

## Ideal TPACK For Arabic Language Lecturer: Student Voices

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### Abstract

TPACK-based learning (Technology Pedagogical Content Knowledge) is an alternative strategy in the online-based learning process. This has an impact on the selection of learning activities, media as well as improving the quality of teaching pedagogy, so it is necessary to map the TPACK learning process based on the students' perceptions who have participated in the TPACK-based learning Arabic. This study aims to identify student responses to the TPACK-based learning process with several categories. This study uses an exploratory research design by adopting questionnaire consisting of 27 statement items covering the 7 TPACK sub-domains. The questions were distributed via google form to 129 students, the analysis applied descriptive statistical techniques. The research findings show that the implementation of Arabic learning based on TPACK framework utilise indicators such as the use of online media, the application of online-based classroom administration, the availability of online learning resources, and the improvement of teaching pedagogy based on teaching technology. Through the integration of technology, pedagogy, content knowledge, it can accelerate the process of acquiring and increasing student Arabic productivity. This study recommends further research to identify the application and effectiveness of using technology, content and pedagogy separately.

**Keywords:** Language Acquisition; Language Learning; TPACK

### INTRODUCTION

The role of education is to improve students' skills in accordance with the demands and expectations of the 21st century. The skills that must be mastered by students in the 21st century include: 1) the core subjects and themes of the 21st century; 2) innovative learning skills; 3) technology, information and media skills; and 4) life and career skills (Larson & Miller, 2011). It aims to prepare graduates who have global awareness; financial literacy, economics, business and entrepreneurship, awareness as a citizen, having new skills, being able to adapt, thinking critically, creatively and innovatively, as well as being literate towards technological advances. The 21st century focuses on the skills of educators in delivering material by integrating technology as one of the innovations for a significant impact on the teaching process (Moghazy, 2021). Educators are demanded in terms of abilities and skills to design a learning system that is relevant to the 21st century both in terms of content and teaching methods (Sauri et al., 2021).

Therefore, along with the rapid advancement of information technology, it becomes a necessity for an educator in higher education to master technology which is then used as a supporting medium in the learning system (Farikah & Al Firdaus, 2020). In other words, advances in science and technology can be employed as techniques to improve the quality of the learning process. The approach that can be applied is TPACK (Technological Pedagogical and Content Knowledge). TPACK is a framework that

combines technological knowledge, pedagogical knowledge and content knowledge in a learning context (Archambault & Crippen, 2009; Koehler & Mishra, 2005; Pamuk et al., 2015; Rahmadi, 2019).

Technological advances require educators to have TPACK capabilities to develop capabilities in material mastery, pedagogic capabilities, and competency in technological literacy (Ningsih, 2020; Quddus, 2020; Ulin Nuha et al., 2020). Especially in online learning situations, there is a need for digital technology facilities as a medium for learning interactions between educators and students (Moore et al., 2011). Moreover, higher education is one of the national education subsystems that are required to produce quality human resources (Kadarisman, 2017). But in fact, university lecturers in Indonesia have not maximized TPACK in learning. This is relevant to the research of Farikah and Al Firdaus (2020) which narrates that the ability of lecturers in mastering TPACK is in a fairly good category, furthermore, it is necessary to increase mastery of content, pedagogic, and technological aspects. Likewise Rizqiyah's research (2021) emphasizes that the level of competence of lecturers in higher education, especially in the field of education, is still in a fairly good category. On the other hand, the finding research from Sojanah et al. (2021) emphasized that the TPACK ability of educators was not maximized in learning due to their teaching experience, training, facilities and infrastructure, self-confidence, and motivation in teaching which tended to be low. Thus, this condition implies the ability of educators to use TPACK has not yet increased.

Therefore, regarding mastery of TPACK in higher education, student perceptions are needed as one of the success factors of learning, especially in distance learning (Ningsih, 2020). Therefore, this study focused on revealing in depth how the learning process in universities with the TPACK approach is shown from the perceptions of students, especially students in Arabic language education study programs at universities. In addition, studies on student perceptions of learning Arabic with the TPACK approach in universities have not been found. Thus, the researchers hope that the results of this study will provide enlightenment and academic horizons to education providers in higher education regarding the readiness of students in learning in the current era.

## METHOD

This research is an exploratory study that was attended by 129 students after attending Arabic lectures conducted online in a critical situation of COVID-19. This study uses a self-report measure approach in the form of a survey because it is an approach that is widely used by TPACK reviewers (Abbitt, 2011). The study was conducted at a university in Jakarta, the capital city of Indonesia, from February to June 2021. An online questionnaire with Google Form was developed from the TPACK theoretical framework (Agustini et al., 2019; Rahmadi, 2019; Schmidt et al., 2009) to collect primary data, the link of which is shared through the Edmodo application to be filled in by students.

Overall, the questionnaire consists of 27 statement items covering the 7 TPACK sub-domains. The details of the distribution of statement items are 3 TK, 2 PK, 3 CK, 2 PCK, 3 TCK, 4 TPK, and 10 TPACK. The questionnaire has a six-level Likert scale: 1 = strongly disagree, 2 = disagree, 3 = slightly disagree, 4 = slightly agree, 5 = agree, and 6 = strongly agree. All data from the questionnaire were analyzed by descriptive statistical techniques to simplify, analyze, and describe the main features of the data (Holcomb, 2017). It starts by tabulating the data in the Microsoft Excel application, adding a percentage score to the data, then presenting the analyzed data in a summary table. In

addition to data analysis, open coding was used to code and summarize data from open items.

## RESULTS AND DISCUSSION

TPACK can be an alternative to achieve the goal of learning Arabic online during the COVID-19 pandemic. Using exploratory research methods, this study examines student views regarding the application of TPACK in Arabic lectures.

**Table 1. The Profile of the First-Year University Students**

<b>Gender</b>	<b>Students</b>	<b>Percentage</b>
Male	12	9.30
Female	117	90.70
Total	129	100%
<b>Age</b>	<b>Students</b>	<b>Percentage</b>
<18	5	3.88
18-20	122	94.57
21-23	2	1.55
Total	129	100%
<b>Socioeconomic status</b>	<b>Students</b>	<b>Percentage</b>
High	1	0.78
Middle	105	81.40
Low	23	17.82
Total	129	100%
<b>Devices for distance learning</b>	<b>Students</b>	<b>Percentage</b>
Smartphones	60	46.51
Laptops	69	53.49
Total	129	100%

Table 1 describes the profiles of students who have participated in this study and shows the familiarity of first-year students with technology for learning. The majority of students are women and between 18 and 20 years old and come from middle socioeconomic status which reaches more than 90%. In terms of devices, laptops are the most commonly used devices (47%) to access lectures during the pandemic, followed by smartphones (53%). The desktop computers are not used at all by students in distance learning. The main findings of this study are presented in the next section. The main finding focuses on analyzing student views on the application of TPACK in Arabic language courses which then provides several implications for the improvement of Arabic learning.

### Technological Knowledge

One element of TPACK-based learning is characterized by the presence of Technology knowledge. This is an indicator of using technology as a medium for learning Arabic. To identify learning activities that have used technology, the findings can be shown in table 2.

**Table 2. Technological Knowledge**

<b>Statements</b>	<b>Mean</b>	<b>SD</b>
Arabic lecturers apply technology in teaching, such as online applications or social media	4.85	0.88
The lecturers use online-based attendance	5.04	0.88
The lecturers implement group chats to present lessons, such as wa groups, edmodo, etc	4.91	0.95
<b>Total</b>	<b>4.93</b>	<b>0.90</b>

Table 2 describes the teacher's knowledge of various technological devices, both analog and digital, soft and hard, and related to technical matters in Arabic lectures. Overall, the average score of Arabic language lecturers using online applications or social media is 4.85 in teaching activities. While the use of online-based attendance, the average value reached 5.04. In addition, lecturers also use group chats including WA groups and Edmodo with an average value of 4.91. Thus, overall it can be known that the lecturers have good knowledge of utilizing technology with an average score of 4.93. The data is quite varied as indicated by the Standard Deviation value for all data which is above 0.90. Based on the findings, it shows that the ability of lecturer to manage technology as an intermediary medium for learning Arabic is very good. This supports the increase in scattered sources of material in online-based learning. Technology can accelerate the acquisition of Arabic language for students through the adoption of online-based materials (Febriani & Anasruddin, 2020). Technology use in learning also facilitates virtual communication. This supports the existence of learning in the classroom and outside the classroom (online learning). With a variety of learning systems, students can take advantage of these opportunities to explore their potential in Arabic language skills. As Mufidah et al (2019) revealed that technology requires students to be creative in increasing their productive language skills.

Based on the findings which indicate that the ability to manage technology that is integrated in the learning process is one of the factors supporting the success of learning Arabic. Technology can accelerate the process of student understanding independently (Nayar & Koul, 2020). Through technological intermediaries, lecturers can elaborate on various materials through online-based learning resources. This variation is balanced by clear instructions in providing learning direction. Thus, collaboration between lecturer and students is well established, which is marked by an increase in student learning outcomes in Arabic.

### **Pedagogical Knowledge**

The pedagogical ability of the lecturers is also an element of successful learning achievement. This determines how the lecturers choose the right strategy in their learning process. In addition, the ability of lecturers to understand the characteristics of students is also needed. It aims to manage effective learning classes tailored to each student's personality. The students' perceptions of the lecturer's pedagogic abilities can be presented in the table 3.

**Table 3. Pedagogical Knowledge**

<b>Statements</b>	<b>Mean</b>	<b>SD</b>
The lecturer pays attention to the differences of each student in teaching	5	0.81
The lecturer applied a variety of learning strategies	5.19	0.71
<b>Total</b>	<b>5.09</b>	<b>0.76</b>

Table 3 describes theoretical and practical teacher knowledge about how to learn and implement learning. Explicitly, the lecturer observes the differences in the character of each student in learning. This is supported by the average score which reaches 5. After it is known that there are differences in the character of students in learning, the average lecturers use varied learning strategies in the implementation of learning by achieving an average score of 5.19. This is done to increase students' enthusiasm so that they are happy to participate in Arabic learning

Overall, it can be seen that the lecturer has good knowledge about how to learn and implement learning as indicated by an average score of 5.09. The data is quite varied as indicated by the Standard Deviation value for all data which is above 0.76. The lecturer's pedagogical ability is one of the balances towards improving student learning outcomes. By choosing the right strategy and the right assessment instrument, the learning objectives can be achieved optimally. As revealed that the variation of strategies can build the acceleration of students' receptive abilities (Masrai & Milton, 2018). As for one of the factors proposed by van Rooij & Zirkle (2016) that the pedagogical ability of lecturer is one of the benchmarks for increasing the achievement of learning outcomes. Elements of pedagogy play a role in understanding students' learning abilities, developing curriculum concepts and organizing active and creative learning. Through the teacher's pedagogical abilities, it is hoped that student learning output can develop and achieve maximum results.

### Content Knowledge

Learning resources in the Arabic learning process are crucial points. This indicates the mastery of sound, vocabulary and grammar in Arabic. Therefore, the teacher pays attention to the right teaching material for students to learn. The indications of Content Knowledge-based learning can be seen in table 4.

**Table 4. Content Knowledge**

Statements	Mean	SD
The lecturer presents the material well in the learning media	5.27	0.60
The lecturer provides clear information (instructions) when explaining the material	5.29	0.56
The lecturer employs good teaching techniques in presenting the material	5.26	0.58
<b>Total</b>	<b>5.27</b>	<b>0.58</b>

Table 4 describes the lecturer's knowledge of the material that must be studied and taught along with its characteristics. In detail, the data in table 4 above emphasizes that with an average score of 5.29, the lecturers provide clear information when explaining the material. Furthermore, the teacher also presented the material well where he used the media in teaching with an average score of 5.27. The lecturers also use good teaching techniques in presenting the material with an average score of 5.26.

Overall, it can be seen that the lecturers have a good knowledge of the material that must be studied and taught in Arabic lectures marked with an average score of 5.27. The data is quite varied as indicated by the Standard Deviation value for all data which is above 0.58.

Based on the findings show that the lecturer's ability to master the material is quite good, so that the learning process with relevant materials really helps students master Arabic skills, namely listening, speaking, reading and writing skills; as well as linguistic elements such as elements of sound, vocabulary and grammar. Through mastering the basic concepts of language science, it is hoped that lecturers will master the material and internalize it in learning activities. The lecturer also pays attention to the material in terms of cognitive, psychomotor and affective skills as learning outputs for students. By paying attention to these three aspects, it is expected that students' skills in learning Arabic are spread in a balanced way. Not only capable of mastering the material cognitively but also psychomotor and affective development.

### Technological Content Knowledge

Collaboration between technology and learning resources is an important element in improving the quality of student learning. This is due to the ability to use technology in exploring scientific sources, learning concepts and language elements scattered in digital learning resources. The distribution of research data related to technology content knowledge can be seen in table 5.

**Table 5. Technological Content Knowledge**

Statements	Mean	SD
The lecturer uses good teaching strategies in presenting the material	5.20	0.52
The lecturer used online media platforms in presenting material	5.11	0.59
The lecturer assigns presentation using technology	5.12	0.54
<b>Total</b>	<b>5.14</b>	<b>0.55</b>

Table 5 describes the lecturer's knowledge of how technology and content are interrelated. Furthermore, the data in table 5 above shows that the average value of the use of teaching strategies in presenting the material is 5.20. Furthermore, the average score in assignments (presentations) using technology is 5.12. Meanwhile, the average value of using online media platforms in presenting material is 5.11. Thus, it is comprehensively seen that the teacher has a good knowledge of how technology and content are related reciprocally in Arabic lectures with an average score of 5.14. The data is quite varied as indicated by the Standard Deviation value for all data which is above 0.55.

The openness of the teacher's mindset to adopt technology as a tool for finding information and developing Arabic learning is very beneficial. This is because the wealth of online learning resources is easier to access than offline access. This requires teachers to improve their competence in managing technology and learning content. However, the important role of technology is to encourage students to learn contextually by understanding things that develop in their daily lives (Swallow & Olofson, 2017). Through the facts that are scattered in the student learning environment, the teacher can manage learning resources contextually. So that their understanding of Arabic is obtained based on their daily experiences.

### Pedagogical Content Knowledge

The competence of lecturers in managing digital learning resources varies widely. This is marked by the basic ability of lecturers to understand and prioritize technology as the right medium. The demand for pedagogical content knowledge for lecturers is very high, amid the current sophisticated technology in the use of learning resources (Gu et al., 2020). The intensity of teacher capacity development in pedagogical content knowledge can be seen in table 6.

**Table 6. Pedagogical Content Knowledge**

Statements	Mean	SD
Teachers encourage students to expand the use of learning resources	5.26	0.46
The teacher invites regular discussions about the development of digital content in learning	4.97	0.73
<b>Total</b>	<b>5.12</b>	<b>0.59</b>

Table 6 describes the lecturer's pedagogic knowledge related to specific content. Specifically, based on table 6 above, it can be concluded that the average score of teachers in motivating students to expand the use of learning resources is 5.26. Meanwhile, the

average score in discussion activities on digital content development carried out by teachers in learning reached 4.97. Overall, it can be seen that the lecturers have good knowledge of pedagogical knowledge related to specific content in Arabic lectures with an average score of 5.12. The data is quite varied as indicated by the Standard Deviation value for all data which is above 0.59.

Based on the findings, it was found that the competence of the teacher in managing the material is very important. One of the keys to successful learning lies in the pedagogical competence of content. Through these factors, teachers can improve their competence in designing online-based learning resources, such as the use of digital applications and the adoption of online materials. Digital learning resources can help teaching and learning practices be more effective and in developing innovative teaching and learning practices (Elgort, 2018).

### Technological Pedagogical Knowledge

Mastery of pedagogical elements for lecturers is absolute. A balanced pedagogy through technology can make online-based learning activities more effective. On that basis, the role of technology in designing pedagogical elements can be seen through various indicators, such as the presentation of online-based academic elements, the provision of discussion forums and the application of learning using technology media. To identify these indicators, it can be seen the distribution of data in table 7.

**Table 7. Technological Pedagogical Knowledge**

Statements	Mean	SD
The lecturer presents academic data online, such as grades and attendance	5.09	0.58
The lecturer provides an online discussion forum in every lesson	5.18	0.54
The lecturer uses a good strategy for integrating technology into learning	5.19	0.46
The lecturer applied learning management using ICT, such as edmodo, kahoot, WhatsApp, etc	5.17	0.52
<b>Total</b>	<b>5.16</b>	<b>0.52</b>

Table 7 describes the lecturer's knowledge of how various technologies can be used in learning and learning. In addition, table 7 above suggests that the highest average score of the technological aspect of pedagogical knowledge is 5.19, where the lecturer uses a good strategy when he integrates technology into learning. Furthermore, with an average score of 5.18, the lecturers provide an online discussion forum in each lesson. The average value is 5.17, the lecturers applied learning management using ICT, such as Edmodo, Kahoot, WhatsApp, etc. Furthermore, the lowest average score is 5.09, where the lecturers present academic data online, such as grades and attendance.

Overall it appears that the teacher has good knowledge of how various technologies can be used in Arabic lectures with an average score of 5.16. The data is quite varied as indicated by the Standard Deviation value for all data which is above 0.52. Based on the findings above, it proves that the competence of lecturer in utilizing ICT is a fundamental matter. The research results of Sanusi et al (2020) confirm that an educator is required to utilize ICT in learning. It aims to develop themselves by increasing their knowledge. In addition, the use of ICT makes learning more interactive and innovative. Mollaei and Riasati (2013) also in their research revealed that the purpose of using technology in learning aims to help students learn and integrate varied skills, develop more interactive ways of teaching and learning so that students understand academic subjects better. Thus, educators and students are required to make changes in the learning

process. The educator not only teaches, but also must master the resources where students can learn, and direct them to be able to learn using various and innovative ICTs.

### Technological Pedagogical Content Knowledge

The spread of teaching abilities in TPACK-based learning design is marked by several aspects, namely mastery of online-based learning, literacy of digital learning resources, digital-based learning activities and the support of relevant media facilities to improve students' abilities in learning Arabic. As for the realization of the applied TPACK learning, it can be seen through the identification of findings scattered in table 8.

**Table 8. Technological Pedagogical Content Knowledge**

Statements	Mean	SD
The lecturer provides online learning	5.07	0.56
The lecturer creates rich learning environments with digital resources	5.07	0.50
The lecturer uses social media resources as learning media	5.12	0.68
The lecturer provides online attendance	5.15	0.66
The lecturer manages discussion forums, teleconferences, or learning videos	5.10	0.68
The lecturer develops digital learning resources such as e-modules or e-learning	5.03	0.62
The lecturer provides online-based learning consulting forum	5.01	0.70
The lecturer learning resources using platforms, such as blogs, vlogs, youtube channels, etc	5.24	0.46
The material presented by the lecturer is in accordance with the current needs of Arabic learners	5.17	0.50
Sources of learning materials used to attract students' interest and motivation to learn, for example youtube content, etc	5.26	0.56
<b>Total</b>	<b>5.12</b>	<b>0.59</b>

Table 8 describes the lecturer's knowledge about how to use the right technology in the appropriate pedagogic method to teach a specific content effectively. Based on the data presented in table 8, the highest average score in the technological pedagogical content knowledge aspect is 5.26. This is indicated by the presentation of learning material sources, including YouTube content by lecturers to increase student interest and motivation to learn. Furthermore, the average value of lecturers in providing reference to learning resources through platforms including blogs and YouTube channels is 5.24. The average value of the lecturer's suitability in delivering material in learning with current conditions reaches 5.17. The average value of lecturers in providing online attendance is 5.15. The average value of lecturers in utilizing social media resources as learning media reaches 5.12. The average score for lecturer managing discussion forums, teleconferences, or learning videos is 5.10.

However, the average score for lecturers in providing online learning and creating a learning environment rich in digital resources is the same average score of 5.07. Then, the average value of lecturers in developing digital learning resources such as e-modules or e-learning reaches 5.03. Meanwhile, the average score of lecturers in providing online-based learning consultation forums is 5.01. This value is the lowest value in the aspect of technological pedagogical content knowledge. Thus, overall it seems that the teacher understands how to use the right technology in the appropriate pedagogic method to teach a specific content effectively in Arabic lectures with an average score of 5.12. The data is quite varied as indicated by the Standard Deviation value for all data which is above 0.59.

Collaboration between material internalization, elements of pedagogy and technology encourages students to accelerate in mastering language skills. This is supported by the finding that the accuracy of the material, the selection of relevant strategies and the ability of lecturers to elaborate an online-based learning atmosphere can increase students' creativity in language (Setyarini et al., 2020). Other findings prove that the role of technology can increase students' creativity and critical thinking (Kamarudin et al., 2016). This is indicated by the selection of the required material content, so that students can search independently for their content needs (Moghazy, 2021). However, clear regulations are needed for both lecturers and students as a learning guide that is relevant to the language skills being studied (Kusuma, 2021).

TPACK learning activities are influenced by the practical ability of lecturers who instruct students to choose the right content and use technology. Thus, mastery of the language is also accompanied by the ability to manage appropriate technology. The encouragement of using technology in the era of globalization is very appropriate, so that students are not only proficient in language skills, but internalized mastery of technology according to their needs (Efthimiadou & Sansoniou, 2020). Through the specification of TPACK indicators managed by lecturers, these factors underlie that TPACK focuses on language teaching processes that are integrated with technology and content in digital learning design (Baser et al., 2016). In addition, designing online-based materials affects teaching practice in a complex way (Wargadinata, 2020). This change requires the integration of TPACK indicators such as content, technology and teacher pedagogical abilities. However, each TPACK indicator has an influences on the success of learning Arabic.

Increased efficiency in TPACK-based learning is also shown through online attendance filling, regular discussions that utilize technology and expanding online-based material sources (Sindi Alivi, 2019). Research on TPACK has shown that the way teachers integrate technology into teaching is still limited, so training is still needed on the integration of existing components in TPACK-based learning design (Tseng, 2018). Through the adoption of the TPACK-based Arabic learning model, students can practice their language skills and master the right technology. In addition, lecturers can practice their abilities from elements of pedagogy and technology. Thus, the process of learning Arabic is expected to vary in the selection of relevant learning strategies (Safutri et al., 2020). The accuracy of the selection of strategies and media plays a role in achieving learning success (Brosh, 2019).

## CONCLUSION

The present findings confirm that learning Arabic in Indonesia has adopted a TPACK-based learning system. It indicated by the survey results between the involvement of lecturer pedagogy, learning resources and content packaged in the use of online-based technology. The research findings show that the involvement of the TPACK indicator in TPACK-based Arabic learning still requires an increase in the competence of lacturer in managing online learning resources, so that the competence of lecturers and students' digital literacy can accelerate the output of Arabic learning skills evenly. These limitations can reduce the effectiveness of time in learning achievement. This research limited for using of minimal methods, so further research is needed to test the effectiveness of TPACK-based Arabic learning in other higher education institutions.

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