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Application Activity Numeracy Pleasant Through Snakes and Ladders Game at SDN 2 Tilongkabila

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Abstract

For increase ability number of participants educate , one method that can used that is application activity numeracy through game snake stairs which is method learning that has characteristics integrate between the learning process and play . Research methods used _ is Classroom Action Research (PTK) with using the spiral model by Kemmis and McTaggart. Research result showing that before implementation cycle only there were 5 out of 15 participants educate or amounting to 33.33% of participants educate those already show behavior numerated , in cycle I obtained as many as 8 out of 15 participants educate or amounting to 53.33% already show behavior numerate . Implementation actions in cycle II were obtained as many as 14 of the 15 participants educate or amounting to 93.33% already show behavior numerate . Based on the data above , this happens change behavior on each implementation cycle , increase from implementation observation initial which was initially 33.33% to cycle I increased by 53.33% of participants educate who shows behavior numerate . Next , improvement behavior numerate on implementation action cycle I to cycle II , namely by 40% of cycle I to cycle II. This matter show that application activity numeracy pleasant through game snake ladder can increase behavior numerate participant educate 4th grade at SDN 2 Tilongkabila .

Introduction

Ability numeracy hold role important For finish problem in various field life . Ability reason and think through numbers , data, code , numbers , and computing is characteristic 21st century digital industry . Karena That ability Numeracy is very important planted to participant educate especially at level school base . Ability numeracy is implementing abilities _ draft numbers , skills operation arithmetic , and ability explain information or problem using mathematics (Ardi & Desstya, 2023) . Ability This emphasize to data and number processing For evaluate statement about problems and situations that require it mental processingand evaluation in life real (Mumazizah et al., 2023) .

Ability numeracy This different with competence mathematics , the difference lies in utilization knowledge and skills , though knowledge and skills still The same .

Ability participant educate in control competence mathematics Not yet ensure participant educate the own ability numeracy (Prihapsari et al., 2023) . In line with matter the practice ability numeracy No can done with an instant process , necessary gradually from kindergarten, elementary school, middle school, high school up to college tall .

Based on research conducted by Adinda et al. (2022) that ability numeracy participant educate Still classified low . This matter based on Programmed for International Student Assessment (PISA) data in 2018 from a total of 79 countries as object study that on category mathematics , Indonesia occupies 7th lowest ranking (72nd of 79 countries) with an OECD average of 487 (Ministry of Education and Culture , 2019). PISA survey in 2018 done to participant educate as many as 600,000 children aged 15 years from 79 countries. Survey This done every three year very .

In essence every child own understanding different numeration especially in its development. Development ability numeracy participant educate achieved from level A success learning that occurs (Budiana, 2022) . One of success in the learning process influenced by use appropriate techniques , methods and media until interesting attention participant educate For increase his competence . Research conducted by (Hendrawati, 2020) use of media that is not appropriate or No using internal media learning numeracy impact big to success of the learning process .

Based on results observations we have made at SDN 2 Tilongkabila, during the implementation process activity numeracy it turns out Still experience constraint to the learning process done by the teacher yet impact on improvement numeracy . Explanation material numeracy by teachers more focuses on usage book text without designing learning in accordance with need participant educate so that in apply draft numeracy in life daily felt difficult for participant educate . The methods used by teachers are inadequate varies for example method lectures , and the lack of teachers using media so learning become No effective in increase interest numerate participant educate . In accordance with facts found in the field be clear that use The right method and media play a very important role in build activity pleasantly numerate , so objective learning can accomplished with maximum for participants educate (Hendrawati, 2020) Learning methods based game is one of possible methods applied inside class (Ulfa et al., 2022) .

Research conducted Clara et al., (2018) that use of game media inside learning need applied For increase motivation learn , will but Still Not yet increase ability base participant educate . Media created felt not enough in accordance with development participant educate . In the learning process should knowledge and skills participant educate developed with the goal is to be able build his knowledge Alone . Therefore That need exists activity encouraging learning participant educate For solve problems and of course activity the have load interesting learning. This matter done For create environment interesting and enjoyable learning No direct practice Skills participant educate (Candra & Rahayu, 2021) . Packaged games _ in learning naturally will can

increase motivation Study participant educate compared with using learning strategies other (Ekowati et al., 2019) .

Games that can combined in learning is game snake ladder . Snakes and ladders is game already known (familiar) to participant educate , so No need long time for explain game This . Game media snake ladder is results development from game customized traditional with characteristics participant educate For reach objective learning (Wati, 2021) . Game This is very fun , also helpful Power memory and ability think critical participant educate (Suciati, 2021) . Draft game snake ladder that is game played by 2 children or more with throw dice that say numbers 1 to 6 and also available board every game plot (box) contains question Where every player must pass and answer question the (Marcela et al., 2022) . The purpose of game snake ladder is participant educate feel challenged and happy follow learning so that participant educate more easy control material and also can increase motivation learn it (Afifah & Hartatik, 2019) . This is what makes it happen activity play while Study become more fun and meaningful .

Based on results study Sibuea and Sinaga (2018) , that with snake media ladder happen enhancement ability child . In line with study Baiquni (2016) through game snake ladder can increase ability cognition and outcomes Study participant educate . Based the problem above so researcher will do assessment about Application activity numeracy pleasant through game snake stairs at SDN 2 Tilongkabila .

Research Methods

Type of method applied in study This is Classroom Action Research (PTK) with use design Stephen Kemmis and Mc model research . Taggar . PTK used designed with two stages cycle , every cycle consists from four processes. Classroom Action research design can seen in the picture following :

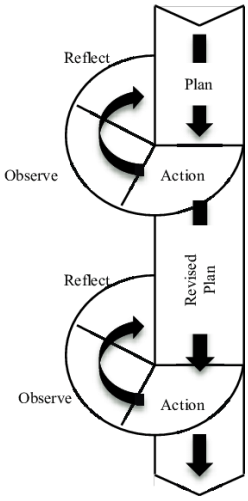

Figure 1. Classroom Action Research Model by Stephen Kemmis and Mc. Taggar

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Research design action class (PTK) in research This based on the picture above , namely 1) plan (planning); stages This containing plan action that will held For increase ability numeracy participant educate IV class with application activity numeracy pleasant through game snake ladder . Planning action the covers preparation of lesson plans, learning media game snake stairs , divide participant educate become a number of group prepare equipment and materials practice , socialization learning with game snake ladder to participant educate and prepare assessment instruments , 2) action ; on stage This researcher carry out learning that has been done planned . The teacher carries it out learning with apply activity numeracy pleasant through game snake ladder based on book mathematics material number chopped curriculum independent . Following steps game snake ladder (a) participants educate do scissors stone paper for determine Who player first and so on , (b) participants educate start game with method throw dice , owned pawns participant educate move in accordance with amount the numbers that come out from dice , (c) participants educate answer question based on place pawn stops . When the pawn belongs participant educate meet with ladder , then the participant's pawn educate will go up to the box that became end from picture ladder the with method expression happy or sing in accordance instructions are on the box , as are the participant's pawns educate land in the box that has it picture head snake then the pawn belongs participant educate will down the box that becomes end from tail snake that and of course follow applicable instructions in box , (d) when the participant's pawn educate land in the box that says gift card then participant educate will get a gift if capable answer questions in the box the with true , (e) for win game , participant's pawn educate must stop boxed final snake stairs , and; (f) co teacher participant educate conclude activities that have been done . 3) observe (observation); stage observation done researcher with assisted by 4 observers who observed direct learning process . Observation This done with objective For know There is or or not changes that occur with implementation moderate action done that is application activity numeracy pleasant through game snake stairs and achievements participant educate in ability marked numeration with participant educate capable understand instructions on each box with reason critical , creative , working together/ cooperating and understanding diversity , 4) reflect (reflection); stage reflection This is something action taken with evaluate results from implementation action the . Reflection based on collected data form results observation and evaluation . Reflection results become base For determine implementation or action on the cycle next. The PTK model is spiral and continuous if the target results from action taken Not yet achieved , then next with cycle next .

Study This carried out from September to November 2023. Research This located at Tilongkabila 2 Elementary School Bone Bolango Regency with subject study is participant educate class IV, totaling 15 people. Study This intended For know How effort increase ability numerate participant educate IV class with application activity numeracy pleasant through game snake ladder . Procedure from research conducted

in study This consists of 4 stages that is planning , implementation , observation and reflection . Data collection techniques used in study This is observational data . Data obtained in research This is quantitative data results observation teacher and participant activities educate in application activity numeracy pleasant through game snake ladder , ability think critical participant educate and interest numerate . Study action class is study cases carried out within the resulting class No Enough generalized , so sufficient data analysis For describe the collected data . Statistical techniques used is statistics descriptive . Every variable study will analyzed based on criteria that have been set .

Results And Discussion

Study This use procedure study action class from Kemmis and McTaagart . Procedure study consists from a number of stages namely : planning , implementation , observation and reflection . Study action class This held start September 11 , 2023 until by November 15 , 2023. Research has been conducted done consists of 2 cycles , viz cycle I and cycle II. Action given that is application activity numeracy pleasant through game snake ladder For increase ability numeracy participant educate 4th grade . Implementation research at meetings Firstly , there were 15 participants students who are present , complete or not someone is absent . Before done implementation In cycle I, data was obtained from 12 of 15 participants educate or 80% of participants educate Still Not yet show motivation and behavior numerate with good , and as many as 20% of participants educate Already show motivation and behavior numerate with OK , p This is known Because with behavior participant educate No motivated For Study numeracy as well as learning numeracy at school Not yet collaborated with use of learning media .

In general , behavior participant educate in classroom learning own sufficient behavior active . However , liveliness participant learn in class Not yet under control with Good . For example , when learning mathematics , participant educate not enough enthusiastic in learn and a lot participant insufficient education control ability with use numbers . Additionally , at the time learning participant educate difficult For still focus in long time . This matter can seen when the teacher explains material , there is a number of participant students who pay attention to the teacher explaining material and participants educate other Busy with activity each of them , for example : there are those who see to window , talking with friends and so on .

In cycle I, 7 out of 15 or 46.66% of participants were obtained educate Still Not yet show behavior numerate with right and good as well as Not yet show motivation numerate with good , and 8 out of 15 participants educate or 53.33% of participants educate Already show behavior numerate with right and good as well as show motivation numerate with Good .

After do implementation research in phase I, then done action reflective . These results used as repair in the process of activities Study teaching in cycle II. Explanation results reflection on cycle I can seen in the table following :

Table 1. Reflection Results Cycle I

Lack	Reason	Alternative Repair
still is a number of participant insufficient education _ understand instructions in box	Participant educate No focus understand instructions in box	Direct participant teach to follow instructions in box
still is a number of participant educate those who don't comfortable at the moment do game	Size board small game _	Enlarge size board game previously 40x40 cm became 70x70 cm
still is a number of participant educate those who don't active in do game snake ladder	Participant educate Not yet understand rule game snake ladder	The teacher explains return method do game snake ladder

Based on the table above , then results reflection show that Still there is a number of shortcomings that must be repaired For understanding of activities numeracy pleasant through game snake ladder . Therefore That ,

1. Planning

At stage here , there is a number of necessary preparation done for process activities numeracy including : development of lesson plans , development of learning media with use game snake ladder . Stage improvement of lesson plans, researchers analyze depth material with allocation available time as well as development competence base done understanding method numerate with good and right .

2. Implementation

Implementation activity Study teach will be held on Monday , November 6 2023 and carried out duration time 2 x 45 minutes . Before do application activity numeracy pleasant through game snake stairs , the teacher gives procedure guide rule in game . The teacher gives chance to participant educate do ask answer about game snake ladder . Then , teacher together participant educate make agreement games , for example participant educate No can help Friend answer questions and participants educate must orderly in play snake ladder . Before start game snake stairs , the teacher invites participant educate do ice breaking so participant educate more enthusiastic .

Next , participants educate do scissors stone paper for determine Who player first and so on , participants educate start game with method throw dice , owned pawns participant educate move in accordance with amount the numbers that come out from dice, participants educate answer question based on place pawn stops . When the pawn belongs participant educate meet with ladder , then the participant's pawn educate will go up to the box that became end from picture ladder the with method expression

happy or sing in accordance instructions are on the box , as are the participant's pawns educate land in the box that has it picture head snake then the pawn belongs participant educate will down the box that becomes end from tail snake that and of course follow applicable instructions _ in box . Next , when the participant's pawn educate land in the box that says gift card then participant educate will obtain gift (gift) if capable answer questions in the box the with right , for win game , participant's pawn educate must stop boxed final snake stairs , at the end joint teacher activities participant educate conclude activities that have been done .

3. Observation

Observation results obtained from the activity process numeracy pleasant through game snake ladder that is as following : based on observation data on implementation activity numeracy pleasant through game snake the stairs in cycle II were found that activity numeracy pleasant through game snake ladder This give good progress for participant educate moment carry out activity numeracy . That matter can proven with exists motivation participant educate in activity numeracy . Apart from that , games snake ladder This make participant educate happy and excited when do activity numeracy while play . Based on explanation participant educate on interviews that have been done that application activity numeracy pleasant through game snake ladder more liked participant educate . Success application activity numeracy pleasant through game snake ladder can seen from his enthusiasm participant educate . Implementation actions in cycle I were found that obtained participant insufficient education understand instructions in box , obtained participant educate those who don't comfortable at the moment do games , as well participant educate those who don't active in do game snake ladder . Then , it's done action next that is cycle II. In cycle II it was obtained that participant educate has prove exists significant improvement in application activity numeracy . Excess activities in cycle II of cycle I, namely : first , participants educate free express his feelings moment play game snake ladder that is with method laughing and jumping . Second , use time in cycle II is more Good from cycle I so activity application activity numeracy pleasant through game snake ladder become more Good . Third , in cycle II apart from answer question with correctly by the participants education , instructions contained in box carried out by participants educate with good and right . Fourth , action advanced This more Good from previously based on results observations carried out by four implementation observers activity numeracy pleasant through game snake ladder .

4. Reflection

Stages reflection done return For produce existing data in table following :

Table 2. Reflection Results Cycle 2

Behavior	Indicator	Notes

Participant educate Already understand instructions in box	Participant educate capable do instructions in box with Good	-
Participant educate active do game snake ladder	Participant educate Already understand rule game snake ladder	-
Participant educate enthusiastic do game snake ladder	Participant educate feel happy and joyful finish game snake ladder	-

Based on table 2 above , results reflection show that application activity numeracy pleasant through game snake ladder there is improvement and development participant educate that is as many as 14 of the 15 participants educate or with number acquisition score of 93.33% already show behavior numerate . Change behavior participant educate from before implementation cycle I to cycle II can seen in the table following :

Table 3
Implementation results activity numeracy pleasant through game snake ladder

Initial/ Prior Observations Implementation Cycle	**Cycle I**	**Cycle II**
5 out of 15 participants educate Already show behavior numerate	8 out of 15 participants educate Already show behavior numerate	14 of 15 participants educate Already show behavior numerate
33.33%	53.33%	93.33%

Based on the table above , shows that before implementation cycle only there were 5 out of 15 participants educate or amounting to 33.33% of participants educate those already show behavior numerated , in cycle I obtained as many as 8 out of 15 participants educate or amounting to 53.33% already show behavior numerate . Implementation actions in cycle II were obtained as many as 14 of the 15 participants educate or amounting to 93.33% already show behavior numerate . Based on the data above , this happens change behavior on each implementation cycle , increase from implementation observation initial which was initially 33.33% to cycle I increased by 53.33% of participants educate who shows behavior numerate . Next , improvement

behavior numerate on implementation action cycle I to cycle II , namely by 40% of cycle I to cycle II. This matter show that application activity numeracy pleasant through game snake ladder can increase behavior numerate participant educate 4th grade at SDN 2 Tilongkabila .

Based on results The research above carried out 2 cycles application activity numeracy pleasant through game snake ladder show that can increase behavior numerate participant learner , participant educate show progress in understanding numerate . Application activity numeracy pleasant through game snake ladder expected No only form behavior and motivation participant educate numerate , but also possible increase interest participant educate in Study numeracy . Like results research conducted by (Ardi and Desstya , 2023) participants educate more like learning while play . Learning with using learning media snake ladder can give motivation for participant educate For Study so that can increase ability numeracy participant educate . Use of learning media numeracy snake ladder make participant educate more excited and able increase ability numeracy participant educate . Draft application activity numeracy pleasant through game snake stairs , with exists application game like This make participant educate can develop communication concentration and creativity .

Conclusion

Based on study action the research class carry it out in class IV at SDN 2 Tilongkabila obtained conclusion results study that is that with use game snake ladder can help application fun numeration . _ Application fun numeration _ through game snake ladder This effective For applied To use increase ability numerate participant educate . Application fun numeration through game snake ladder is method learning that has characteristics form integration between the processes of numeracy and play . Based on results research and discussion above , through implementation of 2 cycles This can withdrawn conclusion that application fun numeration through game snake ladder can increase ability participant educate in numerate . This matter be marked with participant educate show progress in understanding numerate . Application activity numeracy pleasant through game snake ladder expected No only form behavior and motivation participant educate numerate , but also possible increase interest participant educate in learning , concept application activity numeracy pleasant through game snake stairs , with exists application game like This make participant educate can develop communication concentration and creativity . This matter stated with exists significant improvement _ in ability numerate participant educate from observation beginning , cycle 1 and arriving at action cycle 2. Next expected exists study more carry on in implementation application fun numeration through game snake ladder so that get more methods _ latest about grow behavior numerate so that it is possible can help participant educate For do improvisation in matter learning and literacy .

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