

## The Application of Discussion Methods to Increase Student Learning Motivation in Fiqh Subjects in Class XI MA Al-Hasan Cikampek

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### ABSTRACT

**Background.** This study aims to determine the application of the discussion method to student learning motivation in fiqh subjects in class XI at MA AL-HASAN Cikampek.

**Purpose.** the place of this research was carried out at MA AL-Hasan Cikampek. The main data source in this study is the XI class tutor in fiqh subjects, and students in class XI MA DI MA AL-HASAN Cikampek.

**Method.** . This research is motivated by the interest and motivation of students in fiqh subjects that are very low, this can be seen from students who are indifferent during the teaching and learning process and do not pay attention when the teacher explains the subject matter.

**Results.** . This happens because the teacher still uses the conventional method, namely the lecture method, thus causing students to become easily bored, and not focus on the teaching and learning process. To overcome this, it is necessary to apply a more innovative learning model, one of which is the discussion learning model.

**Conclusion.** . The discussion learning model is a learning model that will shape the student's frame of mind through the discovery of ideas, ideas that can be discussed among fellow students, so that it will produce students who are active in thinking about the fiqh material discussed that day, thus student learning motivation will arise.

### KEYWORDS

Class, Implementation, Student

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### INTRODUCTION

One element that has an important role that supports the success of efforts to achieve educational goals, which is micro-described in learning objectives, is student learning motivation. In learning activities, the position of motivation is very important and very necessary, because the presence of students in class without learning motivation is unlikely to be maximally involved in teaching and learning activities. Motivation functions as a driver, director, and at the same time as a driver of one's behavior to achieve a goal.

Given the position of learning motivation which is so important in efforts to achieve learning goals, the teacher with all his power and quality should be able to produce learning activities that can arouse student learning motivation and not the other way around, the learning that takes place actually kills the provision of motivation that exists in students.

Therefore, to achieve the goals that have been set, a good method is needed, appropriate and in accordance with the needs of the material to be taught. And if it is done with good steps, then the results will also be good and directed, the discussion method is a method that tends to motivate student learning so that activities in students, namely training students to be able to use their knowledge to solve problems faced or to answer a question and be able to express their own opinions and ideas in solving problems, especially fiqh learning problems.

Based on these initial observations, information was obtained that class XI students of Madrasah Aliyah Al-Hasan Cikampek had low levels of learning motivation. This is evidenced by the existence of some students who are indifferent in learning activities, some students are even busy with their own activities that have nothing to do with learning activities.

Armed with these initial findings, the researcher held a light discussion with the class XI student teacher with the intention of finding out the problems that caused the lack of student learning motivation levels. And after the problems are known through these discussions, efforts are made to find solutions so that student motivation is expected to increase significantly.

Based on the results of discussions with class XI student teachers, it was found that the main problem that caused learning activities to be less able to motivate students to learn, namely that the learning method used by the teacher was the "lecture method", so that students felt bored and bored.

Furthermore, it was mutually agreed that the solution to the above problem would be to apply the discussion method to increase student learning motivation. Therefore, according to the researchers, one of the efforts to overcome the problems in learning mentioned above, the teacher should use the discussion method, on the grounds that this method has a number of advantages, including the following:

1. Encourages students to think critically;
2. Encourage students to express their opinions freely;
3. Encourage students to contribute their thoughts to solve problems together; and 4.
4. Taking one alternative answer or several alternative answers to solve problems based on careful consideration (Muhibbin Syah, 2008: 205).

Based on the description above, it inspired researchers to carry out classroom research actions (PTK) with the title "Application of Discussion Methods to Increase Student Learning Motivation in Fiqh Class XI Madrasah Aliyah Al-Hasan Cikampek".

Based on the background described above, the following problems can be formulated, namely:

1. Can the application of the discussion method increase student learning motivation in learning Fiqh??
2. Whether the application of the discussion method can increase student learning motivation in learning Fiqh for students in class XI MA Al-Hasan Cikampek.?

PTK is beneficial for teachers, students, and schools. PTK benefits for teachers to improve the quality and insight of teachers in learning Fiqh by empowering the discussion method. For students, PTK is useful for students to increase student activeness and motivation in learning Fiqh. For Madrasah PTK in order to improve the learning process of Fiqh, especially the learning process that can foster student learning motivation.

## **A. THEORETICAL FOUNDATION**

### **a. Learning Motivation**

#### **1. Definition of learning motivation**

learning motivation is the overall driving force within students that gives rise to learning activities, which ensures continuity in learning activities and gives direction to learning activities, so that the goals desired by the subject can be achieved..

#### **2. Functions of Learning Motivation**

The function of learning motivation is as a driver of effort and achievement so that to achieve this achievement students are required to determine for themselves what actions must be taken to achieve their learning goals. Learning motivation has three main functions, namely :

- 1) Encourages humans to do, so as a driver or motor that releases energy. Motivation in this case is the driving force of every activity that will be done..
- 2) Determines the direction of action, namely towards the progress to be achieved. Thus motivation can provide direction and activities that have to be done in accordance with the formulation of goals.
- 3) Selecting actions, namely determining what actions must be done that are harmonious to achieve goals, by setting aside actions that are not beneficial to these goals.

#### **3. Types of Learning Motivation**

There are two types of learning motivation, namely Intrinsic motivation and extrinsic motivation.

##### **1) Instructional Motivation**

Instrumental motivation is a level of motivation that arises from within the individual himself without coercion or encouragement from others, but on the basis of his own will.

For example, a student learns because he really wants to gain knowledge, values or skills in order to change his behavior. So according to the example that someone learns really wants to know everything, not wanting praise or prizes..

##### **2) extrinsic motivation**

Extrinsic motivation, which is the type of motivation that arises as a result of influences from outside the individual, whether due to invitation, pressure, or coercion from others so that under these circumstances students want to do something or learn.

Extrinsic forms of motivation include: numbers, prizes and so on; extrinsic motivation can also be said to be a form of motivation in which learning begins and continues based on external encouragement that is not absolutely related to learning activities.

Extrinsic motivation is still needed at school, because teaching at school does not all interest students or suit students' needs. In addition, students often do not

understand why they are learning the things that are given by the school. Therefore, motivation for the lesson needs to be raised.

#### **4. Learning Motivation Strategies**

Strategies or tips to foster student learning motivation, namely as follows:

- 1) Explain learning objectives to learners.
- 2) Giving rewards.
- 3) Fostering competitiveness or competition.
- 4) Giving praise.
- 5) Providing punishment.
- 6) Encourage students to learn.
- 7) Forming good learning habits.
- 8) Helping students' learning difficulties, both individually and communally (group)..
- 9) Use a variety of methods, and
- 10) Using good media and must be in accordance with the learning objectives..

### **b. DISCUSSION METHOD**

#### **1. Definition of Discussion Method**

The discussion method is a way of presenting lessons by debating problems in the form of statements or questions that are problematic to be discussed and solved together through mutual arguments rationally and objectively. The purpose of the discussion method is to be able to stimulate students in thinking critically to gather opinions, make conclusions, or arrange various alternative solutions to a problem.

#### **2. Benefits of Discussion Method**

The benefits of the discussion method are as follows:

1. Students get the opportunity to think.
2. Students get training to express their opinions, attitudes and aspirations freely.
3. Students learn to be tolerant of their friends.
4. Discussion can foster active participation among students.
5. Discussion can develop a democratic attitude, can respect the opinions of others.
6. With discussion, lessons become relevant to the needs of society.

The implementation of the discussion method runs effectively, it is necessary to take steps to implement the discussion method appropriately, namely as follows:

##### **1) Preparation Steps**

- Formulate the objectives to be achieved, both general and specific objectives.
- Determine the type of discussion that can be carried out in accordance with the objectives to be achieved.
- Determine the problem to be discussed.
- Prepare everything related to the technical implementation of the discussion, such as the classroom with all its facilities, discussion

officers such as moderators, notetakers and formulation teams when needed.

## 2) Discussion implementation

- Checking any preparations that are considered to affect the smooth running of the discussion.
- Provide briefings before the discussion, such as presenting the objectives to be achieved and the rules of the discussion according to the type of discussion to be held.
- Carry out the discussion in accordance with the rules of the game that have been set. In conducting the discussion, pay attention to a pleasant atmosphere or learning climate, such as not being tense, not cornering each other, and so on.
- Provide equal opportunities for each discussion participant to express their ideas.
- Controlling the conversation to the subject matter being discussed. This is very important, because without control, the direction of the discussion usually becomes wide and unfocused..

## 3) Closing the Discussion

The end of the learning process using discussion method should be done as follows:

- Make the main points of discussion as a conclusion in accordance with the results of the discussion.

Review the course of the discussion by asking for opinions from all discussion participants as feedback for further improvement."

## RESEARCH METHODOLOGY

This research was conducted in the even semester of the 2022-2023 academic year while the data collection process was in the form of meetings in each cycle on February 15, 2023-February 22, 2023.

The sources in this class action research are students of class XI MA Al-Hasan even semester of the 2022-2023 academic year totaling 20 students. The next source is the fiqh teacher of class XI MA Al-Hasan. The reason for choosing the subject is based on the fact that the class has low learning motivation in fiqh lessons.

Data collection techniques are ways that can be used by researchers to collect data from this study are observation techniques, questionnaires and documents.

The procedure for this action research was carried out into these four stages. The cycles carried out in this study were two cycles. The classroom action research design that is considered accurate in achieving these goals is the flow design model of Kemmis and Taggart which is characterized by using a cyclical model. Each cycle consists of two or three learning actions, while each learning action includes four stages of activities, namely planning, action implementation, observation and reflection-evaluation.

### a. Cycle action

#### a) Planning

Activities carried out in planning include the following :

- 1) The teacher identifies the problem;

- 2) The teacher develops a lesson plan;
- 3) Teachers prepare learning materials;
- 4) Formulate the objectives to be achieved, both general and specific objectives.
- 5) Determine the type of discussion that can be carried out in accordance with the objectives to be achieved.
- 6) Determine the problem to be discussed.
- 7) Prepare everything related to the technical implementation of the discussion, for example, the classroom with all its facilities, discussion officers such as moderators, notetakers and drafting teams when needed.

#### **b) Implementation**

The implementation of fiqh learning with the application of the discussion method is carried out as follows:

- 1) The teacher checks any preparations deemed to affect the smooth running of the discussion.
- 1) The teacher gives a briefing before the discussion, for example presenting the material objectives to be achieved and the rules of the discussion according to the type of discussion to be carried out.
- 2) Students carry out discussions in accordance with the rules of the game that have been set.
- 3) The teacher gives equal opportunity to each discussion participant to express his/her ideas.
- 4) The teacher controls the conversation to the main issue being discussed. because without control, the direction of the discussion usually becomes wide and unfocused..

#### **c) Observation**

Observation activities in fiqh learning using the discussion method are carried out as follows:

- 1) The discussion leader is given to the students and is organized in shifts.
- 2) The teacher guides the discussion leader.
- 3) The teacher strives for all students to participate in the discussion.
- 4) The teacher gives directions to the discussion leader so that all students can take their turn to speak, while other students learn to listen to their friends' opinions.
- 5) Then the teacher optimizes the time available to get the desired results or conclusions.

#### **d) Reflection of Action Results**

Reflection was carried out to find out the results of the implementation of Cycle I learning. The shortcomings that existed in the Cycle I learning actions were used as improvement materials for Cycle II learning actions.

The stages carried out in the Cycle II learning actions were the same as what was done in the Cycle I learning actions. Planning in the Cycle II learning action was carried out by taking into account the results of the reflection of the Cycle I learning action.

## **RESULT AND DISCUSSION**

The application of the discussion method to increase student motivation in the pre-cycle is still lacking after the action in cycle I there is an increase in student learning motivation but the

results are still not optimal, in cycle II there is a very optimal increase in motivation, this can be seen in the following table:

**Table I**

Data table of Learning Motivation of Class XI Students of Madrasah Aliyah Al-Hasan Cikampek in Pre-Cycle, Cycle I and Cycle II.

No	Name	Cycle		
		Pre-Cycle	I	II
1.	Adit Muhammad Rizky	Simply	Good	Very good
2.	Abu Hanifah	Less	Simply	Simply
3.	Anisa Fadillah	Good	Good	Good
4.	Nasrul	Simply	Good	Good
5.	Maelani	Less	Simply	Good
6.	Yuni Nuraeni	Less	Simply	Good
7.	Ida Pratiwi	Simply	Good	Good
8.	Sayyidah Hasanah	Less	Good	Very good
9.	Riyanti	Simply	Good	Very good
10.	Azkie Syifana Zahro	Good	Very good	Very good
11.	Imaa Rohima	Less	Good	Very good
12.	Naswa Rohmatusaniyah	Less	Good	Good
13.	Fitri Oktaviani	Simply	Good	Very good
14.	Tiska Putri	Simply	Very good	Very good
15.	Ramdan Hermawan	Less	Good	Very good
16.	Halimah Tusa'diah	Less	Very good	Very good
17.	Rizky Nursyabhani	Less	Simply	Good
18.	Dina Mulyawati	Simply	Very good	Very good
19.	Muhammad Yasik Mumfalah	Less	Good	Good
20.	Dewi Rizka	Less	Good	Good

Based on the table above, it is known that the percentage of student learning motivation in Pre-Cycle, Cycle I and Cycle is as follows:

**Table 2**

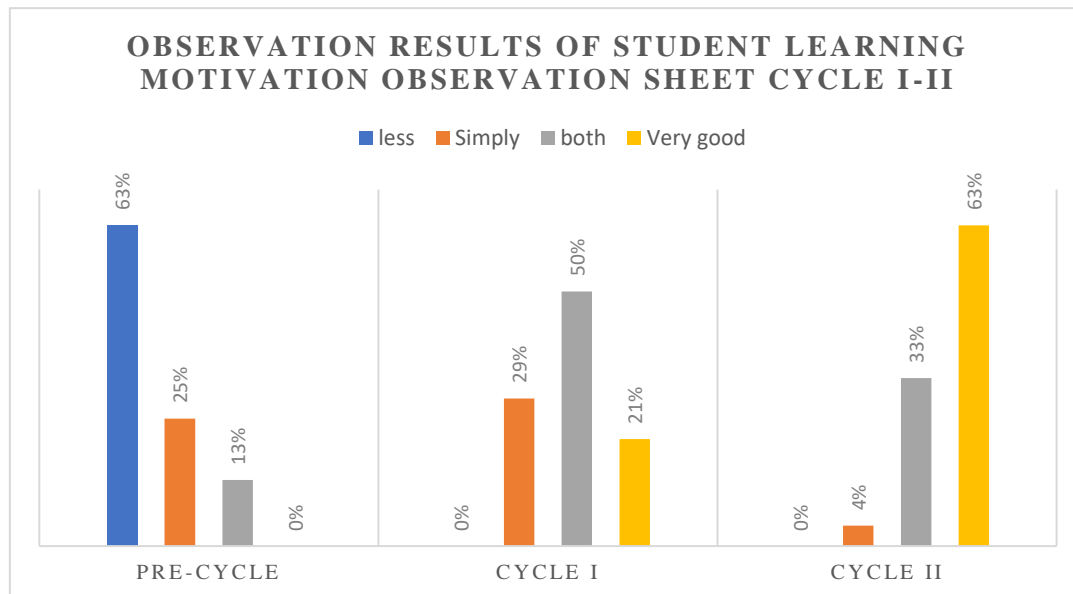
Table of Percentage of Learning Motivation of Class XI Students of Madrasah Aliyah Al-Hasan Cikampek at Pre-Cycle, Cycle I and Cycle II.

No	Criteria	Pre-Cycle		Cycle I		Cycle II	
		Total Students	%	Total Students	%	Total Students	%
1.	Very good (20-25)	0	0%	5	21%	13	63%
2.	Good (15-20)	3	13%	10	50%	6	33%
3.	Simply (10-15)	4	25%	5	29%	1	4%



4.	Less (0-10)	13	63%	0	0%	0	0%
<b>Total</b>		20	100%	20	100%	20	100%

Based on the table above, the presentation of learning motivation of class XI students of Madrasah Aliyah Al-Hasan Cikampek in Pre-Cycle, Cycle I and Cycle II can be depicted in a diagram as follows:



Based on the above results in the pre-cycle student learning motivation is still lacking, this is shown from the results of observations of learning motivation that as many as 13 students lack criteria with a percentage of 63%, and there are 3 students with good criteria with a percentage of 25%. In cycle I there was an increase in the learning motivation of class XI students through the discussion method, as many as 12 students with good criteria with a percentage of 29%, 7 students with sufficient criteria with a percentage of 50%, and no students entered the criteria less with a percentage of 0%. In cycle II, there was also an increase in student learning motivation, as many as 15 students with excellent criteria with a percentage of 15%, 8 students with good criteria with a percentage of 33%, 1 student with sufficient criteria with a percentage of 4%, and 0 students with less criteria with a percentage of 0% so that those who got criteria greater than or equal to good were 23 students with a percentage of 96% of the total 24 students. Student learning motivation from cycle I and cycle II has increased, this can be seen from the acquisition of student scores from cycles I and II, 16 students have increased and 8 students have the same or fixed score. When viewed in the graph above, based on the observation data in cycles I and II, it shows that there is an increase in student learning motivation, students dare to express their own opinions, dare to answer and ask questions. Even in carrying out group discussions, student interaction runs enthusiastically with each member providing ideas for problems given by the teacher to be solved together. Students also dared to present the results of group discussions in front of the class for questions and answers. It is not uncommon for differences of opinion to occur between students during the presentation. It is also not uncommon for students to ask the teacher and their friends about the material being studied. Learning with the discussion method does have advantages compared to traditional learning. In the discussion method that researchers applied to class XI Madrasah Aliyah Al-Hasan Cikampek showed that using the discussion method made students more interested and enthusiastic in participating in fiqh learning by using the discussion method, it can encourage



passive students to be active in learning. In this case the teacher is only a provider of facilities, services, guidance and assistance in learning activities. All learning activities from starting to solve problems with discussions, presenting the results of discussions to questions and answers are carried out by students.

Thus learning fiqh by using the discussion method can increase learning motivation. Through the discussion method all students get the same opportunity to actively participate and can increase learning motivation in learning

## CONCLUSION

Based on class action research in class XI MA Al -Hasan Cikampek is conveyed as follows:

1. The learning approach using the group discussion method is very appropriate, because it can emphasize the formation of relationships between students with one another so that in a broader context it can lead to social relationships between individuals (students) and their communities in the future. The use of group discussion methods in fiqh learning can develop democratic attitudes and behaviors according to fiqh law, and foster the productivity of student learning activities.

The group discussion learning approach can increase the motivation to learn fiqh for class XI MA AL-Hasan Cikampek, this can be seen from the acquisition of values in Pre-cycle I learning motivation of class XI students through the discussion method, as many as 3 students with good criteria with a percentage of 13%, 4 students with sufficient criteria with a percentage of 25%, and 13 students with less criteria with a percentage of 63%. In cycle I there was an increase in student learning motivation, as many as 5 students with excellent criteria with a percentage of 21%, 10 students with good criteria with a percentage of 50%, 5 students with sufficient criteria with a percentage of 29%, and 0 students with less criteria with a percentage of 0% so that those who got criteria greater than or equal to good were 18 students with a percentage of 71% of the total 24 students. In cycle II there was also a very optimal increase in student learning motivation, as many as 13 students with very good criteria with a percentage of 63%, 6 students with good criteria with a percentage of 33%, 1 student with sufficient criteria with a percentage of 4%, and 0 students with less criteria with a percentage of 0% so that those who got criteria greater than or equal to good were 23 students with a percentage of 96% of the total 20 students

## AUTHORS' CONTRIBUTION

*Look this example below:*

Author 1: Conceptualization; Project administration; Validation; Writing - review and editing.

Author 2: Conceptualization; Data curation; In-vestigation.

Author 3: Data curation; Investigation.

Author 4: Formal analysis; Methodology; Writing - original draft.

## REFERENCES

- Berdik, D., Otoum, S., Schmidt, N., Porter, D., & Jararweh, Y. (2021). A Survey on Blockchain for Information Systems Management and Security. *Information Processing & Management*, 58(1), 102397. <https://doi.org/10.1016/j.ipm.2020.102397>
- Bouzidi, H., Odema, M., Ouarnoughi, H., Al Faruque, M. A., & Niar, S. (2023). HADAS: Hardware-Aware Dynamic Neural Architecture Search for Edge Performance Scaling. 2023

- Design, Automation & Test in Europe Conference & Exhibition (DATE)*, 1–6. <https://doi.org/10.23919/DAT56975.2023.10137095>
- Chen, R., Sun, C., Chen, J., Jen, H., Kang, X. L., Kao, C., & Chou, K. (2021). A Large-Scale Survey on Trauma, Burnout, and Posttraumatic Growth among Nurses during the COVID-19 Pandemic. *International Journal of Mental Health Nursing*, 30(1), 102–116. <https://doi.org/10.1111/inm.12796>
- Chen, T., Wu, D., Chen, H., Yan, W., Yang, D., Chen, G., Ma, K., Xu, D., Yu, H., Wang, H., Wang, T., Guo, W., Chen, J., Ding, C., Zhang, X., Huang, J., Han, M., Li, S., Luo, X., ... Ning, Q. (2020). Clinical characteristics of 113 deceased patients with coronavirus disease 2019: Retrospective study. *BMJ*, m1091. <https://doi.org/10.1136/bmj.m1091>
- Chodkiewicz, J., Talarowska, M., Miniszewska, J., Nawrocka, N., & Bilinski, P. (2020). Alcohol Consumption Reported during the COVID-19 Pandemic: The Initial Stage. *International Journal of Environmental Research and Public Health*, 17(13), 4677. <https://doi.org/10.3390/ijerph17134677>
- Cicero, A. F. G., Fogacci, F., Veronesi, M., Strocchi, E., Grandi, E., Rizzoli, E., Poli, A., Marangoni, F., & Borghi, C. (2020). A Randomized Placebo-Controlled Clinical Trial to Evaluate the Medium-Term Effects of Oat Fibers on Human Health: The Beta-Glucan Effects on Lipid Profile, Glycemia and inTestinal Health (BELT) Study. *Nutrients*, 12(3), 686. <https://doi.org/10.3390/nu12030686>
- Darko, A., Chan, A. P. C., Huo, X., & Owusu-Manu, D.-G. (2019). A scientometric analysis and visualization of global green building research. *Building and Environment*, 149, 501–511. <https://doi.org/10.1016/j.buildenv.2018.12.059>
- Duan, Y., Edwards, J. S., & Dwivedi, Y. K. (2019). Artificial intelligence for decision making in the era of Big Data – evolution, challenges and research agenda. *International Journal of Information Management*, 48, 63–71. <https://doi.org/10.1016/j.ijinfomgt.2019.01.021>
- Dwivedi, Y. K., Hughes, D. L., Coombs, C., Constantiou, I., Duan, Y., Edwards, J. S., Gupta, B., Lal, B., Misra, S., Prashant, P., Raman, R., Rana, N. P., Sharma, S. K., & Upadhyay, N. (2020). Impact of COVID-19 pandemic on information management research and practice: Transforming education, work and life. *International Journal of Information Management*, 55, 102211. <https://doi.org/10.1016/j.ijinfomgt.2020.102211>
- Galván Casas, C., Català, A., Carretero Hernández, G., Rodríguez-Jiménez, P., Fernández-Nieto, D., Rodríguez-Villa Lario, A., Navarro Fernández, I., Ruiz-Villaverde, R., Falkenhain-López, D., Llamas Velasco, M., García-Gavín, J., Baniandrés, O., González-Cruz, C., Morillas-Lahuerta, V., Cubiró, X., Figueras Nart, I., Selda-Enriquez, G., Romaní, J., Fustà-Novell, X., ... García-Doval, I. (2020). Classification of the cutaneous manifestations of COVID -19: A rapid prospective nationwide consensus study in Spain with 375 cases. *British Journal of Dermatology*, 183(1), 71–77. <https://doi.org/10.1111/bjd.19163>
- Garcia, F., Serra, E., Garcia, O., Martinez, I., & Cruise, E. (2019). A Third Emerging Stage for the Current Digital Society? Optimal Parenting Styles in Spain, the United States, Germany, and Brazil. *International Journal of Environmental Research and Public Health*, 16(13), 2333. <https://doi.org/10.3390/ijerph16132333>
- Hamzah, N., Abd Halim, N. D., Hassan, M. H., & Ariffin, A. (2019). Android Application for Children to Learn Basic Solat. *International Journal of Interactive Mobile Technologies (iJIM)*, 13(07), 69. <https://doi.org/10.3991/ijim.v13i07.10758>
- Hindricks, G., Potpara, T., Dagres, N., Arbelo, E., Bax, J. J., Blomström-Lundqvist, C., Boriani, G., Castella, M., Dan, G.-A., Dilaveris, P. E., Fauchier, L., Filippatos, G., Kalman, J. M., La Meir, M., Lane, D. A., Lebeau, J.-P., Lettino, M., Lip, G. Y. H., Pinto, F. J., ... Zakirov, N. U. (2021). 2020 ESC Guidelines for the diagnosis and management of atrial fibrillation developed in collaboration with the European Association for Cardio-Thoracic Surgery (EACTS). *European Heart Journal*, 42(5), 373–498. <https://doi.org/10.1093/eurheartj/ehaa612>

- Jiao, L., Zhang, F., Liu, F., Yang, S., Li, L., Feng, Z., & Qu, R. (2019). A Survey of Deep Learning-Based Object Detection. *IEEE Access*, 7, 128837–128868. <https://doi.org/10.1109/ACCESS.2019.2939201>
- Lee, A. C.-L., Harris, J. L., Khanna, K. K., & Hong, J.-H. (2019). A Comprehensive Review on Current Advances in Peptide Drug Development and Design. *International Journal of Molecular Sciences*, 20(10), 2383. <https://doi.org/10.3390/ijms20102383>
- Leemans, S. J. J., Poppe, E., & Wynn, M. T. (2019). Directly Follows-Based Process Mining: Exploration & a Case Study. *2019 International Conference on Process Mining (ICPM)*, 25–32. <https://doi.org/10.1109/ICPM.2019.00015>
- Lin, Q., Zhao, S., Gao, D., Lou, Y., Yang, S., Musa, S. S., Wang, M. H., Cai, Y., Wang, W., Yang, L., & He, D. (2020). A conceptual model for the coronavirus disease 2019 (COVID-19) outbreak in Wuhan, China with individual reaction and governmental action. *International Journal of Infectious Diseases*, 93, 211–216. <https://doi.org/10.1016/j.ijid.2020.02.058>
- Liu, Z., Mao, H., Wu, C.-Y., Feichtenhofer, C., Darrell, T., & Xie, S. (2022). A ConvNet for the 2020s. *2022 IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR)*, 11966–11976. <https://doi.org/10.1109/CVPR52688.2022.01167>
- Maginn, C. (2020). After the Armada: Thanksgiving in Ireland, 1589. *Historical Research*, 93(259), 23–37. <https://doi.org/10.1093/hisres/htz002>
- Mazza, C., Ricci, E., Biondi, S., Colasanti, M., Ferracuti, S., Napoli, C., & Roma, P. (2020). A Nationwide Survey of Psychological Distress among Italian People during the COVID-19 Pandemic: Immediate Psychological Responses and Associated Factors. *International Journal of Environmental Research and Public Health*, 17(9), 3165. <https://doi.org/10.3390/ijerph17093165>
- Meyer, J., McDowell, C., Lansing, J., Brower, C., Smith, L., Tully, M., & Herring, M. (2020). Changes in Physical Activity and Sedentary Behavior in Response to COVID-19 and Their Associations with Mental Health in 3052 US Adults. *International Journal of Environmental Research and Public Health*, 17(18), 6469. <https://doi.org/10.3390/ijerph17186469>
- Mohammed, A., Harris, I., & Govindan, K. (2019). A hybrid MCDM-FMOO approach for sustainable supplier selection and order allocation. *International Journal of Production Economics*, 217, 171–184. <https://doi.org/10.1016/j.ijpe.2019.02.003>
- Montag, C., & Elhai, J. D. (2019). A new agenda for personality psychology in the digital age? *Personality and Individual Differences*, 147, 128–134. <https://doi.org/10.1016/j.paid.2019.03.045>
- Mothukuri, V., Parizi, R. M., Pouriye, S., Huang, Y., Dehghantanha, A., & Srivastava, G. (2021). A survey on security and privacy of federated learning. *Future Generation Computer Systems*, 115, 619–640. <https://doi.org/10.1016/j.future.2020.10.007>
- Qin, C., Zhou, L., Hu, Z., Zhang, S., Yang, S., Tao, Y., Xie, C., Ma, K., Shang, K., Wang, W., & Tian, D.-S. (2020). Dysregulation of Immune Response in Patients With Coronavirus 2019 (COVID-19) in Wuhan, China. *Clinical Infectious Diseases*, 71(15), 762–768. <https://doi.org/10.1093/cid/ciaa248>
- Sette, A., & Crotty, S. (2021). Adaptive immunity to SARS-CoV-2 and COVID-19. *Cell*, 184(4), 861–880. <https://doi.org/10.1016/j.cell.2021.01.007>
- Shakir Haraty, H. J., & Utaberta, N. (2019). CLEANLINESS INSPECTION OF THE ABLUTION SPACES OF THE FEDERAL TERRITORY MOSQUE. *PLANNING MALAYSIA*, 17. <https://doi.org/10.21837/pm.v17i10.624>
- Tan, M., Pang, R., & Le, Q. V. (2020). EfficientDet: Scalable and Efficient Object Detection. *2020 IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR)*, 10778–10787. <https://doi.org/10.1109/CVPR42600.2020.01079>
- Tu, Y.-F., Chien, C.-S., Yarmishyn, A. A., Lin, Y.-Y., Luo, Y.-H., Lin, Y.-T., Lai, W.-Y., Yang, D.-M., Chou, S.-J., Yang, Y.-P., Wang, M.-L., & Chiou, S.-H. (2020). A Review of SARS-CoV-2 and the Ongoing Clinical Trials. *International Journal of Molecular Sciences*, 21(7), 2657. <https://doi.org/10.3390/ijms21072657>

- Unger, T., Borghi, C., Charchar, F., Khan, N. A., Poulter, N. R., Prabhakaran, D., Ramirez, A., Schlaich, M., Stergiou, G. S., Tomaszewski, M., Wainford, R. D., Williams, B., & Schutte, A. E. (2020). 2020 International Society of Hypertension Global Hypertension Practice Guidelines. *Hypertension*, 75(6), 1334–1357. <https://doi.org/10.1161/HYPERTENSIONAHA.120.15026>
- Van Hout, M. C., Bigland, C., & Mariniello, T. (2023). A legal-realist assessment of the Zimbabwean correctional system response to COVID-19 during state disaster measures. *International Journal of Prisoner Health*, 19(3), 290–305. <https://doi.org/10.1108/IJPH-10-2021-0104>
- Wang, S., Tuor, T., Salonidis, T., Leung, K. K., Makaya, C., He, T., & Chan, K. (2019). Adaptive Federated Learning in Resource Constrained Edge Computing Systems. *IEEE Journal on Selected Areas in Communications*, 37(6), 1205–1221. <https://doi.org/10.1109/JSAC.2019.2904348>
- Xu, G., Schwarz, P., & Yang, H. (2020). Adjusting energy consumption structure to achieve China's CO2 emissions peak. *Renewable and Sustainable Energy Reviews*, 122, 109737. <https://doi.org/10.1016/j.rser.2020.109737>

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