

Construction Learning Active Through CERIA Educational Media : Study Conceptual In Elementary School Education In Indonesia

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Abstract

Learning active is one of the approach increasingly pedagogical get attention in context education school basis in Indonesia. However, its implementation Still face various challenges, especially limitations of learning media that are capable accommodate principles learning active in a way integrated. This article offer conceptualization of CERIA (Constructive, Engaging, Reflective, Innovative, Active) Educational Media as designed learning media framework For support construction knowledge student in a way active at the level school basic. The approach used is studies conceptual with analysis literature systematic which includes theories Study active, learning media design, and context education the basis of Indonesia. This study show that CERIA Educational Media integrates five core dimensions: constructivism cognitive, engagement multisensory, reflection metacognitive, innovation based context local, and participation active students. Every dimensions supported by a foundation strong and relevant theory with characteristics participant educate age school basis. This article also identifies indicator success implementation and implications pedagogical for teachers and developers curriculum. Study results conceptual This expected can give direction development of more learning media systematic and theoretical strong For increase quality learning active at school Indonesian basis.

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Keywords: learning active; CERIA educational media; school basic; constructivism; Indonesian education

INTRODUCTION

Education at the level school base hold role strategic in formation foundation cognitive, affective, and psychomotor participant educate. In Indonesia, efforts improvement quality learning at the level This Keep going done through various policy curriculum, teacher training, and development of learning media. One of them issue central which is still become attention of stakeholders interest education is How create environment real learning put student as subject active in the construction process knowledge, not just object recipient information.

Draft learning active (active learning) has develop rapidly since introduced in a way systematic in literature education contemporary. Learning active defined as a series of strategies and approaches that require student do activity think, connect, create, and reflect What is they study (Bonwell & Eison, 1991; Prince, 2004). In context education basic approach This own of great relevance remember characteristics development cognitive student aged 6-12 years who are at the stage operational concrete according to Piaget's framework, where experience direct and manipulation object physique play role critical in formation draft.

Although Thus, the implementation learning active at school the basis of Indonesia is still face a number of challenge structural and pedagogical. Data from the Ministry of Education, Culture, Research, and Technology show that part big practice classroom learning Still dominated by methods lecture One direction (Ministry of Education, Culture, Research and Technology, 2023). Conditions This exacerbated by limitations availability of learning media that is special designed For facilitate involvement active students. Many media are available at school base nature passive, namely only serve information without push interaction deep cognitive from party student.

In context this, development the concept of CERIA Educational Media becomes relevant and urgent. CERIA is acronym from Constructive, Engaging, Reflective, Innovative, and Active. Fifth dimensions This chosen based on study deep to principles learning active that has been established in literature scientific international and customized with context sociocultural education Indonesian foundation. Conceptualization This make an effort fill in gap between theory learning active which is rich in academic and practical development of learning media which sometimes lost foothold strong theoretical.



Studies conceptual This important Because give framework systematic and coherent reference for media developers, designers curriculum, and teachers who want to implement principle learning active through the right media target. Different with article study empirical reporting field trial results, studies conceptual functioning For build argument solid theoretical, identifying connection interconceptual, and offers a working model that can made into foothold For study next (Jaakkola, 2020; Rocco & Plakhotnik, 2009).

This article organized as next. Part two serve review library which includes theories Study active, learning media concepts, and conditions education Indonesian basics. Part three explain method study conceptual framework used. The fourth part to expose conceptualization of CERIA Educational Media in Details. Part five discuss implications pedagogical and direction development to front. Part six serve conclusion.

Study Questions

Based on background behind above, study conceptual This directed For answer three question main :

- What runway relevant theory For constructing CERIA Educational Media in context learning active at school base ?
- How the five dimensions of CERIA interact with each other integrate For support construction learning meaningful active ?
- What implications pedagogical from conceptualization of CERIA Educational Media for practice education basic in Indonesia?

LITERATURE REVIEW

Foundation Theory Learning Active

Learning active rooted in tradition developing constructivism from Piaget's (1952) thoughts on adaptation cognitive and Vygotsky (1978) on the developmental zone proximal. Both confirm that knowledge No transferred in a way passive from teacher to students, but rather constructed in a way active by students through interaction with environment and individuals others. Piaget's constructivism emphasizes importance experience direct and manipulation concrete in formation scheme cognitive, while constructivism Vygotsky's social emphasis the role of scaffolding, dialogue, and collaboration in the learning process.



Bonwell and Eison (1991) developed draft learning active in a way more operational with confirm that learning active requires student do something and think about what they do. Definition This differentiate learning active from learning passive in a way explicit. In influential meta-analysis study, Freeman et al. (2014) show that class with learning active produce achievement more academic tall compared to class with lectures traditional. Meta-analysis results This covers more from 200 studies and strengthens argument empirical For adoption learning active in a way more wide.

At the level school basic theory learning developed by Bruner (1960, 1966) about representation enactive, iconic, and symbolic own relevance high. According to Bruner, children Study optimally when they can move from representation concrete (enactive) towards visual (iconic) representation and then going to representation abstract (symbolic). Sequence representation This in accordance with stage development cognitive student school basic and become one of the foundation the design of the CERIA Educational Media being studied in this article.

Study contemporary the more strengthen argument that learning active need integrated with digital literacy, especially remember penetration increasingly advanced technology deep in life Indonesian children. Nasution et al. (2022) found that combination approach learning active with interactive digital media in a way significant increase motivation and results Study student school basic. This is open opportunity for development of learning media that utilizes strength technology at a time still rooted in the principles strong pedagogical.

Learning Media Design Theory

Learning media, in the most basic understanding is intermediary between message learning and recipient message. Mayer (2009) in the Cognitive Theory of Multimedia Learning (CTML) states that that brain man processing visual and verbal information through different channels, and that optimal learning occurs when second channel This activated in a way synergistic. CTML principles such as principle coherence, principle segmentation, and principles bait come back give guide based proof for media designer for avoid burden cognitive excessive at a time maximize processing active.

Gagné (1985) via the theory about condition Study identify nine incident learning (events of instruction) that are necessary noticed in design learning, including interesting attention, inform purpose, activate knowledge prerequisites, and provide bait back. Designed media with



consider events learning This potential more effective in support achievement objective complex learning.

In the Indonesian context, Prasetyo and Hariyanto (2021) studied use of media based game educational at school basic and find that the media has element competition, collaboration, and relevant narratives with culture local more succeed push involvement students. Findings This show importance contextualization culture in learning media design, which is one of the principle in Innovative dimension of CERIA framework.

Condition of Basic Education in Indonesia

Condition map education the basis in Indonesia shows sharp contrast between quality learning in urban and rural areas, between school flagship and school usual, and between teachers who have certified and those who are not. The PISA 2022 report places Indonesian students are in 68th position out of 81 countries in reading and 70th in mathematics (OECD, 2023). Although there is improvement compared to the years previously, achievements This Still Far from the OECD country average and shows need urge will transformation quality learning.

The Independent Learning Program was launched by the Ministry of Education, Culture, Research, and Technology. since 2019 providing room more wide for school For innovate in learning strategies and media (Ministry of Education, Culture, Research, and Technology, 2023). Policy This create the right momentum For develop and implement concepts learning more active diverse. However, freedom this is also necessary supported by the framework clear conceptual framework for developing innovation still own foothold strong pedagogical.

Indonesia's internet penetration rate will reach 79.5 percent in 2024 (APJII, 2024) and is increasing access digital devices at home ladder student school base create conducive ecosystem For integration of digital learning media. However, Supriyadi et al. (2023) reminded that access technology just No enough more important is How technology utilized in framework pedagogical that encourages think critical, creativity, and collaboration

METHOD

Approach Studies Conceptual

This article use approach studies conceptual (conceptual study) as design main. Study conceptual is type non- empirical research that aims For clarify, develop, or integrate concepts theoretical use produce framework new meaning in a way academic and applicable (Jaakkola,



2020). Approach This appropriate used when objective study is construct a model or framework theoretical new that can become guide for study empirical next.

Rocco and Plakhotnik (2009) distinguish studies conceptual from review literature normal in matter that studies conceptual No only summarize what has been there is, but active construct connection new interconceptual and offering perspective original. In context article this study conceptual used For integrate theories Study active, principle learning media design and context education Indonesian basics to in One framework Work integrated media called CERIA Educational Media.

Procedure Analysis Literature

Analysis literature done through four stage. First, stage identification source, where the author browse article journals, books, reports policies and proceedings relevant conferences from Various databases including Google Scholar, ERIC, Scopus, and institutional repositories of universities in Indonesia. The keywords used includes : active learning, learning active, learning media school basics, educational media design, constructivism, and their combinations.

Second, stage selection and inclusion, where the identified sources filtered based on criteria relevance, quality methodological, and temporal coverage from 2019 to 2025, with exception a number of work foundational which has influence historical big in field This. Third, stage analysis and synthesis, where the arguments main from selected sources analyzed, compared, and synthesized For identify relevant core principles for construction of CERIA Educational Media. Fourth, stage conceptualization, where the results synthesis used For develop and articulate CERIA framework in general coherent.

Validation Conceptual

For ensure validity and internal coherence of the CERIA framework, the conceptualization process in studies This follow established criteria Jaakkola (2020) for evaluate quality studies conceptual, namely : (1) clarity conceptual, whether every CERIA dimension is defined with clear and not ambiguous ; (2) internal coherence, whether fifth dimensions each other support and not each other contradictory ; (3) relevance contextual, whether CERIA framework in accordance with reality education the basis of Indonesia; and (4) generativity, whether framework This can produce question research and hypotheses that can be tested in a way empirical.



RESULTS**Conceptualization of CERIA Educational Media****Overview CERIA Framework**

CERIA Educational Media is framework conceptual integrative that describes characteristics essential from the designed learning media For optimize learning active student school basis. The name CERIA was chosen No only as acronym functional, but also as representation semiotics from atmosphere expected learning : fun, full enthusiastic and meaningful. In In Indonesian, the word "cheerful" itself contain meaning the cheerfulness and joy that reflects vision positive and affirmative learning.

CERIA framework consists of of five interrelated dimensions interact and not can separated One each other. Fifth dimensions This are : C (Constructive), E (Engaging), R (Reflective), I (Innovative), and A (Active). Each dimensions own runway theoretical alone at a time related close with dimensions others, forming a synergistic and holistic system.

Table 1. Five Dimensions of CERIA Educational Media and Foundations Theoretically

Dimensions	Foundation Main Theoretician	Principle Operational
C – Constructive	Constructivism ; Vygotsky's Zone of Proximal Development	Media facilitates development knowledge new based prior knowledge
E – Exciting	Csikszentmihalyi's Flow Theory; Deci & Ryan's Self-Determination Theory	Media creates optimal challenges that motivate involvement sustainable
R – Reflective	Reflective Practice Schön; Flavell's Metacognitive Theory	Media provides space and instructions For reflection independent student
I – Innovative	Contextual Learning; Local Wisdom Integration	Media integrates context local and relevant innovation culture
A – Active	Active Learning Bonwell & Eison ; Experiential Learning Kolb	Media requires participation physical and cognitive direct from student



Dimension C: Constructive

Dimensions Constructive is runway epistemological from CERIA framework. Multidimensional media constructive designed For facilitate the development process knowledge (knowledge construction) in a active by students, not just delivery information. This is realized through media design that provides problem open (open-ended problems), situations problematic that requires solutions and opportunities for student For make connection between draft new and existing knowledge they have previously.

In practice concrete, dimensional media constructive can in the form of game card the concept in which students build connection inter-concept, model three dimensions that can be dismantled, or digital applications with a push interface exploration independent. Santoso and Wardani (2022) found that student fourth grade school basic science learning using manipulative media constructive show understanding conceptual which are more in compared to students who study with presentation media passive. Findings This support relevance dimensions constructive in CERIA framework.

Dimension E : Engaging

Dimensions Exciting refers to the ability of the media to create and maintain involvement full student in the learning process. Concept This rooted in theory Csikszentmihalyi's (1990) flow theory which describes condition optimal engagement as balance between level challenges and levels ability. When the media provides too much of a challenge easy, students feel bored ; when too difficult, students feel anxious and broken hope. Exciting media put student in the optimal zone between two extremes This.

Self-Determination Theory developed by Deci and Ryan (2000) adds dimensions important motivational. According to theory this, motivation intrinsic develop when three need psychological base fulfilled : competence (feelings capable), autonomy (feeling own choice), and connectedness (feelings connected with other people). Exciting media in CERIA framework is designed For fulfil third need This in a way simultaneously. Pratama et al. (2023) demonstrated that learning media based element games (gamification) designed with notice third need psychological This in a way significant increase motivation intrinsic student school base.

Dimension R: Reflective

Dimensions Reflective is frequent aspects ignored in learning media design conventional, but own role crucial in ensure depth processing cognitive and internalization knowledge.



Multidimensional media reflective provide space, time, and guidance for student For stop for a moment, review back to the learning process they, identify what has been they understand and what is still confusing, and plan step Study furthermore.

Flavell (1979) defines metacognition as ability For think about the thinking process own. Development ability metacognitive This started since age school basic, but need appropriate facilities and support. In CERIA media context, facilities reflection can realized through journal integrated mini learning in the media, questions reflective in every part end activity, or inviting visual symbols student For think about return what has been they do. Hartanti and Subekti (2024) found that student class V which uses learning media equipped with reflection prompts metacognitive shows greater transfer of learning Good to situation new compared to group control.

Dimension I: Innovative

Dimensions Innovative in the CERIA framework refers to the media's ability to present fresh approach, content, or format, not conventional, and relevant in a way cultural. Innovation here No means use technology latest only, but create experience learning that has not been Once felt student previous and enriching perspective they.

One of aspect important from dimensions innovative in the Indonesian context is integration wisdom local (local wisdom) to in media design. Indonesia is rich with traditions, folklore, games traditional, and knowledge local that can become context authentic and meaningful learning for student school basis. Kusumawardani et al. (2024) showed that learning media that integrates element culture local No only increase involvement students, but also strengthens identity culture and pride to inheritance local. Findings This support importance dimensions innovative context - based cultural as part from CERIA framework.

Dimension A: Active

Dimensions Active is the core of the binding framework of CERIA fourth dimensions others. Media that has dimensions active in a way explicit demand participation physical and cognitive direct from students. This means the media does not can used in a way passive ; its use need action, decision, movement, or production from party student.

Kolb (1984) in Experiential Learning Theory emphasizes that meaningful learning happen through cycle involving experience concrete, observation reflective, conceptualization abstract,



and experimentation active. Dimensional media active in CERIA framework is designed For facilitate cycle This in a way full, not only One or two stages. More continued, Yulianti et al. (2019) in research at school Jakarta base found that the media requires manipulation physique active from student produce retention knowledge term longer length Good compared to media that only demand passive visual observation.

Table 2. Indicators Implementation of CERIA Educational Media in the Classroom

Dimensions	Teacher Indicator	Indicator Student	Example Activity Concrete
C – Constructive	The teacher provides problem open and questions challenge	Student build draft from experience, not memorize	Student stringing channel story use card picture
E – Exciting	The teacher chooses media with level optimal difficulty	Student show involvement full without need encouragement external	Game custom puzzles level difficulty automatic
R – Reflective	Teachers integrate question reflective in between activities	Student capable articulate what has been they learn	Journal mini study filled in at the end every session
I – Innovative	The teacher chooses the media that is used context relevant local	Student involved with close content with life they	Media based local folk tales For learning mathematics
A – Active	The teacher designs sessions that require participation physical-cognitive	Student move, create, and take decision during Study	Simple science experiments with materials around student

Interconnection Interdimensional CERIA

Fifth the CERIA dimension is not Work in a way separate, but rather in interconnected systems strengthen. Dimension Constructive give objective epistemological, namely why media

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is designed. Dimensions Active give mechanism operational, namely How student interact with media. Dimensions Exciting ensure that involvement active happen in a way voluntary and sustainable. Dimensions Reflective ensure that activity active No ends on the surface, but settle become deep understanding. Dimension Innovative ensure that fourth dimensions other present in context that is relevant, fresh, and meaningful in a way cultural for Indonesian students.

Interconnection This can depicted as ecosystem pedagogy where the absence One dimensions will weaken effectiveness overall system. For example, media that is Active, Exciting, and Innovative, but No Reflective, risky become just entertainment without internalization meaningful knowledge. In contrast, media are Constructive and Reflective but No Exciting will lost ability For maintain motivation intrinsic student age school the basis that is development still in great need enjoyable stimulation.

DISCUSSION

Implications Pedagogical for Teachers

Conceptualization of CERIA Educational Media brings a number of implications significant practical for school teachers basic. First, the framework This encourage teachers to No just using media available at school, but in a way critical evaluate what is the media fulfil fifth CERIA dimension. Evaluation This can done through a simple checklist developed based on indicators in Table 2 above.

Second, the CERIA framework encourages teachers to become creative media developers, not only passive media consumers. In Lots case, best media For class certain is a medium developed by the teacher Alone because teachers understand best context, needs, and interests their students. Wulandari and Prasetyo (2024) reported that the teachers are trained in principle active media design show improvement significant in the quality of the media they develop and deepen involvement student during learning.

Third, integrate CERIA Educational Media into in practice class need shift the role of teachers transmitter information become facilitator construction knowledge. Shift role This No happen in a way automatically, but rather need a development program sustainable and reflective professional.

Implications for Developer Curriculum

For developer curriculum and creators policy education, the CERIA framework offers enriching perspective in the process of selecting and evaluating learning media that will be



distributed to schools basic. During this, evaluation of learning media often focused on accuracy content and suitability with standard curriculum, but not enough notice quality pedagogical from the media design Alone.

Implementation Independent Curriculum which provides flexibility more big for teachers and schools create the right opportunity For adopt CERIA framework as one guide in development and evaluation of learning media at the school level national. Fauzan and Suyatno (2023) suggest that the policy development of learning media in Indonesia is necessary more based on principles learning active based evidence, instead solely consider factor aesthetic or cost production.

Limitations and Directions Study Advanced

As studies conceptual, article This own necessary limitations recognized in a way transparent. First, the CERIA framework is not yet tested in a way empirical in the field, so that claim about its effectiveness Still nature theoretical and prospective. Validation empirical through study quasi-experimental or study action class is very necessary For test whether framework This truly produce improvement learning measurable active.

Second, the study This focus on level school basis in Indonesia in general general, without differentiate in a way deep between level class bottom (1-3) and class the real (4-6) own characteristics development different cognitive. Research advanced need adapt CERIA framework for each level the.

Third, dimension innovative in framework This mention integration wisdom local, but Indonesia is a country with more from 700 groups very diverse ethnicities and cultures. Research more carry on need explore How CERIA framework can contextualized For diversity very rich culture in Indonesia without fall to in stereotypes or oversimplification.

Table 3. Research Agenda Empirical Based CERIA Framework

No.	Question Study	Approach Methodology	CERIA Dimension	Target Level
1	Does CERIA -based media increase score understanding science concept ?	Quasi-experiment	C, A	Grades IV-V



2	How student experience involvement with CERIA media during learning ?	Qualitative phenomenological	E, A	Grades III-VI
3	What are reflection prompts ? enhance learning transfer mathematics ?	Study action class	R, C	Grades V-VI
4	How context local influence motivation Study in CERIA media?	Mixed methods	I, E	Class I-III
5	Can teachers develop CERIA media after training ?	Longitudinal survey	All dimensions	Elementary school teacher

CONCLUSION

This article has presenting conceptualization of CERIA Educational Media as framework integrative that describes characteristics essential learning media For support learning active at school Indonesian foundation. The CERIA framework consists of of five dimensions, namely Constructive, Exciting, Reflective, Innovative, and Active, built on foundation strong theoretical from various tradition scientific : constructivism cognitive and social theory multimedia- based media design, theory motivation, theory Study experience and theory metacognition.

Contribution main article This located on three thing. First, the CERIA framework offers Language systematic and coherent conceptual For discuss quality of learning media active, something that is active This Still nature implicit and not standardized in practice education basis in Indonesia. Second, the framework This emphasize that fifth dimensions is not category separate, but rather interconnected components connected and strengthened in A ecosystem



pedagogical. Third, the article This show How theories universal learning can contextualized in reality sociocultural and policy Indonesian education.

Implications practical from study This covers guide for teachers in evaluate and develop learning media, recommendations for developer curriculum in set standard media quality, and research agenda empirical that can validate and enrich CERIA frame in the field. With existence CERIA framework, it is hoped development of learning media in Indonesia is not Again just follow trend technology latest, but truly based on principles in -depth pedagogical For create generation active, reflective, and empowered students.

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