

Improving throwing and catching skills in a kasti lesson through classroom action cycles

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ARTICLE INFO	ABSTRACT
Article history: Received: 29 September 2026 Revised: 05 October 2026 Accepted: 16 October 2026 Keywords: Throwing and catching Kasti Physical education Classroom action research Skill assessment	This classroom action research examined changes in throwing and catching performance during kasti lessons in class VII-A at SMP Darut Taubah, North Bekasi. Thirty pupils (16 boys and 14 girls) completed a baseline assessment and two action cycles involving paired practice, target throws, varied distances and simplified game play. Performance was assessed with an observed six-item throwing and catching rubric and converted to a 0–100 score. The reported class mean rose from 59.40 at baseline to 69.47 in Cycle I and 76.67 in Cycle II. Pupils reaching the stated minimum score of 70 increased from 4/30 (13.3%) to 14/30 (46.7%) and 25/30 (83.3%). Observed participation was approximately 78% in Cycle I and 89% in Cycle II. The final completeness rate exceeded the preset 75% criterion. These descriptive findings support improvement within this class across the action cycles, while the absence of a comparison class and limited reporting of observation procedures restrict causal and broader claims.

I. Introduction

Kasti requires pupils to coordinate a throw toward an intended receiver or target and to judge the flight of a ball before catching it. In a school lesson, these actions are learned through repeated attempts, useful feedback, and opportunities to apply them in a game. A student who cannot yet send or receive the ball reliably may avoid taking part in team play. Assessing basic movements separately can help a teacher decide what to practise before asking pupils to play the full game.

The thesis on which this article is based describes difficulty with basic throwing and catching in class VII-A at SMP Darut Taubah, North Bekasi. The lessons previously emphasized the whole kasti game while structured practice of the component movements was

limited. The researcher and a physical education teacher therefore planned a sequence of paired throws, target practice and simplified play. The educational problem was specific: the class mean and the proportion reaching the minimum achievement criterion were low in the baseline assessment.

A classroom action design is suited to iterative improvement of one teaching setting. The teacher first plans an intervention, conducts the lesson, observes the process and results, then reflects and modifies the next cycle. Its value lies in making the teaching decision and the observed classroom change explicit. The design does not independently establish what would have happened to the same pupils without extra practice; a claim of effect beyond this class requires a stronger comparison design.

Related classroom studies also report gains when throwing skills are practised within a play approach. Daulay et al. (2021) reported a kasti throwing-and-catching action study in primary school, while Anggraeni and Sutiarysih (2018) examined variations of basic throwing in two action cycles. Those settings involved younger pupils and different teaching procedures, so their scores should not be pooled with the present class. They provide a useful teaching context rather than a benchmark that proves an identical intervention effect.

Aim and research questions

This article examines how the recorded mean skill score, number meeting the minimum score, component indicators and classroom participation changed from the baseline through Cycle II. It also describes what was revised after Cycle I and whether the prespecified classroom criteria were reached. The outcome called “kasti ability” in the thesis is operationally a rubric score for throwing and catching. The source does not report a separate test of complete match play, batting, running or strategic decisions, so the article avoids extending the score to all aspects of kasti performance.

The main practical question is whether structured basic-skill practice accompanied improved performance in this particular class. A second question is which adjustment between cycles plausibly made the lesson more accessible: additional distances, closer help for pupils below the criterion, and simplified play were introduced together. Because these changes were combined, this action study cannot determine which one contributed most to the later scores.

II. Method

Design, setting and participants

The source describes classroom action research in the second semester of the 2025/2026 school year at SMP Darut Taubah in North Bekasi. The participants were all 30 pupils of class VII-A: 16 boys and 14 girls. The class was selected following a preliminary observation of low throwing-and-catching performance. Baseline testing preceded two cycles. Each cycle comprised planning, action, observation and reflection; the methods state that each cycle used two meetings, one for teaching and one for testing. The exact calendar dates of individual lessons are not specified in the results.

The researcher worked with the physical education teacher as a collaborator. The plan included lesson preparation, balls, cones, a target and a whistle, along with an observation form for activity and a performance rubric. A cyclical plan permitted changes after evaluating whether the first intervention met the class criteria. Every reported class-level denominator remains 30; no attrition is described in the thesis tables.

Stage	Teaching and assessment	Decision focus
Baseline	Observed throwing and catching test	Identify starting score and pupils below 70
Cycle I	Paired practice at 5 and 8 m; target throws; skill test	Review score, completeness and participation
Cycle II	Distances of 5, 8 and 10 m; individual support; simplified game; skill test	Check three preset classroom criteria

Table 1. Action sequence reconstructed from the thesis methods and results.

Teaching procedure and revision

In Cycle I, the first meeting gave pupils paired throwing-and-catching practice at approximately 5 and 8 metres, followed by throws at a target. The next meeting assessed skill performance. The reported observation found more pupils participating but some uncertainty in the throw direction and receiving movement. The class did not meet either the 75% completeness target or the 80% participation target, so the researcher and collaborator planned a further cycle.

Cycle II added a 10-m distance option, closer attention to pupils who had not reached the minimum score and a simplified kasti simulation. The three distances were described as variations within a progression, not as a fixed test of how far each pupil could throw. The source does not specify practice duration per station, number of repetitions per pupil, exact teacher feedback, or fidelity observations. Consequently, the intervention is reported at the level supported by the lesson narrative rather than as a fully reproducible training dose.

Instrument, scoring and success criteria

The skill sheet listed three throwing subindicators: a high throw, a horizontal throw and directing the ball toward a target. Three receiving subindicators concerned catching a high ball, catching a horizontal ball and completing the catch. Each subindicator was assigned a rating from 1 to 5. Six ratings therefore yielded a maximum raw total of 30, converted by the thesis to a 0–100 scale for class reporting. A score of at least 70 defined individual completeness.

The methods also show a second observation-sheet layout using “initial position,” “execution” and “final position” with repeated numbered aspects. The relationship between that layout and the six-subindicator table is not fully explained. The article reports the six-item rubric described in the scoring narrative and the published 0–100 outcomes; the author should reconcile the original instrument versions before submission. No inter-rater agreement or rubric validation result is supplied, although the researcher and collaborator are said to have observed performance.

The action was considered successful if at least 75% of pupils scored 70 or above, the mean increased across stages, and observed participation reached at least 80%. For a class of 30, at least 23 pupils must score 70 or more to exceed the 75% threshold. The participation percentage is treated as an approximate reported observation because the thesis does not present individual participation records or specify its denominator and calculation. Its interpretation is therefore more tentative than the count of pupils meeting the score criterion.

Data processing

The article uses the stage summaries and component values printed in Chapter IV of the thesis. Class means, score ranges, completed counts, percentages and component indicator averages are compared descriptively. The arithmetic change in mean equals the later mean minus the earlier mean. Percentage-point change in completeness is the later percentage minus the earlier percentage. This is a within-class account; no inferential significance test was reported or reconstructed because the action cycles did not have an independent comparison group and individual linked scores were not necessary to answer the stated descriptive question.

The thesis includes named pupil tables, but the present article uses aggregate summaries and does not reproduce identifying details. The source does not provide a confirmed ethics approval number or a sufficiently detailed account of parent or guardian consent and pupil assent. These administrative details should be checked from original records before journal submission; they cannot be inferred from the existence of a school-based lesson.

III. Results and Discussion

Class performance across three stages

At baseline, the class mean was 59.40, with reported scores from 47 to 77; four pupils met the 70-point threshold. In Cycle I, the mean reached 69.47, scores ranged from 53 to 90 and 14 pupils met the threshold. In Cycle II, the mean reached 76.67, scores ranged from 60 to 93 and 25 pupils met the threshold. Thus the mean rose by 10.07 points in the first interval and a further 7.20 points in the second interval, a total of 17.27 points from baseline to Cycle II.

Stage	Mean	Range	At least 70	Completeness
Baseline	59.40	47–77	4 / 30	13.3%
Cycle I	69.47	53–90	14 / 30	46.7%
Cycle II	76.67	60–93	25 / 30	83.3%

Table 2. Published stage-level skill outcomes for class VII-A (n = 30).

Completeness improved by 33.4 percentage points from baseline to Cycle I and by 36.6 points from Cycle I to Cycle II using the displayed one-decimal percentages. The total rise was 70.0 percentage points. The proportions are rounded representations of the exact counts, which are the preferred evidence for the criterion decision. Cycle II exceeded the 75% target because 25 pupils, two more than the minimum count of 23, scored at least 70. Five pupils remained below the threshold.

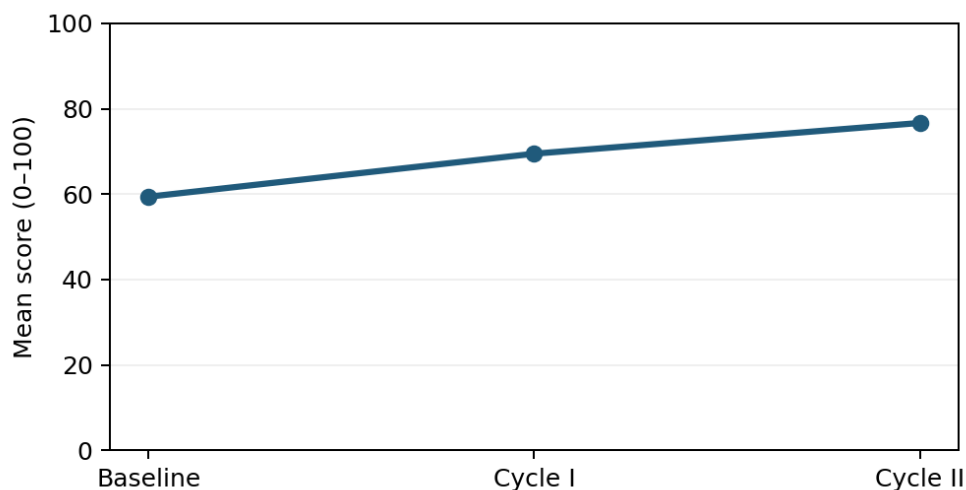


Figure 1. Reported class mean in the baseline assessment and two action cycles.

Observation and the first reflection

The Cycle I observation recorded participation of approximately 78%, below the chosen 80% process target. The mean of 69.47 was also just under the 70-point individual criterion,

although a mean and an individual completeness threshold answer different questions. Fourteen of the 30 pupils had reached 70, leaving a majority below the threshold. The reflection identified limited variation in practice, insufficient support for struggling pupils and distance choices that were not yet sufficiently adapted to starting ability.

Those observations motivated the Cycle II plan. The researcher described additional distance variation and target work, more guidance for pupils below 70 and a simplified game. The Cycle II participation observation was approximately 89%, nine percentage points over the process target and eleven points above the reported Cycle I value. The three changes were implemented as one package, so the available summary cannot attribute the improvement separately to distance progression, attention or game simulation.

Throwing and catching indicators

The thesis also presents mean percentages for the two skill components. Throwing rose from 61.1% at baseline to 67.9% and 75.6% in Cycles I and II. Catching rose from 57.6% to 71.3% and 77.8%. The source does not explain in sufficient detail whether these component percentages were calculated from raw six-item scores before or after conversion. They are used descriptively as reported, without treating them as independent tests or reconstructing pupil-level change.

Component	Baseline	Cycle I	Cycle II	Baseline to Cycle II
Throwing	61.1%	67.9%	75.6%	+14.5 points
Catching	57.6%	71.3%	77.8%	+20.2 points

Table 3. Reported component averages; changes are percentage-point differences.

Catching began lower and showed the larger reported gain between baseline and Cycle I. The component means were closer in Cycle II. This pattern fits a lesson sequence with many repeated exchanges, but it cannot establish that any specific drill caused the component change. A future report would benefit from defining exactly what a successful catch means, how many trials are scored for each movement and whether the same observer applies the rating at every stage.

Distribution and pupil groups

The reported categories shifted toward higher levels. The thesis tabulates 14 pupils as “Cukup Memenuhi” and 16 as “Memenuhi” at baseline; in Cycle I, the corresponding counts were 3 and 20, with 7 in “Terpenuhi.” In Cycle II, 17 were “Memenuhi,” 10 “Terpenuhi” and 3 “Sangat Terpenuhi.” Although this supports a broad upward movement of categories, the

category boundaries are not reproduced alongside the summary. A category labeled “Memenuhi” is therefore not automatically interchangeable with the binary 70-point completeness count.

Stage	Cukup Memenuhi	Memenuhi	Terpenuhi	Sangat Terpenuhi
Baseline	14	16	0	0
Cycle I	3	20	7	0
Cycle II	0	17	10	3

Table 4. Category counts as printed in the thesis; each row totals 30.

The thesis provides a further descriptive split by sex. Mean values for the 16 boys were 56.50, 68.19 and 75.19, while the 14 girls averaged 62.71, 70.93 and 78.36 across the three stages. Both groups had higher final means than at baseline. The Cycle I text reports 7 boys and 7 girls meeting the score threshold; Cycle II reports 13 boys and 12 girls. This split describes the cohort but is not a test of whether the intervention works equally well for boys and girls. The sample sizes, starting levels and classroom setting limit such an inference.

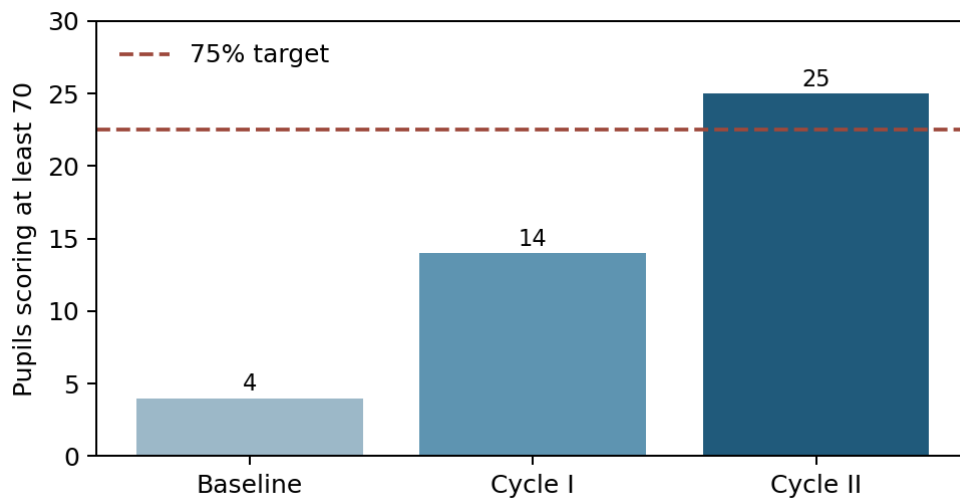


Figure 2. Number of pupils meeting the score criterion, with the 75% target shown for $n = 30$.

Meaning of the action-cycle result

The strongest conclusion is a local teaching result: the published class summaries show higher rubric scores, more pupils scoring at least 70 and higher reported participation after the revised lessons. In Cycle II the two numerical process and outcome targets were met, and the action research stopped. This conclusion preserves the purpose of classroom action

research, which is to improve a documented lesson in a real class through observation and reflection.

The mean increase should not be confused with a controlled treatment effect. Pupils completed additional practice and repeated a similar performance assessment. Familiarity with the task, ordinary maturation, teacher feedback and general physical education activity may all contribute. There was no comparison class taught by the earlier method over the same period, and the source gives no separate measure of how much each pupil practised. The present article therefore describes association across stages and the iterative teaching decision, not proof that one isolated exercise produced the entire 17.27-point change.

The mean and the completeness count convey different aspects of learning. A higher mean could occur if a few already proficient pupils improved sharply, but here the count reaching 70 also rose from four to 25. That count indicates wider attainment of the local criterion. Still, five pupils were below 70 at the final stage, and the aggregate data do not reveal which specific throwing or receiving actions remained difficult for them. Follow-up teaching should begin with their individual rubric profiles.

Relationship to prior classroom studies

Daulay et al. (2021) also used a play-oriented action approach to kasti throwing and catching in a primary-school setting. Anggraeni and Sutiarysih (2018) documented improvement in throwing through a two-cycle approach in another primary classroom. The broad consistency is pedagogically plausible: staged opportunities to practise a movement and use it in a game can make learning visible. The pupils, scoring rubrics and criteria differ, so comparisons should focus on the logic of action and reflection, not a numerical claim that one study outperformed another.

The present case concerns lower-secondary pupils and combines paired throws, target practice and simplified play. It is useful because it makes the Cycle I shortfall and the Cycle II revision explicit. It is less informative about the actual amount of practice, feedback quality and reliability of rubric scores. Publishing those details would make it easier for physical education teachers to adapt the lesson responsibly rather than merely copying a distance sequence.

Measurement and reporting issues

The first reporting priority is to reconcile the two versions of the assessment sheet. One table specifies six throwing-and-catching subindicators scored 1–5, while another lays out initial, execution and final positions with more numbered fields. A reader needs to know

exactly which items generated the 0–100 scores and how a rating was assigned during a live test. A sample completed rubric, conversion equation and observer instructions would help establish interpretability and reproducibility.

Second, the category labels should be defined numerically. The “Memenuhi” category contains 16 pupils at baseline while only four pupils are listed as scoring at least 70; these are evidently different summaries or classification rules. Without explicit score intervals, the narrative should not use “Memenuhi” as a synonym for KKM completeness. The article keeps the published category distribution separate from the directly interpretable count of pupils with a score of at least 70.

Third, the observation of participation should document what behavior counted as active, the number of observation opportunities and whether the percentage reflects pupils, time intervals or rubric points. Values of about 78% and 89% are informative as teacher observations but lack the audit trail of the achievement counts. The same observer and observation rule across cycles would support a more credible comparison of classroom process.

Practical implications

For this class, a useful sequence starts with a manageable paired distance, offers repeated attempts, gives feedback on direction and catching position, and then adds target or simple game tasks. Grouping by initial skill may help the teacher choose distances that allow success without eliminating challenge. A short exit assessment can identify pupils who need another round of instruction. These recommendations follow the specific actions described by the source; they should be adapted to available space, equipment and pupils rather than treated as a universal fixed programme.

For a stronger future study, teachers could retain the same detailed rubric and record scores at the item level for every pupil. A second trained observer could score a subset of attempts to examine consistency. A teaching log could list lesson length, repetitions, ball size, distance, feedback and attendance. A comparison class or staggered implementation would help distinguish the structured programme from change that would have occurred through normal lessons alone.

Limitations

The evidence covers one class of 30 in one school and two short cycles. The exact dates, duration of practice, individual exposure, assessor consistency and fully reconciled instrument are not presented in the source chapter. The three adjustments in Cycle II were

simultaneous, preventing component-level conclusions. No independent match-play outcome establishes improvement in the whole kasti game. The summarized percentages and averages should be verified against original score sheets before external submission.

The abstract of the thesis uses broad phrases about motor coordination, accuracy and efficiency, while its numerical outcomes are rubric totals and two component summaries. The article aligns its claims with those outcomes. It also omits pupil names and leaves author contact and ethics details for verification. Such restraint does not diminish the classroom achievement; it identifies exactly what the collected records can show and what still needs documentation.

IV. Conclusion

In class VII-A at SMP Darut Taubah, the reported mean throwing-and-catching score increased from 59.40 at baseline to 69.47 after Cycle I and 76.67 after Cycle II. The number scoring at least 70 increased from 4/30 to 14/30 and 25/30, and the final completeness rate of 83.3% exceeded the preset 75% target. Participation was reported as approximately 78% and 89% in the two cycles. The teaching revision was followed by improved performance in this class, while the action design and incomplete instrument and observation detail limit causal generalization. The author should verify the original assessment rubric, category boundaries, observation record, ethics information and correspondence details before submission.

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