A quality in education of lower central network school with coaching and mentoring pass online system

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Abstract: A quality in education of lower central network with coaching and mentoring pass online system consisting of teachers, administrators by using the concept and activities of the mentoring system. The purposes were as 1) To Assess the promotion of knowledge and understanding of concepts used in the development of production and teacher development systems in relevant target groups consisting of teachers, administrators using concepts and activities, mentoring systems, Coaching and Mentoring and 2) To develop the system and the process of teaching and learning management by having teachers remove the knowledge management (KM) in classroom by developing a mentor for the target group with participating in the phase 1 project will apply the knowledge in real situations in the lower central region network schools and building a professional community of learning (Professional Learning Community: PLC) by the university professors do research to develop teaching and learning and develop teachers in small schools as well as "coaches" for teachers to use innovations developed for their students in this research using quantitative research methods and integrated experiments (Quantitative-Experiment Research) The researcher has set the framework for the research guidelines. The population for this research with selected purposive sampling by considering the context of responsibilities with university. In the network area of the lower central region which are small and voluntary schools of 30 schools, 98 teachers (science and math teachers), 22 university professors (teachers responsible for monitoring all 30 schools) for the academic year 2019. Data analysis using the statistics of percentage (%) average ($\bar{x}$) standard Deviation (S.D.) and qualitative data analysis. The results of the research were findings: 1) Assessment in the promotion of knowledge and understanding of concepts used in the development of production and teacher development systems Develop relevant target groups consisting of teachers, administrators using concepts and activities, mentoring systems, coaching and mentoring the satisfaction at the highest level ($\bar{x}$=4.74, S.D.=0.37) and 2) Development a system and learning process by having the teacher to remove the knowledge management (KM) in classroom consisting of 1) Learning Management with coaching and mentoring process, 2) Development of competency based learning with imagination (Competency Based on Imagination), 3) Supporting the process of building empirical knowledge (Construction of Knowledge), and 4) Performance Review for Creation of Innovation..

Index Terms: Coaching , Mentoring, Online

1. Introduction

The index of important teacher teaching quality was measured by the quality of the learner in the field of analytical thinking without emphasis on memory. The results of the 2014 PISA and TIMSS tests of Thai students were below the average of the OECD participating countries. In addition, Thailand's IMD and WEF international rankings reflect that teachers Unable to bring knowledge, techniques, methods or teaching styles Modern and quality Used in solving the problems of learners to keep up with the changing of the world, thus, Thailand has faced problems in producing quality graduates and having expertise in teaching that will be used in the development of learners. To be efficient and sustainable self-development in accordance with the educational policy of the country that will raise the level of education and the development of the country with a concrete ideal of knowledge and happiness. (Office of the National Economic and Social Development Board, 2015), especially the poor quality education of small schools in Samut Songkhram Province. There are approximately 2,500 students (Academic Year 2016) and it is very problematic for small schools that lack the availability of several teaching and learning factors affecting students' academic achievement in science, math and English subjects. The approach to solving problems and improving the quality of education of small schools is to be effective, therefore focusing on the participation and cooperation network with mentoring system based on the integrated process and create mutual agreement on the success of goal. The Office of the Basic Education Commission Organized a teacher development program that emphasizes the strengthening of teaching and learning competencies in a variety of contexts of school nature and size. Use the coaching mentoring system to meet the needs of the Primary / Secondary Education Service Area Office. Coordinate higher education institutions to become a development partner Developing to focus on the development of the school base during teaching (On the job training) and provide a support system in the form of coaching and mentoring, with emphasis on development to strengthen the spirit and ideology of being a teacher. Developing learners to have knowledge of Literacy, Numeracy and Reasoning Ability skills as well as providing learning with learners, namely Learning to Question, Learning to Search, Learning to Construct, Learning to Communicate, Learning to Serve according to the level. The learning management process for the core curriculum

of basic education, BE 2551 in accordance with the 21st century learning approach (Faculty of Education, Nakhon Ratchasima Rajabhat University, 2013). Bansomdejchaopraya Rajabhat University has joined as a network of educational quality development and local development project with a tertiary institution as a mentor. To develop basic education of schools in the lower central region By developing teachers' potential, organizing activities in line with the policy, reduce study time, increase learning time STEM education management English language enhancement According to the needs of target schools, 11 schools are classified as under the Office of Education, Bangkok, 7 schools and 4 schools under the Primary Education Area Office in Bangkok. Hold a meeting to build knowledge and understanding about the project. And prepared a memorandum of agreement for academic cooperation (MOU) with 11 network school administrators on March 16, 2017 at 10:00 a.m. - 12:00 noon at the Alumni Association Meeting Room, Floor 6, Building 11, at Bansomdejchaopraya Rajabhat University. There are activities to develop teachers in 11 schools in 2 main activities which are 1) the development of learning management skills towards integrating Stem Education and 2) the development of knowledge and attitude in teaching English for teachers. Which consists of the following steps:

Phase 1: Building knowledge and understanding of concepts used in the development of teacher production systems and development Continue to develop relevant target groups consisting of teachers, executives using mentoring, coaching and mentoring concepts and activities.

Phase 2 Development of teaching and learning systems and processes By having teachers to remove knowledge and KM in order to get a knowledge set that can be used in the teaching process. Operated by the development of mentoring teachers And had the target teachers participating in the Phase 1 project to apply their knowledge in real situations in the lower central network schools. And create a professional community of learning (Professional Learning Community: PLC) by teachers in the university doing research to develop teaching and learning And develop teachers in small schools as well as being "coaches" for teachers to apply the innovations that have been developed for their students.

Therefore, the Faculty of Education has prepared to expand its operations to Samut Songkhram Province. Which is one of the provinces under the responsibility of the university. The Faculty of Education has conducted teacher development activities in Samut Sakhon Province. Which is already a pilot province Since the academic year 2016 and will be fully implemented in the 2018 academic year, the university intends to cooperate with the Primary / Secondary Educational Service Area Office, Samut Songkhram Province. To develop teachers in such small schools that teachers have the potential to develop students to have higher learning achievement. Especially in reading / writing Thai / English, mathematics, science, STEM education and critical thinking. Using the original format that was improved and developed to suit the context Both in space, time and other areas, focusing on research and development of educational quality of schools in the lower central network with mentoring systems under Professional learning community process (Professional Learning Community: PLC), including a model for creating a coaching system and a mentoring system.

2. Research Objectives

The objectives of this research article was a quality in education of lower central network school with coaching and mentoring pass online system

3. Research Methods

population

Population for this research The researcher has selected a specific method. Considering the context, coverage, duties and responsibilities of Bansomdejchaopraya Rajabhat University and school groups In the lower central network area Which is a small and voluntary school of 30 schools, 98 teachers (science and math teachers), 22 university teachers (responsible teachers supervising all 30 schools)

Research tools and quality evaluation tools

1. Learning Management Plan

1) Study the science teaching management manual. Lower secondary level To know the importance, vision, quality of the learners Learning standards Learning Learning process Learning resources Measurement and evaluation in group learning management

2) Explore student fundamentals of knowledge and skills. Analyze the problem of the learners. By exploring learning problems

3) Study theories, concepts, principles, documents, courses and research results related to experimental research. And learning management in science group

4) the study of guidelines for teaching and learning activities

5) implementing a learning activity plan Submitted to 3 experts who are experts in teaching and learning, 1 person in teaching and teaching in science subjects, 1 person and measurement and evaluation, 1 person to verify

accuracy. Content validity Elements of the study structure Use of scientific equipment Learning and experiment design The learning activity management plan assessed by experts was used to find the average value. Determine the criteria for scoring in each item by means of 4.64 in the most appropriate level. By using the following criteria: (Boonchomsri Sa-Saaad, 2000)

Average between 4.51 - 5.00 means the most suitable.
Average between 3.51 - 4.50 means very suitable.
Mean between 2.51 - 3.50 means moderately suitable.
Average between 1.51 - 2.50 means improvement.

2. Satisfaction Evaluation

1) Content Validity was performed using the Item Objective Congruence Index technique by using three experts, each of which was the IOC value of 1.00 or more and the IOC of The whole satisfaction measurement form was value = 1.00.

2) determination of precision Reliability by using a satisfaction assessment test with 30 teachers using the Cronbach's Alpha Coefficient, which had r individual values from 0.80 and the total r value = 0.84.

3. Data Collection

Data collection in this research The researcher used the following tools. The researcher collects the data in the following:

1) Request a letter from Bansomdejchaopraya Rajabhat University to the Director of the Educational Service Area Office.

2) Contact the school coordinator for the sample. To ask for assistance in data collection and to determine the date and time for data collection by coordinating the data collection operation.

3) Provide adequate questionnaires for the number of teachers who will collect the information each time.

3.1) Finding the discriminant power of each question

3.2) Check the quality of the straightforwardness questions. In the nature of the fairness of the question

3.3) Verify the structural validity of the educational quality research and development questionnaire of schools in the lower central network with the developed mentoring and advisory systems.

3.4) Verify the accuracy of the research and development questionnaire for the educational quality of schools in the lower central network with the developed mentoring and advisory systems.

3.5) Analyze data according to the predetermined statistics. Check the completeness of each questionnaire. Which will select only the version that is complete to analyze the data

3.6) The questionnaires were analyzed by using a statistical package. To find the mean And standard deviation

3.7) For the open-ended questionnaire, the researcher will analyze the content (Content Analysis) and describe in an essay.

3.8) Configuring the priority of options The researcher has identified the importance. In which the respondents assess each question By setting the level of importance according to the scoring criteria as follows:

A score of 5 is defined as having the most suitable level.
A score of 4 indicates a high level of suitability.
A Score 3 means moderate suitability.
A score of 2 means that the suitability is at a low level.

Score 1 indicates that the suitability is at the slightest level. A criteria for Interpretation of the Data Determined from the mean which is divided into 5 grade ranges Using the best estimation criteria (Best 1981: 182) as follows:

Meaning Mean Score
4.50 - 5.00 was considered appropriate at the highest level.
3.50 - 4.49 is considered appropriate at a high level.
2.50 - 3.49 The suitability is moderate.
1.50 - 2.49 is considered appropriate at a low level.
1.00 - 1.49 is the least appropriate.

3.4 Data analysis

The researcher has performed the following data analysis.

1) Analysis for the quality of the learning management plan This is presented to experts to assess the consistency between content and behavioral objectives. The calculations were then calculated using the IOC formula and applied to the students according to the learning management plan.

2) Data from the satisfaction survey The data were analyzed by means of mean and standard deviation by setting the criteria for the interpretation of the mean. By holding the following criteria (Mariam Nilphan, 2010: 196)

The Average of 4.50-5.00 means that the satisfaction is at the highest level.
The Average of 3.50-4.49 means that there is a high level of satisfaction.
The Average of 2.50-3.49 means that the satisfaction is moderate.
The Average of 1.50-2.49 means that the satisfaction is at a low level.

TheAverage of 1.00-1.49 means that the level of satisfaction is the least.

3) Analyze open-end questions. The results obtained from the questionnaire. Researchers have categorized and ordered answers to be analyzed content (Content Analysis) and presented the analysis results in descriptive manner.

4) Analysis of data from a group discussion format. Which is an open-ended questionnaire The researcher has synthesized key issues into categories and variables in each area corresponding to the educational management approach with Coaching and Mentoring in the form of mind mapping for explain.

4. Results

Development of teaching and learning systems and processes by allowing teachers to remove knowledge (Knowledge Management) in order to obtain a knowledge set that can be used in the teaching process. Operated by the development of mentoring target groups and had the target teachers participating in phase 1 to apply their knowledge in real situations in the lower central network schools. And create a professional community of learning (Professional Learning Community: PLC) by teachers in the university doing research to develop teaching and learning And develop teachers in small schools as well as being "coaches" for teachers to apply the innovations that have been developed for their students as shown in Table 4.

Table 4. The Achievement of learning shown as pre-test and post-test of the learning outcomes

	Number of Students	$\bar{x}$	**S.D.**	**t**	**Sig (2-tailed)**
Pre-test	33	16.40	2.83	21.63*	0.00*
Post-test	33	36.72	0.65		

From table 4 above it can be seen that the learning achievement of students who study through the model of solar system with electric motor rotation via control system on smartphone with an average of 36.72, the standard deviation of 0.65 ($\bar{x}$ = 36.72, S.D.= 0.65), which was higher than before at the average of 16.40, the standard deviation of 2.83 ($\bar{x}$ = 16.40, S.D. = 2.83) with statistical significance at the level of .05 (t= 21.63). Shown as a model with learning process on smart phone.

The researcher performed the data analysis by conducting a factor classification and data groups in an information format to be used in the conceptualization and system of teaching and learning processes. Knowledge (Knowledge Management) to acquire a knowledge set that can be used in the teaching process. Operated by the development of mentoring target groups And had the target teachers participating in phase 1 to apply their knowledge in real situations in the lower central network schools. And create a professional community of learning (Professional Learning Community: PLC) by teachers in the university doing research to develop teaching and learning And develop teachers in small schools as well as being "coaches" for teachers to apply the innovations that have been developed for their students. It is a method for creating learners to invent, solve problems, connect and create knowledge, consisting of 4 concepts of competency and creative learning management as follows:

1. Learning management through Coaching and Mentoring processes.

2. Development of Competency Based on Imagination

3.Supporting the empirical knowledge building process (Construction of Knowledge)

4. Creation of innovation in everyday life (Creation of Innovation)

A diagram of the learning management through the Coaching and Mentoring process as shown in Figure 1.

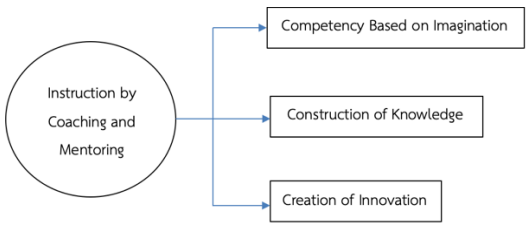

Fig.1 A diagram of the learning management through the Coaching and Mentoring process

From figure 1 show a diagram of the learning management process by Coaching and Mentoring is a method for creating learners to create, solve problems, connect and create knowledge, consisting of 3 concepts, competency learning management and creativity. Namely: 1) Competency Based on Imagination of Learner Competency

Development; 2) Supporting the empirical knowledge building process. (Construction of Knowledge) and 3) Review of the capacity for innovation in daily life (Creation of Innovation), where these three concept maps are a system for developing learners to demonstrate self-learning potential. Social networking Information retrieval Data Actions And problem solving thinking Practicing with scientific process skills according to the development of primary school students under supervision. Consulting help And encouraging the will to foster continuous learning and experiences that will be embedded in learners' schemata (Meaning full learning).

Diagram of development of competency based on imagination (Competency Based on Imagination) as shown in Figure 2.

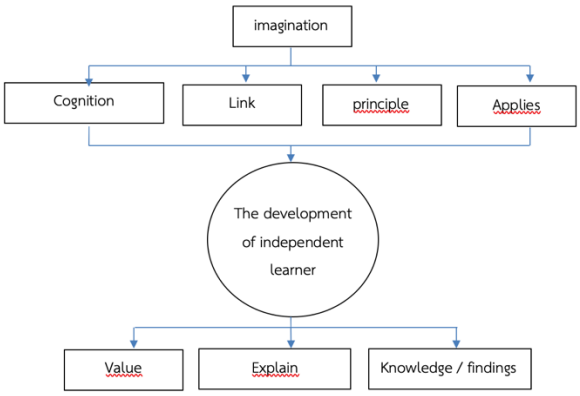

Fig.2 Competency Based on Imagination Chart

From figure 2 shows a diagram of competency-based on imagination development, where the teacher will be a key mechanism in creating learning power by stimulating the thinking power (Brain Storming). Appearance and co-working with others (Team Work) creatively emphasizing behavioral development based on learning and play of elementary school students in a creative and fun way, consisting of Perception activities. And conceptual processes of the learner (Conception), including 1) cognition (Understanding), 2) Connection, 3) Reasonable, and 4) Benefit by the students to reflect the competencies from their learning experience, namely 1) Valuable 2). Relay / Explanation (Explanation) and 3) knowledge/findings. (Construction)

Diagram to support the empirical knowledge building process (Construction of Knowledge) as shown in

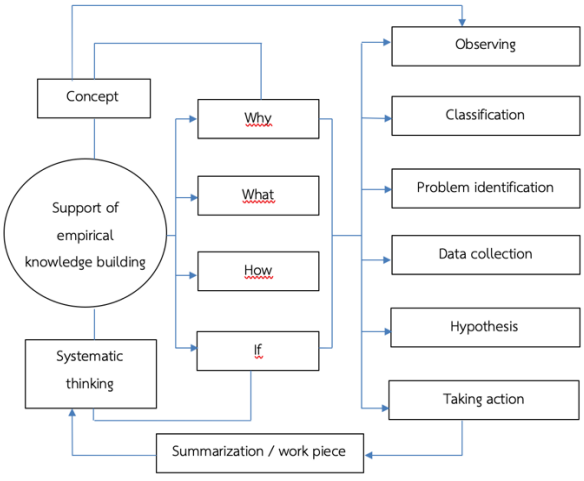

Fig.3 Competency Based on Imagination Chart

From figure 3 a schematic diagram of support for the empirical knowledge building process. (Construction of Knowledge) At this stage, the teacher plays a role in participation, learning, parallel to students, co-partners, questioning Encourage learners to develop cognitive skills in conceptualization and systematic thinking, problem solving processes using scientific processes Questions from challenging situations are being asked to achieve accurate, fast and accurate results, including why, what, and if, which leads to self-confidence and fast learning through a coherence-based mindset system. Learning behaviors consisted of 1) observation, 2) classification, 3) problem identification, 4) data collection, 5) hypothesis and 6) implementation. Until being able to take action and create the work efficiently.

Diagram of competency review for innovation in daily life (Creation of Innovation) is shown in Figure 4.

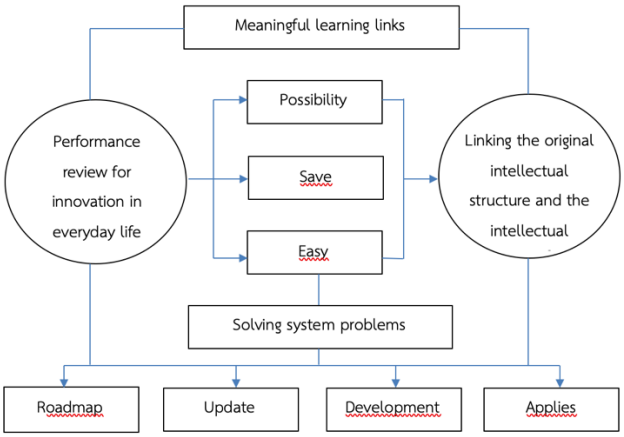

Fig.4 Competency Based on Imagination Chart

From figure 4 the chart shows the performance review for innovation in daily life (Creation of Innovation) is a step for teachers to measure and evaluate learners according to their creative performance by solving systematic problems and being able to mean for learning Containing The possibilities, the economies, the simplicity based on the self-learning process include creating a roadmap, improving development, and its useful and cost-effective application. By reflecting the competency of the learner at this stage, it plays a critical role in the student's lifelong learning. It is an immersive experience which is an intellectual growth. Instructors are required to design challenging activities. Encourage to seek answers and have fun. The knowledge gained must be intelligent in solving problems and knowing the possibilities. Primary school students with this age will behave in harmony with nature. They see the world that is beautiful, rational, very loving, and has great purity of thought. By obeying teachers, parents, friends and intellectual advisers such as monks, missionaries, thus creating a student learning experience for inspiration. Creativity that will lead to the extension of the original intellectual structure to the new cognitive structure. It is a process of particular importance. A design instructor activities, it must focus on the development of the mind, encouragement, acceptance, forgiveness, cooperation of students. With various reinforcements, creating a platform for exchanging knowledge using diverse experiences from outside the classroom and building pride in learning from behavioral competencies that can be measured with results and innovation in everyday life. Teachers may be required to design activities through periodic planning, schedules, development tracking and student responsibilities. The scheduling inspections and improving work individually This could be a practice experience. Information retrieval data actions techniques and methods of presenting information causal analysis Solution to the problem Until students are able to summarize ideas and be able to build a conceptual diagram with confidence and explain and answer questions until the correctness is accepted. It is improved, developed, trial and error and is jointly examined on the possibility. Until being able to take action to create concrete pieces At this stage, the instructor has to split the time to follow up with each student individually. Or working groups using information technology together to provide convenience, speed and up-to-date events such as Application youtube and online various coaching and mentoring processes at this stage. Acknowledge the truth according to cause and effect, be observant, know, think, analyze, know, solve problems, get wisdom from problem or project (Project-Based Learning or Problem-Based Learning) is a process of seeking knowledge which is mentally invigorating. Which students may understand things from invention in the form of projects or research RBL (Research-Based Learning) or RBP (Research-Based Project), which all learners must have a systematic learning base as well. By integrating it with the research base project as a base for creative thinking and sustainable value.

5. Discussions

Development of production systems and development of teachers Continue to develop relevant target groups consisting of teachers, administrators, using mentoring, coaching and mentoring concepts and activities.This time, the objective is to 1) to enhance the knowledge and understanding of the concepts used in the development of teacher production and development systems. To develop relevant target groups consisting of teachers, administrators, using mentoring, coaching and mentoring concepts and activities 2) for the development of teaching and learning systems and processes. By allowing teachers to remove knowledge (Knowledge Management) in order to obtain a knowledge set that can be used in the teaching process. Operated by the development of mentoring target groups And had the target teachers participating in phase 1 to apply their knowledge in real situations in the lower central network schools. And create a professional community of learning (Professional Learning Community: PLC) by

teachers in the university doing research to develop teaching and learning And to develop teachers in small schools as well as to "coach" teachers to use the innovations that have been developed for their own students, it was found that reflecting the competency of the learner at this stage played a very important role in learning. Know all the life of the student it is an immersive experience which is an intellectual growth. Instructors are required to design challenging activities. Encourage to seek answers and have fun. The knowledge gained must be intelligent in solving problems and knowing the possibilities. Primary school students with this age will behave in harmony with nature. They see the world that is beautiful, rational, very loving, and has great purity of thought. By obeying teachers, parents, friends and intellectual advisers such as monks, missionaries, thus creating a student learning experience for inspiration. Creativity that will lead to the extension of the original intellectual structure to the new cognitive structure. It is a process of particular importance. To design instructor activities, it must focus on the development of the mind, encouragement, acceptance, forgiveness, cooperation of students with various reinforcements, creating a platform for exchanging knowledge Using diverse experiences from outside the classroom And building pride in learning from behavioral competencies that can be measured with results and innovation in everyday life. Teachers may be required to design activities through periodic planning, schedules, development tracking and student responsibilities by scheduling inspections and improving work individually This could be a practice experience. Information retrieval Data Actions Techniques and methods of presenting information Causal analysis Solution to the problem until students are able to summarize ideas and be able to build a conceptual diagram with confidence and explain and answer questions until the correctness is accepted. It is improved, developed, trial and error and is jointly examined on the possibility. Until being able to take action to create concrete pieces At this stage, the instructor has to split the time to follow up with each student individually or working groups using information technology together to provide convenience, speed and up-to-date events such as Application Youtube and Online various Coaching and Mentoring processes at this stage. Acknowledge the truth according to cause and effect, be observant, know, think, analyze, know, solve problems, get wisdom from problem or project (Project-Based Learning or Problem-Based Learning) is a process of seeking knowledge which is mentally invigorating. Which students may understand things from invention in the form of projects or research RBL (Research-Based Learning) or RBP (Research-Based Project), which all learners must have a systematic learning base as well. By integrating it with the research base project as a base for creative thinking and sustainable value This is in line with Paradee Kamphu Na Ayudhya (2017), saying that the study of creative problem solving and creativity In children with special abilities, Sirinapa Kitkuakool (2015) said that STEM Education is an integrated learning management in 4 disciplines: Science (Technology) Engineering. (Engineering) and mathematics. (Mathematics), a concept that arose from the lack of quality labor in engineering and science in the United States. STEM learning management therefore emphasizes on encouraging all learners. Can be creative And have skills in designing and thinking of problem solving according to real conditions according to engineering design principles

6. Recommendations

A. Recommendations for Practices

1) Organize learning through coaching and mentoring processes as an operational guideline for creating learners to create, solve, connect and create knowledge, consisting of 3 concepts of competency learning management and creativity, namely 1) development. Competency Based on Imagination 2) Empirical knowledge-building process support. (Construction of Knowledge) and 3) Review of the capacity for innovation in daily life (Creation of Innovation), where these three concept maps are a system for developing learners to demonstrate self-learning potential. Social networking Information retrieval Data Actions And problem solving thinking Practicing with scientific process skills according to the development of primary school students under supervision. Consulting help And encouraging the will to foster continuous learning and experiences that will be embedded in learners' schemata (Meaning full learning).

2) Developing Competency Based on Imagination by the teacher will be a key mechanism in creating learning power through brain storming, assertiveness.) And working with others (Team Work) creatively emphasizing behavioral development based on learning and play of elementary school students in a creative and fun way, consisting of perception activity and conceptual process. Of the learners (Conception), including 1) cognition (Understanding), 2) Connection, 3) Reasonable, and 4) Benefit by the students to reflect the competencies from their learning experience, namely 1) Valuable 2). Relay / explanation (Explanation) and 3) knowledge / findings. (Construction)

3) support of empirical knowledge building processes (Construction of Knowledge) At this stage, the teacher plays a role in participation, learning, parallel to students, co-partners, questioning. Encourage learners to acquire cognitive skills in conceptualization and systematic thinking, problem-solving processes using scientific processes. Questions from challenging situations are being asked to achieve accurate, fast and accurate results, including why, what, and if, which leads to self-confidence and fast learning through a coherence-based mindset system. Learning

behaviors consisted of 1) observation, 2) classification, 3) problem identification, 4) data collection, 5) hypothesis and 6) implementation. Until being able to take action and create the work efficiently

B. Recommendations for Further Research

Measuring and evaluating learners based on their creative performance with a systematic solution has implications for that learning.

1) possibility

2) economical

3) Ease

4) challenges

5) creativity

6) Utilization

7) Application

8) accuracy

9) speed

10) accuracy

On the basis of a self-learning process, such as creating a roadmap for improving development and its application that is beneficial and cost-effective. By reflecting the competency of the learner at this stage, it plays a critical role in the student's lifelong learning. It is an immersive experience which is an intellectual growth. Instructors are required to design challenging activities. The knowledge gained must emerge from the intelligence of problem solving and the realization of possibilities by creating a student learning experience for inspiration. Creativity that will lead to the extension of the original intellectual structure to the new cognitive structure. It is a process of particular importance. In designing instructor activities, it must focus on the development of the mind, encouragement, acceptance, forgiveness, cooperation of students. With various reinforcements, creating a platform for exchanging knowledge Using diverse experiences from outside the classroom And creating pride in learning from behavioral competencies that can be measured with results and innovations in everyday life.

7. Conclusion

In conclusion, the findings from the quality in education of lower central network with coaching and mentoring pass online system consisting of teachers, administrators by using the concept and activities of the mentoring system consist of assessment in the promotion of knowledge and understanding of concepts used in the development of production and teacher development systems develop relevant target groups consisting of teachers, administrators using concepts and activities, mentoring systems, coaching and mentoring the satisfaction at the highest level and development a system and learning process by having the teacher to remove the knowledge management (KM) in classroom consisting of 1) Learning Management with coaching and mentoring process, 2) Development of competency based learning with imagination (Competency Based on Imagination), 3) Supporting the process of building empirical knowledge (Construction of Knowledge), and 4) Performance Review for Creation of Innovation. learning management process by Coaching and Mentoring is a method for creating learners to create, solve problems, connect and create knowledge, consisting of 3 concepts, competency learning management and creativity. Namely: 1) Competency Based on Imagination of Learner Competency Development; 2) Supporting the empirical knowledge building process. (Construction of Knowledge) and 3) Review of the capacity for innovation in daily life (Creation of Innovation), where these three concept maps are a system for developing learners to demonstrate self-learning potential. Social networking Information retrieval Data Actions And problem solving thinking Practicing with scientific process skills according to the development of primary school students under supervision. Consulting help And encouraging the will to foster continuous learning and experiences that will be embedded in learners' schemata (Meaning full learning).

References

1. M. Á. González and others.(2015) Teaching and Learning Physics with Smartphones., Department of Condensed Matter Physics, Universidad de Valladolid, Valladolid, Spain. Journal of Cases on Information Technology, 17(1), 31-50, January-March 2015 31.

2. Godwin-Jones, R. (2017). Smartphones and language learning. Language, Learning and Technology, 21(2), 3e17.
3. Violeta Jurkovi. (2019). Online informal learning of English through smartphones in Slovenia. Faculty of Maritime Studies and Transport, University of Ljubljana, Pot pomor_s_cakov 4, 6320 Portoro_z, Slovenia. journal homepage: www.elsevier.com/locate/system.
4. Eurostat. (2016). Being young in Europe today - digital world. http://ec.europa.eu/eurostat/statistics-explained/index.php/Being_young in Europe today -digital_world/.
5. Prieto, J. C. S., Migueláñez, S. O., & García-Peñalvo, F. J. (2014). Mobile learning adoption from informal into formal: an extended TAM model to measure mobile acceptance among teachers. In Proceedings of the Second International Conference on Technological Ecosystems for Enhancing Multiculturality (ed. García-PeñalvoF. J.), pp. 595-602. ACM. doi:10.1145/2669711.2669961.
6. Aleven, V., McLaughlin, E. A., Glenn, R. A., & Koedinger, K. R. (2016). Instruction based on adaptive learning technologies. Handbook of research on learning and instruction. Routledge.
7. Kenji Matsuura, Stephen Karungaru, Naka Gotoda. January (2017). IMCOM '17: Proceedings of the 1 1 th International Conference on Ubiquitous Information Management and Communication.
8. M. Á. González, Manuel Á. González, M. Esther Martín, César Llamas, Óscar Martínez, Jesús Vegas, Mar Herguedas,Cármen Hernández. (2 0 1 5) .Teaching and Learning Physics with Smartphones. Journal of Cases on Information Technology, 17(1), 31-50, January-March 2015 .31.
9. Irnin Agustina Dwi Astuti, Dasmo and NurullaeliIndraprasta PGRI University, DKI Jakarta, Indonesia. (2 0 1 8) .The Use of Pocket Mobile Learning to Improve Critical Thinking Skills in Physics Learning . https://doi.org/10.3991/ijes.v6i4.8877. irnin.agustina@gmail.com. iJES – Vol. 6, No. 4.