



# Improving self-confidence in rhythmic movement through game-based learning with an inclusive anti-gender bias approach: classroom action research

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**Abstract:** Low self-confidence in rhythmic movement is a persistent challenge in Physical Education (PE), particularly among junior high school students affected by gender stereotypes. This Classroom Action Research (CAR) aimed to analyze the improvement of self-confidence among 30 Grade VII students (14 male, 16 female) at SMPN 13 Banjarbaru in rhythmic movement activities through Game-Based Learning (GBL) integrated with an inclusive anti-gender bias approach. Following the Kemmis and McTaggart spiral model across two cycles (each 3 x 40 minutes), data were collected using a validated self-confidence questionnaire (35 Likert-scale items, Cronbach's Alpha = 0.839) and an expression-based observational rubric (scale 1–4). The success indicator was 76% of students achieving the proficient category on both instruments. Results showed a meaningful improvement from pre-cycle to Cycle II: questionnaire data indicated 80% of students reached the high-confidence category (mean 140.47; 80.27% of maximum), with a cumulative N-Gain of 0.365 (moderate category). Observational data recorded 80% of students achieving the proficient threshold (mean 3.47 out of 4). Both instruments converged, supporting the conclusion that the GBL with inclusive anti-gender bias approach was associated with observable improvement in self-confidence. These findings offer a practical, gender-responsive model for PE teachers at the junior high school level.

**Keywords:** self-confidence; game-based learning; gender-responsive physical education; classroom action research; rhythmic movement; inclusive approach.

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## **INTRODUCTION**

Self-confidence is a critical affective dimension in Physical Education (PE), particularly in expressive activities such as rhythmic movement that require students to perform in front of peers. At the junior high school level, low self-confidence during rhythmic movement often manifests as avoidance behavior, reluctance to perform independently, and susceptibility to gender-based teasing. (World Health Organization, 2022) reported that more than 80% of adolescents aged 11–17 worldwide do not engage in the recommended level of physical activity, a condition that simultaneously affects physical health and psychological development, including weakened self-confidence. (UNESCO, 2021) confirmed that high-quality PE can improve motor competence, self-confidence, and positive identity among students. Furthermore, a meta-analysis by (Lubans et al., 2016) across more than twenty international studies demonstrated that active participation in education-based physical activity has a significant positive correlation with students' self-efficacy and self-confidence. These global findings highlight the importance of developing PE learning systems that proactively address low self-confidence, particularly in expressive and performative activities such as rhythmic movement.

Rhythmic movement is a compulsory topic in the Indonesian PE curriculum as stipulated in (Permendikbud No.7, 2022) concerning Physical Education at the junior high school level. This topic is unique because it integrates movement, rhythm, expression, and aesthetics, and requires students to believe in their own abilities while performing in front of others, a context that holds great potential for developing self-confidence (UNESCO, 2021). Bores-Garcia et al. (2021) demonstrated in an evidence-based study that expressive activities in PE, including rhythmic movement, contribute significantly to improvements in self-concept and self-confidence among secondary school students. Despite this potential, many students tend to avoid rhythmic activities. Research by (Cothran et al., 2021) identified anxiety and lack of self-confidence as primary barriers to participation in rhythmic activities at school, barriers that are amplified by students' fear of negative social evaluation during public performance (Hagger & Chatzisarantis, 2007). This challenge calls for learning strategies that are structured, inclusive, and enjoyable.

Two theoretical frameworks provide the psychological foundation for the present intervention. Self-Determination Theory (SDT), developed by Deci and Ryan (2000), holds that

intrinsic motivation and self-confidence emerge when three core psychological needs are fulfilled: competence, autonomy, and relatedness. In this study, competence was operationalized through progressively designed game tasks that allowed students to experience success at each stage; autonomy was embedded in student choice of movement variations within structured games; and relatedness was cultivated through cross-gender mixed group cooperation. Additionally, Bandura's (1997) self-efficacy theory asserts that confidence in performing movement tasks is built through mastery experiences, vicarious learning, verbal persuasion, and positive physiological states. Both frameworks informed the design of the GBL activities across two cycles, ensuring that each game component deliberately addressed one or more sources of self-confidence development.

Beyond psychological factors, the gender dimension in PE significantly shapes students' confidence levels and participation patterns. Over the past two decades, research has consistently shown that gender stereotypes directly affect students' participation in specific physical activities. Rhythmic movement is particularly affected because it is widely categorized as a feminine activity in Indonesian cultural contexts, causing male students to avoid participation while female students face unrealistic performance expectations (Azzarito and Solomon, 2019). Flintoff and Scraton (2021) emphasized that neglecting the gender dimension in PE learning reinforces existing biases rather than eliminating them. Importantly, in the Indonesian context, research by Nopiyanto et al. (2021) found that gender-based social pressure remains a salient barrier to full student participation in expressive PE activities, particularly in regional schools in Kalimantan where gender-traditional norms are still prevalent. These findings confirm the necessity of an approach that explicitly challenges gender bias across all aspects of PE learning, from content selection and instructional method to the assessment system.

Game-Based Learning (GBL) is a distinct instructional strategy that differs from both ordinary physical games and gamification. While ordinary games in PE refer to unstructured play or recreational activities, and gamification involves overlaying game mechanics (points, badges) onto non-game tasks, GBL integrates purposefully designed game experiences in which the game itself is the medium of achieving specific learning objectives (Plass et al., 2020). In the context of physical education, GBL helps students build self-confidence and reduce anxiety through structured, enjoyable play experiences. (Mayer, 2019), in a review of computer game-based learning, established design principles — including challenge, feedback, and narrative —

that are transferable to physical game contexts; however, a systematic review of GBL and gamification specifically in PE by (Camacho-Sánchez et al., 2023) confirms that these methods consistently improve student motivation, academic performance, and engagement across physical education contexts. (Dicheva et al., 2015) similarly found through a review of 34 gamification studies that game elements consistently improve students' motivation and self-confidence across age and cultural contexts. Yet, research that specifically integrates GBL with an inclusive anti-gender bias approach in rhythmic movement remains very limited.

Meanwhile, the concept of inclusivity in physical education is receiving increasing academic attention as a complement to game-based learning strategies. An inclusive approach in PE refers to systematic efforts to ensure that every student can participate fully and meaningfully in every learning activity. The concept of inclusive anti-gender bias specifically focuses on removing participation barriers that stem from unfair gender stereotypes and expectations. (Walton-Fisette et al., 2022) demonstrated that an inclusive anti-gender bias approach in PE is proven to enhance students' sense of safety and confidence, particularly for those who have been marginalized by conventional gender norms. This conceptual foundation is reinforced by the principles of Universal Design for Learning (UDL), which emphasizes the importance of providing multiple methods of representation, expression, and engagement for every student (CAST, 2018). Thus, the combination of GBL and an inclusive anti-gender bias approach is expected to create a more equitable, enjoyable learning environment that encourages all students to be more self-confident in rhythmic movement activities.

Field conditions at SMPN 13 Banjarbaru provided the direct impetus for this study. Initial observations were conducted systematically by the researcher in February 2026 during two regular PE sessions involving Grade VII students of the 2025/2026 academic year. Observation notes were recorded using a structured field checklist immediately after each session. The (Camacho-Sánchez et al., 2023; Dicheva et al., 2015; Mayer, 2019)majority of students displayed behavioral signs of low self-confidence, including moving to the back rows, avoiding eye contact with the teacher, and declining to perform independently in front of the class. To protect student privacy, all observational data were recorded using coded identifiers, and no personally identifiable information was shared beyond the research team. Separately, a structured interview with the local PE teacher revealed that instruction had primarily focused on demonstration and direct imitation without considering students' psychological or gender-equity needs. This situation aligns with findings from Kemendikbudristek (2023), which

reported that many PE lessons in Indonesia have not systematically integrated inclusive and gender-responsive approaches, affirming the urgency of this research.

A review of prior research from 2020 to 2025 reveals a specific gap that this study addresses. Several studies have examined GBL in physical education (Camacho-Sánchez et al., 2023; Dicheva et al., 2015; Mayer, 2019) and others have explored inclusive approaches in PE (Flintoff & Scraton, 2021; Walton-Fisette et al., 2022). However, no prior study has simultaneously integrated GBL and an inclusive anti-gender bias approach as a single coherent intervention in the context of rhythmic movement at the junior high school level in Indonesia. The study by (Camacho-Sánchez et al., 2023) on GBL in PE did not specifically examine self-confidence in expressive rhythmic activities, while (Bores-Garcia et al., 2021) focused on expressive movement only within a European context. This gap is further underscored by the very limited research base in South Kalimantan, a region in central-southern Indonesia with distinct socio-cultural characteristics related to gender norms in adolescent physical activity (Nopiyanto et al., 2021). Based on this identified gap, the present research was designed to extend and improve upon existing work by offering an integrated learning model that is both GBL-structured and gender-inclusive.

This research makes three distinct contributions. First, it combines GBL with an inclusive anti-gender bias approach in a single, structured learning design, which has not been done in prior research on PE rhythmic movement. Second, it focuses on the affective dimension of self-confidence as a key psychological variable, assessed through two parallel instruments, which adds methodological rigor beyond what motor-outcome-focused PE studies typically provide. Third, the South Kalimantan setting enriches the geographic diversity of PE research in Indonesia. Theoretically, the study deepens understanding of the relationship between game-based instructional design, gender inclusion, and student confidence in PE. Practically, the findings are expected to serve as an operational reference for PE teachers designing gender-equitable and student-centered rhythmic movement learning. Based on the foregoing, this classroom action research aims to describe and analyze the improvement of self-confidence among Grade VII students of SMPN 13 Banjarbaru in rhythmic movement activities through the implementation of Game-Based Learning based on an inclusive anti-gender bias approach.

## **MATERIAL AND METHODS**

This study used a Classroom Action Research (CAR) design following the (Kemmis & McTaggart, 1988) spiral model. CAR was selected as the most appropriate design because the research question is inherently improvement-oriented rather than causal: the aim is to identify whether a specific learning intervention can meaningfully enhance student self-confidence within a real classroom context, rather than to establish causal inference between isolated variables. Unlike quasi-experimental designs, CAR allows the researcher to iteratively reflect and refine the intervention based on observed evidence, which is essential when the dependent variable is an affective construct as responsive to context as self-confidence. It is important to acknowledge that CAR, without a control group, limits causal inference; improvements observed may involve contextual factors beyond the intervention itself. Each cycle consisted of one learning session of 3 x 40 minutes. This duration was determined based on the standard PE lesson block in the Indonesian school curriculum and the time available in the academic calendar. Although one session per cycle is shorter than ideal for measuring sustained changes in self-confidence, the parallel use of two instruments (questionnaire and observation) at each stage was intended to capture both self-reported perception and observable behavioral change, reducing the risk that short-term enthusiasm was misinterpreted as durable confidence. The two-cycle limit was established before the research began, following CAR standards (Kemmis and McTaggart, 1988), and was applied consistently.

The research was conducted at SMPN 13 Banjarbaru, South Kalimantan, in the even semester of the 2025/2026 academic year. The research subjects were 30 Grade VII students, consisting of 14 male and 16 female students. The selection of Grade VII as the research subjects was based on the consideration that Grade VII students represent a transition period from primary to secondary education, a phase that is psychologically vulnerable to self-confidence crises, particularly in activities that are expressive and performative in nature, such as rhythmic movement (Santrock, 2019).

Prior to the study, written permission was obtained from the school principal, and parental or guardian consent was secured for all student participants. Student assent was also obtained verbally before each data collection session. All student identities were coded in observational records to protect confidentiality, and students were informed of their right to withdraw from participation without academic penalty. No personally identifying information

appears in this manuscript. These procedures are consistent with ethical research standards for classroom-based studies involving minors.

The researcher collaborated with one senior PE teacher as an independent observer during data collection to enhance the objectivity of the observational data. To mitigate expectancy bias stemming from the researcher's dual role as student-teacher and researcher, the observer scored the rubric independently and without access to the researcher's field notes during the session. Observer scores and researcher reflections were compared only after each cycle's observation session was complete. This procedure functioned as a form of inter-rater validation to strengthen the trustworthiness of the observational data.

The learning intervention applied was Game-Based Learning (GBL) integrated with an inclusive anti-gender bias approach. The GBL design referred to the framework of Plass et al. (2020), which emphasizes three main components: motivating game design, meaningful learning content, and adaptive feedback. All game activities were developed with explicit anti-gender bias design principles: all verbal instructions and demonstrations used gender-neutral language and featured both male and female exemplary performers; play groups were mandated as mixed-gender; and no activity was framed, labeled, or evaluated in terms of gender-stereotypical expectations.

Cycle I (Session 1, 3 x 40 minutes) focused on two games: (1) Mirror Movement Game, where students in mixed-gender pairs imitated each other's rhythmic movements simultaneously, normalizing expressive movement for all genders; and (2) Rhythm Chain, where groups of five students (2–3 mixed gender) created a chain of rhythmic movements with each member contributing one element. The learning objective was to develop initial confidence in performing rhythmic movement in a low-stakes, cooperative format. Teacher prompts during this cycle included explicit affirmations such as "All of us can move rhythmically" and "There is no boy's or girl's style of movement" to directly challenge gender stereotypes. Cases of gender-based teasing observed during Cycle I were addressed immediately by pausing the activity, using the incident as a teachable moment, and having the class collectively agree on a respect norm before continuing.

Cycle II (Session 2, 3 x 40 minutes) built on Cycle I by increasing game complexity. The main game was Rhythm Challenge, in which groups competed cooperatively (each group against its own previous score) to complete a rhythmic sequence with added movement vocabulary. A cross-gender collective appreciation activity was embedded at the end: each

student publicly affirmed one specific strength they observed in a peer of the opposite gender during the session. This was designed to build interpersonal relatedness, normalize mixed-gender collaboration, and reduce residual stereotyping. Point scoring was team-based and displayed collectively to prevent individual stigmatization. Cycle II design modifications were based directly on reflections from Cycle I, specifically addressing the hesitation observed in mixed-gender performance and the need for more explicit positive reinforcement .

Data collection used two parallel instruments to provide a comprehensive picture of self-confidence. The first was a self-confidence questionnaire developed by the researcher based on (Bandura, 1997) and (Snyder, 2002), consisting of 35 Likert-scale items (1–5 points) covering four dimensions: Self-Belief (12 items, maximum 60 points), Perseverance (8 items, maximum 40 points), Hope (8 items, maximum 40 points), and Social Relationships (7 items, maximum 35 points), with a total maximum score of 175 points. Conceptually, self-belief captures students' conviction in their own movement ability; perseverance reflects sustained effort despite difficulty; hope, adapted from (Snyder, 2002) Hope Theory, captures students' sense of having a clear pathway to succeed in the activity; and social relationships reflects comfort with cross-gender and peer interaction during performance. Representative items per dimension include: Self-Belief: "I believe I can perform the rhythmic movement in front of my class"; Perseverance: "I keep trying even when the movement feels difficult"; Hope: "I know what to do to improve my rhythmic movement skills"; Social Relationships: "I feel comfortable performing with classmates of different genders."

Category thresholds for questionnaire scores were: HIGH (score  $\geq 131$  or  $\geq 75\%$  of maximum), MODERATE (score 88–130 or 50–74%), and LOW (score  $< 88$  or  $< 50\%$ ). These thresholds were adapted from (Azwar, 2015) using mean and standard deviation norms. The second instrument was an expression-based self-confidence observational rubric completed by the observer (senior PE teacher) during each session. The complete rubric is presented in Table 5. Students scoring 3 (Good) or 4 (Excellent) were classified as proficient for the purpose of the 76% success indicator.

The questionnaire was administered to a pilot sample of 100 Grade VII students from a different school in Banjarbaru prior to field use. These students were comparable in age, grade level, and socio-economic background to the research participants but were not included in the main study. Validity was assessed using the item-total Pearson correlation ( $r_{xy}$ ). Of the 35 items, 32 were declared valid ( $r\text{-count} > r\text{-table} = 0.163$  for  $df = 98$  at a 5% two-tailed

significance level; (Sugiyono, 2019); 3 items with r-count below 0.163 were revised and re-tested before inclusion. Item-total correlation values ranged from 0.187 to 0.601. Cronbach's Alpha reliability for the full 35-item instrument was 0.839 (classified as high reliability; (Arikunto, 2009)). Subscale reliability values were: Self-Belief  $\alpha = 0.812$ , Perseverance  $\alpha = 0.791$ , Hope  $\alpha = 0.778$ , and Social Relationships  $\alpha = 0.804$ , all exceeding the 0.70 threshold. These values confirm that both the total instrument and each subscale met adequate reliability criteria for use in this study.

Data were analyzed using descriptive statistics including mean, standard deviation, and percentage of students meeting the proficiency threshold. The N-Gain Score (Hake, 1999) was calculated as:  $N\text{-Gain} = (\text{post-score} - \text{Pre-score}) / (\text{Maximum score} - \text{pre-score})$ , with criteria: low ( $< 0.30$ ), moderate (0.30–0.70), and high ( $> 0.70$ ). Although N-Gain was originally developed for cognitive pre-post comparisons, its use here for affective questionnaire data is justified by the instrument's Likert-scale structure with a defined maximum, which meets the mathematical requirements of the formula (Sundayana, 2015). As an additional indicator, absolute mean differences and percentage improvements were also reported for each dimension. The success indicator for action completion was set at a minimum of 76% of students achieving the proficient category on both instruments, in line with CAR standards commonly applied in Indonesian educational research.

Data triangulation between questionnaire and observational data was conducted to strengthen the validity of the research conclusions. The triangulation procedure involved three steps: (1) independent scoring of observational rubrics by the observer without reference to questionnaire responses; (2) comparison of questionnaire proficiency rates with observational proficiency rates for the same students at each cycle; and (3) cross-referencing of any discrepancies between instruments with field observation notes and teacher reflective journal entries. Where discrepancies were found, the observer's notes were consulted to identify possible contextual explanations. These were documented as interpretive notes in the discussion but did not alter the quantitative summary.

## **RESULTS**

This classroom action research was conducted in three data collection stages, namely Pre-Cycle, Cycle I, and Cycle II, each in a single learning session. Self-confidence data were collected through two parallel instruments: the self-confidence questionnaire with a maximum

score of 175 points (5-point Likert scale, 35 items) and the expression-based self-confidence observation sheet on a scale of 1 to 4. The success indicator was set at a minimum of 76% of students achieving the proficient category on both instruments. The summary of questionnaire measurement results is presented in Table 1 and Table 2, while observational data is presented in Table 3 and Table 4.

**Table 1.** Summary of Students' Self-Confidence Questionnaire Results

Measurement Aspect	Pre-Cycle	Cycle I	Cycle II
Mean Score	120.60	129.57	140.47
% of Maximum Score	68.91%	74.04%	80.27%
HIGH Category (n)	4 (13%)	12 (40%)	24 (80%)
MODERATE Category (n)	26 (87%)	18 (60%)	6 (20%)
LOW Category (n)	0 (0%)	0 (0%)	0 (0%)
N-Gain Score	-	0.165 (Low)	0.240 (Low)
Cumulative N-Gain (Pre to Cycle)	-	0.165 (Low)	0.365 (Moderate)
Success Indicator (76%)	Not Achieved	Not Achieved	ACHIEVED

Questionnaire results at the pre-cycle stage showed a mean self-confidence score of 120.60 or 68.91% of the ideal score, with only 4 students (13.3%) reaching the high category and 26 students (86.7%) in the moderate category. After the Cycle I intervention, the mean score increased to 129.57 or 74.04%, with 12 students (40%) reaching the high category. In Cycle II, the mean score increased significantly to 140.47 or 80.27%, with 24 students (80%) reaching the high category, thus fulfilling the 76% success indicator. The overall N-Gain from Pre-Cycle to Cycle II of 0.365 falls in the moderate category.

**Table 2.** Score Development per Dimension of Self-Confidence Questionnaire

Dimension	Pre-Cycle	Cycle I	Cycle II	Total Increase
Self-Belief (max. 60)	40.60 (67.7%)	44.53 (74.2%)	48.27 (80.4%)	+7.67 points
Perseverance (max. 40)	28.73 (71.8%)	29.60 (74.0%)	32.33 (80.8%)	+3.60 points
Hope (max. 40)	27.40 (68.5%)	28.77 (71.9%)	30.77 (76.9%)	+3.37 points
Social Relationships (max. 35)	23.87 (68.2%)	26.67 (76.2%)	29.10 (83.1%)	+5.23 points
Total Score (max. 175)	120.60 (68.9%)	129.57 (74.0%)	140.47 (80.3%)	+19.87 points

Dimension-level analysis in Table 2 shows a consistent improvement across all self-confidence dimensions from pre-cycle to Cycle II. The largest absolute increase occurred in the self-belief dimension at 7.67 points, followed by social relationships at 5.23 points, perseverance at 3.60 points, and hope at 3.37 points. In percentage terms, the social relationships dimension recorded the highest increase from 68.2% to 83.1%, while the hope dimension had the lowest final percentage at 76.9% but still exceeded the 75% proficiency threshold.

**Table 3.** Summary of Self-Confidence Observation Results in Expressive Performance

Observation Aspect	Pre-Cycle	Cycle I	Cycle II
Total Score	68	86	104
Mean Score	2.27	2.87	3.47
Excellent – Score 4 (n)	2 (6.7%)	7 (23.3%)	20 (66.7%)
Good – Score 3 (n)	4 (13.3%)	12 (40.0%)	4 (13.3%)
Fair – Score 2 (n)	24 (80.0%)	11 (36.7%)	6 (20.0%)
Poor – Score 1 (n)	0 (0%)	0 (0%)	0 (0%)
Proficient (Score ≥ 3)	6 (20.0%)	19 (63.3%)	24 (80.0%)

Observational data in Table 3 shows an improvement pattern consistent with the questionnaire data. In the Pre-Cycle, the mean observational score was 2.27, with only 6 students (20%) achieving proficiency (score of 3 or above). In Cycle I, the mean score increased to 2.87, with 19 students (63.3%) reaching proficiency; however, the 76% success indicator had not yet been achieved, necessitating continuation to Cycle II. In Cycle II, the mean observational score reached 3.47, with 24 students (80%) achieving a proficient score, surpassing the success indicator threshold. Cross-tabulation of individual student scores revealed that 22 of the 24 students classified as HIGH on the questionnaire also scored Proficient (3 or 4) on observation, yielding a conc

Table 4 shows that both male and female students demonstrated improvement across all stages, and neither gender group was notably disadvantaged by the intervention. Male students improved from 119.86 to 139.71 in questionnaire mean score (78.6% reaching HIGH in Cycle II), while female students improved from 121.25 to 141.13 (81.3% reaching HIGH). Observational proficiency rates also converged between genders by Cycle II (male 78.6%; female 81.3%), suggesting that the inclusive anti-gender bias approach supported equitable improvement rather than favoring one gender group over the other.ordance rate of 91.7%

**Table 4.** Expression-Based Self-Confidence Observational Rubric (Scale 1–4)

Score	Behavioral Descriptor
4 – Excellent	Student performs the rhythmic movement with full confidence, expresses movement freely, and actively encourages peers to participate.
3 – Good	Student performs confidently and is willing to express themselves in front of the class without significant hesitation.
2 – Fair	Student is willing to perform but still shows visible hesitation, avoids eye contact, or moves to peripheral positions.
1 – Poor	Student refuses to perform, displays very low confidence, or completely avoids participation.

## Discussion

The findings of this study indicate that the implementation of Game-Based Learning integrated with an inclusive anti-gender bias approach was associated with measurable and consistent improvement in students' self-confidence in rhythmic movement activities. This was confirmed by two instruments: questionnaire data showing 80% of students achieving the HIGH category, and observational data recording 80% of students achieving the Proficient category in Cycle II. The convergence of both instruments reinforces the interpretive conclusion that the improvement in self-confidence was not merely a change in self-reported perception, but also reflected in the observable expressive behavior of students as independently scored by the observer. It should be noted, however, that without a control group, this study cannot rule out the influence of maturation, repeated exposure to the topic, or other contextual factors that may have contributed to the observed improvement.

The most prominent increase in questionnaire data occurred in the Self-Belief dimension (7.67 points), while the overall mean observational score increased by 1.20 points on a 4-point scale. These findings are consistent with (Bandura, 1997) principle of self-efficacy, which identifies mastery experiences as the primary source of self-confidence. In the GBL context, each successfully completed game task provided students with direct evidence of their own competence in rhythmic movement, thereby incrementally building stronger self-belief. The progressive design of games across cycles, moving from low-stakes cooperative mirror activities to more complex rhythm challenges, ensured that mastery experiences were accessible to all students regardless of prior movement skill.

The significant improvement in the Social Relationships dimension in questionnaire data (from 68.2% to 83.1%) and the substantial increase in students in the Excellent category on observation (from 2 to 20 students) are consistent with findings by Walton-Fisette et al. (2022), who demonstrated that inclusive approaches in PE consistently improve students' sense of safety and confidence. Observer notes from Cycle I indicated that 11 students (36.7%) remained in the Fair category, and some showed closed body language and reluctance to perform with mixed-gender partners. The cross-gender collective appreciation activity added in Cycle II is interpreted as a contributing factor to the observed reduction in avoidance behavior in Cycle II, based on observer field notes that recorded a notably reduced frequency of gender-based hesitation behaviors during the session.

The Cycle I N-Gain remaining in the low category (0.165) can be understood through the design maturity argument advanced by (Mayer, 2019): GBL effectiveness depends heavily on design clarity and student readiness for the game format. Observer notes from Cycle I documented that several students showed initial resistance to the mixed-gender game format, which was novel compared to their prior PE experience. Based on this evidence, three specific design revisions were made for Cycle II: (1) game rules were simplified to reduce cognitive load and allow students to focus on movement confidence; (2) anti-gender bias instructions were made more explicit and embedded into the opening briefing script; and (3) cross-gender collective appreciation was added as a structured closing activity. These targeted revisions, systematically derived from Cycle I reflection, directly align with the CAR process requirement for evidence-based cycle-to-cycle improvement and appear to have contributed to the acceleration of improvement observed in Cycle II.

The triangulation of questionnaire and observational data in this study provides stronger evidence than either instrument alone. Cross-tabulation revealed that 22 of the 24 students categorized as HIGH on the questionnaire also achieved Proficient scores on observation, yielding a concordance rate of 91.7% between instruments in Cycle II. The 2 discordant cases were examined using observer field notes: one student appeared distracted during the observation window, and the other had submitted the questionnaire in a high-confidence state but showed physical hesitation during the only observed performance opportunity. These discrepancies were documented as limitations of single-session observational data rather than contradictions of the overall trend. Overall, the convergent pattern across instruments affirms that the integration of GBL and inclusive anti-gender bias

was associated with a meaningful, gender-responsive improvement in students' self-confidence in PE at the junior high school level.

## CONCLUSION

Based on the research findings, First, PE teachers are advised to explicitly embed inclusive anti-gender bias principles into rhythmic movement lesson design, including gender-neutral language, mixed-gender grouping, and equitable assessment criteria. Second, the GBL model developed here can serve as an adaptable reference for other schools in South Kalimantan. Third, for the 6 students who remained in the Fair category in Cycle II, differentiated strategies such as one-on-one scaffolding, peer mentoring, and individually adjusted game complexity are recommended to support further confidence development. Fourth, future researchers are encouraged to examine the effects of inclusive anti-gender bias GBL on intrinsic motivation, motor learning outcomes, and classroom social climate across varied educational level.

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