

## Pairing Bloom's Taxonomy Higher-Cognitive Domains and Audience Design to Improve EFL Students' Responses

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### Abstract

The study sought to explore the effect of pairing audience design and higher-cognitive domains in teachers' initiations (I) on generating improved students' responses (R) in the EFL classroom. To meet this aim, in-depth data were gathered via a qualitative approach utilizing observations and interviews. Ten classes of observation were conducted in an EFL class with 24 students, and semi-structured interviews were held with 7 language teachers. The findings of the study revealed that integrating audience design and higher-cognitive domains into teachers' initiations generated students' responses that were effective enough to maintain the flow of conversation, represented in the IRF sequence. This kind of conversational exchange flow secured effective and communicative classrooms. The study highlights the potential for a more student-centered IRF exchange through strategic initiation planning and suggests pedagogical practices aimed at fostering inclusive and interactive classroom environments. The implications of the findings emphasize that improving the communication flow in language classrooms can be achieved by designing interactive tasks that employ audience design and higher cognitive skills.

**Keywords:** audience design, Bloom's taxonomy, Initiation-Response-Feedback (IRF), students' interaction

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## 1. Introduction

It is argued that instructional methods like communicative language teaching (CLT) and task-based language teaching (TBLT) have emerged as a revolution against traditional teaching methods (Ellis, 2024), where the bulk of the classroom work had been carried out by the teacher and where the learners' role was mostly limited to 'clerical' work. The classical way of instruction is now hugely discouraged with emphasis being directed to classroom interaction, where the teacher *facilitates* more than *dictates* and where the students are *actively engaged* more than *passively preached*. However, although communication has been placed at the core of language teaching, several problems have been reported as to how the students are not taking active part in classroom interaction (Abdullah, et al., 2012; Curtis & Lawson, 2001; Xu, 2024). Classroom interaction can be considered one of the key elements of successful learning because it helps create meaningful communication between teachers and students through exchanging ideas, thoughts and feelings (Brown, 2000; Riwayatningsih, 2024) and because it involves conversational collaboration between the teacher and the learners (Curtis & Lawson, 2001). At the core of classroom interaction lie classroom exchanges, the most dominant of which are exchanges that involve the well-known Initiation-Response-Feedback (IRF) sequence (Hidayatullah, 2024; Li, 2013; Walsh & Sert, 2019), which was developed by Sinclair and Coulthard (1975).

The IRF exchange, which opens space for the flow of ideas, represents teacher's initiations (usually in the form of questions), learner's response, and teacher's feedback, which often involves an evaluative comment (Vold, 2022). The IRF is not a rigid sequence, though, as it can be flexibly applied based on a number of factors, including the learners' different levels, the nature of the language involved in the I and the R stages and the topic of the lesson (Jaeger, 2019). Marzban, Yaqubi and Qalandari (2010) noticed, for example, that the IRF can become ISRF, with the 'S' representing *struggle* of the students to respond. Therefore, some classroom exchanges may contain only one or two elements of the sequence.

Due to its importance in maintaining effective exchanges in the language classroom (Dawood & Sultan, 2024), the IRF sequence has been a subject of scrutiny in educational research which tackled ways of improving the effectiveness of IRF exchanges, such as systematic planning of teachers' initiations (Orlich et al., 2010) and student-need-based differentiated initiations (Jaeger, 2019).

Nevertheless, the IRF exchange improvement is still an under-researched area. The present study fills this gap by considering the impact of integrating higher-domain cognitive skills and audience design in the 'I' move on improving the IRF exchange through eliciting more effective 'R' moves. By doing so, the current study not only adds a valuable piece of the jigsaw to the research done on improving the IRF, but also, by focusing on the 'I' and the 'R' moves, fills a gap in research, which has so far dominantly focused on the 'F' move (e.g. Abu-Ayyash, Assaf, & Zabadi, 2023; Hellermann, 2003; Huq & Amir, 2015; Lee, 2007; Park, 2014; Waring, 2008). In addition, this study is valuable at the pedagogical level as it seeks to enhance the effectiveness of the learner's role in classroom conversations, given that concerns about IRF are mainly about the teacher having more dominance in the class, being in control of two moves, 'I' and 'F', compared to the student's share of one move, 'R' (Li, 2013). Therefore, in line with assertions that teacher questions should be used meaningfully for them to achieve effective students' responses (Dawood & Sultan, 2024; Goodwin et al., 1983), there is a solid pedagogical rationalisation behind the present study, enhancing the effectiveness of classroom exchanges through eliciting more improved student responses.

The current paper aims to explore the effect of pairing audience design and higher-cognitive

domains in teachers' initiations (**I**) on generating improved students' responses (**R**) in the EFL classroom. The purpose of this research can be achieved by seeking well-informed answers to the following research questions:

1. To what extent does employing the higher-cognitive domains in teachers' initiations elicit improved **R** moves among EFL students?
2. To what extent does integrating audience design in teachers' initiations elicit improved **R** moves among EFL students?

## **2. Literature Review**

This part of the paper attempts to encapsulate the triadic foci of **IRF**, higher-cognitive domains and audience design by addressing the existing body of theoretical and practice-based knowledge about these three elements.

**IRF** is a three-move technique that typically characterises classroom conversations (Hidayatullah, 2024; Li, 2013; Vold, 2022) and substantially dominates them (Dalia & Putra, 2024; Dawood & Sultan, 2024; Wells, 1993). Rustandi and Mubarak (2017, 239) defined **IRF** as "the movement in which the teacher initiates an interaction to get the response of the students, then the teacher gives feedback to the student's response". Therefore, the sequence begins with an '**I**' move, which comes usually in the form of a question. This is followed by the '**R**' move, the student's response, and the '**F**' move, the teacher's feedback to the student's response (Lemke, 1990).

While it has been acknowledged that the **IRF** exchange is ubiquitous in and typical of language classes (Dalia & Putra, 2024; Jianhong, 2022; Vold, 2022), research findings have been deeply divided about its effectiveness. On the positive side, the **IRF** exchange has been found to facilitate students' learning (Mercer, 1992), utilise feedback and correction in a constructive way (Newman, Griffin, & Cole, 1989), and enhance classroom interaction (Walsh 2011). On the negative side, the most popular criticisms of the **IRF** exchange have been centred on the concern that it is teacher-centred (Lemke, 1990; Lomotey & Gyima-Aboagye, 2021; Nystrand & Gamoran, 1991). Taken together, the criticisms are based on the fact that two out of the three moves, the '**I**' and the '**F**', are teacher-controlled (Li, 2013). However, one might rightly argue that by enhancing the '**R**' move, the classroom may become student-centred since this part of the exchange can take the lion's share among the three initiations. Goodwin et al. (1983) believed that a well-phrased initiation can capture students' attention and arouse their curiosity, while Hassanein and Abu-Ayyash (2018) sought to achieve enhanced responses through increased task complexity. Therefore, it seems sensible to consider ways of enhancing the student part, the '**R**' move, which the current study seeks to tackle by exploring integrating high-cognitive domains and audience design into the exchange.

Probably, one of the most all-embracing theoretical accounts of cognitive domains is Bloom's taxonomy. The Taxonomy is a model that classifies cognitive levels that are important to learning into six domains, from lower to higher ones as follows: knowledge, comprehension, application, analysis, synthesis, and evaluation. The present study attempts to uncover whether integrating the higher-cognitive domains (analysis, synthesis, evaluation) into the '**I**' move would enhance the '**R**' move. Abundant research has found that the most frequent teacher initiations used in the classroom context address lower domains, i.e. knowledge (remembering) and comprehension (understanding) (Fitriani, Yusuf, & Zumara, 2021) although focusing on higher-cognitive levels yields better classroom interaction (Syafriyadin et al., 2021) and better academic achievement (Winne, 1979).

Naturally, the model has undergone revisions (e.g. Anderson et al., 2001; Krathwohl, 2002) and attracted criticism (e.g. Pring, 2006; Soozandehfar & Adeli, 2016), yet one can rightly claim that

the taxonomy has stood the test of time and that its value has been established by copious research. Most of the revisions made to the model sought a more dynamic approach targeting the model either at the content level to facilitate its practical use, for example by operationalising the six levels via the use of verbs and action words, or by revising its wording, for example replacing ‘knowledge’ with ‘remembering’ and ‘synthesis’ with ‘creating’, or at the structural level by reconsidering the order of cognitive levels, for example swapping the upper two levels by placing ‘creating’ at the top, followed by ‘evaluating’ (Anderson et al., 2001). The older model and its revisions can be shown in Figure 1 (Bloom’s Taxonomy, 2022). The differences between the two models have been sidelined in this study, which focuses on the outcome of integrating the higher-cognitive levels into teachers’ initiations, rather than the technicalities housed in the two versions.

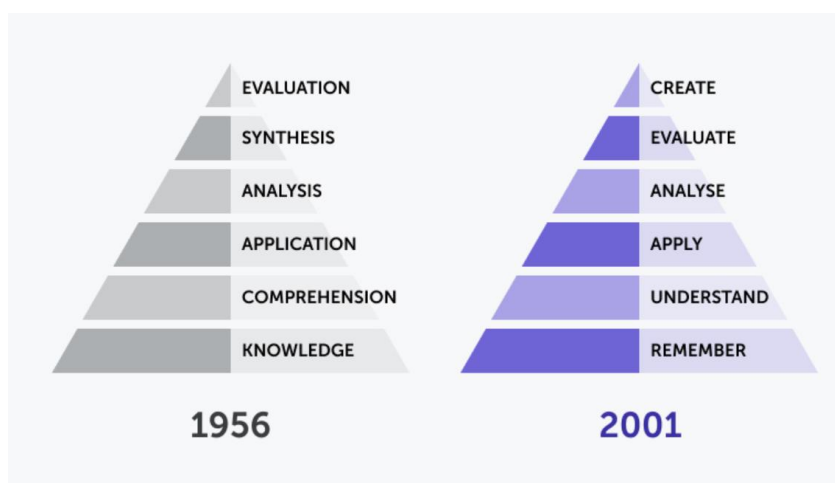


Figure 1: Revised Bloom’s Taxonomy (Bloom’s Taxonomy, 2022)

Having highlighted the relevant literature on IRF and higher-cognitive domains, we can now consider the third element, which is audience design. Theoretically, audience design is compellingly rooted in Vygotsky’s Zone of Proximal Development (ZPD). Vygotsky (1978, 86) defined the zone of proximal development (ZPD) as follows:

[t]he distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem-solving under adult guidance or in collaboration with more capable peers.

Audience design taps into ZPD at the practical level since teachers’ initiations ‘I’ are adapted and differentiated to help the learners’ move with their responses ‘R’ to the next level.

The foundations of audience design were laid by Bell (1984), who suggested that speakers design the way they speak according to their audience. While Bell’s theory was rooted in sociology and based on radio broadcasts, the concept of audience design has been applied to varied contexts where there have been speakers and listeners. So far, studies that have addressed audience design examined how speakers shape their language in response to their audience in business organisations (e.g. Nair-Venugopal, 2000), in workplace (Morais, 1995), and with undergraduate students (Horton & Gerrig, 2002).

The reasons why audience design can also be considered in studies about the language classroom are obvious, and shaping the language based on students’ diversity has solid grounds. It has been acknowledged that differentiation is of paramount importance in language classrooms

because it secures a higher rate of learner involvement in language activities (Onyishi & Sefotho, 2020; Ortega, Cabrera, & Azar, 2018). Quite understandably, empirical research on differentiation has dominantly tapped into teaching methods being tailored to cater for learners' varied learning styles and academic levels (e.g. Abu-Ayyash & Assaf, 2016; Sapan & Mede, 2022) and cultural background (Al-Qinneh & Abu-Ayyash, 2022), but differentiation being integrated into teachers' initiation is still a gap in research that the current study attempts to fill. One more reason why audience design is worth considering in the language classroom is that effective, differentiated initiations can be the gateway to more interactive classrooms due to their role in instigating learners' motivation to take part in the conversational exchange (Reeve et al., 2004). Several studies have linked learners' motivation to better teacher-learner interaction (e.g. Akhtar et al., 2019; Koca, 2016), an environment that audience design seeks to optimise. Still, Yoon and Brown-Schmidt (2019) indicated that teachers usually "Aim Low", which means that they tailor their utterances to the least knowledgeable addressees. They claimed that the "Aim Low" procedure can be utilized to raise the cognitive conversational level only if the teachers "strike a balance between the different needs of the individuals within the group" (Yoon & Brown-Schmidt, 2019, 1). Therefore, language teachers need to be aware that differentiated initiations have to be utilized in classrooms to ensure that all students have their needs met.

### **3. Research Methods**

The present paper utilised the qualitative approach in order to generate the in-depth data necessary to answer the research questions (Glesne, 2011). The study was conducted in an American curriculum school in Dubai. The researchers utilized the qualitative research method that involved observations and semi-structured interviews. The observations were conducted in an English Language class of twenty-four eleventh graders, whose ages range between fifteen and sixteen. One of the researchers observed and recorded ten EFL classes. The researchers recorded the dialogues observed in classes to analyse the IRF sequence, particularly the integration of audience design and higher-cognitive domains into teachers' initiations and their impact on students' responses to investigate how initiations promote students' responses.

Semi-structured interviews were conducted with seven high school teachers who teach only Arabic and English Language; four teachers teach English as a second language, and three teach Arabic. The questions revolved around using Bloom's Taxonomy in the classroom and designing utterances to fit addressees with different academic levels and learning styles. Moreover, probes and prompts were used to re-establish questions or to encourage the participants to further elaborate on their responses. All questions were open-ended to give the participants the space to justify their answers.

The method of constant comparison analysis was used to compare and interpret the collected data to create connections relevant to the research purpose. The constant comparative method is essential to analyse data that vary in-depth, especially in interviews and observations. Qualitative data analysis has yielded insightful, rich findings from the data (Gibbs, 2007). To perform constant comparative analysis, the researchers followed the steps outlined by Leech and Onwuegbuzie (2007). Therefore, the researchers read through and reviewed the data collected through recordings and the answers of the interviewed teachers. The data were then chunked into meaningful parts that aligned with the research questions. The resulting chunks were labeled with codes, which were ultimately grouped within themes. In the process, the observations were compared between high and low-performing students and how the teacher utilised the audience design model. Observations were compared based on Bloom's Taxonomy of cognitive domains, and finally, the researchers compared teachers' answers during the interviews to the actual strategies used by the observed teacher.

## 4. Results and Discussion

After observing and recording ten EFL classes, the data were filtered to choose the interactions that best applied to this research, since not all in-class activities are suitable for the IRF Sequence analysis. All chosen interactions were transferred into transcripts. It is important to mention that in the transcribed tasks, the “I” stands for the **teacher’s initiation**, the “R” stands for **students’ responses**, and the “F” stands for the **teacher’s feedback**. After presenting different interactions, the researcher will set a comparison would be set to examine the effectiveness of Bloom’s taxonomy of higher-cognitive domains as well as the impacts of the audience design on students’ ‘R’ move.

Therefore, the data presented below correspond to the foci of the two research questions: 1. To what extent does employing the higher-cognitive domains in teachers’ initiations elicit improved R moves among EFL students, and 2) To what extent does integrating audience design in teachers’ initiations elicit improved R moves among EFL students.

### Task 1

This first observation was conducted in a speaking class attended by all twenty-four students on Monday at 8.00 A.M. The teacher initiated her lesson with a closed-ended question, the first response was for a **below-level** student, and the second response was for a **high-achiever**.

#### Excerpt 1:

Initiation (I): Have you ever suffered from racism?

1<sup>st</sup> student’s response (R): Yes

Teacher’s (I) move : How? What happened exactly?

1<sup>st</sup> student’s (R) move: Two students in my old school used to pull my hijab.

I : Were they Muslims?

R : No

I : Were they males or females?

R : One of them was a male and the other one was a female.

I : How did you face the issue?

R : I told my parents who came to school and talked to the principal, and then I moved to this school.

Teacher’s feedback (F): (teacher nods with a smile). You are a very strong girl, Zainab. A fighter.

#### Excerpt 2:

I : What about you, Doha?

2<sup>nd</sup> student’s R: I don’t know if I can call it racism, but some of my classmates commented that I am too white.

F : Teacher laughs.

I : Maybe they envied you!

R : They were white too, but their comments really bothered me.

I : What did you do in this regard?

R : I used to laugh in front of them, but deep inside, I felt hurt.

F : Don’t allow them to get under your skin. They are jealous.

In the first excerpt, the teacher initiated the interaction with a closed-ended question. The below-level student’s response was brief and needed more motivation to proceed with her response. In the second excerpt, however, the teacher asked an open-ended question, and without further encouragement, the student elaborated on her response. The above-mentioned initiations did not utilize the higher levels of the taxonomy. Yet, the teacher was able to design initiation to

build an effective interaction. This was achieved by considering the audience design model (Bell, 1984; Onyishi & Sefotho, 2020; Ortega, Cabrera, & Azar, 2018). The instructor knew that her 1st student was too shy to talk about personal experience, so she tried to get a response by initiating closed-ended questions.

When asking the interviewed teachers about using Bloom's taxonomy of cognitive domains (Anderson et al., 2001) in their lessons, all seven agreed that they utilize the taxonomy when writing their objectives, and therefore, they use it frequently in their questions.

Teacher 1 is an English Language teacher for grade 10 and was the first to be interviewed.

Researcher : Good Morning, Ms. How are you this morning?

Teacher 1 : Everything is fine, thanks for asking.

Researcher : Let's get started with the interview, shall we?

Teacher 1 : Yes, sure.

Researcher : Do you utilise Bloom's Taxonomy when designing your questions?

Teacher 1 : The objectives of the lesson are built on Bloom's Taxonomy; as a result, when I ask questions, I usually use verbs that motivate students to develop higher thinking skills.

Researcher : Would you start your question with an action verb? Let's say determine, create, produce, or design.

Teacher 1 : Of course. I might ask my students to analyze the development of a specific character or synthesize different themes to develop a new understanding.

The same question was asked separately to the grade eleven Arabic language teacher, and her response was as follows:

Teacher 2 is an Arabic language teacher who teaches grade 11 answered as follows,

Teacher 2 : It is obligatory to use Bloom's taxonomy when designing our lessons.

Researcher : I don't mean when writing the objectives. I am talking about designing questions used in class. For example, do you ask your students to analyse or evaluate?

Teacher 2 : We don't only use the action verbs mentioned in the taxonomy to ask our questions, but also we use them when preparing the students' handouts to ensure that all six thinking domains are covered.

Additionally, Teacher 3, who is an English Language teacher for grade nine, answered:

Teacher 3 : Yes, of course, when we write our objectives, we use the taxonomy and naturally, we design our questions to match the objectives. We ask questions like interpret, analyse, classify, etc.

Researcher : Do you use them in this form? Analyze the following?

Teacher 3 : Of course.

Researcher : On a daily basis?

Teacher 3 : Yes, of course. We usually add them to our slides.

By examining the first excerpt, it is evident that the teacher initiated the lesson with closed and open-ended questions rather than using higher-thinking skills; This aligns with research that found that teachers focus on low-cognitive skills (Fitriani, Yusuf, & Zumara, 2021). This can be connected to the 3rd teacher's reply that higher-cognitive domains can be employed effectively only as the lesson goes further, and that this is not the rule, thus, contradicting findings from abundant research (e.g. Syafryadin et al., 2021; Winne, 1979).

One of the criticisms mentioned in the literature review is that classes are teacher-centered because two out of three moves are under the teacher's control. The excerpt quoted earlier indicates that students' responses were lengthier than the teacher's initiations and feedback

combined, which aligns with the assertions of some scholars (e.g. Li, 2013; Xu, 2024). The teacher's feedback in some places was a nod, a laugh, or a hand move to give the pupil time to proceed. It may be concluded that employing the IRF Sequence has increased students' talk time, below-level students in specific.

## Task 2

The second observation was conducted in the same class. The students were introduced to a new topic and needed to get a clear insight into the lesson. The lesson started at 9.35 and ended at 10.25 A.M. Two above-level students and one on-level student's responses were analysed.

### Excerpt 3:

I : In your opinion, what do you think is the price of freedom? Or let's say, what will you do, or how much you might pay to get your freedom?

1<sup>st</sup> student's R : I think freedom has no price, but I would pay all my money to get it, and I would fight for it. However, I won't fight till the point that affects my life or I might die, because if I die, that means I lost my freedom.

I/F : You won't sacrifice yourself for the sake of your country?! You might have a point here. Meera, do you agree with Khawla?

2<sup>nd</sup> student's R move: I don't think that freedom has a price, but let's say it does, I will pay everything I have because freedom means that I will be able to do whatever I want, such as education and conveying my thoughts.

F : Excellent perspective.

I : Haya?

R : I don't think that freedom should have any price, because it is something that is rightfully yours, and you shouldn't do anything to get it. But, if it had a price, I would probably do anything in order to gain freedom because freedom will allow me to do anything in life.

F : Well-said Haya.

According to Thornbury, (1999, 124), "[t]he joint brainstorming around a topic assumes that the class are both sufficiently forthcoming and that there is a related classroom dynamic conducive to the free flow of ideas". The teacher, in this sequence, created a class discussion by designing one question formed in different ways to produce multiple responses from students with different academic levels, which aligns with the emphasis on catering for learners' varied academic levels (Sapan & Mede, 2022). Analysing, synthesising, and evaluating are higher-thinking levels in Bloom's taxonomy; these domains usually evoke on-level and high-achiever responses, whereas below-level students would listen carefully to be able to generate their own ideas when requested.

During the interviews, the teachers were asked about the frequency of using the higher-cognitive skills in class and whether these questions targeted the above-level students in specific or all students.

Researcher : How often do you use higher-cognitive skills in your classes?

Teacher 5 : I usually ask higher-cognitive thinking questions in classes with a reasonable number of good students. As for classes that contain a lot of weak students, I usually ask simple questions with one or two higher-thinking level questions.

Researcher : What if you asked a higher-level question, do you address an above-level student directly, or do you ask everyone in class?

Teacher 5 : I ask the question to everyone, but I know whom I am going to choose.

Researcher : A high-achiever. You mean!

On a different occasion, another teacher answered the question differently. She had a different perspective regarding this issue.

Teacher 6 : It depends on the class and its academic level, the age of students, and their grade level. All these factors play a significant role in the process.

Researcher : Can you please explain?

Teacher 6 : I already know my students academic level, so I try to repeat the question in different ways to guarantee that they better understand the question, and therefore answer correctly.

Addressing the whole class is a practice that would promote all students' talk time, motivate participation, and provoke their higher-cognitive domains (Anderson, 2001). This procedure would refute the claim mentioned earlier that teachers usually target lower-cognitive domains; the most common answer of the interviewed teachers was that starting with lower-thinking skills and moving forward toward the higher skills would help students not only enhance their 'R' move but also improve classroom interaction, grab students' interest, and pique their curiosity.

### **Task 3**

In this lesson, eleven graders were requested to analyse the elements of a short story. The class was conducted on Wednesday's second class. The teacher targeted low achievers to involve them in the class discussion (Yoon & Brown-Schmidt, 2019).

Excerpt 4:

I : Do you recall, Selin, where did the main characters come from?

R : USA?

I : Any idea what the difference is between USA and US?

R : mmmmmmm. Are they the same?

F : Yes, exactly. They are the same.

I : Yekta, give me a brief summary of our story before we go any further.

R : Caesar and Titus migrated from the US to the UK.

I : Migrated?!!!

R : Escaped.

I : Escaped what?

R : They went to the UK to fight.

I : Did you hear my question? Escaped what?

R : mmmmmmmmm

F/I : Where were you yesterday? Sleeping? Anyone?

2<sup>nd</sup> student's R move: They wanted to escape slavery.

F : Exactly. Very good.

Although the initiations were designed specifically to accommodate the low achievers, some of the learners were not able to respond effectively. The teacher initiated recalling questions that are considered a lower-thinking domain on Bloom's Taxonomy, yet was not able to motivate the low-achievers to take part in the interaction. Moreover, the teacher's feedback was negative and not encouraging. Thornbury (1999, 117) stated, "[b]y excluding the option of self-correction, however, the teacher risks humiliating the original student".

In order to motivate all students of different learning styles (Abu-Ayyash & Assaf, 2016), the interviewed teachers suggested some practices that would promote students' engagement. These suggestions came as a reply to the following question.

- Researcher : In your opinion, what are the activities that would motivate students the most? Do you think that a debate or an open discussion will motivate high-achievers and low-achievers as well?
- Teacher 1 : I believe that some students are kinaesthetic learners who prefer to learn through building models and prototypes. This means that these students prefer a hands-on method to learn, rather than other methods like reading or listening to lectures.
- Researcher : What would you ask a kinaesthetic learner to build in a language class?
- Teacher 1 : I might ask them to visualize the story and try to draw it, or I might ask them to role-play a story, or I might ask them to create a poster.
- Researcher : Fantastic

All of the Arabic Language teachers agreed that group work or pairwork is one of the most engaging activities in their classes.

- Teacher 6 : Students have a preference for group work and pair work.
- Researcher : That's great. But what about mind-mapping and gaming?
- Teacher 6 : These activities are applicable as well, but when it comes to my classes. I can tell that my students love to work with a partner or partners.
- As for Teacher 7, who is an English teacher, she responded to the question by saying:
- Teacher 7 : Games such as, Kahoot, Quizizz, and Blooket are the preferred options among my students for in-class activities.
- Researcher : How often do you play a game with your students in class?
- Teacher 7 : One or twice a week. Not on a daily basis for sure.
- Researcher : Why not?
- Teacher 7 : There are many reasons, one of the most important reasons is that games are time-consuming, another reason would be that games don't fit in all lessons and topics, and the last but not least is that games don't appeal to all students of different learning styles.

Although teachers did not know the term, yet they were fully aware of the importance of the "Aim Low" (Yoon & Brown-Schmidt, 2019) procedure to meet the needs of the below-level students and design activities to guarantee their engagement.

#### Task 4

Students in the Literature class are analysing the elements of the short story. In this sequence, the teacher targeted students with different academic levels (Sapan & Mede, 2022).

Excerpt 5:

- I: Laila, you mentioned the word "betrayal". How did that word come to your mind?
- R: The characters should have felt that they are betraying their own country since they are fighting with the British against their own people.
- I: How did you get that feeling?
- R: I believe that the characters are having an internal conflict because they don't know which side to take. Should they fight with the British and gain their freedom, or should they go back to the US and become slaves again?
- I: Evaluate the situation and tell me if you were in their place, what would you do?
- R: If I were them, I would definitely choose my own freedom because...mmm...OK. If I choose my country, the USA, I will fight for it, I will defend the country, and now what? What will happen to the people? Even if they lose the war, they won't be free. That's why I will escape and choose my freedom.
- I: So, can you excuse them for what they did? Can you understand their reasons?

2<sup>nd</sup> student's R move: Definitely, definitely. They were slaves and were treated badly. That was the only thing they could do: escape.

F: Amazing discussion.

The teacher intended to target students with different academic levels, yet only high achievers interacted positively. That is due to the audience design (Bell, 1984) adopted by the teacher in this discussion. The initiations focused on evaluating and analysing a specific situation where only on-level and above-level students can provide a viewpoint about the issue. Low achievers might understand the discussion. However, participating in the discussion did not match their academic level.

When asked about 'Audience Design', all answers came back negative. Teachers were unfamiliar with this scholarly term.

Researcher: Could you make an attempt to predict or expect the definition of this term?

Teacher 3: Audience means students, right?

Researcher: True, can you make a connection between students and the word design?

Teacher 3: During the academic year, you get to know your students better. So, you start to understand their differences; therefore, you design specific activities to meet their distinct learning styles.

Researcher: Exactly.

It is concluded that the length and effectiveness of students' responses depend mostly on teachers' initiations and the audience design. Teachers targeting on-level and above-level students with higher thinking designed initiations will promote students' interaction and responses. This type of initiations would motivate high achievers to think more critically and out of the box. As for the below-level learners, simple and direct questions would be a good way to guarantee their interaction. However, teachers need to motivate these learners to reach the mid-level. Moreover, building a good rapport with students would create an encouraging atmosphere for learners of all different academic levels and learning styles.

All seven interviewed teachers agreed that Bloom's Taxonomy is utilised in their classroom. Not only when planning for their objectives, but also when designing for their initiations. Planning and designing their initiations beforehand make the flow of the lesson go smoothly. Yet, some questions arose spontaneously during the class.

Two Arabic language teachers mentioned that higher thinking designed initiation is limited in their interactions. They said they usually utilise around (4) questions related to analysing and evaluating to guarantee the effective engagement of all students. On the other hand, an English teacher mentioned that it depends on the lesson itself. She said, "Usually I start my story with general questions that include recalling and understanding, and then dig deeper into Bloom's taxonomy as the lesson goes toward its end". All the interviewed teachers commented that when they ask higher-thinking level questions, they address the whole class, but choose students who can give comprehensive responses. They also mentioned that they paraphrase their initiations in different ways to guarantee that their audience understands the idea. The model "audience design" is unfamiliar to all teachers, although it is applicable within their classes. All seven teachers consider their learners' learning styles and academic levels when designing initiations.

The findings of the current study revealed that integrating Bloom's higher-cognitive domains and audience design in teachers' initiations significantly improved students' responses in EFL classrooms. This outcome aligns with recent research underscoring the critical role of cognitive engagement and audience consideration in fostering effective classroom interactions (Dalia & Putra, 2024; Dawood & Sultan, 2024; Syafriyadin et al., 2021). This current study found that higher-order

cognitive questions led to more elaborate student responses supports previous research highlighting the pedagogical value of Bloom's higher-order thinking skills. Syafriyadin et al. (2021) similarly concluded that classroom interaction improves substantially when teachers incorporate analysis, synthesis, and evaluation into their questioning strategies. Conversely, Fitriani, Yusuf, and Zumara (2021) noted teachers predominantly asked lower-cognitive domain questions, thus limiting student engagement and deeper understanding. The current research provides empirical backing to the argument that moving beyond recall-based questions positively influences students' cognitive engagement and participation.

Moreover, the effectiveness of utilizing audience design in this study echoes findings by Yoon and Brown-Schmidt (2019), who demonstrated that tailoring teacher initiations to the learners' proficiency and cognitive readiness significantly enhanced conversational quality and inclusivity. The targeted use of audience design observed in the current study, especially with diverse learners, aligns with recent empirical insights by Sapan and Mede (2022), who emphasized differentiated instruction as essential for motivating students of varying academic levels and learning styles. The positive correlation between tailored teacher initiations and heightened student responsiveness observed herein further solidifies these assertions.

Furthermore, the improved IRF exchange dynamics noted in the study contribute to the ongoing scholarly discourse concerning the teacher-centered nature of the IRF model (Li, 2013; Lomotey & Gyima-Aboagye, 2021). While historically critiqued for perpetuating teacher dominance (Nystrand & Gamoran, 1991), recent research by Hidayatullah (2024) and Jianhong (2022) underscores that IRF, when effectively modified, can foster a more student-centered and interactive environment. The current study aligns with these contemporary perspectives, providing concrete evidence that skillful integration of higher cognitive domains and audience-specific questioning effectively redistributes interactional power dynamics, thereby increasing student engagement. Additionally, the nuanced approach teachers employed in the current study, adjusting question complexity based on students' cognitive readiness, corresponds with the recommendations made by Onyishi and Sefotho (2020) and Ortega, Cabrera, and Azar (2018). Their studies advocate differentiated approaches in initiating classroom discussions to address diverse academic levels effectively.

## 5. Conclusion

The purpose of this research is to investigate the effectiveness of Bloom's Taxonomy and audience design on students' interaction. After analysing the data from classroom observation and teacher interviews, the researcher concluded that students' responses depend mostly on teacher initiations. When teachers ask close-ended questions, most of the responses are brief, excluding the high-achievers. Although below-level students might struggle to respond to closed and open-ended questions. Yet, ascending from lower-thinking to higher-thinking levels will help them develop dramatically. The study also shows that the audience design model is an effective tool to build learners' knowledge; utilizing this model will help learners comprehend the initiation and, therefore, respond effectively. The researcher also noticed that a good rapport between the teacher and students plays a significant role in enhancing students' interaction. The negative interaction will have a negative impact on below-level students.

It is important to consider the type of initiations conducted by teachers since they are crucial in boosting students' responses. Teachers should include all the taxonomy's domains during the 50-minute class to guarantee that students from all academic levels are engaged and interacting positively. In the process, teachers need to avoid ambiguity when designing their initiations and

then give their learners enough time to think and respond. When asking higher-thinking questions, teachers should first allow high-achievers to respond to give enough space for on-level and below-level to listen to their colleagues' responses and hence, prepare their own responses. It is also recommended that teachers employ the audience design technique more often in the classroom to encourage low achievers to take part in all class discussions, even if their responses are brief. Still, interacting in a class discussion will boost their self-confidence. As for further research, it is strongly recommended that students' perspectives be taken into consideration as they are the end-users of these methods.

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The authors report that there are no competing interests to declare.

#### **Data availability statement**

The data is available with the 1<sup>st</sup> author, Ms Mai Zaghab, and can be shared when requested.

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