74 - SCHOOL BASKETBALL: TEACHING GAMES FOR UNDERSTANDING OR TECHNICAL APPROACH?

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INTRODUCTION

Physical education has valuable purposes as a means to develop physical, intellectual, emotional, social and artistic capabilities of children (Pickard and Maude, 2014). The learning experiences offered to children should be developmentally appropriate to help them acquire psychomotor skills, cognitive understanding, social skills and emotional learning they need to lead a physically active life (Harris, 2008).

The main goal to teaching ball games is to help students become good players, and to do it in a way that inspires lifelong participation. The discussion of how best achieve this goal should be directly related to learning theory which should be the basis for pedagogical practice. The more we can involve the whole learner, the better chances that meaningful learning will occur. TGfU has a potential to involve the learner more holistically (Rink, 2010). Light and Fawns (2003) argue that games taught in PE using TGfU as a form of educational conversation in which the mind, expressed in speech, and the body, expressed in action, embody the ideal holistic learning experience that simultaneously provides for cognitive, affective, social and physical learning. Play enables children to learn many skills beyond moving competence, such as decision-making, turn-taking, language acquisition and social interaction (Vygotsky cited in Singer and Singer, 2005). The current emphasis on the contributions of physical activity for health is driving much of the support for TGfU, as well as sport as play education (Siedentop, 2007) and Kretchmar's (2007) ideas about keeping joy in physical activity (Pickard and Maude, 2014).

Since we lean towards TGfU, the aim of this study was to compare its effects with effects of traditional approach to teaching basketball on game skills, knowledge and game performance and consequently to support engagement TGfU in teaching ball games.

METHODS

Two groups of students participated in the study. An experimental group was taught by TGfU (n1=17; age=10,5 years) and a control group was taught by a technical approach (n2=21; age=10,5 years). Duration of the experiment was 8 weeks (twice a week for 45 minutes) in physical education classes.

Game skills were evaluated by Under basket shot test, Push pass for accuracy test (Brace, 1966) and Dribbling test (Argaj - Rehák, 2007) before and after the intervention. Game knowledge was assessed by a written test after the intervention. The test was constructed on basis of questions for physical education activities (McGee – Farrow, 1986) and it contained 12 questions regarding rules and tactics. Game performance was evaluated in videotaped 3-3 basketball by coding players' behavior after the intervention. 1-5 scoring system of Game Performance Assessment Instrument (Mitchell – Oslin, 1999) was applied. The game performance of students was evaluated as a very week, week, average, good or very good. Data was statistically analysed by Wilcoxon's T-test and Man-Whitney's U-test. Procedural and declarative knowledge was evaluated separately as well as together what we considered general knowledge of basketball. Significance level was set on 5%.

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RESULTS

Firstly we wanted to find out whether the experimental and the control group improved their game skills due to our experimental programmes. A statistical analysis of the data showed that both groups achieved a remarkable improvement in passing and dribbling skills ($p<0.05$ or $p<0.01$). In addition to it both groups improved their shooting skills however we found statistical significance only in the experimental group ($p<0.05$) (Figure 1, 2).

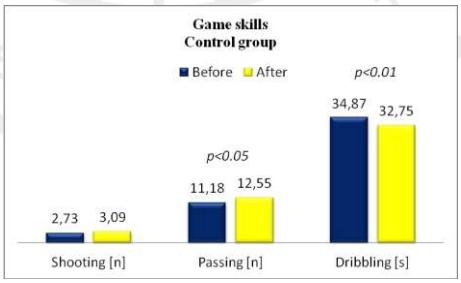


Figure 1 Game skills of control group

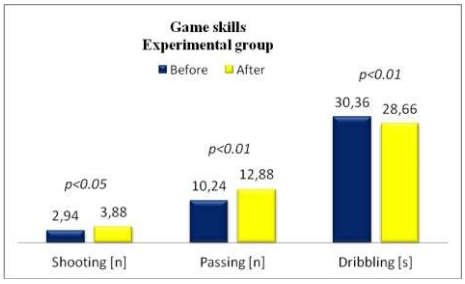


Figure 2 Game skills of experimental group

Consequently a question arose whether any approach caused better game skills' improvement and if yes which one it was, TGfU or a technical approach. An answer for this question is shown in Figure 3. Despite better performance in tests achieved by the experimental group the results were not statistically significant. Therefore we could observe in our case that both approaches to teaching basketball had similar effects on learning game skills.

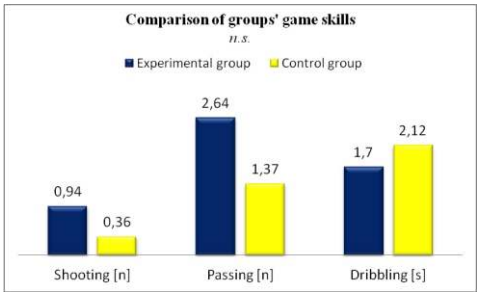


Figure 3 Comparison of groups' game skills

Secondly we focused on effects of examined approaches on procedural and declarative knowledge of our probands. It is well known that in sport games declarative knowledge is concerned to the rules of the game and procedural knowledge is considered to be a tactics or a strategy of the game. Figure 4 shows that the experimental group gained better general knowledge of basketball during the intervention compared to the control group ($p<0.05$). Furthermore this group taught by TGfU achieved higher percentage in questions regarding both rules and tactics nevertheless these results were not statistically significant. In our study TGfU seemed to be more efficient approach to teaching basketball in understanding rules and principles of the game.

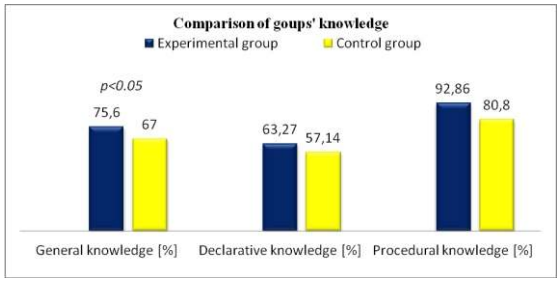


Figure 4 Comparison of groups' game knowledge

Thirdly we tried to explore the difference in effects of TGfU and the technical approach on game performance. Figure 5 shows that 64% of the control group achieved week or very week performance whereas only 28% students of the experimental group were evaluated as week or very week. On the contrary good or very good performance was achieved just by 10% of the control group whereas it was achieved by more that 50% of the experimental group ($p<0.05$). Undoubtedly students taught by TGfU showed much better game performance in 3-3 basketball than students taught by the technical approach.

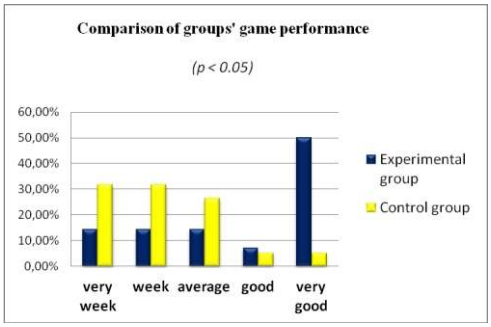


Figure 5 Comparison of groups' game performance

DISCUSSION

Our results support a premise that TGfU does not neglect teaching game skills as some people may mistakenly believe. On the contrary according to Thorpe and Bunker (2010), the model has always addressed the importance of the skill but with the notion that it is the best developed in circumstances the most closely resemble the situation in which they will be used. The results support the idea that skills as well as tactics can be learnt in the context of the game. They also support the foundation that TGfU as a problem-solving approach improves knowledge of games and games performance (Mitchell, Oslin and Griffin, 2003). Alternatively we could say that it is more efficient to let children discover and learn rules of the game and game tactics by playing games than to teach it while performing some drill exercises which are far from the game context. However we need to add that the written test might not be the most appropriate tool to measure procedural knowledge of the students because real game conditions are still different after all. Ultimately it is not a surprise for us that the children taught by TGfU were able to play basketball better that those led by the technical approach. The experimental group gained much more experience in playing itself what we could observe in the results of game performance of both groups.

CONCLUSION

Thomas and Thomas (1994) suggest that multiple measure of skill, knowledge and game performance should be used in sport research because of the complex nature of sport performance. To determine which approach, TGfU or a technical

one, could be more efficient in teaching basketball at a primary school we measured all three aspects of the domain. However we want underline that besides statistics we must not neglect or undervalue aspects like motivation, engagement, joy, flow or fun when teaching sport games. It appears that TGfU fulfils all mentioned attributes visibly more than the traditional technically oriented approach.

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ABSTRACT

This paper reports findings of an experimental study about the effects of technical approach and TGfU on game skills, knowledge and game performance in basketball. Two groups of 10- to 11-year-old students participated in the study. A control group was taught by the technical approach and an experimental group by TGfU for 8 weeks. Game skills were measured by Under basket shot test, Dribbling test and Push pass for accuracy test. Procedural and declarative knowledge was assessed by a written test and game performance was assessed by GPAI in 3-3 basketball. Wilcoxon's T-test and Man-Whitney's U-test were used to evaluate the data. As a result both groups improved passing and dribbling skills ($p<0.05$ or $p<0.01$) but only the experimental group improved shooting skills ($p<0.05$). However there were no significant differences found between the groups' improvement of game skills ($p<0.05$). Further analysis of the data showed that the experimental group was generally more successful in the knowledge test comparing to the control group ($p<0.05$). When rules and tactics were evaluated separately there were not found any significant differences between the groups ($p<0.05$). Even though we did not find significant differences between groups' procedural and declarative knowledge at least the experimental group achieved better percentage of both. Additionally the experimental group showed better game performance compared to the control group ($p<0.05$). To conclude it seems that TGfU is more efficient approach to teaching basketball than the technical approach nevertheless a deeper exploration is needed indeed. Simultaneously motivation and engagement of students should be considered as well.

KEYWORDS: basketball, TGfU, technical approach, physical education