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Supporting the Kinesthetic Learning Style through BINGO Puzzle Emoji (NGOPI) in Pancasila Education: A Case Study in Grade IX F at SMP Negeri 16 Surabaya

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Abstract:
Learning styles are commonly classified as visual, auditory, and kinesthetic, with read/write added in the VARK model. This study explores BINGO Puzzle Emoji (NGOPI), a group game designed to support kinesthetic learning in Pancasila Education. NGOPI requires students to match emoji puzzles with pictures, ring a bell in turns, and answer questions on BINGO worksheets until two bingo lines are formed. This qualitative case study involved 31 ninth-grade students in Grade IX F at SMP Negeri 16 Surabaya. Diagnostic assessment indicated visual learning as dominant (mean 12.8), followed by auditory (10.7) and kinesthetic (5.5). Classroom observations and teacher reflection identified student passivity, unequal group participation, and inappropriate AI use. Following NGOPI implementation, student participation increased, off-task conversations decreased, reliance on AI declined, and enthusiasm improved. The findings suggest that NGOPI offers an affordable, replicable strategy for enhancing student engagement, social-emotional competence, and evidence-based teaching decisions.

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Introduction

Pancasila Education contains abstract concepts, for example the position of Pancasila as the foundation of the state and its function as the nation's way of life. In class, such concepts are often delivered through oral explanation, reading, and pictures, so students tend to become recipients of information. Media development in this subject also relies heavily on visual media, such as interactive e-comics for junior high school students (Zilvia et al., 2026) and pop-up books for elementary school students (Farhan et al., 2026). Visual media are certainly useful, but learning

that rests on a single learning route risks neglecting students who understand most easily through direct experience.

In learning studies, differences in how students absorb information are often grouped as learning styles. The most popular grouping divides learning styles into three kinds, namely visual, auditory, and kinesthetic. The VARK model adds one category, namely read/write, so that learning styles become four kinds (Subagja & Rubini, 2023). Visual students understand more easily through pictures, charts, and colors. Auditory students understand more easily through oral explanation and discussion. Read/write students understand more easily through text and notes. Kinesthetic students understand more easily when they move, touch objects, and do something directly. A mapping of 100 junior high school students in a science subject showed that all four styles are present in one class population, and kinesthetic was in fact the most common (35%), ahead of visual (30%), auditory (21%), and read/write (14%) (Subagja & Rubini, 2023).

Even so, a recent review confirms that no study supports the claim that matching teaching to learning styles improves academic achievement (Brown, 2023). Therefore, learning styles in this article are understood as preferences that need to be tested through observation of student behavior, not as fixed labels. This understanding in fact strengthens the argument that what a class needs is a variety of learning experiences, not a single way considered the most suitable.

Pedagogically, every style has limitations when it becomes the only learning route. Learning that rests on the visual route can pile information into one channel and thereby burden students' working memory (Mayer, 2021), and students easily just look at or copy answers without processing them actively. Learning that rests on the auditory route depends on concentration because oral explanation is temporary and quickly fades, so students who miss one part find it hard to follow the next. Learning that rests on the read/write route demands reading stamina that is unevenly distributed, and long texts in conceptual material easily cause boredom. In all three conditions, the student's role is often limited to receiving information.

The kinesthetic style, in fact, gets the least room in classroom learning, especially in subjects whose material is regarded as conceptual, such as Pancasila Education. Yet evidence from embodied learning shows that involving bodily movement in learning has a moderately positive effect on learning performance (Hedges' $g = 0.41$), with larger effects in the humanities and at the high school level (Liu et al., 2025). This finding gives a strong reason that movement activities deserve to be designed for Pancasila Education material.

Support for the kinesthetic learning style in Pancasila Education can be realized by turning concepts into experiences that students can carry out. The experiential learning cycle places concrete experience, reflection, conceptualization, and active experimentation as a single sequence (Kolb, 2015). Games are one form of concrete experience that is easy to manage in class because they provide goals, rules, challenges, and immediate feedback. A systematic review shows that game-based learning has a positive impact on students' cognitive and affective outcomes (Hui & Mahmud, 2023), and bingo media in Civic Education at the elementary school level made students more willing to participate and learning more enjoyable (Nurlaelisah et al., 2023).

This idea departs from a real case in Grade IX F at SMP Negeri 16 Surabaya, which has 31 students. A diagnostic assessment, which in the Merdeka Curriculum serves to map students' needs before learning is designed (Kemendikbudristek, 2022; Nadia et al., 2026), showed that the visual learning style was the most dominant with a mean of 12.8, followed by auditory at 10.7, while kinesthetic was the lowest with a mean of 5.5. The assessment also showed moderate learning readiness, motivation that changes easily with classroom atmosphere, self-confidence and questioning activeness that are not yet evenly distributed, and a limited response to visual

media. Within the framework of differentiated instruction, such data are used to adjust learning content, process, and product (Tomlinson, 2017).

Based on these data, the teacher designed a visual-based group task with role division. In practice, the results did not match the data. Some students merely rode on their group's name, others chatted until they disturbed members who were working, and some used AI to answer instantly without understanding the material. Riding on a group's name is known as social loafing and is proven to damage the quality of group work (Milinga et al., 2022), with varied causes, among others self-confidence, shyness, social skills, and academic ability (Casan et al., 2024). The misuse of AI is also a concern because personal integrity is related to the tendency to use ChatGPT (Bouteraa et al., 2024), while UNESCO (2023) reminds that generative AI should not replace students' own thinking process.

On this basis, the author developed the innovative work BINGO Puzzle Emoji (NGOPI) as a form of specific support for the kinesthetic learning style in Pancasila Education. Visual media are still used in presenting the material, while the assignment is designed as a game that demands movement, interaction, and responsible turn-taking. This article is organized around four interrelated focuses. First, the article describes the learning problem that arises when a visually dominant class is given a group task that rests on visuals. Second, the article presents the solution in the form of the NGOPI design along with its scientific rationale. Third, the article reports the results of implementing NGOPI on student behavior and engagement. Fourth, the article discusses the impact of the solution on students, on the teacher as the author, and on the school.

Accordingly, this study aims to describe the learning problem in Grade IX F, design NGOPI as a solution that supports the kinesthetic learning style, describe the results of its implementation, and analyze its impact. Practically, this article is expected to give Pancasila Education teachers a picture of how to support the kinesthetic learning style without abandoning the strengths of other learning styles. Theoretically, this article is expected to contribute to the study of game-based learning in a subject that has long been tied to a conceptual approach.

Literature Review

Learning styles: concept, types, and criticism

Learning styles refer to students' tendencies or preferences in receiving, processing, and remembering information. The best-known classification divides learning styles into visual, auditory, and kinesthetic. The VARK model expands it into visual, auditory, read/write, and kinesthetic, so that there are four kinds of learning styles (Subagja & Rubini, 2023). Visual students learn effectively through pictures, diagrams, and colors. Auditory students learn effectively through listening and speaking. Read/write students learn effectively through text and notes. Kinesthetic students learn effectively through movement, touch, and direct practice.

Research on 100 junior high school students in a science subject found that kinesthetic was the most common style (35%), followed by visual (30%), auditory (21%), and read/write (14%) (Subagja & Rubini, 2023). This finding shows that one group of students almost always contains all four styles at once. Relying on a single delivery route means letting some students learn outside the route that is easiest for them. Therefore, teachers need to map learning styles as a starting point for designing a variety of activities, not as a tool for classifying students rigidly.

At the same time, the concept of learning styles has received scientific criticism that needs to be acknowledged. A recent review found that no study supports the claim that matching teaching to students' learning styles improves academic achievement, and this belief is still widespread among educators (Brown, 2023). This article takes a position in line with that criticism. Learning styles are treated as preferences that are tested through students' actual

behavior in class, and a diversity of activities is considered more important than matching one style with one method.

The kinesthetic learning style and embodied learning

The kinesthetic learning style is characterized by a tendency to understand information through physical activity, manipulation of objects, and direct practice. Students with this tendency find it hard to stay engaged for long in activities that only require sitting, listening, and taking notes. They become involved more quickly when their hands and bodies also work, for example arranging, matching, choosing, or moving around. In Pancasila Education, this tendency is relevant because the values of Pancasila are essentially practiced, not just memorized.

A theoretical foundation close to the kinesthetic style is experiential learning theory. Kolb (2015) describes learning as a cycle consisting of concrete experience, reflective observation, abstract conceptualization, and active experimentation. According to this framework, the experience of doing something is not merely a complement but the starting point for forming conceptual understanding. Activities that require students to do, reflect, and then conclude in their own words fit this cycle.

Empirical support comes from a meta-analysis of embodied learning. An analysis of 46 studies (66 effect sizes) found a moderately positive effect on learning performance (Hedges' g = 0.406), with larger effects in the humanities than in other disciplines, stronger effects at the high school level, and stronger effects in small group work and with active movement engagement (Liu et al., 2025). Pancasila Education belongs to the humanities and social fields, so this finding supports designing small-group movement activities for its material.

Limitations of the visual, auditory, and read/write routes when used alone

Visual media are widely used in Pancasila Education. A Canva-based interactive e-comic for junior high school students, for example, was assessed as feasible by media and material experts and showed a significant improvement in learning outcomes (Zilvia et al., 2026). This finding shows that well-designed visual media can be effective. Even so, multimedia learning theory reminds us that working memory is limited, so a presentation that piles information into one channel can burden students (Mayer, 2021). This means that visual strength needs to be preserved but not made the only route.

Oral explanation, as the auditory route, is temporary and quickly fades, so students who miss one part find it hard to follow the next and the dependence on concentration becomes high. The read/write route demands reading stamina and writing speed that are unevenly distributed among students. In conceptual material, long texts easily make students bored and copy without understanding. These limitations show the need to enrich the ways students process material.

The problem that unites the three routes is the tendency of students to be in the position of recipients. Learning is more effective when students are actively involved in processing information, interacting with friends, and taking responsibility for their learning outcomes (Slavin, 2018). Kinesthetic activities become a strategic complement because they force this active engagement to be physically visible to the teacher and friends.

Differentiated instruction and diagnostic assessment

Diagnostic assessment is carried out at the beginning of learning to recognize students' competencies, readiness, and characteristics so that learning can be designed according to their needs (Kemendikbudristek, 2022). A descriptive study of the Merdeka Curriculum in an Islamic elementary school (madrasah ibtidaiyah) showed that diagnostic assessment helps teachers recognize differences in students' abilities, learning styles, interests, motivation, and difficulties, although time limits and the lack of standardized instruments remain obstacles (Nadia et al.,

2026). Thus, diagnostic assessment is a legitimate basis for teachers' decisions, but its implementation needs to be accompanied by caution.

In differentiated instruction, teachers adjust learning content, process, and product based on students' readiness, interests, and learning profiles (Tomlinson, 2017). A classroom action research study in junior high school that combined differentiated instruction with Project Based Learning reported an increase in learning mastery from 50% to 76% in the second cycle (Lestaria et al., 2023). In this case, the assessment results were used to determine the learning process and product, namely the form of the group assignment. Classroom observations were then used to correct that decision.

Game-based learning and bingo games

Game-based learning links learning goals with rules, challenges, and immediate feedback. A systematic review of 28 articles showed that game-based learning has a positive impact on students' cognitive and affective outcomes, including motivation, interest, and engagement (Hui & Mahmud, 2023). This finding comes from mathematics learning, so its transfer to Pancasila Education needs to be tested, but the motivational mechanism is general.

In Indonesia, an initial development study of bingo media in Civic Education at the elementary school level found that the game increased students' willingness to participate and made learning more enjoyable (Nurlaelisah et al., 2023). This finding is relevant because bingo is a simple format, easy for students to understand, and cheap for teachers to make.

Bingo is essentially a grid game in which players try to complete a line, whether horizontal, vertical, or diagonal. This element provides a clear intermediate goal, namely the line that must be formed, so that the group's progress is visible. When each square contains a question on the material, a bingo game turns working on questions into a journey toward a shared goal.

Cooperative learning, social loafing, and individual accountability

Social loafing is the reduction of individual effort when working in a group. A qualitative study of pre-service teachers found that this behavior is widespread and damages the quality of group assessment (Milinga et al., 2022). Research focusing on students who ride on their friends' effort found that the causes are varied, among others social skills, technical ability, self-confidence, shyness, and academic ability, and that such students are generally aware that their behavior is not appropriate (Casan et al., 2024). This finding shows that riding on a group's name is not merely a matter of laziness but also of feeling capable and feeling safe.

Cooperative learning is effective when every member has individual responsibility and the group's success depends on the contributions of all members (Slavin, 2018). Alternating turns that the teacher can see is one way to create such individual accountability. A turn that is helped by group mates also provides a sense of safety for students who are less confident.

Scaffolding and feedback

Scaffolding is gradual assistance that is withdrawn as students become capable. A meta-analysis of 83 effect sizes from 32 articles found that scaffolding improves learning performance with an overall effect size of 0.53, although the context was online learning (Zuo et al., 2023). Assistance can come from the teacher as well as from peers, and both can be arranged in layers.

Immediate feedback, for example checking answers after the bell is pressed, is among the factors that consistently influence learning achievement (Hattie, 2023). In a game, this immediate feedback is integrated into the flow of the activity so that students do not wait long to know whether their answer is right.

Social-emotional competence and academic integrity

CASEL formulates five social-emotional competencies, namely self-awareness, self-management, social awareness, relationship skills, and responsible decision-making. A review of 12 meta-analyses showed that school-based social-emotional learning programs provide significant benefits for social-emotional skills, academic achievement, and reduced behavior problems (Durlak et al., 2022). These competencies are relevant for reading the impact of group games on student behavior.

At the same time, UNESCO (2023) reminds that generative AI needs to be used responsibly so that it does not replace students' own thinking process. A study of 921 university students showed that personal integrity reduces ChatGPT use (Bouteraa et al., 2024). Assignments that are answered directly and accounted for orally make instant answers from AI difficult, so task design also shapes students' academic integrity.

Pancasila Education and the characteristics of its learning

In the class studied, the Pancasila Education material covered the position and function of Pancasila and the application of the values of its principles in the family environment. This material is full of concepts, but its final goal is behavior. Therefore, learning that only produces knowledge without the experience of acting does not yet fully answer the goal of the subject.

Media development in this subject, both e-comics (Zilvia et al., 2026) and pop-up books (Farhan et al., 2026), mostly focuses on the visual presentation of the material. The remaining gap is media that activate students' movement and interaction. NGOPI is positioned to fill this gap without replacing visual media.

Research Method

This study used a descriptive qualitative approach with a single case study design (Yin, 2018). A case study was chosen because the problem studied is very specific to one class, namely the gap between learning style data and student behavior when doing group tasks. The discussion is directed at an in-depth understanding of that situation and not at generalization to a wider population (Creswell & Poth, 2018). The research workflow followed one reflection cycle in the style of action research, consisting of planning, action, observation, and reflection (Mertler, 2020).

The research subjects were 31 students of Grade IX F at SMP Negeri 16 Surabaya in the Pancasila Education subject. In the core activity, students were divided into four groups formed by the teacher. The researcher also served as the teaching teacher, so observation and reflection data were collected from inside the class as it was running.

Data were collected through four techniques. The first technique was a diagnostic assessment through Google Form that covered cognitive aspects, learning style, attitude, motivation, interest, critical thinking skills, discussion and presentation skills, social background, and emotional aspects. Learning style was measured with ten multiple-choice statements, and options A, B, and C each represented a visual, auditory, and kinesthetic tendency. The reported score is the mean number of students choosing each option per item, so the figures 12.8, 10.7, and 5.5 are equivalent to about 41%, 35%, and 18% of the 31 students. The second technique was observation of student behavior during group work, both in the visual task before NGOPI and when NGOPI was implemented, focusing on member contribution, off-task talk, and the use of AI. The third technique was the collection of work documents in the form of the BINGO worksheet (LKM BINGO) along with reflection questions and group presentations. The fourth technique was the teacher's reflection notes written after the lesson.

The research procedure was carried out in one cycle. In the planning stage, the teacher mapped the diagnostic assessment results and designed a visual-based group task with role division. In the action stage, the task was carried out and student behavior was observed. In the observation stage, the teacher recorded the gap between assessment data and student behavior. In the reflection stage, the teacher concluded that the form of the assignment needed to be changed, then designed and implemented NGOPI as a corrective action while continuing to use visual media in presenting the material.

Assessment data were analyzed by calculating the mean score of each aspect, then categorized according to the assessment interpretation guide. Observation, document, and reflection data were analyzed qualitatively by repeated reading, grouping according to the four research focuses, namely problem, solution, results, and impact, and then interpreting (Creswell & Poth, 2018). Data validity was maintained through technique triangulation, namely comparing findings from the assessment, the observations, and the documents of students' work. Student identities are not included in this article.

Case Study and Learning Problems in Grade IX F

This case occurred in Pancasila Education learning in Grade IX F at SMP Negeri 16 Surabaya, with 31 students, most of whom showed positive attitudes toward school and learning. Before designing the activities, the teacher conducted a diagnostic assessment to map students' readiness, learning styles, attitudes, motivation, interests, and social backgrounds. Table 1 summarizes the assessment findings that most influenced the teacher's decisions.

Table 1. Diagnostic assessment findings in Grade IX F

Assessment aspect	Finding	Implication for learning
Learning style (mean students per item)	Visual 12.8 (about 41%); auditory 10.7 (about 35%); kinesthetic 5.5 (about 18%)	Initial materials and media were designed visually
Learning readiness	Moderate category	Gradual scaffolding is needed
Motivation	Adequate, but easily affected by classroom atmosphere and teaching style	Varied and engaging activities are needed
Self-confidence	10.2; some students hesitate to express opinions	Safe opportunities to speak are needed
Questioning activeness	Still low	Gradual prompting questions are needed
Boredom	Students get bored easily	Variation in activities with a focus pattern of about 15 minutes is needed
Response to visual media	Limited	Visual media need to be combined with hands-on activities

At first glance, the data in Table 1 directed the teacher toward visual-based tasks because visual was the most frequently chosen style. However, the assessment report itself already gave another signal. Response to visual media was recorded as limited, students got bored easily, and the recommendations compiled in fact pointed to group discussion, simulation, hands-on practice, project-based learning, and educational games, as well as reducing long lectures. In other words, the data already showed that this class needed more activities that directly involve students, even though kinesthetic was the style least often chosen.

The teacher then designed a visual-based group task with a division of roles for every member. In practice, the gap between data and behavior appeared in four interrelated forms.

The first form was students who rode on their group's name. The situation visible in class was that a student's name was listed in the group, but his or her contribution to the task product was minimal, while the work was held by only some members. The causal factors can be traced to the task design and the students' characteristics. A visual group task produces one shared product so that individual contributions are hard to distinguish, and the assigned roles can be carried out passively. This condition is known as social loafing (Milinga et al., 2022). The assessment also recorded self-confidence and questioning activeness that were not yet evenly distributed, and research on free-riding found that self-confidence, shyness, social skills, and academic ability also play a role (Casan et al., 2024). The impact on learning achievement is clear. Students who ride on a group's name do not train their own understanding of the position and function of Pancasila, and the group score no longer reflects individual mastery.

The second form was students who chatted until they disturbed group members who were working. The situation was seen when some students shifted their attention to friends in other groups, then talked off-task and broke the concentration of members who kept working. The causal factor was a task that demanded neither movement nor turns, so students who were not working on their part had no reason to stay engaged. The assessment report recorded that students got bored easily and that motivation depended on the classroom atmosphere, so students' energy easily shifted to social interaction. The impact was felt on two sides. Members who were working were disturbed and the quality of work declined, while students who chatted lost the chance to process the material while the lesson was in progress.



Figure 1. Students lose focus and talk off-task during learning with a group visual task

The third form was the misuse of AI to do tasks instantly. In class, some students obtained answers from AI and then copied them without understanding the content. The causal factor was a task in the form of a written or visual product whose answer is easily requested from AI, without a mechanism that requires students to explain their answers directly themselves. Personal integrity is proven to be related to the tendency to use ChatGPT (Bouteraa et al., 2024), and UNESCO (2023) reminds that generative AI must not replace students' thinking process. The impact on learning achievement is that the task results look good on paper but do not reflect understanding, so students' reasoning ability is not trained.

The fourth form was learning goals that were not achieved for those students, and this is the combined result of the previous three forms. Students who rode on a group's name, chatted, or relied on AI skipped the process actually needed to understand the material. Yet the readiness of this class was in the moderate category, so students needed scaffolding and gradual practice

that they did not obtain in tasks carried out passively. As a result, the learning goals of Pancasila Education were not yet achieved for those students even though the media used matched the class's dominant learning style.

From this reflection, the teacher concluded that a visual preference does not yet guarantee engagement. This finding is in line with Brown (2023) that adjusting teaching to learning style preferences does not automatically improve achievement. The core problem lies in the form of the assignment, not in students' visual ability. A task that allows students to be passive will not produce engagement, whatever their learning style. This conclusion pushed the teacher to look for a form of assignment that requires every student to move, interact, and take responsibility in turn, namely a form that supports the kinesthetic learning style without discarding visual elements.

Learning Solution through BINGO Puzzle Emoji (NGOPI)

Rationale of the design

The teacher kept the visual elements in presenting the material but designed the assignment as a kinesthetic activity in the form of a game, namely BINGO Puzzle Emoji (NGOPI). Kinesthetic was chosen not because it is dominant but because it is the lowest and because movement, interaction, and responsible turns were considered able to close the passive gap in the visual task. In this way, students are trained in a rarely used modality without losing their visual strength. This choice is in line with evidence that learning involving bodily movement has a positive effect on learning performance, especially in the humanities and small group work (Liu et al., 2025), and with the experiential learning cycle that places real action as the entry point to understanding (Kolb, 2015). This design also answers the assessment's recommendation for educational games and hands-on practice.

What BINGO and NGOPI are

Bingo is essentially a grid game in which players try to complete lines, whether horizontal, vertical, or diagonal. NGOPI is short for BINGO Puzzle Emoji, an adaptation of bingo for learning. Each square on the worksheet (LKM) contains a Pancasila Education question, and a square may only be worked on after the group has successfully matched the emoji puzzle with the sample picture and won the turn to press the bell. Emojis were chosen because they are visual symbols familiar to teenage students and give a fun game element, while the sample picture serves as a concrete reference to match.



Figure 2. Emoji puzzle and sample picture matched by students

Why NGOPI effectively supports the kinesthetic learning style in Pancasila Education

NGOPI supports the kinesthetic style through four mechanisms. First, matching the puzzle requires students to hold, move, and arrange objects, so hands and bodies are also at work. Second, scrambling in an orderly way to press the bell demands quick responses and alternating movement, which channel students' energy into directed activity. Third, the answering turn that passes between members means every student must perform, so no role can be carried out passively. Fourth, reflection questions written by each member after playing connect the playing experience with conceptual understanding, in line with the reflection and conceptualization stages of the learning cycle (Kolb, 2015). Because Pancasila Education material is full of concepts but ends in behavior, the combination of movement, cooperation, and rotating responsibility makes students not only know but also practice the attitudes discussed in the material, such as waiting for one's turn, respecting friends' opinions, and deliberating.

Equipment

- Four groups of students formed by the teacher. Small groups allow every member to get enough turns and are easy for the teacher to observe, in line with the finding that embodied learning is stronger in small group work (Liu et al., 2025).
- One set of emoji puzzles and sample pictures for each group. Each group has its own equipment so that all groups play at the same time and every member has a chance to touch and arrange the puzzle, not just watch.
- One bell that is scrambled for in an orderly way by all groups. A single shared bell creates healthy competition and gives a chance to practice self-management, because groups must hold back, wait for the teacher's cue, and accept the checking decision.
- A BINGO worksheet (LKM BINGO) containing 25 questions in a bingo grid. The reflection questions are placed on the same worksheet because of time limits, so the transition to the closing activity is more efficient and students do not need to move between worksheets.

- Visual media in the form of sample pictures and the presentation of material, which are retained so that the class's visual strength remains used.



Figure 3. BINGO worksheet (LKM) on Citizens' Rights and Obligations in the 1945 Constitution of the Republic of Indonesia

Game flow

1. The group matches the emoji puzzle with the sample picture provided by the teacher. This step starts every round with a manipulative activity so that students move first before thinking about the question.
2. When they feel it is correct, the group presses the bell, and the teacher checks the puzzle arrangement. Immediate checking gives quick feedback (Hattie, 2023) and prevents groups from pressing the bell carelessly.
3. If the arrangement is correct, one member is entitled to work on one question on the BINGO worksheet. The rule of one member, one question guarantees individual accountability, that is, every student is responsible for his or her part (Slavin, 2018).
4. The turn passes to the next member, and so on. This rotation prevents students from riding on the group's name because every member is certain to get a turn.
5. The group does not need to finish all 25 questions; it is enough to form two bingo lines, whether horizontal, vertical, or diagonal. A reachable target maintains motivation and ensures enough learning time for reflection and presentation.
6. The group works on the reflection questions. Each member writes down his or her own knowledge, on the condition that they play the emoji puzzle first. This condition keeps the reflection starting from the playing experience and reduces the chance of answering instantly with the help of AI.

7. The group that has finished everything presses the bell and shouts "BINGO" to win the game. This shout serves as a fun closing and a marker of the group's completion.
8. Each group presents its work. The presentation involves the auditory route and requires students to account for their answers orally.

The teacher's role, scaffolding, and modality integration

The teacher acts as a rule supervisor as well as a provider of scaffolding. If a student has difficulty answering, group mates help first. If the student is still confused, the teacher provides scaffolding as needed, for example with gradual prompting questions. Such layered assistance is in line with evidence that scaffolding improves learning performance (Zuo et al., 2023) and fits the needs of a class in the moderate readiness category.

Although the assignment is kinesthetic, NGOPI still integrates all three learning routes. The visual route is present through the presentation of material, sample pictures, emoji puzzles, and the BINGO worksheet. The auditory route is present through group discussion, the teacher's cues, and presentations. The kinesthetic route is present through puzzle manipulation, scrambling for the bell, and alternating turns. This integration gives every student the chance to learn through the route easiest for him or her while also training other routes, without claiming that matching one style with one method guarantees results (Brown, 2023).

Results and Discussion

Based on observations, work documents, and the teacher's reflection, the implementation of NGOPI changed the atmosphere and behavior of students in all four groups. Table 2 compares the condition during the visual task with the condition when NGOPI was implemented, and the following explanation describes where the changes can be seen.

Table 2. Comparison of student behavior during the group visual task and during NGOPI

Observed aspect	Group visual task	During NGOPI
Member contribution	Some students rode on their group's name	Every student must answer on his or her turn
Behavior during group work	Chatting and disturbing other members	Energy is channeled into matching puzzles and scrambling for the bell; disturbance decreases
Use of AI	Used for instant answers	Decreases, because questions are answered directly and accounted for during the presentation
Assistance for students who struggle	Unstructured	Helped by group mates, then by teacher scaffolding if needed
Enthusiasm	Low among passive students	Increases
Achievement of learning goals	Not yet achieved by passive students	All students are helped to achieve the learning goals

The change that is easiest to see occurred in member contribution. Even contribution is visible in three ways. First, the bingo grid on the worksheet was filled with different handwriting because each question could only be worked on by one member who had the turn, so the teacher could trace who worked on which square. Second, every time a group won the bell, the member who stepped forward always changed, and not a single student could represent the whole group. Third, the reflection questions were written by each member, so every student produced his or her own writing that could be checked. In the previous visual task, these three traces did not exist

because contributions merged into one group product. This change is in line with the principle of individual accountability in cooperative learning (Slavin, 2018) and reduces room for social loafing (Milinga et al., 2022).



Figure 4. Students fill in the BINGO worksheet in turn after the bell is rung

The next change was seen in how students channeled their energy. As soon as the teacher gave the start cue, the four groups moved in simultaneously to their own equipment. Hands slid the emoji pieces, some students stood to see the sample picture from a better angle, and quick whispers could be heard to decide the right arrangement. When a group was sure its arrangement was correct, the bell rang and the class erupted in cheers and laughter, then quieted again as the teacher checked. Students who previously moved to other groups to chat now had a reason to stay in their own group, because the group needed every pair of hands. Off-task talk decreased, and disturbance to members who were working also decreased. This lively atmosphere differed from the earlier noise because the liveliness was now directed at the group's goal and governed by agreed game rules. This pattern is consistent with the finding that game-based learning has a positive impact on motivation, interest, and engagement (Hui & Mahmud, 2023) and that bingo media increase students' willingness to participate (Nurlaelisah et al., 2023).



Figure 5. Students working in groups and moving actively during the NGOPI game

The third change concerned the use of AI. In NGOPI, questions were answered on the spot in a fast-moving game situation, reflection questions were written by each member after playing the puzzle, and the results were presented in front of the class. This sequence narrows the room to request instant answers from AI, because students' hands are busy with the puzzle, turns keep moving, and students know they will be asked about their answers. Students are required to understand the content of their answers in order to account for them orally, in line with UNESCO's (2023) message that AI must not replace students' thinking process. This task design matters because personal integrity is related to the tendency to use ChatGPT (Bouteraa et al., 2024), so tasks need to be designed so that honesty becomes the easiest choice.

The fourth change was more structured assistance. When a student had difficulty answering a question on his or her turn, group mates helped first, for example by pointing to the material or re-explaining in peer language. If the student was still confused, the teacher came closer and provided scaffolding as needed. Shy or less confident students no longer had to work alone behind the group's name, because their difficulty received help on the spot. This mechanism fosters collaboration while ensuring that no student is left behind, in line with evidence of the benefits of scaffolding for learning performance (Zuo et al., 2023). This help also addresses the causes of riding on a group's name that are related to shyness and feeling less capable (Casan et al., 2024).

Visual elements remained present throughout the activity. The sample picture became the reference for matching, the emoji puzzle became the symbol to be matched, and the BINGO worksheet became the grid to be completed, so the class's main strength remained used. The difference is that visuals are now positioned as a tool for acting, not as an object that is only looked at. This answers the limitation of visual media noted by the assessment, namely that students' response to visual media is limited when it is not combined with hands-on activities.

In terms of discussion, these results show that a class whose kinesthetic style was least often chosen (about 18%) in fact showed increased engagement when its assignment involved movement. This finding does not mean that kinesthetic became the class's dominant style. It shows that the preferences reported by students do not necessarily describe the activities that can best engage them, and it is in line with the criticism that matching learning styles with methods does not automatically raise achievement (Brown, 2023). These results are also consistent with evidence that embodied learning has a positive effect in the humanities (Liu et al., 2025). Thus, supporting the kinesthetic style in Pancasila Education is better understood as an effort to enrich the class's learning experience, not as an effort to replace the dominant style.

An important note needs to be made. The results above come from the teacher's observations and reflection in one class and one cycle. This study does not yet contain quantitative data before and after the action, so the reported changes are descriptive and cannot yet be stated as measured effects.

Impact on Students, Teacher, and School

Impact on students

For students, NGOPI fosters active engagement while training the five social-emotional competencies formulated by CASEL (Durlak et al., 2022). Self-awareness grows when students recognize their own abilities and knowledge through reflection questions that must be written personally. Self-management is trained when students patiently wait for their turn, hold back from pressing the bell before the arrangement is correct, and follow the game rules. Social awareness emerges when students appreciate the help and opinions of group mates, including accepting corrections from the teacher and the results of checking. Relationship skills are built

through cooperation and communication in the group, from discussing the puzzle arrangement to sharing tasks during the presentation. Responsible decision-making is reflected when the group decides on the right answer before pressing the bell and chooses to work honestly without shortcuts.

In addition, previously passive students gain room to contribute in a safe atmosphere because their difficulties are helped by friends and the teacher. This is in line with the need for self-confidence and questioning activeness recorded in the assessment. In terms of learning achievement, students who previously skipped the learning process in the visual task are now directly involved in working on questions, reflecting on their knowledge, and presenting it, so the chance of achieving the learning goals increases.

Impact on the teacher as the author

For the author as a teacher, this case teaches that assessment data need to be combined with observation of student behavior before being used as the basis for decisions. Learning style data showing visual dominance turned out to be insufficient to predict the form of assignment that engages students, and classroom observation corrected that decision. This experience strengthens the habit of reflection, namely observing, concluding, changing the design, and then observing again.

The author was also encouraged to design low-cost, contextual media. Designing NGOPI required the author to choose sample pictures, arrange emoji puzzles, and compose 25 questions along with reflection questions, so the ability to translate material into learning experiences increased. The author also realized the need to manage time, for example by merging the reflection questions into the worksheet so that the transition to the closing activity is more efficient. Monitoring became easier because every turn is visible, so the teacher can assess individual contributions more fairly and give scaffolding precisely to students who need it.

Impact on the school

For the school, NGOPI provides an example of good practice in differentiated instruction that departs from assessment data and is corrected by classroom observation. Its equipment is simple, namely emoji puzzles, a bell, and a worksheet, so it is easy for other teachers to imitate and can be adapted for other subjects and classes by changing the questions and the puzzle arrangement. This practice can be shared in teacher learning communities as an example of how diagnostic assessment is translated into real classroom action.

The use of questions that are answered directly and presented also supports a culture of academic integrity amid the widespread use of AI. Activities that require cooperation, honesty, and the courage to express opinions also strengthen the character of mutual cooperation (gotong royong), critical reasoning, and independence as the school expects. For the school, this means that Pancasila Education learning can become a space for practicing values, not only a space for delivering concepts.

Conclusion, Limitations, and Suggestions

Conclusion

The case study in Grade IX F at SMP Negeri 16 Surabaya shows that the kinesthetic learning style can be specifically supported in Pancasila Education through BINGO Puzzle Emoji (NGOPI) without abandoning the strengths of the visual and auditory styles. The underlying problem lies in the form of the assignment, not in students' learning styles. Although visual was dominant, a group task that rested on visuals gave rise to students who rode on their group's name, chatted

until they disturbed friends, and misused AI, so the learning goals were not yet achieved for those students.

NGOPI answers this problem by demanding movement, interaction, and responsible turns through matching emoji puzzles, an orderly scrambled bell, and turn-based work on the BINGO worksheet. Based on the teacher's observations, NGOPI increased engagement and enthusiasm, channeled students' energy into directed activity, reduced dependence on AI, and helped all students achieve the learning goals. The impact is felt by students through engagement and social-emotional competence, by the teacher through learning decisions based on data and observation, and by the school through a good practice that is low-cost and replicable.

Limitations of the study

This study has several limitations that readers need to note. The study was conducted in one class and one cycle, so its results cannot be generalized to other classes or schools. The results come from the observation and reflection of a teacher who was also the one carrying out the lesson, so there is a possibility of assessment bias, and this study does not yet contain quantitative data before and after the action or a comparison group. The decrease in AI use was also assessed from behavioral observation, not from a detection tool, so it is indicative. In addition, the learning style measure used relies on students' self-reports, and the concept of learning styles itself is still scientifically debated (Brown, 2023). Finally, implementing a bell-based game requires careful management of time and order so that the lively atmosphere remains directed.

Suggestions

Pancasila Education teachers are advised to combine diagnostic assessment results with observation of student behavior before determining the form of assignment, and to design activities that give room for movement and interaction without abandoning visual media and discussion. NGOPI can be adapted to other materials and subjects by changing the worksheet questions and the arrangement of emoji puzzles, provided that the teacher manages the orderly use of the bell and the time allocation so that the game remains orderly and complete. Schools are advised to facilitate the sharing of this good practice in teacher learning communities and to support the provision of the simple equipment needed. For future researchers, it is suggested to add an engagement rubric, pretest and posttest, a comparison group, and more than one cycle so that the impact of NGOPI on learning achievement and academic integrity can be measured more strongly.

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