

The Study on Blended Learning Management Approaches to Develop Students' Potential under the COVID-19 Pandemic in Thailand

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Abstract

The study on blended learning management approaches to develop student potential at the basic education level under the outbreak of COVID-19 aimed to 1) study blended learning management characteristics to develop student potential at the basic education level under the outbreak of COVID-19; 2) study blended learning management approaches to develop student potential at the basic education level under the outbreak of COVID-19; and 3) provide suggestions for blended learning management approaches to develop student potential at the basic education level under the virus outbreak. Four steps of research and development were used for the implementation, i.e., studying basic data to develop blended learning management approaches, drafting blended learning management approaches, testing blended learning management approaches, and providing suggestions for blended learning management approaches. The results revealed that:

1) Blended learning management characteristics to develop student potential were various and flexible with the context of students in each particular school. Under the COVID-19 outbreak, learning management should be integrated.

2) Learning management approaches were divided into on-site and on-hand learning management approaches at the elementary level and on-site and on-hand learning management approaches at the high school level.

3) For suggestions for learning management approaches, involved agencies should give precedence to teacher development in terms of integrated learning management design, active learning management, coaching, creating and using learning media as well as sources, and authentic assessment.

Besides, agencies at the policy level should also support concise curricular integration, online learning sources, the development of online learning sources, promotion of assessment to develop authentic learning, and creating strong education management networks.

Keywords: Blended learning; COVID-19; Teaching guidelines

Introduction

The outbreak of COVID-19 since the end of 2019 up until currently has affected education management in school systems all over the world. Media and technology are brought for instruction, along with newly developed learning models and methods to support the outbreak in the context of areas with different severity in order to fix the problem of learning disruption and to prevent too long learning loss. For the effects of the outbreak of COVID-19 in Thailand according to the study on the effects of the outbreak of COVID-19 on learning management for students at basic education level by Office of the Education Council (2017), positive effects on learning management in schools were found. For example, education management plans were adjusted. Supervision, monitoring, and assessment were also adjusted. New technology-based learning management models were used. As a consequence, both teachers and students had more opportunities to develop learning through technology.

Even so, the outbreak also caused negative effects on students. For example, they received less practical skills, could not perform activities with classmates, and lost opportunities to learn from external sources as well as from real practices. These all caused lower learning management quality. Office of the Education Council (2017) stated about the effects of the outbreak of COVID-19 in Equity Forum, an educational talk, on “How schools must adapt to COVID-19 that invades education,” hosted by Equitable Education Fund (EEF) on 28 January 2021.

He pointed that the outbreak of COVID-19 affected students all over the world, particularly learning loss, specifically in Thai children due to school closing that affected their learning.

They can also be clear approaches for teachers to promote learning quality continuously. The key objectives of the research were to 1) study blended learning management characteristics to develop student potential at basic education level under the outbreak of COVID-19; 2) study blended learning management approaches to develop student potential at basic education level under the outbreak of COVID-19; and 3) provide suggestions for blended learning management approaches to develop student potential at basic education level under the outbreak of COVID-19.

Objective

1. Study blended learning management characteristics to develop student potential at basic education level under the outbreak of COVID-19
2. Study blended learning management approaches to develop student potential at basic education level under the outbreak of COVID-19
3. Provide suggestions for blended learning management approaches to develop student potential at basic education level under the virus outbreak

Literature Review

The current goals of education management for student development is to reinforce their learning and full self-development based on their potential in order to prepare students for stepping to the future society; and to develop students as learning persons with continuous self-development (Office of the Education Council, 2017). Learning management to develop student potential in the contexts of IT society, knowledge society, and innovation society mainly gives precedence to student learning. Blended learning management is used as a tool for students to use their own learning processes through different media and learning sources, i.e., on-site, online, on-air, on-demand, and on-hand learning (Pinasa, 2021). Teachers design blended learning management for students to develop their potential in accordance with learning methods and way of life. It facilitates their potential development better than a certain learning model (Office of the Education Council, 2017). A role of teachers in blended learning management is to coach for arousing intrinsic motivation and curiosity of students so that they will be determined and disciplined to learn. It also promotes and supports students to use learning and thinking processes,

to open knowledge sharing space, and to use power questions for arousing imaginations and creativity that lead to innovation creation that students are interested in. This will help students for continuous self-development with their full capabilities (Abdulla, 2017., Knight, 2009). Moreover, assessment is also another key factor to reinforce student potential for blended learning management. Teachers design measurement and assessment in accordance with learning activities. Various assessment methods are used, e.g., observation, learning process investigation, and giving feedbacks for further development (Crockett & Churches, 2017., Fogarty, & Pete. 2017).

According to Human Capital Index (HCI) of World Bank in 2020 before the outbreak of COVID-19, it was found that up to 23% of Thai children aged below 10 years had learning poverty, highest percentage in Asia. Whereas the number of study years was around 12.70 years, the number of years of received knowledge was only 8.70 years. According to the data, it was found that blended learning management under the outbreak of COVID-19 must give precedence to learning management potential that will create their capabilities as regulated in school curriculums.

Blended learning management is a type of student-centered learning management with high flexibility. Various learning models are blended together between on-air learning through online systems and face-to-face learning in class as usual between teachers and students. It responds to differences of students individually. Blended learning management is an integrated learning management in which various methods are used for the best learning (Nasongkhla, 2018; Khlaisang, 2019; Driscoll, 2002). Under the outbreak of COVID-19, learning management in accordance with the outbreak that is hard to predict its severity causes learning management to be highly flexible and to blend various methods in accordance with the context in each particular area, and to allow students at basic education level to be promoted for their continuous learning quality despite the outbreak of COVID-19.

These influences created an idea for the researchers to study blended learning management under the outbreak of COVID-19 to study related concepts, theories, and knowledge; and to provide suggestions for blended learning management approaches to develop student potential at basic education level under the outbreak of COVID-19 and learning management approaches for students at basic education level so that Ministry of Education can consider them as alternative approaches for schools to manage learning in various methods in accordance with the situational context and needs of students.

Conceptual framework

In this research, the researcher defines a conceptual/theoretical research framework. The details are as follows.

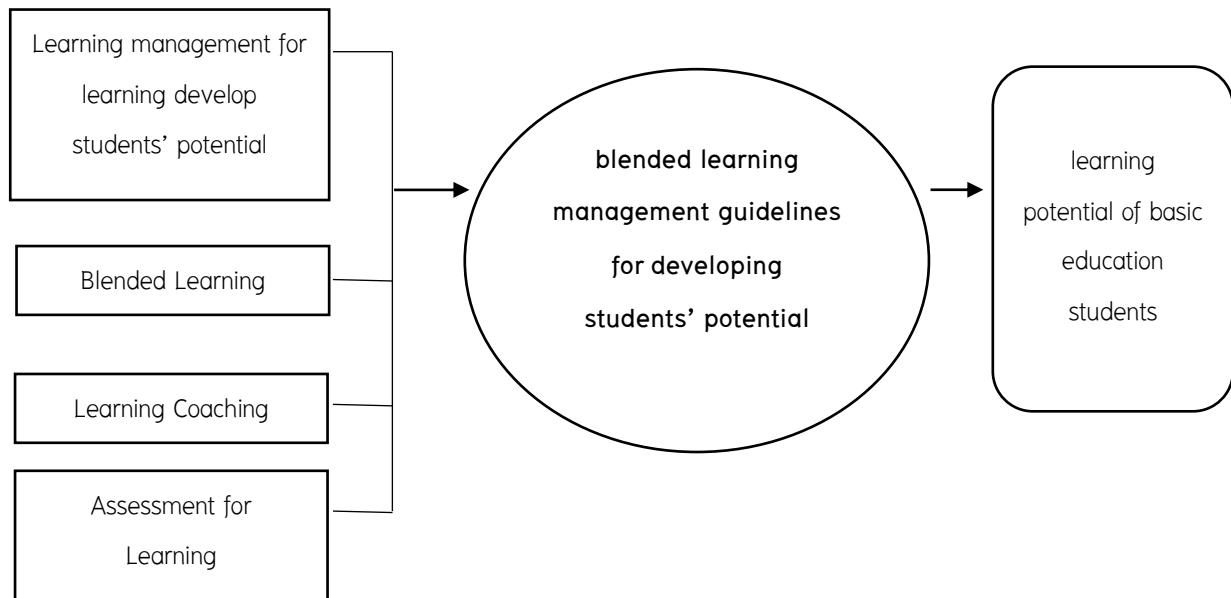


Figure. 1 conceptual framework

Methods

For the study on blended learning management approaches to develop student potential at basic education level under the outbreak of COVID-19, 4 steps of research and development (R&D) was used for the implementation as follows.

Step 1: Studying basic data for blended learning management approaches to develop student potential at basic education level under the outbreak of coronavirus 2019 (COVID-19). It was to study basic data for the development of blended learning management approaches to develop student potential at basic education level under the outbreak of COVID-19, with the implementation details as follows.

1. Documents and research results related to blended learning management approaches to develop student potential at basic education level under the outbreak of COVID-19 were analyzed. Qualitative synthesis was used.

2. Involved persons were interviewed for their opinions toward blended learning management approaches to develop student potential at basic education level under the outbreak of COVID-19, i.e.,

3. Involved persons were interviewed for their opinions toward blended learning management approaches to develop student potential at basic education level under the outbreak of COVID-19, i.e., 25 lecturers, 45 administrators, and 296 teachers. The questionnaire with 5-point rating scale was used. Mean and SD were used for data analysis. This questionnaire was already tested for its quality (Index of Congruence: IOC) by the experts. collecting data by online questionnaire distribution through Google Form. The results were brought for overall content analysis. The analysis framework included 4 points, i.e., blended learning management approaches, roles of teachers, media and learning sources, and assessment.

Step 2: Drafting blended learning management approaches to develop student potential at basic education level under the outbreak of COVID-19. implementation details as follows.

1. Blended learning management approaches to develop student potential at basic education level under the outbreak of COVID-19 were drafted based on the results obtained from Step 1. Therefore, there were 4 drafts of blended learning management approaches as follows.

1) The draft of on-site and on-hand blended learning management and approaches at elementary level.

2) The draft of on-hand and on-hand blended learning management approaches at high-school level.

2. All drafts of blended learning management approaches to develop student potential at basic education level under the outbreak of COVID-19 were tested for their quality and appropriateness by 7 education experts, with reliability of 0.86. The data was collected through Google Form. Mean and SD were used for data analysis. For the accepted appropriateness criteria, the mean must not be below 3.50. Then, the analyzed data was revised for better.

Step 3: Trial of blended learning management approaches, and providing suggestions for blended learning management approaches to develop student potential at basic education level under the outbreak of COVID-19. The implementation details as follows.

The drafts of blended learning management approaches to develop student potential at basic education level under the outbreak of COVID-19 were brought for trial in 61 elementary and high-schools teacher volunteers in the project. Then, the researchers held a 3-hour seminar to create understanding through ZOOM Meeting about using the drafts of blended learning management approaches to develop student potential at basic education level under the outbreak of COVID-19. The scope of contents included active blended learning management, learning management design to develop student potential, coaching to develop student potential, using

learning media and sources to promote learning processes, and assessment to develop their learning. Then, they used the drafts of blended learning management approaches to develop student potential at basic education level under the outbreak of COVID-19 in real at schools. Email and ZOOM Meeting were the channels to contact with the researchers for advice every Monday, Wednesday, and Friday between 20.00 – 21.00 throughout July. According to trial of blended learning management approaches to develop student potential at basic education level under the outbreak of COVID-19, 48 learning management plans were submitted to the researchers.

2 . The effectiveness of blended learning management approaches to develop student potential at basic education level under the outbreak of COVID-19 was assessed based on the assessment criteria of blended learning management approaches to develop student potential at basic education level under the outbreak of COVID-19 . If the assessment results revealed the effectiveness as per the criteria, it would be concluded that the drafts of blended learning management approaches to develop student potential at basic education level under the outbreak of COVID-19 passed the effectiveness criteria. Then, the complete version of learning management approaches to develop student potential at basic education level under the outbreak of COVID-19 would be provided.

Step 4: Providing suggestions for blended learning management approaches to develop student potential at basic education level under the outbreak of COVID-19.

The results of trial of blended learning management approaches to develop student potential at basic education level under the outbreak of COVID-19 were accuracy and appropriateness of the drafts were examined by 6 experts and persons involved with learning management. Then, the results obtained were brought to provide suggestions for blended learning management approaches to develop student potential at basic education level under the outbreak of COVID-19.

Results

The results obtained led to blended learning management characteristics and approaches to develop student potential at basic education level under the outbreak of COVID-19, divided into 4, i.e., on-site learning management approaches at elementary level, on-hand learning management approaches at elementary level, on-site learning management approaches at high-school level, and on-hand learning management approaches at high-school level. Policy

suggestions to develop teachers in several aspects for better quality of learning management under the outbreak of COVID-19 were also provided as follows.

1. Blended learning management characteristics to develop student potential at basic education level under the outbreak of COVID-19: Learning management characteristics were various and flexible with the context of students. Under COVID-19 outbreak, learning management should be integrated and linked to student concepts. Teachers aroused students to set their learning goals and to be disciplined for learning. They also monitored and helped students for full learning based on student potential. However, teachers should also be creative to design learning management that responds to natures, readiness, and needs of students; including family readiness. Students were enthusiastic with learning processes, but should share knowledge with their classmates and teachers through appropriate channels. For measurement and assessment, they should be conducted with the key purpose to develop students by various and flexible methods and tools, without focusing on traditional tests. Teachers should give feedbacks to students through appropriate methods and channels.

2. Blended learning management approaches to develop student potential at basic education level under the outbreak of COVID-19: They can be managed into 4 characteristics as follows.

2.1 For blended learning management approaches to develop student potential at basic education level under the outbreak of COVID-19 in term of on-site learning management approaches at elementary level, they mainly focus on various learning activities that create student concepts. Teachers coach students to use their own thinking and learning processes. Personal media must also be used for accurate and quick understanding. Individual authentic assessment must be conducted. The assessment results must be communicated to parents.

2.2 For blended learning management approaches to develop student potential at basic education level under the outbreak of COVID-19 in term of on-hand learning management approaches at elementary level, they mainly focus on integrated concepts in accordance with the daily life of students, roles of teachers to monitor, give advice, encourage, help, and collaborate with parents to use accessible media based on student capability level; with their mental and physical safety.

2.3 For blended learning management approaches to develop student potential at basic education level under the outbreak of COVID-19 in term of on-site learning management approaches at high-school level, they mainly focus on linking on-site and on-hand learning activities altogether as individual learning. Teachers coach students to be inspired for learning and using their own learning methods. They must also use learning media and sources that create accurate and quick understanding. Avoid allowing all students to share media, materials, and equipment. Authentic assessment must be conducted by various and flexible methods. Give feedbacks and provide remediation quickly.

2.4 For blended learning management approaches to develop student potential at basic education level under the outbreak of COVID-19 in term of on-hand learning management approaches at high-school level, they mainly focus on challenging learning activities to respond to various needs. Teachers join co-learning with students and coach them to use various learning processes. They must also use learning media and sources that create quick and cost-saving understanding, with consideration of physical and mental effects. Authentic assessment must be conducted by various and flexible methods. Give precedence to thinking and learning process assessment.

Blended learning management approaches to develop student potential at basic education level under the outbreak of COVID-19: On-site learning management approaches at elementary level

Learning activity management	– Link on-site and on-hand activities altogether. – Arrange learning activities that allow students to use learning processes for create concepts. – Focus on developing reading, writing, calculation, and English skills through various learning activities in accordance with individual differences. – Focus on developing reading, writing, calculation, and English skills through various learning activities in accordance with individual differences. – Fulfill knowledge and understanding of concepts and encourage students to apply them in daily life.
Roles of teachers	– Arouse students to link their learning to real life. – Coach students to use their own thinking and learning processes. – Give opportunities for smart students to extend knowledge on their own through activities based on their capability level, and help unsuccessful students individually. – Create good interaction with students, make learning promises with them, and arouse their self-discipline. – Use positive discipline, create motivation, create curiosity and action atmosphere, and reduce using conditions with students. – Arrange atmosphere and environment that arouse student curiosity to practice and learn own their own.
Using learning media and sources	– Use learning media that create accurate and quick understanding, i.e., online – offline media and real materials. – Use learning media that students can further on their own at home. – Use learning media that students can access by viewing, observation, reading. Avoid media that students must touch or physically contact with. – Use personal media and equipment and avoid sharing media, materials, and equipment among students. – Use learning media that students can learn further on their own at home. – Arrange learning sources that students can learn individually.
Measurement and assessment	– Assess and diagnose both accurate understanding and misunderstanding of students to design individual learning activities as individual assessment. – Assess learning processes by observation and performance assessment. – Assess progress and outcomes by various assessment methods and reduce assessment for judgement. – Provide quick on-site remediation. – Promote students to assess their own learning and plan for their self-development continuously. – Communicate assessment results to parents by appropriate methods and suggest them how help and take care of students in term of learning

Blended learning management approaches to develop student potential at basic education level under the outbreak of COVID-19: On-hand learning management approaches at elementary level

Link on-site and on-hand activities altogether to respond to various	– Integrate concepts and link learning activities in accordance with daily life of students and social as well as cultural contexts. – Use learning activities that all students have opportunities to perform any of their interest and based on multiple-intelligences of each individual student. – Arrange learning activities in accordance with capability level of students for their success in those activities on their own.
Learning activity management	– Use the phenomenon or the disease outbreak to design learning activities and to link concepts of all area altogether. – Avoid learning activities that require close contact with family members.
Roles of teachers	– Design simple and not too complicated learning. Focus on routine-based learning. – Pay attention to student learning processes by asking them and their parents periodically. – Arouse students for their self-discipline and encourage them. – Give advice to parents about how to monitor students to perform learning activities continuously. – Provide academic help to student case by case. – Coordinate with community and volunteer networks of student development to participate in learning management.
Using learning media and sources	– Use all-around materials or materials at home as learning management media that can be accessible for all students. – If media used are knowledge sheets or worksheets, they must be designed to be appropriate with capability level of each individual student, and with appropriate time to complete those sheets. – Use online media appropriately and not too much until they cause physical and mental effects on students. – Use learning sources at home and link them to learning activities that can create concepts. – Choose learning sources that are safe to student life and health. Avoid water sources, altitudes, electric appliances, other harmful activities.
Measurement and assessment	– Use learning assessment approaches by various methods. – Assess from what students perform. Do not separate assessment from learning management, because students may provide their own portfolios. – Examine portfolios and give feedbacks to students. Also communicate with parents to acknowledge student progress. – Provide opportunities for self-assessment by simple methods. – Provide opportunities for parents to participate in assessing their children by observation or examining achievements. Parents should be educated for basic assessment by schools.

Blended learning management approaches to develop student potential at basic education level under the outbreak of COVID-19: On-site learning management approaches at high-school level

Learning activity management	– Arrange learning activities as personal learning that mainly focuses on developing concepts and skills. – Using learning media and sources – Avoid group activities with close communication or contacts. – In case of switching to on-site periodically, knowledge-based or remediation activities should be mainly provided. Students should also be prepared for learning concepts later on.
Roles of teachers	– Arouse and promote students to use their own various learning methods – Arouse curiosity and behavior by questioning, motivation – Provide suggestions for self-learning methods. – Manage creative class and arouse positive discipline of students. – Create good interaction with students and make learning promises with them to use their self-discipline for learning. – Promote students to use their perseverance for learning. – Pay attention to learning progress of each individual student.
Integrate activities altogether to respond to various	– Use learning media that create accurate and quick understanding, i.e., online – offline media and real materials. – Use personal media and equipment. Avoid sharing media, materials, and equipment among students. – Use concise and comprehensible learning media that promote knowledge linking. – Use developed learning media appropriate with learning management contexts. – Use internal learning sources that students can learn on their own as needed. – Use accessible, comprehensible, and cost-saving online learning sources.
Measurement and assessment	– Assess and diagnose both accurate understanding and misunderstanding of students to design individual learning activities as individual assessment. – Assess learning processes by observing student behavior during learning management. – Assess progress and outcomes by various and flexible assessment methods. – Provide quick on-site remediation. – Give feedbacks for precise learning development and encourage students. – Allow self-assessment by quality tools for further self-development.

Blended learning management approaches to develop student potential at basic education level under the outbreak of COVID-19: On-hand learning management approaches at high-school level

Learning activity management	– Blend different learning methods that focus on self-learning from book, textbooks, online sources, community learning sources, and their own skills. – Manage learning by allow students to participate in designing their own learning activities with classmates. Use knowledge sharing as a team through online channels. – Use challenging activities. – Avoid learning activities that require close contact with family members.
Roles of teachers	– Arouse inspiration and self-learning discipline. – Coach students to use their own various learning processes through different channels based on their readiness – Join co-learning with students. Be their partner and advisor for continuous learning. – Give opportunities for students to set their goals and learning methods. Promote them to try learning for success. – Monitor learning progress of each individual student by talking, asking, and examining achievement. – Use creative communication with students, both individually and in groups.
Using learning media and sources	– Use accessible and cost-saving online and offline learning media. – Use learning media for quick learning and can arouse students to further or extend knowledge on their own. – Use all-around learning sources or those around home/communities that can link to concepts. – Use online learning sources with reliable information. – Use various learning media by considering physical and mental effects on students.
Measurement and assessment	– Assess to develop students by various and flexible methods. – Give precedence to thinking and learning process assessment, reflected from student achievements. – Allow self-assessment by quality tools for further self-development. – Use portfolio-based assessment that reflects student learning processes. – Give feedbacks to students for further learning or knowledge extension. – Provide suggestions for further learning or knowledge extension. – Use positive words that will not hurt students' feelings.

Discussion

According to the research results, there are some points to be discussed as follows. Blended learning management approaches to develop student potential at basic education level under the outbreak of COVID-19 in term of on-site learning management approaches at elementary level

According to the results of learning activity management which found that it should link on-site learning activities to daily of students and on-hand learning; focus on arousing students to use learning processes, fulfill understanding and promote students to apply them in their daily life. Another highlight is the development of reading, writing, calculation, and English skills. Teachers should plan and integrate such development systematically for on-site learning management, because on-hand learning basically contains several limitations to develop these basic skills.

According to the results of roles of teachers which found that they should design learning to link to on-hand and on-site learning that respond to interest of students. The findings also revealed that the roles of teachers directly affect learning. The teachers should be open learning space and keep observing and suggesting students to use various learning processes in order to reach goals as set.

According to the results of using learning media and sources which found that teachers should use learning media that create accurate and quick understanding, i.e., learning media that students can further on their own at home. At this point, teachers should give precedence to learning activity design that includes sharing technological media among students, choosing technological media and learning sources still holds to a key principle that they must be learning media and sources for accurate and quick learning of students.

According to the results of measurement and assessment which found that teachers should assess and diagnose both accurate understanding and misunderstanding of students to design individual learning activities as individual assessment; assess learning processes by observation and performance assessment; promote students to assess their own learning and plan for their self-development continuously; communicate assessment results to parents by appropriate methods; and suggest them for take care of students. The assessment results are brought for individual development by methods in accordance with the problems of each individual student. Assessment to develop students under the outbreak of COVID-19 in case of on-site learning should be conducted systematically by methods with high accuracy.

Blended learning management approaches to develop student potential at basic education level under the outbreak of COVID-19 in term of on-hand learning management approaches at elementary level According to the results of learning activity management which found that it should integrate concepts and link learning activities in accordance with daily life of students and social as well as cultural contexts; use the phenomenon or the disease outbreak to design learning activities and to link concepts of all areas altogether; these reflect that on-hand learning

management under the outbreak of COVID-19 for elementary students should be integrated and linked to their routines so that they can perform meaningful learning activities. These data totally effects on-hand learning efficiency of elementary students. Therefore, it can be viewed that on-hand learning management design for elementary students requires capabilities of student analysis in several aspects.

According to the results of roles of teachers which found that they should design simple learning; focus on routine-based learning; arouse students for their self-discipline and encourage them; give advice to parents about how to monitor students to perform learning activities continuously; provide academic help to student case by case; coordinate with community and volunteer networks of student development to participate in learning. The elementary students still lack self-learning skills so if designed learning activities are difficult or too complicated, students will undergo on-hand learning and may cause too many burdens for their parents. Therefore, good learning should facilitate students to perform on their own. Learning will be even more meaningful if it can be linked to their daily life.

According to the results of using learning media and sources which found that teachers should use all-around materials or materials at home as learning management media that can be accessible for all students; design knowledge sheets or worksheets that are appropriate with capability level of each individual student; use online media appropriately; use learning sources at home and link them to learning activities that can create concepts. Teachers should have basic data about learning media and sources at home to be used for learning activity design that respond to various needs of students. Worksheets or knowledge sheets may be required for some areas or some concepts. In this case, teachers should design and prepare those sheets that integrate concepts altogether for more integrated learning.

According to the results of measurement and assessment which found that it focused on student development by talking with parents and students; assessing from what students perform; not to separate assessment from learning management because students may provide their own portfolios; examining portfolios and give feedbacks to students; communicating with parents to acknowledge student progress, including what parent should pay particular attention to; giving opportunities for self-assessment and educating parents for basic assessment, these imply that assessment for learning development is still an approach that should be used as a tool for student development and learning progress. Teachers should communicate with parents continuously about assessment. Another interesting finding is student portfolios or the ones with remarkable

achievements that clearly reflect their learning capability. These portfolios can be used as perfect evidences/clues of their learning processes, learning progress, and outputs.

Blended learning management approaches to develop student potential at basic education level under the outbreak of COVID-19 in term of on-site learning management approaches at high-school level. According to the results of learning activity management which found that it should link on-site and on-hand activities altogether to respond to various needs of students, e.g., furthering their study or occupations; arrange learning activities as personal learning that mainly focuses on developing concepts and skills. Therefore, learning management requires focus on clear concepts of what to be learned, which skills to be developed, and what desirable characteristics of students are expected. These will create clear and unconfusing goals of learning activities, leading to advantages for students that have to extend their knowledge from a certain point to some others. Besides, another thing that teachers should give precedence to is learning management that responds to various needs of students in terms of furthering their study or occupations,

According to the results of roles of teachers which found that they should design learning management that focuses on concepts and open approaches that students to use their own various learning methods; arouse curiosity and behavior by questioning, motivation; provide suggestions for self-learning methods; manage creative class and arouse positive discipline of students; create good interaction with students and make learning promises with them; avoid making frustrating conditions; these imply that high-school teachers are the key to develop students for their understanding of contents learned. A key role of teachers is eagerness, intrinsic motivation, inspiration; and to link their interests to learning activities. Also, teachers should allow students to use discipline as much as possible by making learning promises that link to performing interested activities.

According to the results of using learning media and sources which found that teachers should use the ones that create accurate and quick understanding, i.e., online – offline media and real materials; use personal media and equipment; use developed learning media appropriate with learning management contexts; use internal learning sources that students can learn on their own as needed; and use accessible, comprehensible, and cost-saving online learning sources, these imply that using quality learning media and sources will bring accurate and quick understanding for students. Teachers should clearly analyze natures of students first, which characteristics of learning media and sources they prefer. That is because preferable media and sources will attract

student attention to concentrate on learning. Accuracy should be verified/checked first before using in learning management.

According to the results of measurement and assessment which found that it focused on assessing and diagnosing both accurate understanding and misunderstanding of students to design individual learning activities as individual assessment; assessing learning processes by observing student behavior during learning management; assessing progress and outcomes by various and flexible assessment methods; providing quick on-site remediation; giving feedbacks for precise learning development and use positive words with students; and allowing self-assessment by quality tools for further self-development, these imply that assessment mainly focuses on assessment for learning development. Moreover, assessment must link back to further learning management design. A challenge of student assessment is its variety and flexibility for teachers to design measurement and assessment in accordance with learning objectives.

Blended learning management approaches to develop student potential at basic education level under the outbreak of COVID-19 in term of on-hand learning management approaches at high-school level. According to the results of learning activity management which found it should integrate activities altogether to respond to various needs of students, e.g., furthering their study or occupations; blend different learning methods that focus on self-learning from book, textbooks, online sources, community learning sources, and their own skills; manage learning by allow students to participate in designing their own learning activities with classmates; use knowledge sharing as a team through online channels; use challenging activities. There are several methods of integration, e.g., infusion, parallel, and multidisciplinary. If teachers can design integrated learning management, it will help students link their knowledge in different areas, including various learning process skills, which will be a foundation to innovation creation.

According to the results of roles of teacher which found that they should arouse inspiration and self-learning discipline; coach students to use their own various learning processes through different channels based on their readiness; join co-learning with students; be their partners and advisors for continuous learning; give opportunities for students to set their goals and learning methods; promote them to try learning for success; monitor learning progress of each individual student by talking, asking, and examining achievement; and use creative communication with students, both individually and in groups, these confirm the roles of teachers for student potential development as focusing in arousing students to use their own learning processes and highest potential to learn things. This is a factor that will support students to keep up with lessons

continuously so teachers should write down progress of each individual student regularly, with various contact channels to communicate with students, particularly online channel for quick follow up.

According to the results of using learning media and sources which found that teachers should use accessible and cost-saving online and offline learning media; use learning media for quick learning and can arouse students to further or extend knowledge on their own; use all-around learning sources or those around home/communities that can link to concepts; use online learning sources with reliable information; use various learning media by considering physical and mental effects on students, these all challenge teacher capabilities to choose various learning media and sources that respond to natures and needs of students.

According to the results of measurement and assessment which found that it focused on assessing to develop students by various and flexible methods; giving precedence to thinking and learning process assessment, reflected from student achievements; allowing self-assessment by quality tools for further self-development; using portfolio-based assessment that reflects student learning processes; giving feedbacks to students for further learning or knowledge extension; providing suggestions for further learning or knowledge extension, these are still challenging points that assessment for individual learning progress development. Teachers should design assessment in accordance with on-hand learning activities, particularly checking student achievements that clearly reflect their learning processes and learning progress. Feedbacks should also be given to each individual student for accurate understanding and inspiration for continuous self-development.

Suggestions for blended learning management approaches to develop student potential at basic education level under the outbreak of COVID-1, divided into practical suggestions and policy suggestions as follows.

1. Integrated learning management design that combines concepts, learning processes, technological skills, advanced thinking skills, and desirable characteristics of students. It is to develop teachers to be capable of integrating all concepts altogether, either in same or different areas, in order to design and manage learning activities for students to apply their concepts in challenging situations, to perform activities enthusiastically with curiosity and lesson learned, and to share their knowledge with classmates and teachers for authentic learning.

2. Learning management that focuses on learning inspiration and self-development so that students can take out their highest potential and use it more. Passion – based learning is another learning management method to make student determined to be successful in what they have passion for regardless how much difficult or complicated those things are.

3 . Acting as coaches by coaching students for their skills. teachers should also be developed for their coaching skills to guide students to achieve learning goals, with commitment to learning. Teachers should also question students by various techniques to reinforce thinking processes that lead to planning, problem solving, and creativity; and should support students to set their self-development goals. Teachers must plan and assess achievements, together with observation and assessment of student development in various aspects. Teaching techniques must be applied for coaching students in accordance with each individual's nature and needs as scaffolding, authentic assessment by various methods; using IT for continuous development; and coaching students based on human dignity, cultural difference, and student beliefs.

4. Creating and using learning media as well as sources that promote learning. Teachers must be developed to be capable of creating and using learning media in accordance with curriculums that quickly lead to learning and deep understanding for students. Media must be chosen appropriately with each individual student, i.e., online-offline media, real materials, and media that can arouse students to extend knowledge on their own. All-around materials or materials at home should also be used as learning management media that can be accessible for all students and preparing them for easy and cost-saving access; together with capability of using various learning media and sources that respond to natures and interests of students.

5. Authentic assessment that leads to student development is one of methods to develop students in term of understanding, capabilities, skills, competency, and desirable characteristics by authentic assessment. Various assessment methods should be used, with continuous assessment. Useful feedbacks should be provided, together with creative assessment, giving value to assessment outcomes rather than judgement so that students can use those outcomes for planning and continuous self-development. As for teachers, they should apply the outcomes to improve learning management quality continuously.

Research suggestions

1. Original affiliations should promote blended learning management approaches to develop student potential at basic education level under the outbreak of COVID-19at schools, and convince teachers to apply those approaches in accordance with learning management contexts.

2 . Original affiliations should develop teachers for their understanding and capability to efficiently apply blended learning management approaches to develop student potential at basic education level under the outbreak of COVID–19.

3 . To apply blended learning management approaches to develop student potential at basic education level under the outbreak of COVID–19, teachers should analyze contexts related to learning management, e.g., natures and needs of students, family readiness, the disease outbreak before designing each characteristic of blended learning management.

4 . Teachers should apply blended learning management approaches to develop student potential at basic education level under the outbreak of COVID–19 in accordance with the disease outbreak and other unexpected conditions. Health, physical, and mental safety of students must be considered as the first priority.

Suggestions for future studies

1. There should be further studies on the efficiency of blended learning management approaches to develop student potential at basic education level under the outbreak of COVID–19 at schools, in order to prove whether or not those approaches can truly help develop student competencies. That is because the results of this research did not mainly collect data about student competencies.

2 . Blended learning management approaches to develop student potential at basic education level under the outbreak of COVID–19 should be brought for designing teacher trainings for their capabilities of blended learning management in accordance with practical suggestions as stated. They will be useful for teachers in the long run.

3 . There should be research on driving policy suggestions in order to find out other mechanisms and supporting factors that facilitate teachers to provide efficient blended learning management to develop student potential at basic education level under the outbreak of COVID–19, with highest benefits for students.

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