# CHALLENGES OF USING TECHNOLOGY IN ISLAMIC RELIGIOUS EDUCATION LEARNING
## (Application of Flipped-Classroom in Class X PAI Subjects at SMA Plus Pagelaran Subang)

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***ABSTRACT***

*PAI material at various levels of high school has different characteristics compared to the levels below, namely in terms of content, weight, and deepening of the material both psychologically, philosophically, sociologically, and technologically. This article aims to discuss the use of flipped classrooms in PAI subjects at the high school level, and find out its implementation, disadvantages, advantages, and ethical issues that arise. The method used is qualitative with a descriptive approach. The data collected is from interviews with PAI class X teachers. Based on the interviews, it can be concluded that by using a flipped classroom, PAI teachers will become more skilled in the use of technology. Students are more independent and actively use their time to study. But in the lack of flipped-classroom, teachers have become busier in preparing materials in the form of videos or PPTs so that students can access them at home. As for students, their free time has become less. The challenge that arises is that PAI learning has long used the teacher center so that students can learn as well as get suri tauladan directly from the teacher's knowledge. Meanwhile, with flipped classrooms that use student-centered methods and technology, there are fewer opportunities for students to get knowledge transfer, value transfer, and character building from suri tauladan PAI teachers.*

**Keywords:** *Islamic Religious Education, Flipped classroom, ethical issues*

**ABSTRAK**

Materi PAI di berbagai di tingkat SMA memiliki karakteristik yang berbeda dibandingkan dengan jenjang di bawahnya, yaitu dari segi isi, bobot maupun pendalaman materi baik secara psikologis, filosofis, sosiologis dan teknologi. Artikel ini bertujuan membahas mengenai penggunaan *flipped-classroom* pada mata pelajaran PAI di tingkat SMA, untuk mengetahui implementasinya, kekurangan, kelebihan, dan *ethical issue* yang timbul. Metode yang digunakan adalah kualitatif dengan pendekatan deskripsi. Data yang dikumpulkan yaitu dari wawancara dengan guru PAI kelas X. Berdasarkan wawancara, dapat disimpulkan bahwa dengan menggunakan *flipped-classroom,* keuntungan bagi guru PAI yaitu menjadi lebih terampil dalam penggunaan teknologi. Siswa lebih mandiri dan mengaktifkan waktunya untuk belajar. Namun kekurangan *flipped-classroom,* guru menjadi lebih sibuk dalam mempersiapkan materi dalam bentuk video atau PPT agar siswa dapat mengaksesnya di rumah. Sedangkan bagi siswa, waktu luang mereka menjadi lebih sedikit. Tantangan yang muncul adalah pembelajaran PAI sejak dulu menggunakan metode *teacher center*, dengan begitu siswa dapat belajar sekaligus mendapat suri tauladan langsung dari kesolehan guru. Sedangkan dengan *flipped-classroom* yang menggunakan metode *student center* dan teknologi, maka kesempatan siswa untuk mendapat *transfer knowledge*, *transfer values,* dan *character building* dari suri tauladan guru PAI semakin sedikit.

**Kata kunci**: *Pendidikan Agama Islam, Flipped classroom, tantangan teknologi*

## A. INTRODUCTION

The role of education is very important in today's digital era in creating a life that is intelligent and open to progress. The progress of the times has changed the paradigm of the way of thinking and acting in everything, especially in directing and leading learners to be more active and creative (Fitri Meliani et al. 2021). In increasing the motivation and activeness of learning, students need more creativity from educators to guide them with various means so that the individual or group can optimize their potential. One of the tools that teachers can use to achieve learning effectiveness is the selection of media that is on the material to be taught (Supriani et al. 2022).

Teachers need to involve students so that they can learn directly and concretely and find an answer to a problem now student-centered learning has been widely applied in various countries, although in practice in the field students are not necessarily left to find information on their own without guidance from the teacher (Fitri Meliani, Ahmad, and Suhartini 2022). The role of a transformed teacher who was originally only a messenger became a facilitator to accompany students during the learning process. Concretely, educators should be able to provoke or encourage student activity through interesting learning models and according to the needs of students so that student motivation increases to engage more actively in the classroom (Sutisna, Mulyadi, and Alinawati 2019).

The development of learning occurs through the process of receiving information and then processing and producing an output in the form of learning outcomes. In information processing, there is interaction in several things, namely interaction in internal conditions (cognitive processes and individual states), and external conditions (stimuli from the environment) and the interaction of both will obtain learning outcomes. In the learning process includes the interrelationship between verbal information, intellectual skills, cognitive strategies, attitudes, and motor skills. E-learning is one of the breakthroughs in the world of education that utilizes information technology. Various online learning models have also been developed. For example, blended learning, distance learning, and flipped learning. One of the online learning models that are currently quite widely studied in educational research is flipped learning (Ichsan et al. 2020).

The originators of the flipped learning model were Bergmann and Sams chemistry teachers at Colorado's Woodland Park High School in 2007. Some students in their classes are often unable to participate in school learning because they have to participate in competitions, or other similar matches and events. In anticipation of this, teachers developed videos to record the learning, demonstrations, and slides that were shown. This recording is then uploaded on YouTube so that students can download it anytime and anywhere (Dharma and Sihombing 2020). The use of flipped learning models is interpreted in the classroom into flipped classrooms. With the application of the flipped classroom learning model, students who have learning difficulties or are left behind can follow the learning well and can pass the exam. According to Bergmann & Sam, the flipped classroom method is an innovative pedagogical approach that focuses on learner-centered learning by reversing the traditional teaching system that has been carried out by educators (Affida and Zainiyati 2022).

The above problem gave rise to a research idea, namely developing flipped classroom learning based on information technology. This opinion is supported by McLaughin, that this flipped classroom approach is suitable for teachers to use to save time teaching in the classroom. This is the opinion of Berger & D'Ascoli who stated that the use of technology in teaching can help overcome the problem of insufficient time in teaching (Anggraeni and Bahri 2022). The results of Anggraeni & Bahri's research stated that students' mastery of concepts before and after learning with flipped classroom learning experienced an increase in achievement. This means flipped classroom learning can improve students' mastery of concepts. Student creativity during the flipped classroom learning process belongs to the excellent category in terms of identifying sources of information, generating and selecting ideas, presenting work results to the audience, and generating product creativity (Anggraeni and Bahri 2022).

The flipped classroom learning method is part of a blended learning model that combines synchronous and asynchronous. Synchronous learning takes place in the classroom in real time. Students engaged with educators as well as other learners also received responses at the same time. Asynchronous learning, on the other hand, is more independent learning. Conducted on digital platforms, learning content can be accessed through several types of media. The use of technology is fundamental in flipped classrooms and needs to be considered by educators in the digital era, where technology can be used as a tool to create meaningful experiences in learning (Charniak 2018). According to Bishop and Verleger, the flipped classroom is an interactive learning method during both live and computer-based learning. Various previous studies have stated that the flipped classroom method can increase student learning motivation because students are required to participate in preparing for learning. Students will gain meaningfulness in learning because they are directly involved in learning. In another study, it was stated that there is a positive perception from educators, parents, and students towards the application of flipped classrooms because it is considered to be able to support the learning process (Azman, Sirat, and Ahmad 2014).

Flipped classroom learning can facilitate students to develop creativity during the process and product stages very well. This is reinforced by the opinion of Damayanti that flipped classroom learning that has been carried out can improve students' creative attitudes, and responsibilities, and improve skills. Hanifuddin stated that flipped classrooms must use adequate facilities and infrastructure in the process of preparing teaching materials which mean of flipped classrooms to make learning videos, aims when students before entering class and when they are still not familiar with the material presented will repeat it so that they are deeper in understanding the learning material (Sumarni et al. 2020).

From various previous studies, this method is more widely used in learning science, mathematics, and health fields, therefore researchers feel it is important to research the development of flipped classroom methods in learning Islamic religious education based on various previous research results that show the effectiveness of this method. Given the need for experience in Islamic religious education teachings that do not just provide knowledge, the author intends to reveal how the flipped classroom method can be an alternative to PAI learning in the digital era.

## B. METHOD

This article is an attempt to analyze the use of flipped classrooms in PAI learning with a field approach. This research was conducted on class X PAI learning at SMA Plus Pagelaran Subang in September 2022. The primary data of this study was taken from interviews with PAI teachers, while secondary data was taken from national and international books and journals related to flipped classrooms. This research was carried out in several stages, namely: (1) data search; (2) data analysis, which is carried out by the content analysis method by identifying objective and systematic information; and (3) concluding the form of descriptions. Identify the application of the flipped classroom model used by PAI teachers is Youtube and PowerPoint media, which discusses the material of dressing by Islamic law. The research method used is a type of qualitative research, that is, a research method based on natural conditions (Sugiyono 2015).

## C. RESULTS AND DISCUSSION
### 1. Flipped Classroom
Flipped learning is one of the learning models that utilize information technology. According to McKnight, flipped learning is a learning model that combines online learning with face-to-face learning. Online learning is intended to provide materials and explanations and provide assignments for later work in face-to-face classes. In face-to-face learning, task discussions, case studies, or problem-solving are carried out, which in essence activates students and provides a broad learning experience or commonly called SCL (Student Center Learning). Learning with a model like this will be more effective because the subject matter can be accessed by students anytime and anywhere through internet facilities. Learning remains face-to-face but teachers and students are in different places (Musthafa and Meliani 2021).

Flipped learning is different from blended learning. The flipped learning method can be face-to-face every day, then several components of e-learning learning are inserted, or vice versa. Most teachers use e-learning, then insert face-to-face methods. Flipped learning is learning that combines classroom meetings with online learning. In flipped learning things that are usually done in the classroom such as explaining the material, and giving assignments, exercises and homework are moved into online learning. Instead, homework (such as exercises, case studies, problem-solving, and the like) is done in class. While listening to the teacher's explanation becomes a chore in the form of a video. Therefore, this learning is called flipped learning.

Flipped classrooms are a way that teachers can provide by minimizing hands-on instruction in teaching practice while maximizing interaction with each other. The flipped classroom is the learning process of students learning more about the subject matter at home by observing learning videos so that teaching and learning activities in the classroom are more effective for working on assignments, and discussions about materials or problems that students do not yet understand. Thus, it is hoped that when students experience difficulties, they can be directly consulted with their friends or with the teacher so that the problem can be solved immediately. Even students are also able to convey their learning results at home and discuss them together in class (F Meliani et al. 2022). The process of the flipped classroom learning model can be seen in the following image:
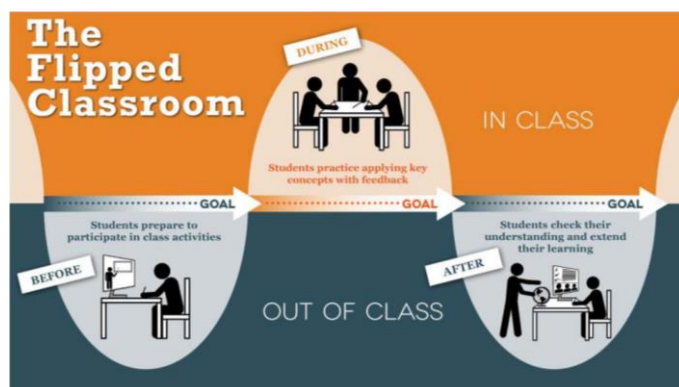
Image 1. *Flipped Classroom Learning Model* (Vereş and Muntean 2021)

With flipped classrooms, students have more time to complete case studies, do problem-based learning, practice, and discuss and mature the material that has been learned at home. The development of flipped classrooms carried out by teachers is seen professionally by looking at learning videos from teachers, in its implementation learning in the classroom can be used more effectively and creatively, parents can see exercises at home, student achievement increases, students can learn theories that support new approaches, use technology, and are suitable for modern learning. Learners can learn anytime they choose, ask questions in the comments section, and share their thoughts or understanding of a learning topic with teachers and other learners. In traditional learning, the teacher delivers material in class, then assigns additional assignments at home. On the contrary, the use of the flipped classroom method facilitates learning through video, power points, e-learning, and other media to be learned at home, then discussed in class (Harimurti 2019).

Flipped classroom moves to learn out of the classroom with the use of electronic media, the internet, and assignments at home. Through this method, students can watch videos about learning materials and then prepare questions that will be asked when studying in class. This is considered to be able to support the learning process because the process of observing and observing has been carried out at home, while when students come to class, they have brought provisions in the form of basic knowledge and are ready to analyze the form of problem-solving when facing difficulties in class. The flipped classroom method does not change pedagogic concepts, on the contrary, it can strengthen the principle of active learning through student involvement, challenging the role of students who are only passive listeners to participate in learning activities (Sari and Hamami 2022).

Anggraeni & Bahri's study (2022) shows that four types of flipped classroom types can be applied in PAI subjects, namely:

a. Traditional flipped, where students watch learning videos at home, then in class carry out activities followed by doing assignments in groups and ending with giving quizzes individually.

b. Flipped mastery, that is, before students watch the learning video at home, the teacher repeats it in class.

c. Peer instruction flipped, i.e. students learn the basic material before starting learning in class through video. When in class, students can answer conceptual questions individually and students can argue about the questions given to convince answers

to their peers. At the end of the learning, students are given an individual comprehension test.

d. Problem-biassed learning is flipped, that is, students can solve problems that will be raised by the teacher in class after students conduct experiments and evaluations from the videos they watch at home.

**2. The Relationship of Flipped Classroom Learning to Bloom's theory**

The flipped classroom method is divided into three stages of learning, namely, before class starts (pre-class), when class starts (in-class), and after class ends (after class). In the stage before class starts, students have access to the learning materials to be discussed. At this stage, students are expected to be able to remember and understand the material. Then when class starts, students can apply and analyze through interactive activities in the classroom in the form of discussions and other activities. Next is the activity of evaluating and working on certain projects or tasks as activities after class. The thing to note is that the pre-class stage needs to be designed appropriately, usually containing readings, videos, or short audio that contains the main points of discussion. In pre-class activities, it should be able to guide students but not contain too detailed discussions. The success of this method depends on the interaction of activities before class and ethics in class. In-class activities can clarify and reinforce discussions that have not been included in pre-class activities. Therefore the two must be interrelated and must not be disconnected (Ubaidillah 2019).

Table 1. *Flipped classroom activity sequence* (Anggraeni and Bahri 2022)

| Stages | Activities | Purpose |
|---|---|---|
| Pre-class | Students watch videos, power points, and other learning resources provided by educators related to the topic to be studied | Learners prepare for learning. Learners are actively involved in |
| In-class | Students are jointly guided by educators to practice and deepen the material | For students to gain understanding and learning experience |
| After class | Students repeat the material and re-examine the understanding gained in class | So that students do not forget easily and make learning more meaningful |

The stages of learning activities as table 1 are related to bloom taxonomic levels which explain several stages of learning, namely, remembering, understanding, applying, analyzing, evaluating, and creating. These stages when depicted will form an inverted pyramid. Based on the level, if it is associated with the flipped classroom method, it will fix figure 1 as follows:
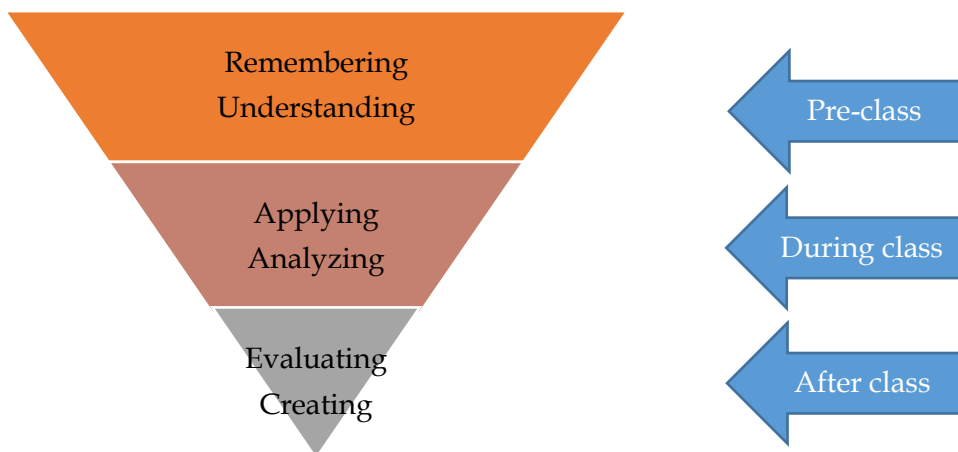
Image 2. The linkage of flipped classrooms to Bloom's theory (Harimurti 2019)

Bloom's taxonomy shows the stages of each level of learning. The flipped classroom method helps learners in activities that require higher-order thinking. In general, low levels of thinking such as remembering and understanding have been formed outside the classroom while at high levels cognitive levels are formed in the classroom. The flipped classroom method helps create learning that focuses on developing high-order thinking skills (HOTs) starting with developing low-order thinking skills (LOTs) as the basic foundation to go to a higher level. In the application of flipped classrooms, educators are required to be able to present learning experiences outside the classroom that are relevant to form LOTs and be developed into HOTs in the classroom. There are at least three components that must be prepared for the experience outside the classroom to be relevant, namely learning materials, learning tools or media, and evaluation (Usmadi and Ergusni 2019).

The use of media and technology in learning is very important to the continuity of this learning method. In its implementation, it is inseparable from the obstacles faced, including differences in the absorption of students that cause different learning speeds, students must get used to interaction through online learning media, and it is difficult to encourage student interaction. Overcoming this problem requires the ability of educators to stimulate students to get feedback. The application of the flipped classroom method can be used as an alternative to learning in the digital era, because it can improve the quality of student learning, from the beginning only being given tasks. Combining online and offline learning has various advantages in preparing for the journey students can participate in designing and being directly involved in learning. With this, educators must utilize various learning resources so that this method can be carried out properly and have an impact on students as expected (Sudaryanto, Widayati, and Amalia 2020).

## 3. PAI Learning at the High School Level

In the pai material at the high school level class X, 11 chapters need to be studied and mastered by students according to KI and KD. The material in high school is broader and more in-depth, and more about the values that can be taken from the theme of the material, this can be known when looking at the concept map. By the approach used in the independent curriculum, students are invited to be bold to look for other learning resources that are available and spread widely around them. The role of the teacher in improving and adjusting

the absorption of students with the availability of activities in this book is very important. Teachers can enrich it with creations in the form of other appropriate and relevant activities sourced from the social and natural environment (Darmawati, S. Pettalongi, and Idhan 2019).

In one year of the learning process, there are eleven main chapters given to students or students, eleven chapters are given in two semesters. In the first semester, there are five chapters given. Each chapter will be described in each sub-chapter, which aims to be easy in delivery, and in material activities there are limitations. In the second semester, there are six main chapters described in more detailed sub-chapters. The teacher must understand the material, and explain everything from understanding to wisdom from what has been learned. In this case, it is hoped that students will not only know but students are expected to be able to practice it. Independent curriculum, students are expected to be more active, so the teacher only directs and plays a more role when viewed from the materials presented, how to open up ideas, criticize things around students, enrich the treasures of students, and noble messages than apply them (Irawati et al. 2022).

Regarding the learning model or material delivery, teachers can use different techniques according to the material, so that the material can be direct and easy to understand. Teachers motivate students contextually according to the benefits and application of the material. For example, the study of the desire of a person who wears a hijab, solely because of following the commands of Allah SWT. Guru presents it as an observation process that explains the study material "Muslim and Muslim dress is a Mirror of Personality and Self-Beauty", as the basis and beginning of the formation of students' religious understanding and passion. This material can also be developed through the display of videos, films, images, and stories, or by showing paper clippings that have been made (media by design) that contain equivalent explanations, or are more creative and innovative. Students individually and classically, are asked to see and observe the study of Muslim and Muslim dress as a mirror of personality and beauty oneself or show videos, films, pictures, stories, or paper cutouts that have been made (media by design) which contains the explanation "Muslim and Muslim dress is a Mirror of Personality and Self-Beauty" (Mauladina and Giantara 2020).

Before, during the process, and after learning, the teacher is expected to provide reinforcement and explanation to students, so that the process of observing both individually and classically takes place completely, well, and correctly. In addition, it can also be done with the story method, Suri tauladan, or direct practice. Direct practice, methods are very suitable to be applied to the hajj chapter. Because the chapters that do have to be practiced so that the students can understand clearly. In this teaching program, it is quite effective if after being given the material, students are given the task of answering the questions of the material. This can be used to find out the extent of the teacher's success in delivering the material, as well as being material for teacher evaluation. PAI material at the high school level can be reviewed from various aspects (Laili 2020), as follows:

a. Psychological Aspects

At the age of ma, high school, or vocational students, the material provided is quite simple, because at that age their thinking power is not like in junior high school or MTs, they are easier to understand and more mature. They can analyze a problem,

they are also easier to direct to be able to practice a theme (hajj chapter) to facilitate the teaching and learning process.

b. Philosophical Aspects

In terms of philosophy, the materials given to high school age are not too difficult, because these materials are materials that were taught when they were in junior high school. The difference is that this material is more detailed, while the material during junior high school is only in general. So for high school age, these materials do not make it difficult for them.

c. Sociological Aspects

PAI material at the high school level from the first to the last chapter is material that must be applied or practiced in everyday life. So they will not be unfamiliar with practicing it.

d. Technology Aspects

In practice, teachers can create teaching materials in various forms using technological applications, as long as the material can be delivered as a whole and the results are maximum.

## 4. Application of Flipped Classroom in PAI Class X Subjects

Based on interviews with pai class X SMA Plus Performance teachers, flipped classroom learning is carried out through several stages as follows:

Table 2. The order of flipped classroom activities based on interviews with pai class X SMA Plus performance teachers

| Stage | Activities | Purpose |
|---|---|---|
| P*re-class* | 1) 1) Students learn the material to be studied tomorrow by reviewing the night before by forming small groups of 4-5 people,<br>2) In addition to discussing and accessing information from websites and videos, students also record problems they find to be presented during class time, | Learners prepare for learning. Learners are actively involved in preparing and designing learning |
| *In-class* | 1) When entering the classroom, the teacher enters the classroom and salutes the students,<br>2) the teacher greets and asks about the student's readiness to learn, the teacher leads the don't, the teacher invites random students to stand forward | For students to gain understanding and learning experience |

| | | |
|---|---|---|
| | to the front of the class to read, give meaning and explain the material that has been studied before, | |
| | 3) the teacher invites other students to ask something they do not understand, the teacher instructs the explaining student to answer the questions asked by his friends, | |
| | 4) only after answering the question, the teacher invites the standing students to sit back in their respective seats, then the teacher corrects the student's explanation and accompanies the explanation as deemed necessary, | |
| | 5) the teacher gives an evaluation in the form of posted to the students, Before closing the lesson, the teacher inferences the material learned and does not forget to give motivation and enthusiasm to the students, and | |
| | 6) the teacher ends the lesson with the reading of do'a and greetings. | |
| *After class* | Students repeat the material and re-examine the understanding gained in class. | So that students do not forget easily and make learning more meaningful |

Learning through the flipped classroom model is judged by PAI teachers to be more effective than using lectures. This learning model can improve the learning outcomes and learning motivation of students. It is proven that more students are actively asking questions and discussing classroom learning through questions and students' observations of the material they have prepared the night before. The PAI teacher explained that if only one approach, namely lectures, students only listen to explanations and it seems that students get bored and sleepy quickly.

## 5. Advantages and Disadvantages of Flipped Classroom

Based on interviews with PAI teachers in class X SMA Plus Pagelaran about the advantages and disadvantages of using flipped classrooms for students and teachers, researchers mapped in table 3 as follows:

Table 3. Mapping the advantages and disadvantages of flipped classrooms based on interviews with PAI class X SMA Plus Pagelaran teachers

| Advantages for students | Disadvantages for students |
|---|---|
| 1. 1. The student can repeat the video as needed so that he understands the material, <br> 2. Students can access the video from anywhere as long as it has sufficient facilities and can even be copied via flash and downloaded, <br> 3. Efficient, because students are asked to study the material at home, and while in class, students can focus more on their difficulty in understanding the material or their ability to solve problems related to the material, <br> 4. Students are required to learn independently by utilizing the learning videos provided to support the spirit of learning, <br> 5. Students can better understand the material to be taught, <br> 6. The teaching and learning process becomes more effective, <br> 7. This can lead to fun learning, Can learn from various sources, Students can be actively involved in asking questions, listening to explanations, and solving problems, <br> 8. Making it easier for parents to supervise students learning at home. | 1. Students may need a lot of support to ensure they understand the material presented in the video, <br> 2. Students are unable to ask questions to their instructors or peers if watching the video only, <br> 3. Students tend to get bored faster if each PAI subject matter uses video, <br> 4. Student playtime is reduced, <br> 5. If the student does not learn the material, then the student can fall behind the other students, <br> 6. It costs a lot of money, especially if you use video and internet facilities, a pretty good internet connection is needed to access videos, <br> 7. Not all students have internet access, <br> 8. Not necessarily all students are suitable for studying in front of a computer/laptop, <br> 9. Not all students have the motivation to study independently at home, and <br> 10. Do not guarantee that students can see videos with focus. |
| Advantages for teachers | Disadvantages for teachers |
| 1. Learning is more effective because it is in the form of videos, <br> 2. Roles change to facilitators, <br> 3. Save learning time, and <br> 4. Interactive communication occurs between students and teachers. | 1. Tasks increase by preparing learning materials in the form of short videos, and various media, preparing questions to ask to stimulate students and build an interactive learning atmosphere, <br> 2. To watch videos, at least adequate facilities are needed, both computers, laptops, and cellphones, and make it difficult for students who do not have these facilities, <br> 3. A pretty good internet connection is needed to upload or access videos. |

| | 4. Especially if the file is large, it will take a long time to open or download it. and the teacher cannot guarantee that students will relearn the video material after class |
|---|---|

Anggraeni & Bahri's study (2022) shows the advantages of flipped classrooms, namely students are more independent and use their time to study at home so that time is not wasted, besides that students can find and complete tasks given by the teacher and then continue the process at school in the teaching and learning process with the teacher. Flipped classrooms are effective in reducing classroom time which generally uses classical methods such as lectures in Islamic schools or madrasas. As is well known, religious lessons tend to be classical and teacher-centered which are easier to convey in the form of lectures. However, teacher-centered makes students dependent on teacher activity which results in them being less independent and having no preparation for learning. This greatly affects the development of their thinking power in analyzing the material obtained.

The application of flipped classrooms can run well if it is in some subject matter that requires critical thinking and practice skills. For example, akidah lessons can be focused on the analysis of learners through the stories of the prophets in the form of animated videos or films. After seeing the video of the story, they summarized the material obtained, which can then be discussed in the classroom collaboratively. From this, it can be said that all subject matter, including PAI material, can be adapted to the strategies and innovations offered by the teacher (Fitri Meliani and Zaqiah 2022).

The last study (Harimurti 2019) shows the obstacle in implementing flipped classrooms on PAI is that in the view of students the use of learning videos and self-study at home new experiences for them, needs to be adapted longer. According to students, the tasks given by the teacher are not taken seriously, or students do not make an effort to study at home so they are far behind their friends who study at home. Another drawback is the low attention of parents to the child's learning process at home, the internet network does not always support it. Hamid & Hadi's study (2020) showed students studying Islamic Religious Education subjects at SMP Negeri 5 Halmahera Tengah after using flipped classrooms are in the high category because the score interval is between 60.5%-100%, which is 89.5%. Hamid & Hadi analyzed the high learning outcomes of students because they are still at the stage of remembering the materials in textbooks and LKS. The results of the study also showed that the flipped classroom model was proven to increase student learning motivation, judging from the activeness of students in online classes, because it became a new experience compared to classical learning in the classroom.

The teacher of PAI class X SMA Plus Pagelaran stated, when students experience problems in understanding the concepts obtained from the material (video and PPT), that's when the role of the teacher applies. In face-to-face activities in the classroom, the teacher gives students the freedom to consult on problems they find when studying videos/materials independently. Teachers can focus on learners who need help understanding the material.

## 5.  Challenges in the Use of Technology in PAI Learning

Digitalization in education demands that the world community be involved in global competition. This has consequences that must be met by students as Indonesian human resources, including the demands of increasing intelligence, tenacity, resilience, innovation, and others. In order not to be left far behind and ready to face global competition, there need to be significant efforts to guide the younger generation as the nation's successor. The flipped learning model strategy is considered more reasonable and compatible in today's technological era, especially in PAI subject matter which tends to be traditional and has very little learning time. PAI materials are now not only found in writing in the book but can also be unearthed through videos and other media (Fransyaigu et al. 2021).

There are several positive impacts of digitalization on the values of Islamic education, including diverse and innovative teaching patterns. Classical teaching turned into teaching based on new technologies such as the internet and computers. In the old days, teachers wrote in chalk, sometimes making simple drawings or using voice and other simple ways to communicate knowledge and information. With the existence of computers and the internet, the activities of analyzing video, sound, music, and images can be combined into a communication process. In the old days, when a teacher talked about how power can change the shape of an object without the help of multimedia, students may not immediately catch it. Levie & Levie reviewed the results of previous research on learning through word, visual and verbal stimuli. They found that visual stimuli produced better learning outcomes for tasks such as remembering, recognizing, remembering, and relating facts to concepts. Flipped learning strategies provide support to learners to complete tasks in the modern learning era (Arwen and Puspita 2020).

In Bloom's taxonomy, the purpose of learning in the cognitive realm is to apply the strategy of the early stage flipped learning model at the stage of remembering and understanding as the lowest levels of the cognitive realm, carried out before class. Meanwhile, student learning activities in the classroom focus more on the top four cognitive levels, namely the applying, analyzing, evaluating, and creating stages (Sumarni et al. 2020). As an illustration, students are presented with a variety of material contained in the form of recorded lectures and videos accessed outside the classroom. Then all forms of knowledge and understanding of the material through reading, and audio-visual will lead students to higher cognitive levels (HOTs) when in the classroom (Harimurti 2019).

The prominent difference between the flipped classroom learning model with the usual learning model lies in the learning center. The usual learning model is usually teacher-centered while the flipped classroom learning model is student-centered. In traditional Islamic education, for example, the slogan approach and lectures there is a transfer of knowledge, transfer of values, and character building that students capture and direct examples of uswatun Hashanah in teachers. Meanwhile, with flipped classrooms, many factors are hindered students from receiving material (Sari and Hamami 2022).

Given that flipped learning strategies are in direct contact with technology, of course, they have limitations. This can happen because learners use their tools. For example, they access learning videos simultaneously by viewing football broadcasts or listening to music. This certainly reduces their attention to the content of the material that has been given by

the teacher. However, these limitations can be overcome if there is intensive supervision and assistance from parents or the closest people to students (Brey 2012).

Online learning uses technology that allows students to use laptops, cellphones, tablets, and other gadgets, where students were previously kept away and even prohibited from holding the device except during school holidays with a certain time limit. The use of these gadgets makes children unable to control themselves for more than just opening learning tools. Television programs also interfere with children's concentration on learning at home. The combination of learning systems from offline to online has also changed children's learning rhythms from neatly structured to unstructured. Because online learning can be done anytime and anywhere, it can be done in the morning, afternoon, afternoon, and evening. It can also be done anywhere, such as at the dining table, in the living room, family room, bedroom, and terrace of the house. This makes students less focused on studying the material presented by their teachers through the media. This is in line with what Ulum states, that there is an element of technology addiction among students, which has been abused beyond the interest of learning due to its flexible rhythm (Yigitcanlar, Mehmood, and Corchado 2021).

There is unlimited information in the virtual world. Cyberspace, in addition to helping to access information easily, also hurts students. There is a lot of negative material waiting on the internet. For example pornography, hatred, racism, crime, violence, and so on. News of harassment such as pedofolia and sexual harassment can be accessed by anyone, including students. Items such as viagra, alcohol, and drugs are offered on the internet. This is certainly very dangerous and greatly affects the learning process both at school and at home. The third negative impact depends on the means of communication and the Internet. Computers and the internet can cause addiction in students or teachers. They become lackluster in the learning process without such tools. To overcome these conditions, teachers need to take advantage of the positive impacts of globalization and protect students from its negative impacts (Sari and Hamami 2022).

The era of digitalization does not necessarily kill traditional and classical learning. Because traditional learning such as lectures and slogans provide things that are irreplaceable by things that are digitized in the modern era. Traditional and slogan learning not only focuses on knowledge as an object of study but also on morality and moral messages transferred by traditional learning that cannot be achieved with digital learning or e-learning. Through a perpetual learning system, Islamic Education institutions can maintain their identity as cadre institutions and cultural heritage institutions. The digital age is proving unable to erode and replace traditional learning (Glueckauf et al. 2018).

## D.  CONCLUSION

The flipped classroom is a type of blended learning that combines synchronous and asynchronous learning (through face-to-face and virtual/online interactions). The results showed that this method is considered effective as an alternative method, especially in materials that require in-depth practice and analysis so that students can get a learning experience from the videos or information needed before students discuss it in class with the teacher. The difficulty in applying this method is that the teacher needs to prepare a lot of

material for students to learn at home. Teachers are required to be able to utilize technology appropriately. Students need to adapt, practicing self-regulation by controlling the desire to open up other content while self-study. The thing that needs to be considered before applying this method is to measure the stages of student development to what extent students can reach understanding, in other words, this method can be applied to facilitate higher-order thinking skills (HOTs), therefore it must adjust to the right age and level of education. The drawback of this research is the field research was conducted through interviews with teachers. Researchers suggest getting more comprehensive results required Classroom action research.

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