CHAPTER V
CONCLUSION AND RECOMMENDATION

This chapter provides an overall assessment of the research and addresses the significance of the study. The first section shows how the research questions have been addressed. The second section elaborates on the implications of the study in the form of recommendations for practice, policy, and further research, grounded in the data. The chapter ends with an overview of the chapter, and of the study.

5.1 Conclusion

5.1.2 Addressing the Research Questions

Research question one: How does the teacher implement web-based courses in post-covid 19 pandemic learning activities?

Three types of web-based course during post-covid 19 pandemic have been identified; full web-based course, web-enhanced course, and web-enriched course. A full web-based course was implemented by the teacher in only a special class with a special condition requiring a full online course. The class is called an athlete class, a coordination program between the school with the Ministry of Youth and Sport. The focus of it is to prepare the students for both national and international sports competitions. During the competition time, it requires them to be away from the school making it impossible to attend the face-to-face session. Moreover, To ensure they continue learning even while away, the teacher provides a full web-based course for them.

The teacher designed a website consisting of instructions, materials, and evaluations. She instructed the students to do particular activities and learn some materials from the website followed by a virtual meeting using a virtual meeting conference application. Since the time is limited and shorter compared to the normal face-to-face session, the meeting was used mostly for a discussion encouraging the students to ask, confirm, or clarify the things they had learned before from the website so that the time could be used optimally. After having the discussion, they were asked to do some practices available on the website individually which they could manage

themselves to do the practices at any time without bothering the training sessions for their competition. Moreover, it is more flexible for them to catch up with the learning activities.

Those activities fulfill two, out of three, criteria of a full web-based course mentioned by Ibrahim and Franklin (1995),; conducted in an online situation in which the learning process relies most on the website and the portion of asynchronous mode is greater than synchronous one encouraging the students to manage their timeline to complete the task and follow the learning activities well. The last criterion which was not found in the study was multinational participants. This is considered reasonable since the school is not categorized into an international school having multinational students. All the students from the athlete class are Indonesians. On the other hand, there is something that can be noted; the teacher sometimes invites native speaker, as the school has cooperation with Pearson Ltd, making it possible for her to invite native speakers coming from other countries virtually so they can still have global sharing session to learn about cultures or habits from people from other countries giving them new learning experience.

Web-enhanced course is the second one identified during the observations. It has the highest portions of web-based course implementation compared to the other two types, full web-based course and web-enriched course. It was implemented for 5 out of seven observations conducted. In this type of web-based course, most of the instructions were given and explained directly by the teacher. For the activities, it can be said that the website helped the teacher to guide the students with the reading activities. It was used to show various texts so the students might have more exposure to the details of the text such as its structure, social function, and also language features used in the texts. In terms of the activities, even though the website was focused on helping the students with reading skills, the teacher provided various reading activities that were different from one session to the other. In one session, she asked the students to work in pairs, in the other sessions she let them work in a bigger group and asked them to share their thoughts about the text with the other groups. The variation of

reading activities was not specifically mentioned or elaborated on the website. It was given directly to them in the classroom. After having those activities, they were asked to do some practices available on the website. While doing the practice, the students can have direct help, feedback, confirmation, or suggestions since they can have direct communication with the teacher. Moreover, those activities reflected can be said as web-enhanced course since the criteria are fulfilled; they can be conducted both in online and face-to-face mode or traditional classroom, major instructions are given in the face-to-face classroom, direct communication between teachers and students can be held, and immediate responses from the teacher as a help for the students can be achieved.

The last type of web-based course named web-enriched course was also identified during the observation. The class activity fulfilled the criteria stated by Khan (1997), Ibrahim and Franklin (1995), Ahn(2005). It was found that the teacher asked the students to read several texts available in the sourcebook. They were asked to work in a group and compare two texts on the books by giving them some guiding questions to help them find the expected comparisons. Then, they were asked to share their thoughts and have discussions with other groups regarding the content of the texts. When the class ended, she still thought that they needed more enrichment so they could have more comparisons as well as a deeper understanding of particular kinds of texts, so she gave extra texts available on the website. There was no exact time for the students to access or learn about the texts on the website. Besides, since the instruction is not detailed specifically on the website, the students who missed the class might be confused about what they needed to do if the only thing they did was read the instructions on the website. Last, the frequency of this situation was rare meaning that it has a very small portion compared to the whole teaching and learning activities which are mostly conducted in the physical classroom. The enrichment that is provided on the website was only given if the teacher thought that the students might need more exploration or exposure to particular materials due to of the lack materials available in the sourcebook.

Research question two: What are the teacher's considerations in implementing web-based course during the post-covid 19 pandemic?

The teacher's considerations in establishing a web-based course during the post-COVID-19 epidemic are related to the things she needs to pay attention to while implementing it in the classroom. Based on the semi-structured interview conducted, it was found that there are three major considerations regarding the web-based implementation. *First*, it is about the learning goals. The learning goals became the first consideration since it would affect the way she selected the materials, learning activities, and also assessments for the students. She took the learning goals as her maps to keep her on the track helping the students to learn at their very best. Besides, having the learning goals as the first consideration allowed her to have careful thought on many aspects such as the topic material selection, time management, class management, the capability of the students, and the design of the website that can attract their attention and motivation to learn. Fortunately, the school supported her decision on the most suitable and rational learning goals for them making it possible for them to achieve the goals during the learning process. This support was considered a positive energy for the teacher since it could make her more focused on the students and comfortable without being burdened by the school demands.

Second, the consideration was related to technical resources. The technical resources in this context are the availability of technology tools and a person to help the students if they face some difficulties. According to the teacher, technical resources were also a major factor affecting the success of the establishment of the teaching and learning process. Since web-based course should be accessed by gadgets, it was clear that the minimum requirement was that the students should have at least a gadget that can help them to access the website and do some activities available on the websites. Another thing to consider was the mastery of the students toward the gadgets they used as the main tool in accessing the website. The teacher could easily decide to involve a web-based course since all students have no problem with the availability and mastery of the technological resources. They were skillful in handling the gadgets and online

applications used in the classroom so that the learning process could run smoothly. *Third*, it was about the students' needs and interests. The involvement of technological tools and applications during Covid—19 pandemic made the students more familiar with the use of gadgets in the learning process. The habits continued when they were in the traditional class encouraging the teacher not to hesitate to conduct web-based course. She tried to adjust things included on the website based on the students' needs and interests. The process of adjustment included the way the teacher decided the topic of the materials, learning activities, online applications, and the design of the website requiring her to select the most interesting and engaging layout as well as the pictures to help the students be more concentrated and motivated to learn.

Research question three: What are the benefits as well as the challenges faced in implementing web-based course during the post-covid 19 pandemic?

There are some benefits identified in the study regarding the web-based course implementation during the post-covid 19 pandemic. They were authenticity, flexibility, capability, durability, and transparency. Authenticity in the implementation of web-based course allowed the teacher to decide the most suitable topic of the materials and learning activities that were close to the students' real life or condition. She believed that when it was something close to the students, it could promote their motivation to learn and develop their critical thinking beneficial for them in coping with the challenges of twenty-first century. As a result, she could create her own website to customize the content and avoid relying solely on the book as the main resource. Web-based courses gave her more freedom to make modifications and adaptations to the materials for the students without disregarding the school's requirements. Last but not least, according to the teacher, authenticity allows students to connect their learning to real-life situations, helping them see learning as ongoing and applicable outside the classroom.

The next benefit mentioned by the teacher was the flexibility offered by the implementation of web-based course. It allowed the teacher to have no worry about having limited time in the classroom since the communication could still be conducted

even though they were separated by geographic location. The website made it possible for the teacher to check their work and provide feedback, and or enrichment opportunities. Besides, it also allowed her to decide the layout and design for the website that she thought more engaging for the students. Since there were no such strict requirements or guidance for the website, it was flexible for her to make it attractive encouraging the students to have positive attitudes toward the learning process. Last, the flexibility also offered the teacher to have more freedom in choosing the instructional delivery as well as pedagogical approaches for particular materials. She could maximize the technology-enhanced learning environment by offering students online chats and virtual classrooms, as well as introducing additional activities to websites so they could have fun at home. Thus, students not only complete classroom tasks as they used to, but they may also participate in new learning experiences through the website that are tailored to their learning requirements and preferences.

The capability of the teacher became another benefit gathered by the implementation of web-based course during post-covid 19 pandemic. The capability in this context was related to the mastery of the teacher in creating or designing the website as well as coping with any problems faced during the process. She conveyed that it took two weeks for her to be able to design the website and master all features involved in the website. Her mastery promoted her confident to continue implementing the web-based course because she knew that she could help the students whenever the students faced any difficulties or challenges during the process. Then, the durability of the website was also considered as one of the benefits according to the teacher. She believed that the materials available on the website have less risk of being damaged or broken compared to the traditional books. Besides, the website can be easily updated in a far shorter time rather than a book. Last, it was about transparency. By having the website, it was not only teacher and students who can see or view it, other stake holders such as parents, and even the school can easily monitor the things that the students received in the classroom. It makes them easier to check because they can do it anywhere at anytime they have so they could always follow the progress of the

students. Even, they could also make communications with the teacher to give her meaningful feedback for the sake of betterment.

About the challenges faced in implementing web-based course during post-covid 19 pandemic, the teacher noted two major things; connectivity and time management. Since the website requires a connection with the internet, therefore, when there is no connection internet it can be used. Thankfully, the school facilitated all school members with high speed of Wifi so they could manage to access the website easily without thinking of buying quota. On the other hand, when the maintenance time came, they needed to use their own internet quota or data to access the website. Some students did not have internet data because it was rare for them to buy it since they relied so much on the Wifi facilitated by the school and their parents at home. Moreover, in this situation, usually, the teacher shared the internet data from her phone to be used by the students so they could still follow the lesson well and were free to access the website and all online applications required. The next challenge was time management. With all the administrative things that the teacher should do, she needed to manage herself in spending her time designing the website, updating the content as well as deciding on the materials, learning activities, and possible assessments for the students. The last thing that became the main concern for the teacher was upgrading her skills to be updated with the newest trends of technological applications that can be involved on the website. To upgrade her capability, some workshops or seminars should be taken requiring special time and budget. In other words, personal issues related to the implementation of web-based course became a challenge for the teacher.

5.2 Recommendation

This study shows that web-based course during post-covid 19 is a rational phenomenon that needs a critical assessment of practice, policy, and further research to increase understanding of how it can be successful. The following sections discuss how this study provides the potential for recommendation in these three respects;

Recommendation for Practice

The first recommendation for practice is related to the professional development for teachers. In specific way, it may include this following steps:

a. Develop Comprehensive Training Programs

   Developing training modules that focus on instructional design concepts, online facilitation approaches, and feedback mechanisms specific to digital environments. For example, one session could address best practices for creating interesting online content, while another may focus on successful online communication and student interaction tactics.

b. Offer Ongoing Coaching and Mentoring

   Create a structure of ongoing support via coaching and mentorship. This could include appointing experienced mentors to less experienced educators, conducting regular check-ins, and creating a forum for educators to discuss difficulties and exchange solutions.

c. Incorporate Technology Integration Workshop

   Plan workshops to explore new technical tools and applications. Encourage educators to explore with various digital technologies and provide hands-on sessions where they may develop and test digital lesson plans and activities.

d. Encourage Collaborative Learning among Educators

Facilitate professional learning communities where teachers can share best practices and creative teaching strategies. This can be accomplished through online forums, scheduled webinars, and collaborative projects that allow educators to share their experiences and resources.

e. Evaluate and Adapt Training Programs

Regularly assess the effectiveness of professional development programs using surveys and participant feedback. Use this information to refine and improve training programs, ensuring they remain relevant and successful.

The second matter related to the practice is equitable access to technology and internet connectivity are critical to the success of web-based courses. Educational institutions must address gaps by taking the following steps:

a. Implement Technology Landing Program

Set up a specific mechanism for managing device loans. This could include developing an online portal via which students and parents can request gadgets, as well as a check-out system that tracks device distribution and return. Make sure there are clear protocols for device collection, maintenance, and troubleshooting. Create a timetable for frequent maintenance and repair of leased devices. Create a helpdesk system so that students may report problems and obtain prompt support. This could include a physical support center or an online ticketing system for technical assistance.

b. Partner Community Organization

Collaborate with Internet Service Providers (ISPs) to develop subsidized or free internet plans for low-income families. Negotiate arrangements that allow discounted pricing or temporary access at key periods, such as the school year or major assignment deadlines. Then, investigate the feasibility

of installing community Wi-Fi hotspots in locations with low connectivity. Collaborate with local businesses or municipal governments to set up secure and dependable Wi-Fi zones for students. The last one is trying to apply for grants or government programs that aim to increase digital access. Use these monies to give Internet access and equipment to students in need.

The third one is incorporating a blended learning approach by integrating web-based course with traditional classroom instruction. To successfully integrate web-based courses with traditional classroom instruction, schools can take the following steps:

a. Design Hybrid Lesson Plans

Create Modular Content: Plan lessons that include both in-person and online components. For example, use classroom time for interactive discussions and group exercises, and assign online modules for private study and practice. Set up an LMS to organize and distribute online materials. Use the LMS to upload assignments, monitor progress, and improve communication between students and teachers.

b. Facilitate Online Group Work

Use online collaboration tools like discussion boards, group chats, and shared documents to help students collaborate on projects and tasks. Then, the teacher may also encourage peer feedback by creating systems for peer review and feedback on internet platforms. This could include assigning peer review activities and giving defined rubrics to help guide the feedback process.

c. Regularly Assess and Refine Strategies

Gather feedback and analyze data. Surveys and focus groups can be used to collect input from students and teachers on the blended learning strategy. Analyze the data to find areas for improvement. Adjust approaches based

on feedback. Adjust the blended learning approach based on evaluation results. This could include modifying instructional ideas, updating technology tools, or improving support systems.

Recommendation for Policy

Establishing a clear quality standard is considered important for ensuring the integrity and effectiveness of web-based courses. Schools should create policies outlining the criteria for content relevance, interaction, accessibility, and assessment procedures. These criteria should be matched with the objectives and reviewed regularly to ensure they represent the best practices in both online and traditional learning activities. Furthermore, adhering to quality standards can promote consistency and coherence across web-based courses, improving the entire learning experience for students. By establishing specific rules for course development and delivery, schools may ensure that online resources are interesting, interactive, and accessible to all students. Quality standards also serve as a benchmark for determining the efficacy of web-based courses, allowing educators to analyze student outcomes and make a rational judgement about instructional design and delivery techniques. Finally, by focusing on quality standards, educational institutions may maintain the value and legitimacy of web-based education, establishing a culture of excellence in online learning.

Additionally, effective data privacy and security regulations are required to secure student information in the online world. Schools must comply with applicable rules and establish safeguards to protect student data from illegal access or misuse, as well as provide instructions for secure data processing and storage. The formulation of policy for web-based courses should be guided by the notion of inclusivity. Schools must proactively meet the needs of diverse learners by developing policies that enhance accessibility and account for individual variations. This could include captions for videos, alternative formats for course materials, and accessible design standards for online content. By stressing inclusion in policy development, schools can foster an

atmosphere in which all students have equal possibilities to succeed in web-based classes.

Recommendation for Further Research

Investigating the effectiveness of web-based course can be an essential topic discussion for the future research. It is intended to figure out the impact on students' learning outcomes and overall learning performances. The type of research might focus on a variety of measures, such as student engagement, academic accomplishment, and retention rates. Comparative studies of web-based and traditional classroom training can provide useful information about the relative benefits and disadvantages of each technique. Researchers can analyze the efficiency of web-based courses in satisfying educational objectives and promoting student success by looking at criteria such as student happiness, assessment performance, and completion rate.

The proposed study will address crucial concerns about the influence of web-based courses on student engagement, academic achievement, and retention, especially when compared to traditional classroom instruction. Additional research will look into how students' pleasure with web-based learning affects their overall academic performance, as well as how these courses help to develop critical thinking abilities, digital literacy, and flexibility. To do this, the research will use a combination of quantitative studies comparing student outcomes in web-based and traditional learning contexts, as well as questionnaires and interviews to collect qualitative data on student experiences. These findings are expected to offer valuable insights into the relative strengths and weaknesses of web-based and traditional educational settings, and provide data on the long-term effectiveness of web-based courses in preparing students for their academic and professional futures.

Moreover, research on the long-term effects of web-based courses can give an illustration or description on their effectiveness in preparing students for future academic and professional future careers. Researchers can investigate if students who participate in web-based learning have better critical thinking abilities, digital literacy,

and flexibility than their classmates. Furthermore, investigations might look into the relationship between web-based course attendance and student outcomes including graduation rates, job possibilities, and lifelong learning habits. By performing comprehensive research on the success of web-based courses, educators and policymakers may make more informed judgments about their incorporation into educational environments, thereby improving the quality and accessibility of online learning experiences.

The next recommendation for the future research is assessing technological innovations that might play a crucial role in succeeding the web-based course implementation. Researchers might conduct a study regarding the use of potential applications that can be involved on the websites for the students to learn. Artificial intelligence, virtual reality, gamification, and adaptive learning technologies can be the alternatives as the focus of the study to examine the delivery and assessment of information in web-based course. For example, artificial intelligence systems can personalize learning experiences by assessing student data and making specific recommendations for training and remediation. Virtual reality simulations provide immersive and interactive learning settings in which students can investigate complicated concepts and scenarios in a safe and controlled setting. Gamification strategies, such as introducing game elements and mechanics into course design, can boost student motivation and engagement by making learning a more enjoyable and rewarding experience. Furthermore, adaptive learning systems employ algorithms to change the pace and difficulty of education based on individual student performance, hence improving learning outcomes and retention rates. By embracing technology developments, instructors may design dynamic and engaging web-based courses that cater to a variety of learning styles and preferences, enabling greater student involvement and knowledge. By having those things investigated, it is expected that the enrichment for the web-based course theory and findings can be achieved.

Future research should focus on how future technologies like artificial intelligence, virtual reality, gamification, and adaptive learning influence student

engagement and learning outcomes in web-based courses. It will be critical to examine the most effective ways to integrate these technologies into various educational contexts, as well as their impact on the accessibility and inclusion of web-based learning. This research could include experimental studies to evaluate the influence of certain technologies, such as AI-powered personalized learning systems and VR simulations, on student engagement, comprehension, and retention. Furthermore, case studies could chronicle and assess the application of novel technology in a variety of educational settings, identifying best practices and potential problems. This research is expected to contribute a better understanding of how technological advancements support or hinder learning in web-based courses, practical guidelines for integrating these technologies to improve educational outcomes, and insights into the larger discussion about the role of technology in modern education, particularly in terms of accessibility and personalization.

Recommendations for improving the design and implementation of web-based courses to increase student performance.In addition, exploring pedagogical strategies is also important to increase the efficacy of web-based course. Pedagogical approaches such as collaborative learning, inquiry-based learning, and project-based learning can be adapted to the online environment in order to enhance active learning and critical thinking abilities. Collaborative learning platforms allow students to connect with peers and participate in asynchronous group projects and conversations, which promotes collaboration and communication skills. Inquiry-based learning enables students to explore and examine issues independently, which helps them improve their research and problem-solving skills. Project-based learning immerses students in real-world difficulties and tasks, providing hands-on experience while encouraging creativity and innovation. Furthermore, using approaches like peer teaching, flipped classrooms, and self-directed learning can help students take control of their learning journey and become lifelong learners. Using a range of pedagogical methodologies, educators can design dynamic and engaging web-based courses that pique students' interest, promote intellectual progress, and prepare them for success in an increasingly digital world.

To begin this research, future researchers might consider on how collaborative, inquiry-based, and project-based learning can be effectively adapted for online environments. Key questions could also look into how pedagogical approaches like peer teaching, flipped classrooms, and self-directed learning affect student engagement and accomplishment in web-based courses. Furthermore, a significant topic of focus is how teachers may strike the correct balance between structure and flexibility to maximize learning in online contexts. Methodologically, this research could include action research, in which teachers adopt and evaluate various educational techniques in web-based courses, methodically examining the effects on student learning and involvement. Comparative analysis could also be used to determine the efficacy of various educational practices in promoting active learning, critical thinking, and collaboration in online contexts. This research is expected to make significant contributions by developing improved pedagogical approaches tailored to the unique needs and opportunities of online learning, evidence-based practices for promoting deeper learning and collaboration among students, and new frameworks for teacher professional development centered on the effective application of these strategies in web-based course.

Implications of Recommendations for Teachers, Students, Parents, Administrators, and Collaborations

In investigating the broader implications of the recommendation for web-based courses, it is also important to evaluate how different stakeholders—teachers, students, parents, and administrators—will be affected. Here are the scenarios that can illustrate the potential benefits and challenges of the recommendations that ay present for each stakeholder.

1. Teacher: Empowerment and Professional Growth

   Implications: The recommendation, such as the use of more interactive and individualized learning tools, might result in significant professional development for teachers. Teachers who understand new technology and

approaches may feel more powerful in their professions. On the other hand, there is the necessity for continued professional growth and the possibility for stress as a result of adapting to technological advances.

Case Scenario: A teacher in a rural school district is introduced to an advanced Learning Management System (LMS) that provides real-time student performance data. While teachers initially struggle with the new approach, they eventually discover new strategies for differentiated instruction. As a result, their students' performance improves, but the teacher also faces an increased effort and pressure to stay current.

2. Students: Engagement and Equity

   Implications: For students, particularly in a post-COVID-19 educational environment, focusing on individualized learning through technology can lead to increased engagement and better learning results. However, discrepancies in access to technology can worsen pre-existing inequities, putting some students at a disadvantage.

   Case Scenario: A high school uses digital resources to establish a project-based learning method, which greatly increases student engagement in an urban classroom. However, due to inadequate internet connectivity, students at a neighboring rural school are unable to access the same services. The disparity in access causes a learning gap, causing anger among the students and parents at the under-resourced school.

3. Parents: Involvement and responsibility

   Implications: Parents may become more active in their children's education, particularly with the rising usage of digital platforms that provide regular updates on student achievement. However, this may place an increased pressure on parents to ensure their children are keeping up with their academics, especially in families where parents are not as tech-savvy or have the time to interact with these platforms.

Case Scenario: In a suburban district, parents have access to a parent portal that allows them to check their child's assignments and grades in real time. While some parents find this tool useful in keeping their child on track, others are overwhelmed by the need to continually monitor academic progress. This causes difficulties within households as parents are unable to keep up with these demands, thereby compromising their connection with their children and the school.

4. Administrators: Policy and Resouce Allocation

   Implications: School administrators will undoubtedly confront difficulties in reconciling the introduction of new technologies with financial restrictions and the requirement for equitable resource allocation. The recommendations may necessitate a rethinking of present policies and the implementation of new methods for educating personnel, maintaining infrastructure, and ensuring that all students have access to the appropriate technologies.

   Case Scenario: The district administration chooses to implement a district-wide digital literacy program, which includes issuing gadgets to all students. At the same time, it is very possible for the administrators to face criticism when it is shown that there are insufficient IT staff to give timely support, resulting in delays in addressing technical issues. Furthermore, financial overruns cause the district to eliminate funds from other programs, causing resentment among educators and parents.