.

Brown, A. V. (2009). Students' and teachers' perceptions of effective foreign language teaching: A comparison of ideals. *The Modern Language Journal*, *93*(1), 46-60.

Brown, R. (2016). *Communication in a diverse classroom: An annotated bibliographic review* (Unpublished master's thesis). University of Seattle, Seattle.

Burton, E. (2010). *Research brief: High level thinking and questioning strategies*. Southfield: Educational Partnerships Inc.

Case, R. (2013). The unfortunate consequences of Bloom's Taxonomy. *Social Education*, *77*(4), 196-200.

Chafi, M. E., & Elkhouzai, E. (2014). Classroom interaction: Investigating the forms and functions of teacher questions in Moroccan primary school. *International Journal of Innovation and Applied Studies, 6*(3), 352-361.

Cohen, L., Manion, L., & Morrison, K. (2011). *Research methods in education* (7ᵗʰ eds.). New York: Routledge.

Collins, R. (2014). Skills for the 21st century: Teaching higher-order thinking. *Curriculum & Leadership Journal, 12*(14). Retrieved from http://www.curriculum.edu.au/leader/teaching_higher_order_thinking,37431.html?issueID=12910

Cotton, K. (1988). Classroom questioning. *School Improvement Research Series*, *5*, 1-22.

Cotton, K. (2001). *New small learning communities: Findings from recent literature*. Portland: Northwest Regional Educational Laboratory.

Creswell, J. H. (2012). *Educational research: Planning, conducting, and evaluating quantitative and qualitative research* (4ᵗʰ eds.). Boston: Pearson.

David, O. F. (2007). Teachers' questioning behavior and ESL classroom interaction pattern. *Humanity and Social Sciences Journal, 2*(2), 127-131.

Davis, C. (2011). *Teaching students higher order thinking skills*. Retrieved July 5, 2020 from http://teachers-career-edge.com/articles/article/teaching-students-higher-order-   thinking-skills-94-1.html

Diaz, Z., Whitacre, M., Esquierdo, J. J., & Ruiz-Escalante, J. A. (2013). Why did I ask that question? Bilingual/ESL pre-service teachers' insights. *International Journal of Instruction*, *6*(2), 163-176.

Döş, B., Bay, E., Aslansoy, C., Tiryaki, B., Cetin, N., & Duman, C. (2016). An analysis of teachers questioning strategies. *Educational Research and Reviews, 11*(22), 2065-2078.

Duron, R., Limbach, B., & Waugh, W. (2006). Critical thinking framework for any discipline. *International Journal of Teaching and Learning in Higher Education*, *17*(2), 160-166.

Ferris, D., & Tagg, T. (1996). Academic listening/speaking tasks for ESL students: Problems, suggestions, and implications. *TESOL Quarterly*, *30*(2), 297-320.

Fisher, R. (2005). *Teaching children to think*. Cheltenham: Nelson Thornes, Ltd.

Forehand, M. (2010). Bloom's taxonomy. *Emerging Perspectives on Learning, Teaching, and Technology*, *41*, 47-56.

Gast, G. (2014). *Effective questioning and classroom talk*. Wiltshire: The National Society for Education in Art and Design.

Gross, R. (2002). *Socrates' way: Seven master keys to using your mind to the utmost*. London: Penguin.

Haghshenas, Z. (2015). Case studies in three domains of learning: Cognitive, affective, psychomotor. *World Academy of Science, Engineering and Technology, International Journal of Social, Behavioral, Educational, Economic, Business and Industrial Engineering*, *9*(6), 2104-2107.

Hamiloğlu, K., & Temiz, G. (2012). The impact of teacher questions on student learning in EFL. *Journal of Educational and Instructional Studies in the World*, *2*(2), 1-8.

Hasan, A. S. (2006). Analysing bilingual classroom discourse. *International Journal of Bilingual Education and Bilingualism*, *9*(1), 7-18.

Yurnelis, Hasanuddin W. S., & Ermanto (2013). Peningkatan keterampilan menulis naskah drama melalui pendekatan pembelajaran kontekstual siswa kelas VIII RSBI-SMP Negeri 12 Padang [Improving drama script writing skills through the contextual learning approach of class VIII Students of State RSBI-SMP No. 12 Padang]. *Bahasa, Sastra, dan Pembelajaran*, *1*(2), 1-11

Hidayati, K. (2014). *The influence of Questioning Strategy on students' achievement in reading* (Bacehlor's thesis). Universitas Islam Negeri Syarif Hidayatullah, Jakarta.

Ho, D. G. E. (2005). Why do teachers ask the questions they ask? *RELC Journal*, *36*(3), 297-310.

Hu, G. (2015). The teachers' teaching skills effect on the classroom-teaching quality in the fashion design teaching. In *International Conference on Education, Management, Commerce and Society (EMCS-15)* (pp. 83-86). Amsterdam: Atlantis Press.

Huitt, W. (2004). Bloom et al.'s taxonomy of the cognitive domain. *Educational Psychology Interactive*, *22*. Retrieved on August 21, 2020 from http://www.edpsycinteractive.org/topics/cognition/bloom.html

Johnson, M. B. (1999). *Communication in classroom*. Washington D.C.: ERIC Clearinghouse. Retrieved May 27, 2020 from https://files.eric.ed.gov/fulltext/ED436802.pdf

Kauchak, D., & Eggen, P. (1998). *Learning and teaching: Research-based methods* (3rd ed.), Boston: Allyn and Bacon

Kira, E., Komba, S., Kafanabo, E., & Tilya, F. (2013). Teachers' questioning techniques in advanced level chemistry lessons: A Tanzanian perspective. *Australian Journal of Teacher Education, 38*(12), 66-79.

Klenn, A. M., & Connell, J. P. (2004). Relationships matter: Linking teacher support to student engagement and achievement. *Journal of School Health*, *74*(7), 262-273.

Könings, K. D., Seidel, T., Brand-Gruwel, S., & van Merriënboer, J. J. (2014). Differences between students' and teachers' perceptions of education: profiles to describe congruence and friction. *Instructional Science*, *42*(1), 11-30.

Krathwohl, D.R. (2002). A revision of Bloom's taxonomy: An overview. *Theory into Practices, 41*(4), 212-218.

Krathwohl, D. R. (2009). A revision of Bloom's taxonomy: An overview. *İlköğretim Online*, *8*(3), 1-7.

Ma, X. (2008). The skills of teacher's questioning in English classes. *International Education Studies, 1*(4), 92-100.

Marzano, R. J., Pickering, D., & Pollock, J. E. (2001). *Classroom instruction that works: Research-based strategies for increasing student achievement*. Alexandria: ASCD.

Mazzola, A. F. (2009). My inquiry journey: A field guide for learners. *Knowledge Quest*, *38*(1), 40-47.

McBain, R. (2011). How high can students think? A study of students' cognitive levels using Bloom's Taxonomy in social studies. Retrieved from August 21, 2020 from https://files.eric.ed.gov/fulltext/ED524386.pdf

McCarthy, P., Sithole, A., McCarthy, P., Cho, J. P., & Gyan, E. (2016). Teacher questioning strategies in Mathematical classroom discourse: A case study of two grade eight teachers in Tennessee, USA. *Journal of Education and Practice, 7*(21), 80-89.

Moyer, P. S., & Milewicz, E. (2002). Learning to question: Categories of questioning used by preservice teachers during diagnostic mathematics interviews. *Journal of Mathematics Teacher Education*, *5*(4), 293-315.

Mufanti, R. (2014). A social strategy of university learners of low-level speaking proficiency. *Jurnal Dimensi Pendidikan dan Pembelajaran*, *2*(2), 88-97.

Noble, T. (2004). Integrating the revised Bloom's taxonomy with multiple intelligences: A planning tool for curriculum differentiation. *Teachers College Record*, *106*(1), 193-211.

Ontario Ministry of Education. (2011). Asking effective question. *Capacity Building Series,* 21. Retrieved on August 21, 2020 from http://www.edu.gov.on.ca/eng/literacynumeracy/inspire/research/cbs_askingeffectivequestions.pdf

Ragawanti, D. T. (2009). Questions and Questioning Techniques: A view of Indonesian students' preferences. *K@ta, 11*(2), 155-170.

Rahman, S. A., & Manaf, N. F. A. (2017). A critical analysis of Bloom's Taxonomy in teaching creative and critical thinking skills in Malaysia through English Literature. *English Language Teaching*, *10*(9), 245-256.

Robitaille, Y. P., & Maldonado, N. (2015). Teachers' experiences relative to successful questioning and discussion techniques. *American International Journal of Contemporary Research*, *5*(1), 7-16.

Rusmiati. (2013). *The use of pre-questioning strategy in teaching reading comprehension: An Experimental Study at IAIN Ar-Raniry Banda Aceh* (Master's Thesis). Universitas Islam Negeri Ar-Raniry, Banda Aceh.

Shomoossi, N. (2004). The effect of teachers questioning behavior on EFL Classroom interaction: A classroom research study. *The Reading Matrix*, *4*(2), 96-104.

Slavin, R. E. (1995). A model of effective instruction. *The Educational Forum, 59*(2), 166-176.

Smith, V. D., & Darvas, J. W. (2017). Encouraging student autonomy through higher order thinking skills. *Journal of Instructional Research, 6*, 29-34.

Strother, D. B. (1989). Peer coaching for teachers: Opening classroom doors. *The Phi Delta Kappan*, *70*(10), 824-827.

Sujariati, S., Rahman, A. Q., & Mahmud, M. (2016). English teacher's questioning strategies in EFL classroom at SMAN 1 Bontomarannu. *ELT Worldwide*, *3*(1), 107-121.

Sunggingwati, D., & Nguyen, H. T. M. (2013). Teachers' questioning in reading lessons: A case study in Indonesia. *Electronic Journal of Foreign Language Teaching*, *10*(1), 80-95.

Syahabuddin, K., Fhonna, R., & Maghfirah, U. (2020). Teacher-student relationships: An influence on the English teaching-learning process. *Studies in English Language and Education, 7*(2), 438-451.

Tankersley, K. (2005). *Literacy strategies for grades 4-12: Reinforcing the threads of reading*. Alexandria: ASCD.

Tofade, T., Elsner, J., & Haines, S. T. (2013). Best practice strategies for effective use of questions as a teaching tool. *American Journal of Pharmaceutical Education*, *77*(7), 1-9.

Tuaputty, H. (2016). Thinking empowerment by questioning (TEQ) sebagai model pengembangan strategi kognitif dalam meningkatkan pemahaman konsep fisiologi hewan pada mahasiswa FKIP Unpatti Ambom [Thinking empowerment by questioning (TEQ) as a model for developing cognitive

strategies in enhancing the understanding of animal physiology concepts for students of FKIP Unpatti Ambom]. *BIMAFIKA: Jurnal MIPA, Kependidikan dan Terapan*, *3*(2), 367-375.

Viechnicki, G. B., & Kuipers, J. (2006). "It's all human error!": When a school science experiment fails. *Linguistics and Education*, *17*(2), 107-130.

Wahyuni, S., Qamariah, H., Syahputra, M., Yusuf, Y. Q., & Gani, S. A. (2020). Challenges and solutions to develop critical thinking with the British Parliamentary Debate System in EFL classrooms. *International Journal of Language Studies, 14*(3), 137-156

Walker, S. E. (2003). Active learning strategies to promote critical thinking. *Journal of Athletic Training*, *38*(3), 263-267.

Wilson, O. L. (2016). *Anderson and Krathwohl - Bloom's taxonomy revised: Understanding the new version of Bloom's taxonomy*. Retrieved July 5, 2020 from https://quincycollege.edu/content/uploads/Anderson-and-Krathwohl_Revised-Blooms-Taxonomy.pdf

Wineburg, S., & Schneider, J. (2010). Was Bloom's Taxonomy pointed in the wrong direction? *Phi Delta Kappan*, *91*(4), 56-61.

Xi, H. M., Li, W. Z., & Lei, P. (2010). The contextual adaptation of English teachers' questioning strategies. *US-China Foreign Language*, *8*(12), 52-56.

Yang, C. C. R. (2010). Teacher questions in second language classrooms: An investigation of three case studies. *Asian EFL Journal*, *12*(1), 181-201.

Bilişsel alanın sorularda kullanımı: Aceh'deki devlet üniversitelerinin öğrenci ve öğretim görevlilerinin algısı

Özet

Bu çalışmanın amacı, Bloom'un taksonomisinin Endonezya'nın Banda Aceh kentindeki iki devlet üniversitesindeki öğrencilerine sordukları sorularda kullanılan bilişsel alanını araştırmaktır. Çalışmanın verileri hem öğrencilerin hem de öğretim görevlilerinin algılarından toplandı. Bu ankete katılan 218 öğrenci ve 19 öğretim görevlisi bulunmaktadır. Bu çalışma, bu devlet üniversitelerinden hem öğretim görevlilerinin hem de öğrencilerin, öğretim görevlilerinin Bloom'un taksonomisinin bilişsel alanının tüm seviyelerini sıklıkla kullandıklarını algıladıklarını ortaya çıkardı. Öğrenciler, öğretim elemanlarının sorularda en sık kullandıkları bilişsel alanın yaratma alanı olduğunu, bunu anlama, hatırlama, değerlendirme, uygulama ve son olarak analizin bilişsel alanının bilişsel alanı olduğunu algılamışlardır. Öte yandan öğretim görevlileri, sorularda en sık bilişsel alan olarak hatırlamanın bilişsel alanını kullandıklarına inanmışlardır. İkinci olarak, öğretim görevlileri anlama alanının kullanımını algılarken, üçüncü ve dördüncü sırada yaratma alanı ve değerlendirme alanı, ardından analiz ve uygulama bilişsel alanı yer almaktadır. Bu nedenle öğretim üyelerine, Bloom'un taksonomisinin tüm bilişsel alanlarını kullanarak öğrencilerin eleştirel düşünmesini teşvik etmek için sınıflardaki soruların kalitesini korumaları önerilir. Üniversiteler, öğretim ve öğrenimin kalitesini sürekli olarak iyileştirmek için öğrencilerin ve öğretim görevlilerinin görüşlerine dayalı olarak öğretim görevlilerinin performansının güvenilir ve geçerli bir kaydına sahip olmak için sık sık anket yapmalıdır.

Anahtar sözcükler: bilişsel alan; soru; algılar; öğretim üyeleri; öğrenciler

AUTHOR BIODATA

Dr. Siti Sarah Fitriani is a lecturer at the English Education Department of Universitas Syiah Kuala, Banda Aceh, Indonesia. She finished her PhD program at University of New England (UNE), Armidale, Australia, in 2015. Before taking her PhD candidacy at UNE, she had completed her Master's degree in Applied Linguistics at Macquarie University, Sydney, Australia, in 2007. Her research interests are in literacy, systemic functional linguistics, discourse analysis, language teaching methods and approaches, including the use of genre approach for teaching English as a Foreign Language (EFL), especially metacognition, and communicative language teaching generally. She has taught EFL for more than ten years at Universitas Syiah Kuala. She established a private foundation, Goodman Language Training, where she also teaches EFL. She has attended and presented at national and international conferences. She is now a reviewer for several international journals. She is also the editor-in-chief for the English Education Journal.

Dr. Yunisrina Qismullah Yusuf is a lecturer in the English Education Department, Teacher Training and Education Faculty. She completed her PhD in Phonology in 2013 and her Master's in Linguistics in 2006, both from the University of Malaya. Her Bachelor's degree is in Education, in which she received in 2002 from Universitas Syiah Kuala. Her articles have appeared in reputable journals and she also acts as a reviewer to a number of national and international journals. She is currently the editor-in-chief of *Studies in English Language and Education* journal. Her research interests include topics in the field of Linguistics and Education.

Ayu Zumara is a fresh graduate of the English Education Postgraduate Program of University of Syiah Kuala, Banda Aceh, Indonesia. Her research interests are in English Language and English Education especially in General and Applied Linguistic. She is now a non-permanent lecturer at some private universities in Banda Aceh, teaching English to her students. She is also active in some English communities in her town, encouraging and helping her juniors to increase their ability to have better spoken English.