Employment of Audacity Application for Vocabulary Lessons

Yan Fude [1], Beatrix Andrew [2], Amrina [3]
[1] *University of Tabriz, Iran, Islamic Republic of*
[2] *University of São Paulo, Avenida Trabalhador São Carlense, Brazil*
[3] *Universitas Islam Negeri Mahmud Yunus Batusangkar, Indonesia*

Corresponding Author: Yan Fude,   E-mail; yanfude@gmail.com

Article Information:	ABSTRACT
	In this day and age, technology has explored every line, including the world of education. There are many technologies that can be used in education, one of which is Audacity. Audacity is an application that is used to edit sound or audio. This application can be downloaded via desktop or android. One of the Arabic language learning used in this application is Istima'. This research is a qualitative descriptive research. Descriptive research is research that can examine literature reviews or describe phenomena that occur in the world of education. The purpose of this study is to describe the use of the Audacity application as an effort to strengthen students' interest in learning, this study uses qualitative research methods that are literature studies, while the sources of literature in this study are journals and books in the form of e-modules. As for how to use the application using an audacity account by utilizing the audacity application.

INTRODUCTION

In this life we will not escape the problems of life as is the case in Indonesia, the aspects that have always been discussed are economic, social, and political aspects. We always witness hot discussions related to these three aspects, both from print media and television media (Arrosagaray dkk., 2019). So here the role of education is needed as a way out to solve it (M. Khalilullah, 2012). Education is a way of distributing knowledge from teachers with the aim of directing their students to achieve a mature maturation process (Medina-Smith dkk., 2021). In the path of education, teachers must guide students to be able to limit the development of science and technology very quickly and develop the abilities of students, student attitudes to be able to handle new situations

(Atiyah, 2022). the concern of the student participants towards problems and the desire to fix problems, these problems are factors that must be developed in the student participation can accommodate the very rapid development of science and technology and the changes it causes (Hendrix dkk., 2020). To overcome and accommodate, it is necessary to develop the attitude of students not to be spared by change, students must follow and control changes in order to grow into positive and useful ones (Theodra, 2019). Natural science is a knowledge related to the nature around us, which has been planned, or that is real but is also a process of discovery (Nandy dkk., 2022). In line with this definition, the demands in Education are that we can be widely able to be broad cantra wala for students to learn themselves and the surrounding nature, this development to be able in learners to apply them in everyday life. According to the Ministry of Education and Culture (2013), education can be for students to find their own identity to help students to master a deeper understanding of the surrounding nature (Anderson dkk., 2019). The learning process emphasizes the provision of experience to develop self-competence so that students understand the surrounding nature scientifically (Abdi dkk., 2019). Educational Ability is divided into 2 types, namely krateter education and adolescent education (Beneteau dkk., 2019). Krateter education is an identity identity that is attached to, education is all efforts that can be done to influence the krater of students we can know the meaning that we can see by means of the definition of character education delivered by Thomas Lickona. Lickona (1991) states that character education is an activity carried out deliberately planned that aims to increase one's insights (Ansari & Khan, 2020). In other words, students to choose awareness The understanding conveyed by Lickonadiri is asoranh idan idan as well as students in a logical way (Salminen dkk., 2020). The definition of educational methods is the persistence of learning in the way that there are small groups of students learning with similarities to learn (Rafiq, 2010).

Two important things that always follow in the process of educational journey are learning and learning. Learning is an activity to acquire knowledge. In addition, learning is also interpreted as something that adjusts certain things (Zhu dkk., 2019). (Jufri, 2013) Learning is the process of learning about a topic or theme that has been determined by it(Morphology, t.t.).learning is the ability of the student to know a lesson that d b learned and the process of change over learning y exams and so on.

In addition to the understanding of learning there is its purpose. The purpose of learning is to carry out a process of change in a person for the better (Hwangbo dkk., 2019). With this activity, the norms possessed by a person will change to be good, besides that the purpose of learning is so that students are able to understand what has been learned (Suartika, 2019). We know the world there are several languages that we find one of which is arabic that we need to learn arabic is the language of all people who are muslims around the world ,a language that cannot be separated from the religion of islam, besides arabic is also one of the semitic languages of tegah incorporated,in arabic has many utterances than other languages (Mynott, 2019). Arabic is one of the world's languages, having developments in line with social development (Schumaker, 2022). According to the opinion of these experts and educational experts, but have the same principle, namely teaching materials are equipment or subject matter that is planned

completely and has been systematic according to the learning principles used by students and students in the learning process (Verdoliva, 2020). Teaching materials are everything that can help students or infrastructure in conducting lessons in the classroom.

The material in question can be in the form of written or unwritten material.4 While according to Widodothe teaching instrument is a set of tools that contain learning materials, methods, boundaries, and ways of evaluating that are systematically designed and interesting in order to achieve the expected goals, namely achieving competencies and subcompetences with all their complexity (Ñahui Palomino dkk., 2021). Arabic is one of the most unique languages. One example is seen from the phenomenon of language, Arabic has a high linguistic order in its own linguistic system which is different from other language systems (Angulo dkk., 2021). Like an example from the lexical side (Law dkk., 2019). Some linguists have arguethat the number of lexicons (words) in Arabic if accumulated is much more than the amount of vocabulary found in other languages.

tool used by human beings for others to dive into the values accumulated in society throughout its history, language as a means chosen by humans to communicate. language that many people are interested in literature, art, and all that happens within the language horizon to make it as research, writing and analysis, so that way language can develop valid thinking (Milanez, 2023). The purpose of learning Arabic is that we can understand the Quran and its content taught by its religion, as the main legal foundation in Islam .besides that classical works use Arabic and in simlin science (Salingaros, 2021). the purpose of Arabic is so that we understand the language quickly.

After we learn Arabic we know in it there is a vocabulary, vocabulary is a vocabulary term that is a collection of words from arabic or the meaning of each word that is in each line of tau which is arranged in the form of a sentence tau pragraph .besides that vocabulary is a vocabulary word which is interpreted one by one which is found in the language we are mufradkan vocabulary is a set of words that are understood by the learner to understand the meaning of the word he knows.

Vocabulary is an important language in arabic language learning that discusses the vocabulary that is inside to enrich the vocabulary of a collection of languages orally and in writing and knowing what it means like vocabulary which according to experts is often used in houses or objects in (Perrine, 2019). The following is the vocabulary used in Arabic language learning.

مَدْرَسَةٌ	School	مَعْمَلٌ	Laboratory
فَصْلٌ	Class	مَيْدَانٌ	Field
مَسْجِدٌ	Mosque	إِدَارَةٌ	Office
بَابٌ	Door	غُرْفَةُ الأَسَاتِيْذَ	Teacher's room
مَوْقُفٌ	Parking	حَدِيْقَةٌ Lot	Park
مَكْتَبَةٌ	Library	حَمَّامٌ	Bathroom
مَقْصَفٌ	Canteen	مُدِيْرٌ	Principal

The purpose of learning vocabulary is so that we can pronounce sounds kata_ words well in accordance with the correct makhraj, and be able to understand musytaqod (Leboeuf, 2019). besides that the purpose of vocabulary is that vocabulary is

very important in learning foreign languages and the formation of skills and habits to maintain about vocabulary (Underhill-Sem, 2020). the purpose of vocabulary is that we can know the meaning of words The purpose of learning vocabulary is so that participants are lanjar and easy to pronounce.

In addition, in we learn everything such as education, learning, learning or everything related, all there is a learning media .learning media is something that can be used to get news when carrying out the teaching and learning process so that it can affect the attention and interest of students .the learning media is that students can understand, learn in the learning media that we can send messages because we are now using cellphones because of the current conditions pandemic (Sunzuphy, t.t.).learning media is a medium that i dmedia learning to have a certain purpose and change in contextual behavior maupujuan un moral.

The purpose of learning media is right where a teacher knows educators to deliver learning materials.besides that the purpose of learning media is easy because learning media concerns audio media, visual, silent visuals, silent audio visuals, and so on (Cindrić & Gregurić, 2019). the purpose of learning media is a process of tranf er science to students making it easier for students to understand principles and skills by using media that is in accordance with what we are need and choose the learning media provided to students in the form of an easy learning experience.

In addition, there are many applications that are in line with learning media, one of which is Audiosity.Audiosity is an audio application on gital that is free and .besides audiosity free recorder tampa uses packages used by windows and so on for letop (Li dkk., 2020). Audiosity is aud io di gital which is free and has bnyak benefits for users (Schoeneborn dkk., 2019). Our purpose in learning this application is so that we can make a visual video of the educational process and know how to make annime video and make it easier for us Audacity besides that this research is described what are the functions of audacity media (Androutsopoulou dkk., 2019). The source of research data can be obtained from printed materials or graphic work in the form of books and journal.

RESEARCH METHODOLOGY

This research method is to use qualitative, which is a method that uses how to combine data or find data by interviewing sources from the school or going to the school place to observe the object in the school so that we can carry out research where the researcher takes a title that has been agreed by the lecturer of this research (Riordan dkk., 2023). The research method used is an analytical descriptive method by describing the process of making audio through *the audacity* freeware instrument using a principled approach to sound and aligning with industry standards that have been tested and acceptable to the public (Danielson dkk., 2019). The description is spelled out in the form of an image (panelpanel) in order and sitematically (Tai & Khabbazbashi, 2019). Then the audio approach is used to(M & Wahyono, t.t.)

RESULT AND DISCUSSION
Audacity

In the world of education now we have to follow the use of technology or applications that are needed today and the application needed by the student body to provide it is Audacity this application is very much needed by the student body in explaining a learning program that a teacher wants to explain.

This Audacity application is very useful for students, because this application helps students to be more grative in the anime aspect or edit our own voice and the various benefits that we can use (Hefler dkk., 2022). We know the silent films of the past year, but not for today. The audio always follows where the visuals are. In fact, in some ways audio can stand alone as an introduction to knowledge. The human need for knowledge, insight and expertise is increasingly needing to be more flexible and remain accurate. As knowledge, insight and expertise in non-formal fields. Even so, the world of formal education still needs to develop. Tutorials that are currently actively accessed by the public, including audio-visual, some even only use audio media without visuals. Fairy tales also not only spread directly from the mouth of the mouth, but can also be conveyed through online media. The tendency of today's learners is to learn more from Youtube media.

In this study, the Audacity application has been successfully developed. The developed Audacity can explain and display on the phenomenon of the Doppler effect both for the sound source to move relative to the observer and the observer to move relative to the sound source. There are two applications used, namely AudaThe result achieved from this study is the audacity application.

Figure 1. Edit Audacity

DAW (Digital Audio Workstation) is a software that can be installed on a computer and serves to facilitate us to work in certain fields. One of those DAWs is*Audacity*. As additional information, the move between analog to digital and digital to analog allows for latency (sound delay), if we only use a laptop as our device, then it is better if we add a freeware, namely Asio4all.Asio for all is a software created by the Steinberg company and can be used to overcome latency in audio production that we record basic.

Figure 2. Addition of betson audasity
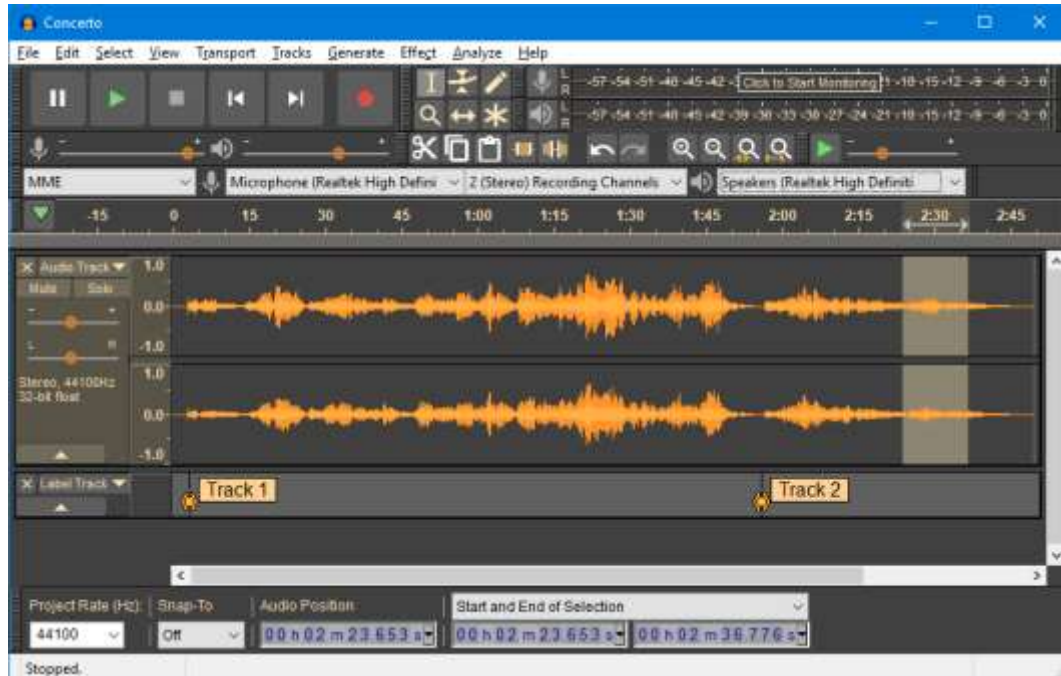
Audacity has many interesting features including the following:

1.We Record audio, as well as play audio on computer

2.move the recording to Mp3 or audio CD

3.Edit the audio recording, such as WAV, AIFF, FLAC, MP2, MP3

4.we take the sound files that we copy, cut, and we merge in one file

How to use Audacity is:

1.Create ringtone

Use cutting to cut the desired part, how to:

• find the file we want - then press open

•look for the part we are going to omit. then press delete on the keyboard

• the one we cut just kept the rigton shutter

•then it saves the sound we cut earlier to the format we want

2.How to eliminate vocal sounds

•first we select the file that we want to eliminate

•then select the arrow according to the song selected on the left

• Then select the bottom of the screen by pressing from the middle between the arrow and mute

•then we select the effect - invert menu and wait until the invert process runs

•then we Select the arrow on the left of the bottom track, select mono

•Repeat the same steps, select the arrow on the left of the top track, select mono

•Press play or press the SPACEBAR to listen to the result

3.Slows down the song

•then we press the song we want to replace, then we press the file menu - open - select the song - press open

•We click on the section we want to slow down by using the mouse to select all the parts

•then press the effect menu - change speed for slowing down effect

•Slide the slider towards the left to speed up to your liking - click ok

•press the play button, then save the song

4.Efect fade out

•Import songs from the file menu - import - select songs - open

•Then block the back of the song you want to fade out with the mouse

•Press the effect / fade out menu and the part on the block will experience changes

•Press Play to hear the changes and then save

5.Shrink MP3 size

•Open a song from the file menu – open – select song – open

•then press the edit menu – preferences

•In *audacity* preferences, we change the default sample format to 16 bits. Then click OK

•Now save songs in MP3 format from the file – export menu

6.Removes noise

•Open song from song file - open – select song - open

•Select the part of the song that has noise by blocking

•Klik menu effect - noise removal

•In the noise removal window, click get noise profile

•press effec t- noise removal - click OK

•When finished saving

7.Recap the sound

Then open *Audacity* in the voice - and video - *audacity* application menu

•Then we record the sound and press record in the red icone easily

•After that we can start recording, after that we press stop to record then save the recording

8.Merge two audio files

•first press file in the file menu, open it, and then select the song in the want, then press open

Press the file in the click open, and select the song you want

•In the second part of the file is the same as the previous step,

•Then we press copy by pressing Ctrl- C

•Then press the first audio file, and hover over the audio file number two then we paste it.

•Then we copy the second audio file just now merging the first audio file earlier.

•then we save the file

In the world of recording, we have three popular terms that can actually still be divided again. However, activities are usually grouped into 3 large parts namely(a)Pre Production: preparations that must be made before the production processIt is carried out (Murwaningrum dkk., t.t.).

The benefit of *Audacity* is that it has a pretty good impact on students, in addition to being able to develop the media we learn in a world that is all digitized and can save time and effort, *Audacity* is an editor application that has a recorder function and as a voice viewer. *Audacity* is very interested in students to try it who can edit their own voice (Fenty dkk., 2014)

This media aims to help the learning process and is expected to increase student learning motivation in biology subjects about the digestive system in humans. Audio Audio used in the application there are three parts, namely bendsound ukulele for application music, both button sounds, and third material sounds recorded using Audio Making.

In the creation of audio, *the Audacity* application is used to record and edit the recording results. First record the material to be inputted in the application after that clean the sound or eliminate the sound from noise, and then input the sound into the adobe flash LIBRARY CS6.n *Audacity*. The application of interactive learning of the human digestive system, the statement is based on the results of testing with a percentage of 37% who answered correctly increased to 96% and 63% who answered incorrectly decreased to 4%. This application is aimed at teachers in helping the delivery of Audacity material, the benefit is that students can more easily understand and understand the material of the human digestive system (Rafiq, 2010).

Figure 3. Audasity

The image above is our way to add a track marker on *audacity* by the way

Click the Project tab on the menu, select add track table from the menu pull – down trick empty table that looks like an audio track displayed Among the advantages of this software can be run with various features and da effects .the use of *Audacity* uses can judge the sound or add various effects that we want today many *Audacity* users can relate to the sound owned by themselves(Murwaningrum dkk., t.t.)

The advantages of this *audacity* application include the following:
1. Can subdue the sound
2. Make classroom learning clearer and more engaging
3. Can facilitate learning in an interactive way
4. Slow down time and effort
5. Improve the quality of learning
6. Media allows the learning process to be carried out anywhere and anytime
7. Changing the role of teachers in a positive and productive direction.

With the existence of media learning, the presentation of conventional teaching materials has become more standard with the advantages of:

1. The learning material is very interesting
2. Become more classy
3. The presentation of the mteri of shorter learning
4. The quality of learning can be improved
5. The use of technology such as media makes it easier for us to make totorial videos where we are

Vocabulary

Learning is in school covering some aspects of language and general ,this research we will discuss vocabulary which is part of arabic as well, vocabulary is a collection of language-shaped vocabulary that mastering proficiency is very necessary ,a very broad language in sentences, vocabulary that is often spoken by students around him such as the dining room there or the living room and so on (M. Khalilullah, 2012).

Principles of vocabulary learning

1. Relating to learners
2. In order to be able to know the existing vocabulary
3. Develop existing vocabulary in learners

Vocabulary learning objectives

1. Learners can introduce new vocabulary
2. Learners can memorize vocabulary
3. Can understand the meaning of the vocabulary (Viera Valencia & Garcia Giraldo, 2019)

Types of vocabulary

1. to understand vocabulary
2. Learners to train in speech
3. In order to be able to write vocabulary or vocabulary one by one
4. Potential in a matter (Memenuhi dkk., 2019)

Vocabulary that is often used

Place

مَدْرَسَةٌSekola

مَعْمَلٌLaboratory

فَصْلٌClass

مَيْدَانٌField

مَسْجِدٌMosque

إِدَارَةٌOffice

بَابٌDoor

مَوْقُفٌParking Lot

مَكْتَبَةٌLibrary

مَقْصَفٌCanteen

غُرْفَةُ الأَسَاتِيْذَTeacher's room

حَدِيْقَةٌTaman

حَمَّامٌBathroom

مُدِيْرٌPrincipal

The final stage of the data of the researcher of this application is that we can know how the development of the *audacity* application in our school research is whether you have a lot of understanding about the *audacity* application and how to use the ru that d the school explains the material .

CONCLUSION

In Audacity is one of the audio editors in gital which is quite complete for a device a lot of features and capabilities are offered, for students it takes quite a long time to master this application. An audio editor application on gital dasity still lacks a file sharing feature on the internet or connections to various social media such as fecebokok and so on. The learning media developed includes very simple with the help ofsoftwere Audacity. This learning media development scheme focuses on bamboo flutes into simple flutes from paralon pipes using fluite from slipper blockages then analyzed Audacity softwere. The assessment results from several pihasepertiahlmedialearning, danguru students show that the media can be used and meets the criteria both for the learning process on organ pipe material. Audio recording is the process of transferring waves from analog to digital, so equipment is needed that mediates the wave displacement and change of the wave format. The displacement can cause gaps, thus allowing for latency. Latency is the delay of sound, meaning that the sound heard on the computer slows down a bit compared to our original sound. The advantages of Audacity are features and stability and disadvantages are between its users who are very rigid when distinguished from applications of various types in other operating systems besides that Audacity only supports effect plugins.

Social media such as fecebokok and so on. The learning media developed includes very simple with the help ofsoftwere audacity. This learning media development scheme focuses on bamboo flutes into simple flutes from paralon pipes using fluite from slipper blockages then analyzed Audacity softwere. Media can be used and meets good criteria for the learning process on organ pipe material. Audio recording is the process of transferring waves from analog to digital, so equipment is needed that mediates the wave displacement and change of the wave format. The transfer and Assessment results from several learning media pihasepertiahllearning, danguru students showed that pat caused a gap, thus allowing for latency. Latency is the delay of sound, meaning that the sound heard on the computer slows down a bit compared to our original sound. The advantages of Audacity are features and stability and disadvantages are between its users who are very rigid when distinguished from applications of various types in other operating systems besides that Audacity only supports effect plugins.

The fast capture value of our recorded sound is obtained by m/s with a relative rectification of 1.3 %. The determination of a fast value of the sound propagation recorded is obtained using the Time of Flight (TOF) method with an analysis more or less close to the value in theory (vtheories = 340 m /s), because by the difference in sound and noise that causes a frequency collision so that the learners of the sound to be tried are disturbed. Suggestions for the continuation of the study would be nice for

learners should try to pay attention to everything that will concern the sounds we record and do in a soundproof room so as not to interfere with the frequency in the tuning fork sounds recorded in audacity(Maryam & Fahrudin, 2020).

REFERENCES

Abdi, A., Shamsuddin, S. M., Hasan, S., & Piran, J. (2019). Deep learning-based sentiment classification of evaluative text based on Multi-feature fusion. *Information Processing & Management*, *56*(4), 1245–1259. https://doi.org/10.1016/j.ipm.2019.02.018

Anderson, R. J., Bloch, S., Armstrong, M., Stone, P. C., & Low, J. T. (2019). Communication between healthcare professionals and relatives of patients approaching the end-of-life: A systematic review of qualitative evidence. *Palliative Medicine*, *33*(8), 926–941. https://doi.org/10.1177/0269216319852007

Androutsopoulou, A., Karacapilidis, N., Loukis, E., & Charalabidis, Y. (2019). Transforming the communication between citizens and government through AI-guided chatbots. *Government Information Quarterly*, *36*(2), 358–367. https://doi.org/10.1016/j.giq.2018.10.001

Angulo, E., Diagne, C., Ballesteros-Mejia, L., Adamjy, T., Ahmed, D. A., Akulov, E., Banerjee, A. K., Capinha, C., Dia, C. A. K. M., Dobigny, G., Duboscq-Carra, V. G., Golivets, M., Haubrock, P. J., Heringer, G., Kirichenko, N., Kourantidou, M., Liu, C., Nuñez, M. A., Renault, D., … Courchamp, F. (2021). Non-English languages enrich scientific knowledge: The example of economic costs of biological invasions. *Science of The Total Environment*, *775*, 144441. https://doi.org/10.1016/j.scitotenv.2020.144441

Ansari, J. A. N., & Khan, N. A. (2020). Exploring the role of social media in collaborative learning the new domain of learning. *Smart Learning Environments*, *7*(1), 9. https://doi.org/10.1186/s40561-020-00118-7

Arrosagaray, M., González-Peiteado, M., Pino-Juste, M., & Rodríguez-López, B. (2019). A comparative study of Spanish adult students' attitudes to ICT in classroom, blended and distance language learning modes. *Computers & Education*, *134*, 31–40. https://doi.org/10.1016/j.compedu.2019.01.016

Atiyah, K. K. (2022). Application of The Evans Blue Dye for The Study of Permeability of The Blood Brain Barrier in Rodents. *2022 International Symposium on Multidisciplinary Studies and Innovative Technologies (ISMSIT)*, 171–175. https://doi.org/10.1109/ISMSIT56059.2022.9932704

Beneteau, E., Richards, O. K., Zhang, M., Kientz, J. A., Yip, J., & Hiniker, A. (2019). Communication Breakdowns Between Families and Alexa. *Proceedings of the 2019 CHI Conference on Human Factors in Computing Systems*, 1–13. https://doi.org/10.1145/3290605.3300473

Cindrić, I., & Gregurić, M. (2019). The Audacity to Teach with Technology – A Case of Integrating Technology in Pre-service Language Teacher Education/Odvažnost poučavanja tehnologijom – Integracija tehnologije u obrazovanje budućih učitelja stranoga jezika u primarnome obrazovanju. *Croatian Journal of Education - Hrvatski časopis za odgoj i obrazovanje*, *21*(1). https://doi.org/10.15516/cje.v21i1.3339

Danielson, K., Wong, K. M., & Neuman, S. B. (2019). Vocabulary in educational media for preschoolers: A content analysis of word selection and screen-based pedagogical supports. *Journal of Children and Media*, *13*(3), 345–362. https://doi.org/10.1080/17482798.2019.1585892

Hefler, M., Bianco, E., Bradbrook, S., Arnold, D., & Dorotheo, E. U. (2022). What facilitates policy audacity in tobacco control? An analysis of approaches and supportive factors for innovation in seven countries. *Tobacco Control*, *31*(2), 328–334. https://doi.org/10.1136/tobaccocontrol-2021-056570

Hendrix, M. M., Cuthbert, C. D., & Cordovado, S. K. (2020). Assessing the Performance of Dried-Blood-Spot DNA Extraction Methods in Next Generation Sequencing. *International Journal of Neonatal Screening*, *6*(2), 36. https://doi.org/10.3390/ijns6020036

Hwangbo, J., Lee, J., Dosovitskiy, A., Bellicoso, D., Tsounis, V., Koltun, V., & Hutter, M. (2019). Learning agile and dynamic motor skills for legged robots. *Science Robotics*, *4*(26), eaau5872. https://doi.org/10.1126/scirobotics.aau5872

Law, K. M. Y., Geng, S., & Li, T. (2019). Student enrollment, motivation and learning performance in a blended learning environment: The mediating effects of social, teaching, and cognitive presence. *Computers & Education*, *136*, 1–12. https://doi.org/10.1016/j.compedu.2019.02.021

Leboeuf, C. (2019). "The Audacity of Hope": Reclaiming Obama's Optimism in the Trump Era. *The Journal of Speculative Philosophy*, *33*(2), 256–267. https://doi.org/10.5325/jspecphil.33.2.0256

Li, B., Chang, S., Sainath, T. N., Pang, R., He, Y., Strohman, T., & Wu, Y. (2020). Towards Fast and Accurate Streaming End-To-End ASR. *ICASSP 2020 - 2020 IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP)*, 6069–6073. https://doi.org/10.1109/ICASSP40776.2020.9054715

Medina-Smith, A., Becker, C. A., Plante, R. L., Bartolo, L. M., Dima, A., Warren, J. A., & Hanisch, R. J. (2021). A Controlled Vocabulary and Metadata Schema for Materials Science Data Discovery. *Data Science Journal*, *20*, 18. https://doi.org/10.5334/dsj-2021-018

Milanez, F. (2023). Ousadia e luta: O pensamento de defensores da floresta na Amazônia. *Boletim do Museu Paraense Emílio Goeldi. Ciências Humanas*, *18*(2), e20220037. https://doi.org/10.1590/2178-2547-bgoeldi-2022-0037

Morphology, T. C. (t.t.). *PROBLEMATIKA PEMBELAJARAN BAHASA ARAB Oleh:*

Murwaningrum, D., Asyari, R. A., Bandung, G., Jend, J., Subroto, G., & Bandung, N. (t.t.). *PEMANFAATAN OPENSOURCE FREEWARE AUDACITY SEBAGAI PENDUKUNG MEDIA EDUKASI Program Studi Angklung dan Musik Bambu Institut Seni Budaya Indonesia Bandung , Jl . 26–32.*

Mynott, J. P. (2019). Lesson study outcomes: A theoretical model. *International Journal for Lesson and Learning Studies*, *8*(2), 117–134. https://doi.org/10.1108/IJLLS-08-2018-0057

Ñahui Palomino, R. A., Vanpouille, C., Costantini, P. E., & Margolis, L. (2021). Microbiota–host communications: Bacterial extracellular vesicles as a common language. *PLOS Pathogens*, *17*(5), e1009508. https://doi.org/10.1371/journal.ppat.1009508

Nandy, A., Duan, C., & Kulik, H. J. (2022). Audacity of huge: Overcoming challenges of data scarcity and data quality for machine learning in computational materials discovery. *Current Opinion in Chemical Engineering*, *36*, 100778. https://doi.org/10.1016/j.coche.2021.100778

Perrine, A. L. (2019). The "Audacity" of Visibility: Preta-Rara's Feminist Praxis. *TRANSMODERNITY: Journal of Peripheral Cultural Production of the Luso-Hispanic World*, *9*(2). https://doi.org/10.5070/T492046322

Riordan, J.-P., Revell, L., Bowie, B., Woolley, M., Hulbert, S., & Thomas, C. (2023). Understanding and explaining pedagogical problem solving: A video-based

grounded theory study of classroom pedagogy. *Research in Science & Technological Education*, *41*(4), 1309–1329. https://doi.org/10.1080/02635143.2021.2001450

Salingaros, N. A. (2021). Spontaneous Cities: Lessons to Improve Planning for Housing. *Land*, *10*(5), 535. https://doi.org/10.3390/land10050535

Salminen, J., Hopf, M., Chowdhury, S. A., Jung, S., Almerekhi, H., & Jansen, B. J. (2020). Developing an online hate classifier for multiple social media platforms. *Human-Centric Computing and Information Sciences*, *10*(1), 1. https://doi.org/10.1186/s13673-019-0205-6

Schoeneborn, D., Kuhn, T. R., & Kärreman, D. (2019). The Communicative Constitution of Organization, Organizing, and Organizationality. *Organization Studies*, *40*(4), 475–496. https://doi.org/10.1177/0170840618782284

Schumaker, J. B. (2022). Lessons Learned during the Development and Validation of an Intensive Evidence-Based Reading Intervention for Secondary Students. *Learning Disabilities Research & Practice*, *37*(4), 294–313. https://doi.org/10.1111/ldrp.12293

Suartika, G. A. M. (2019). Lessons from a Small Island – Density, Spatial Development, and Identity. *IOP Conference Series: Earth and Environmental Science*, *248*, 012016. https://doi.org/10.1088/1755-1315/248/1/012016

Tai, K. W. H., & Khabbazbashi, N. (2019). Vocabulary explanations in beginning-level adult ESOL classroom interactions: A conversation analysis perspective. *Linguistics and Education*, *52*, 61–77. https://doi.org/10.1016/j.linged.2019.06.006

Theodra, J. (2019). Audacity and Acuity: The Life and Work of Samir Amin. *International Critical Thought*, *9*(4), 617–633. https://doi.org/10.1080/21598282.2019.1695534

Underhill-Sem, Y. T. R. (2020). The audacity of the ocean: Gendered politics of positionality in the Pacific. *Singapore Journal of Tropical Geography*, *41*(3), 314–328. https://doi.org/10.1111/sjtg.12334

Verdoliva, L. (2020). Media Forensics and DeepFakes: An Overview. *IEEE Journal of Selected Topics in Signal Processing*, *14*(5), 910–932. https://doi.org/10.1109/JSTSP.2020.3002101

Zhu, C., Xu, X., Zhang, W., Chen, J., & Evans, R. (2019). How Health Communication via Tik Tok Makes a Difference: A Content Analysis of Tik Tok Accounts Run by Chinese Provincial Health Committees. *International Journal of Environmental Research and Public Health*, *17*(1), 192. https://doi.org/10.3390/ijerph17010192

Zhang, W., Liu, Y., & Guo, Z. (2019). Approaching high-performance potassium-ion batteries via advanced design strategies and engineering. *Science Advances*, *5*(5), eaav7412. https://doi.org/10.1126/sciadv.aav7412

Zhu, L., Gao, M., Peh, C. K. N., & Ho, G. W. (2019). Recent progress in solar-driven interfacial water evaporation: Advanced designs and applications. *Nano Energy*, *57*, 507–518. https://doi.org/10.1016/j.nanoen.2018.12.046

Züst, M. A., Ruch, S., Wiest, R., & Henke, K. (2019). Implicit Vocabulary Learning during Sleep Is Bound to Slow-Wave Peaks. *Current Biology*, *29*(4), 541-553.e7. https://doi.org/10.1016/j.cub.2018.12.038