Can all students in PE get an 'A'?
Game performance assessment by peers as a critical component of student learning

Shane Brown and Dr Tim Hopper
School of PE
University of Victoria

Abstract

As PE teachers, too often we attempt to measure psychomotor competence in games units through *skill tests*, and we create contexts that mitigate against student success no matter how much effort they exert. These 'non-athletic' and 'unsuccessful' students inevitably become discouraged as they accept lower grades and try to 'protect' themselves from further failure by avoiding physical activity. These tests of competence are guilty of rewarding skill performance, but neglecting personal effort, social engagement and cognitive decisions so imperative in game play. Importantly, specialists in PE have long recognized that sport-related games are about more than merely performing motor skills; these games also incorporate concepts such as setting up to execute a skill, adjusting position, making decisions about when to support or cover a teammate, or when to mark another player or guard an area. Drawing on Griffin, Mitchell and Oslin's (1997) Game Performance Assessment Instrument (GPAI), as well as Hopper (2003), this paper will discuss the utility of the GPAI form in recording game performance behaviors that encourage all students to experience success in assessment games lessons.

Assessing and promoting physical activity

This paper discusses how to make assessment of game curriculum more meaningful for children growing up with games, as well as more pertinent for students in their adult lives. Students attend PE classes expecting to have fun and to learn about becoming and staying active; many leave wondering why they only got a 'B' or 'C+.' If these students ask, "Why didn't I get an A?", we quickly defend our grading system and explain to them that it is because they "Did not do so well on the skill tests in the units of basketball and soccer." Yet we point out, "Thanks for participating in class and showing good sportspersonship behaviors, that's why you got a B." After all, we reserve the 'A' for those students who can perform skills in a game to a high level – mostly those who have prior or advanced experience with the sport outside of instructional PE.

For PE teachers, the promotion of physical activity is probably the most important aim in our curriculum (Hill, 2003). Yet, for principals and parents, accountability of learning through assessment is the dominant concern; "Educators are being challenged to provide proof of student learning and program effectiveness" (Robinson & Turkington, 1994, p. 18). The need for assigning a grade has led us to dread summative assessment (testing days) - the days where we test skills so we have something to help account for the assigned letter grades. Together, the aim of developing a positive attitude toward physical activity and the demand for accountability in assessment have created the "double edged" sword of the physical education class; often, by giving students a mark less than an 'A', we turn them away from activity. Chernysh and Crossman (1994) found

51% of females judged their performance in physical education by the grade they received, and as many as 54% of all students were discouraged by their PE mark. Ironically, we want students to choose physical activity, yet for the vast majority of our students we assess in a manner that discourages them and implies that they are "not good enough." This is counterproductive to the aim of promoting an active lifestyle, which is advocated by our PE curriculum.

But I want an 'A'

Truly, physical education might be the one subject in which we want every student get an 'A', or at least have the opportunity to. We are all aware of the benefits of physical activity, and the consequences of inactivity. We need an assessment strategy that not only encourages students to be physically active, but that also promotes learning itself as an instructional strategy. Richard and Godbout (2000) suggest formative assessment and have described it as occurring "during a teaching unit with the intent that the gathered information will be used to adjust future learning scenarios…. distinguished by the fact that its main purpose is to aid or improve rather than simply attributing a grade (p. 5)." When one combines formative and authentic assessment, one attempts to measure the performances of students in "more natural, real-world settings rather than artificial, contrived settings typically found in standardized testing protocols" (Block, Lieberman, & Connor-Kuntz, 1998, p. 49). With formative and authentic assessment, the process of assessing becomes the core of the students' learning. In fact, in our experience this type of assessment is making the learning happen. Moreover, learning can be enhanced during the assessment process when students are involved (Robinson & Turkington, 1994). Drawing on Griffin, Mitchell and Oslin's (1997) Game Performance Assessment Instrument (GPAI), as well as Hopper (2003)**,** this paper will demonstrate the usefulness of such an instrument in recording performance behaviors.

Adapting the games performance assessment instrument (gpai)

Authentic assessment of game performance takes into account both 'on the ball' and 'off the ball' perspectives. That is, in territory or invasion games such as basketball and soccer, a student is assessed both when their team has the ball (with the student or a teammate in possession), and when their team does not have the ball. Griffin et al., (1997) clarifies the significance of this idea. If 30 minutes of a mini-soccer game is divided by 5 outfield players per team, "each outfield player is only in contact with the ball for an average of three minutes (p. 12)." This begs one to inquire as to what players are doing during the 27 minutes of game play when they are <u>not</u> in possession of the ball. As Griffin and her colleagues have answered, these players should be "moving to appropriate positions to attack or defend, and making decisions about how to contribute to the game (p. 12)." To recognize these movements, Griffin et al., (1997) have listed seven components of the Game Performance Assessment Instrument (GPAI): base, adjust, decision making, skill execution, support, cover, and guard or mark. These components offer a way of describing player movement in <u>all</u> aspects of game play.

As a simplified example, in Figure 1 we have adapted four of these components for the game of soccer, focusing <u>only</u> on the team that <u>has the ball.</u> Drawing from Hopper (2003) and Bell and Hopper (2003), following is a typical sequence of tasks applying a games for understanding approach that uses the GPAI assessment method.

INSERT FIGURE 1 about here

Sample sequence of tasks for a novice players' soccer unit (grade 6 and up)

Endball: Modified soccer game exaggerating passing, receiving and support

Adapting Endball from Bell and Hopper (2003), the class can be divided into groups of eight (four on each team) and each pair of teams has an alley in the gymnasium in which the game occurs. The objective of the game is to pass the soccer ball to the "goal-trapper" who must stay in the opposite end zone of the alley. If the goal-trapper traps the ball in the end zone with their feet, their team scores a goal. Additionally, a player with the ball cannot travel, and defenders try to prevent scoring by using their feet to intercept a pass, and are not allowed to tackle. This gives the player with the ball time to control and pass. In attack, as can be seen by Figure 2, this game structure creates a 4 vs. 3 situation that favors the team with the ball, and increases their scoring opportunity because the goal-trapper offers an extra option to receive a pass. As Bell and Hopper (2003) have shown, if the goal area includes the entire width of the alley, then the goal-trapper is free to move anywhere along this space to receive a pass, increasing the chance of scoring. Once a team scores, the player who scores becomes the new goal-trapper, and the team that scored must retreat to their own end, allowing the opposing team space to bring the ball into play (restarting play).

Insert FIGURE 2 ABOUT HERE

Inevitably, with novice players, the ball will be passed toward a teammate when a defender is between the passer and the receiving player. When this happens, the teacher can stop play and ask the group, "What do we need to work on?" Students will usually answer with, "Passing." Or, if some have played soccer, they might say, "Getting open to receive a pass." This experience and dialogue creates the following situation for practice.

Task 1: Working on the 'skill' of the short pass and stop

Through guided questions such as, "How do we pass better?", and "What part of the foot do we want to use?", students provide the three critical cues that will be used. For example:

- Non-kicking foot beside ball (pointing at target)
- Inside of foot contact (while looking at ball)
- Follow through

Using the three critical cues, students start stationary passing against a wall or a flat surface (bench on its side), and work on getting in line with the ball to stop it and set-up to pass. As an extension, students who have experience in soccer can be allowed to pass and move to the new area (open space), trapping the ball each time before they pass (see Figure 3 for an idea of how the skill could be practised). The students can be given a task of attempting to make ten successful passes before moving on to a more challenging task (pass and move), or using the other foot or alternating feet.

Insert FIGURE 3 about here

Task 2: Passing and receiving with a partner

In this task students begin to refine the skill of receiving the ball appropriately through trapping while working with a peer. Again using a questioning approach, students can be asked, "Before we pass, how do we want the ball?" with the focus on getting the ball still and just in front of the body next to the non-kicking foot.

"How can we stop the ball coming from our partner so we are able to quickly pass it back to them?"

Possible responses from students could be:

- let the ball come to you
- cushion the ball with inside of foot
- trap the ball with foot on top

Using the critical cues for an effective pass and trap, students can pass back and forth in partners. If students can pass ten in a row without losing control, they can be invited to pass and move to a new area (open space) to receive the next pass. But caution students, "You must make a pass without interfering with other players." Students can be asked to keep a total of successful passes without losing control of the ball. Figure 4 highlights the kind of set-up this task would require. The setting up to receive a ball should be emphasized as the base – that is, students get ready to receive the pass by having their head up, knees bent and signaling for the ball.

Insert FIGURE 4 about here

By progressing to the whole class moving around the gym and getting ready for a pass, students begin to incorporate decision making about when it is appropriate to pass (no one in their way) as well as support by getting to an open space to receive a pass.

At this stage, novice players could return to the Endball game to see if they have more success. However, the skill development (passing and trapping) and game play (getting open to receive the ball to invade and score) challenge may still be too much for noticeable improvement. The next set of tasks will help connect skill learning to effective game play.

Task 4: Understanding open space via a grid

The use of grids can help students understand passing and moving to an open space. As shown in Figure 5, groups of four students occupy one square, three students set-up on a cone each, leaving one cone vacant. Students within the grid pass (skill) to an open teammate in a good base position (decision) and then run to the vacant cone (support) ready to receive a pass (base). The fourth student stands outside of the grid counting complete and appropriate passes – this student will be the coach in a reciprocal role for the task. The coach switches with a player after 5 -10 complete passes. As an extension, the fourth person can come into the middle of the grid to act as a passive defender (there to be in the way, but not to try to get the ball). In this manner, students begin to understand passing to the open teammate (decision).

Insert FIGURE 5 about here

Invariably, students within the class will be working on different aspects when they are ready to move ahead. Some will be on stationary passes while others will be on passing and moving. Importantly, students need to understand the concepts of getting to an open space and being ready to receive the ball.

This grid work needs repetition over several lessons, with game structures such as successful passes, points for making sets of 3 passes, defenders becoming more active, etc. With more advanced players, the space can be increased and two defenders added, leading to a keep-away type game. See Bell and Hopper (2003) for more ideas on developing this game-like practice.

Once students can complete the grid task within a game structure against a passive defender, recognizing their movement role with and without the ball (base, support, decision) they are ready to return to the Endball (see Fig. 2) game and use the GPAI form.

Example of GPAI assessing game play of a grade 8 student

To help understand how the GPAI form works, we have created the following scenario that shows how students could use the GPAI form. A '✓' indicates a successful attempt while an 'X' indicates an inappropriate attempt. Referring to Figure 6, Kim started the assessment when Bill's team had the ball, and Bill got to an open space to receive a pass (Support #1). Bill received it in a proper position with knees bent and looking at the person who passed, signaling for the ball (Base #2). Bill also used the proper receiving technique (Skill-receive #3). Once Bill had the ball, he passed correctly (Skill-pass #4), but unfortunately he passed to a teammate who was well covered (Decision #5). Consequently, there was a loss of possession, and the other team had the ball. When Bill's team got the ball back, Kim began to assess Bill again (Possession 2). Bill actually started with the ball (the other team scored) and although he passed incorrectly (Skill-pass #6) he made the correct decision about passing to a teammate who got open and away from their defender (Decision #7). That teammate attempted to pass to the goal-trapper (not shown on Kim's assessment because she is only responsible for Bill) and the opposing team intercepted the ball. Kim began to assess when Bill's team got the ball back on possession 3. Bill did not attempt to get to an open space (Support #8), did wait in a proper position (Base #9), but was unable to trap the ball when his teammate passed to him (Receive #10).

Insert FIGURE 6 about here

Bill, as a novice soccer player, scores six ticks to four crosses. Such assessment from his peer identifies successes, encouraging Bill, and motivating him to improve. After another lesson based on the 'Sample Sequence of Tasks' indicated earlier, Kim later assessed Bill and found his game play had improved, see Figure 7.

Insert FIGURE 7 about here

Again, Kim started the second assessment when Bill's team had the ball. In this case Bill had possession and used proper technique to pass the ball (Skill-pass #1) to a teammate who was open (Decision #2). Learning from the above grid game (see Figure 5 showing open space), Bill supported his teammate by getting open to receive a pass near the goal (Support #3) in a proper base (Base #4). Receiving the ball appropriately (Skill-receive #5) close to the goal line, Bill panicked and attempted to pass to the 'goal-trapper,' using his toes instead of his instep (Skill-pass# 6). Consequently, although the decision to go for a goal was appropriate (Decision #7), the pass was not on target and the goal-trapper was unable to trap the ball (loss of possession due to out of bounds). It should be noted that more than one '✓' or 'X' may appear in a box, as long as the team still has possession (i.e. Bill may receive the ball 2-3 times during a single team possession). For the sake of simplicity, we have provided only the assessment for Possession 1, although Kim would begin to assess Bill again once Bill's team regained possession of the ball (Possession 2).

Making learning happen

Using the GPAI benefits both the player and assessor. For example, after five minutes of play, the player gets feedback on game performance that can actually show them *how* to improve. The feedback illustrates what they did right, rather than outcome based assessment focused on what they did not do or what they did wrong. The assessor begins to learn and understand the game while they assess, much in the same way we as teachers learn as we teach. Howarth (1999) has noted that if students are to improve in

and at games, it is important that they be able to observe and analyze their own and others' performances. Moreover, assessment of game play has been recommended for physical educators, and such assessment of students during the game "fits all of the characteristics of performance-based authentic assessment currently endorsed by the education community" (Rink, French & Graham, 1996, p. 499).

Possible way to assign a grade

If necessary, to convert the GPAI assessment method to a grade we suggest using the experience to get the students to reflect on their learning. Figure 8 is a suggestion of a directive but simple set of questions that can be done during the last five-to-ten minutes of class, or for homework. Afterward, both an example of an assessment that the participant has completed, as well as an assessment done on their game performance, could be used in a field activity journal. When students fill out the assessments and also the provided questions, teachers begin to obtain formative and authentic assessment that can show improvement and evidence of students playing the game reasonably well. Moreover, this assessment is not based solely on skill, but also offers quality assessment in the cognitive and affective domains, which is encouraged by the current educational reform movement (Worrell, Evans-Fletcher & Kovar, 2002). As Griffin et al. (1997) has shown, there are many things that are occurring during game play for which students should be rewarded. In effect, although the obtainment of an 'A' by ALL students may be idealistic, at least ALL students should feel they have an equitable opportunity to succeed by demonstrating their knowledge, effort and appreciation for playing games. If students feel they can appreciate and play games, they may begin to enjoy physical activity at unprecedented levels. This type of reflective self-assessment may even replace the need for a grade, but that is a topic for another paper.

Insert FIGURE 8 about here

Why this can work for you

Griffin et al. (1997) have stated that the teaching and learning of sport-related games encompasses approximately 70% of the typical physical education course in North America. Therefore, an impact on games teaching can have a tremendous influence on the worrisome inactivity of children. As Rink (1996) succinctly stated, "the ultimate goal of sport instruction is to enable students to enjoy participation and to play the game reasonably well so that they will have increased motivation to play and gain the benefits of participation (p. 397)." For physical education specialists, sport-related games include more than merely performing motor skills; they encompass setting up to execute a skill, important decisions about knowing when to support or cover a teammate, as well as positional adjustment, and perhaps guarding another player or area. Our example only focuses on the use of the GPAI form for when the player's team has the ball. As Griffin and Richard (2003) have stated, "The appeal of the GPAI is that as the teacher, you can adopt the instrument for use based on the aspects of the game taught and the type of game being played in your lesson with students" (p. 24). For example, this model could be developed for off-the-ball movements, when the player's team is on defense, and for use in more formal soccer-like games.

Conclusion

When students step back and examine games that are being played, they begin to appreciate the finer details and complexities of these games. Importantly, games can be used to develop the skills of evaluation and analysis within a practical setting (Howarth,

1999). Therefore, when physical education teachers evaluate game performance (authentic assessment), one would hope that movements made by players who do not have the ball are recognized (assessed) and acknowledged (evaluated). Moreover, Robinson and Turkington (1994) have encouraged the involvement of students in the assessment of their performance and the performance of their peers in physical education, because it can enhance the teaching-learning process. In the end, the students who receive 'A's' should be the ones that have learned to appreciate and play the game. If there has been effective teaching there is no reason why this cannot include every student in the class. In such a scenario, we might be able to show evidence that fully prepared physical educators can make a difference, and can enable all their students, no matter what their ability, to take PE seriously. This will occur naturally, as students' play experiences become more meaningful. As a result, students can learn in such a way that they carry a positive attitude of game playing into a life long appreciation and pursuit of physical activity.

References

Bell, R., & Hopper, T. (2003). Space the first frontier: Tactical awareness in teaching games for understanding. *Physical & Health Education Journal*, 69(2), 4-10.

Block, M. E., Lieberman, L. J., & Connor-Kuntz, F. (1998). Authentic assessment in adapted physical education. *Journal of Physical Education, Recreation & Dance*, 69(3), 48-55.

Chernysh, K., & Crossman, J. (1994). The perceptions of students regarding grading in physical education. *The Canadian Association for Health, Physical Education & Recreation*, 60(1), 21-24.

Corbin, C. (1987). Physical fitness in the K-12 curriculum: Some defensible solutions to perennial problems. *Journal of Physical Education, Recreation & Dance*, 58(7), 49-54.

Griffin, L., Mitchell, S., & Oslin, J. (1997). *Teaching sport concepts and skills: A tactical games approach.* Champaign, IL: Human Kinetics.

Griffin, L., & Richard, J-F. Using authentic assessment to improve students' net/wall game play. *Teaching Elementary Physical Education*, 14(2), 23-27.

Hill, G. (2003). Using students to assess physical fitness performance. *Strategies*, 16(4), 34-36.

Hopper, T. (2003). Four Rs for tactical awareness: Applying game performance assessment in net/wall games. *Teaching Elementary Physical Education*, 14(2), 16-21.

Howarth, K. (1999). What makes games an educational tool? *Strategies*, 13(1), 29-32.

Kitts, M. (2003). Assessment strategies for physical education. *Strategies*, 16(6), 29-32.

Richard, J-F., & Godbout, P. (2000). Formative assessment as an integral part of the teaching-learning process. *Physical & Health Education Journal*, 66(3), 4-10.

Rink, J. E. (1996). Tactical and skill approaches to teaching sport and games: Introduction. *Journal of Teaching in Physical Education*, 15(4), 397-398.

Rink, J. E., French, K. E., & Graham, K. C. (1996). Implications for practice and research. *Journal of Teaching in Physical Education*, 15(4), 490-502.

Robinson, B. A., & Turkington, D. H. (1994). Do you involve students in the assessment of student performance in physical education? *The Canadian Association for Health, Physical Education & Recreation*, 60(2), 18-22.

Worrell, V., Evans-Fletcher, C., & Kovar, S. (2002). Assessing the cognitive and affective progress of children. *Journal of Physical Education, Recreation & Dance*, 73(7), 29-34.

1. Skill Execution: Efficient performances when receiving (i.e. do they cushion the ball to trap it) and passing (i.e. for a short pass, putting their non-kicking foot beside the ball and using the inside of their kicking foot for contact).
2. Decision making: Making the appropriate choice with the soccer ball (i.e. someone can have a great pass, BUT did they pass to an open team-mate).
3. Base: Knees bent and head up, ready for pass, providing a target (or calling out for ball).
4. Support: Does the player support the ball carrier by being in OR moving to an appropriate position to receive a pass (finding space).

Figure 1. GPAI components adapted from Griffin et al., (1997)

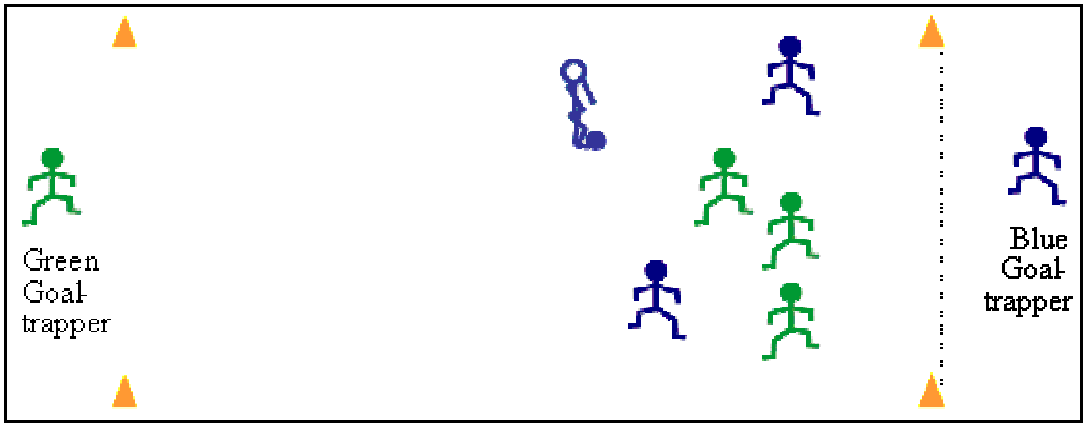

Figure 2. Endball soccer with blues trying to get the ball to the goal-trapper

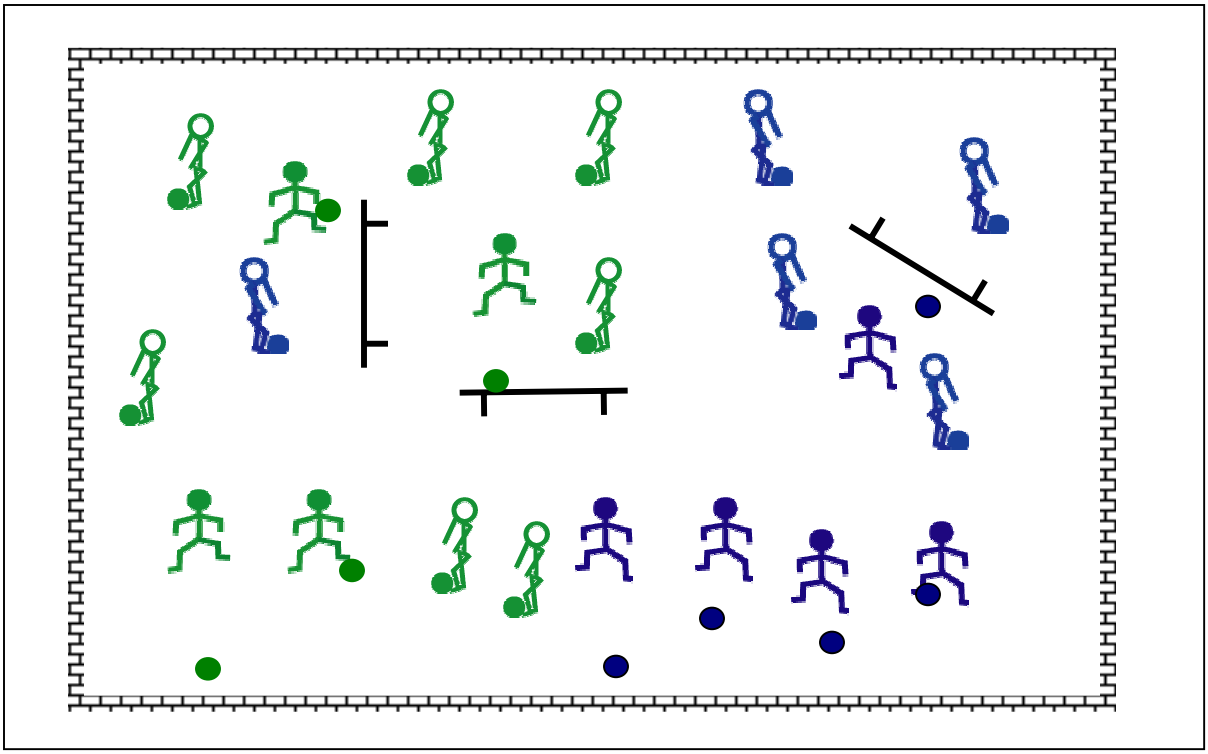

Figure 3. Players individually passing and receiving the ball as rebounds off wall or bench

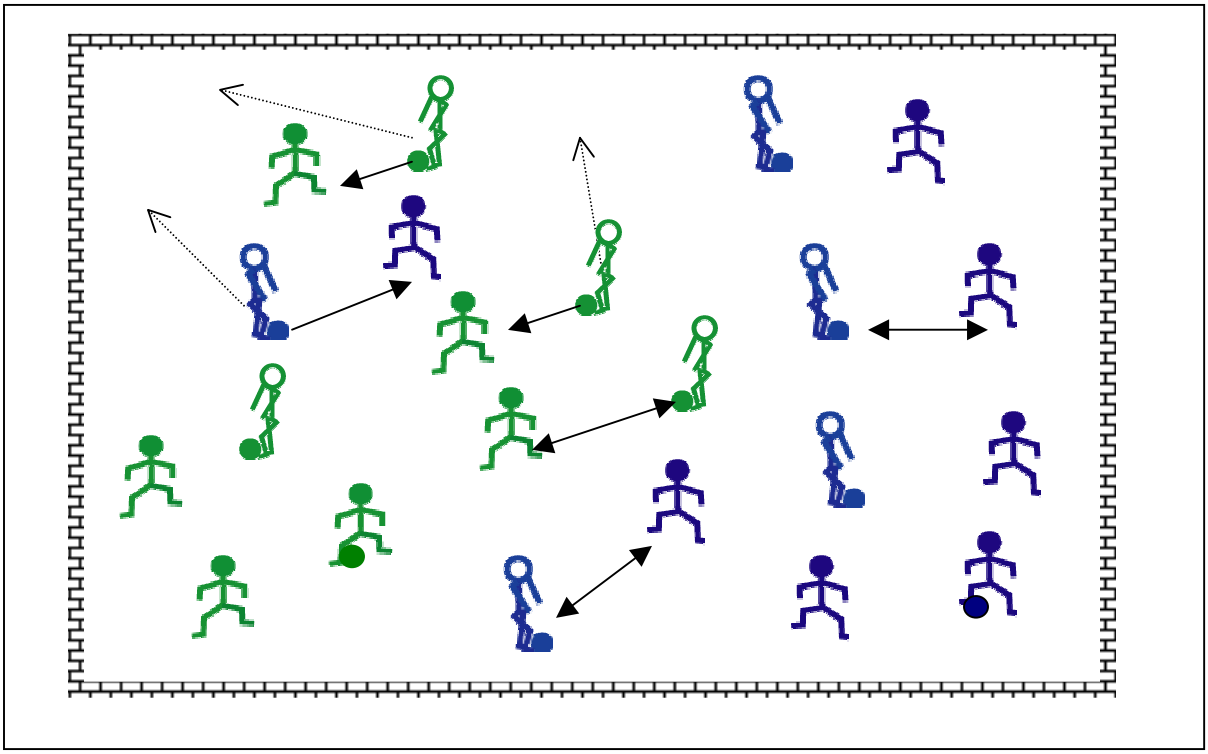

Figure 4. Players in pairs passing snd receiving then passing and moving to space to receive a pass

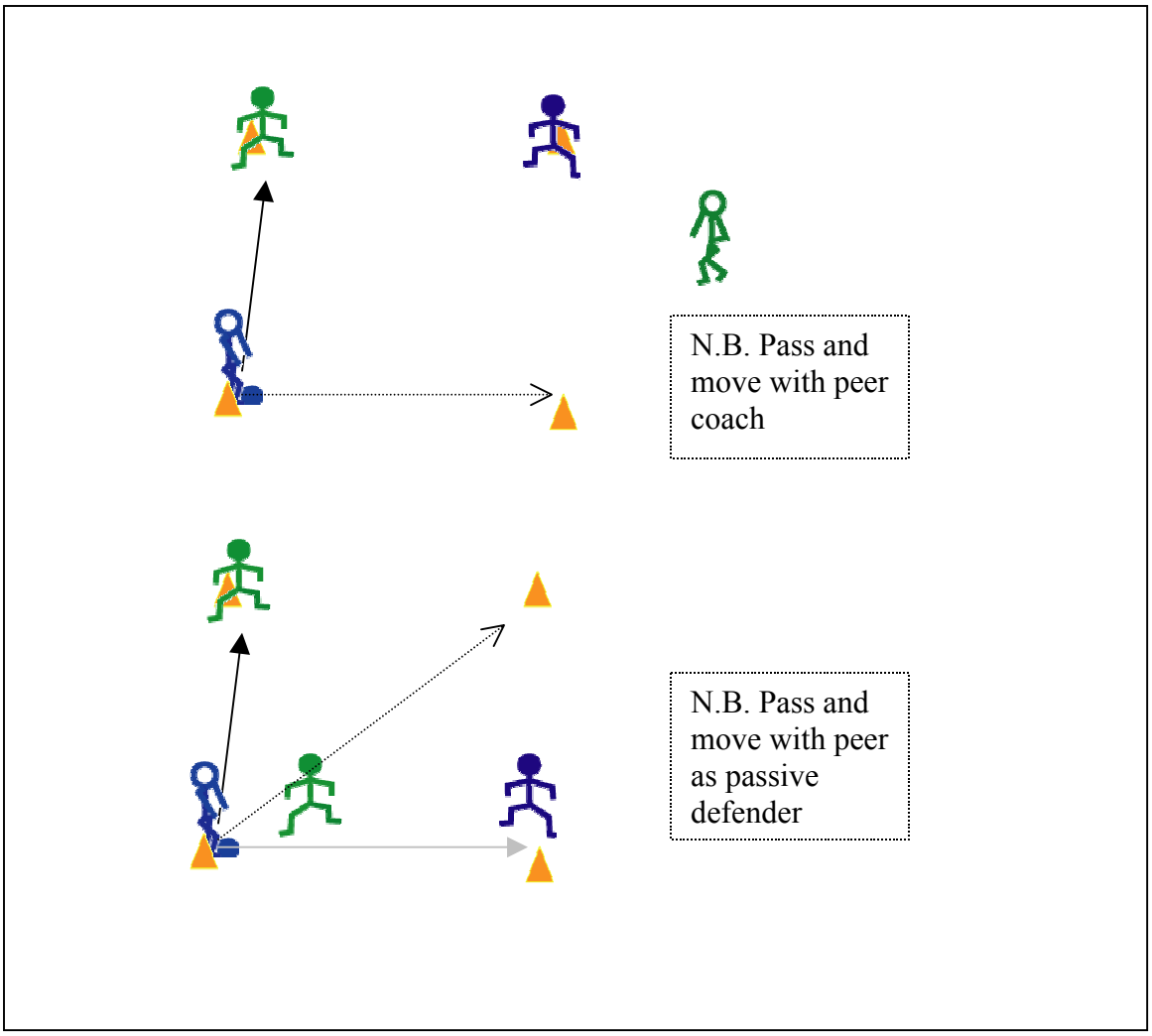

Figure 5. Grid task with peer coach and extension with passive defender

Player's Name: Bill Brown **Assessor's Name: Kim Leask**

GPAI for Soccer → Team with Ball

Possession	'On the ball'			'Off the ball'	
	SKILL		DECISION	BASE	SUPPORT
	Receive	Pass	(Right person?)	(Knees bent & ready)	(Get open for pass)
1.	✓ (3)	✓ (4)	X (5)	✓ (2)	✓ (1)
2.		X (6)	✓ (7)		
3.	X (10)			✓ (9)	X (8)
4.					
5.					
Ratio Total	1:1	1:1	1:1	2:0	1:1

6:4 ratio for Bill

Figure 6. An example of Bill's initial GPAI assessment by Kim.

Player's Name: Bill Brown **Assessor's Name: Kim Leask**

GPAI for Soccer → Team with Ball (2nd Assessment)

Possession	'On the ball'			'Off the ball'	
	SKILL		DECISION	BASE	SUPPORT
	Receive	Pass	(Right person?)	(Knees bent & ready)	(Get open for pass)
1.	✓ (5)	✓ (1), X (6)	✓ (2), ✓ (7)	✓ (4)	✓ (3)
2.					
3.					
4.					
5.					
Ratio Total	1:0	1:1	2:0	1:0	1:0

6:1 ratio for Bill

Figure 7. An example of the second GPAI assessment of Bill by Kim.

Instructions to students: Please answer the following four questions.
1. Did you complete the form similar to the example? *Yes*

2a. What did you learn when you assessed your partner?
I started to see all the little things that occurred in game play besides the person who has the ball.

2b. What did you learn when your partner assessed you?
I learned that my base was good for receiving passes, but I needed to work on passing to players who were not covered (decision making) as well as supporting my teammates who had the ball. Through trying to get to an open space, I quickly realized that I was drawing defenders towards me, opening up options for my teammate who had the ball to either pass to one of my teammates, or shot towards the goal.

3. What did you do well?
I assessed really well and I realized that the assessment creates a way for both the player and coder to get better. Felt like I was a coach.

4. How can your game play be improved?
My game started to really improve. I started to realize that we are evaluated not in comparison to others, but rather in terms of my improvement, not just skill performance.

Figure 8. A possible example of how a student might answer reflective questions on their learning after using the GPAI assessment process.