International Journal of Psychosocial Rehabilitation, Vol. 25, Issue 03, 2021
ISSN: 1475-7192

TRADITIONAL GAMES MODULE THROUGH THE CONCEPT OF TEACHING GAMES FORUNDERSTANDING: DEVELOPMENT AND USABILITY FOR TEACHING AND LEARNINGFOR MALAYSIAN PRIMARY SCHOOL CHILDREN

[1]Mohamad Fadil Ibrahim,[2] HairulAnuar Hashim, [3]Nurul Azuar Hamzah,[4] Kueh Yee Cheng, [4]Garry Kuan

[1]Exercise and Sports Science Programme, School of Health Sciences, UniversitiSains Malaysia, 16150 Kubang Kerian, Malaysia
[2]Institut Pendidikan Guru Malaysia, Kampus Sultan Miza, Besut 22200, Terengganu, Malaysia
[3]Biostatistics and Research Methodology Unit, School of Medical Sciences, UniversitiSains Malaysia, Kubang Kerian 16150, Kelantan, Malaysia
[4]Department of Life Sciences, Brunel University, London UB8 3PH, UK
Corresponding: garry@usm.my

ABSTRACT
This manuscript aimed to reports on the process of validity and reliability of the traditional games module through the development and usability of the Teaching Games for Understanding (TGfU) concept for Teaching and Learning (TnL) for Malaysian Primary School Children. The implementation and evaluation process involved the preparation of the materials, the experts' review, and the content validity of the module. The module was then distributed and reviwed by eight subject matter experts from different fields. Several recommendations have been identified, and amendments were done accordingly. The amended module was then evaluated for its content validity by eleven evaluators, consisting of eight subject matter experts and three users. The implementation and evaluation process involves 63 students from the primary school of the Malaysian Ministry of Education for data collection. In addition, physical education teachers were selected to implement the module in their respective classrooms. The results showed that all evaluators responded strongly agree and agree for the level of usability and module presentation (*Mean* =95.4%), content (*Mean*=97.7%), Learning material and TnL activities (*Mean*=99.0%), language performance (*Mean*=100%) and the module has good content validity (*Mean*=93.9%). The teaching method with the concept of play-based learning improves the mastery of skills and promotes a more positive attitude among the students, as well as enhancing their interest in learning through the teachers' guidance. The TGfU concept more meaningful and provide more space for students. By using this module, the Malaysian children are found to be more motivated and more involved in learning in the form of physical activity.
Keywords: Teaching and Learning; Teaching Games for Understanding; Module development; Physical activity; Primary school.

INTRODUCTION

The curriculum transformation in the Malaysian Education Development Plan has applied a number of approaches in the delivery of knowledge in schools. Quality aspirations can underscore the government's efforts to improve the quality of teaching and learning (TnL) in Malaysia in accordance with other developed countries. Responsibility for improving the quality of TnL requires a more practical approach to attract students' interest. A creative and innovative learning approach can ensure the delivery of knowledge becomes more effective, interesting, fun, and can stimulate students' interest (1). MacNaughton(2)also described a qulity learning process as capable of providing students with a positive, meaningful, and enjoyable experiences. This opinion is supported teaching is a system of activities aimed at students in order to bring behavioural change among them (3).

Regarding the development of teaching modules, especially for primary school students, researchers consider it an important requirement to improve teachers' pedagogical quality so that effective teaching mediums can be delivered. Previous studies indicated that students prefer informal education, especially those that offer students the freedom to engage in more challenging activities in a fun environment (4-6). The concept of play while learning is important for students to develop, take responsibility, and feel valued (7,8). This approach to learning through play has begun to be emphasised in the primary school curriculum (9).

Previous pedagogical teaching practises that focus on traditional teaching directly as well as less use of the play approach at the primary school level will make the module a guide to improving teaching pedagogy (10).

Play is the best platform for children to interact with the learning process (11). They learn and explore through play activities because they can enhance their imagination (12-14) Interactions during play enable them to learn social skills such as tolerance, sharing, and teamwork. Next, through games, they can learn how to solve various problems (cognitive, motor, and social) that contribute to their intellectual development (15). The development of knowledge in the early stages of a child's development needs to be supported by an environment that responds to their needs as children. Child psychologists strongly emphasise play activities in children's learning that play provides many benefits to children's development and learning (16-18). Vygotsky's theory (17), which looked at the social environment'sinfluence on children's development, said that children build knowledge through social interaction while sharing games with friends and are supported by adults.

The main challenge of this study is the usability of the module to apply the teaching pedagogical practice using the TGfU concept in traditional games (19). On average, most teachers are less experienced and less knowledgeable in conducting traditional games (20). In this regard, the writing of teaching materials at the primary school level, developed according to the needs and development of students, can help teachers implement the teaching and learning process. Good teaching materials are not only effective but also should attract and motivate students to remain involved with learning (9,21,22). However, researchers have found that there is a lack of focus on the production of teaching materials related to play approaches that can motivate children to continue learning. The study was conducted to develop and evaluate the usability of TnL module based on Malaysian traditional games with the concept of TGfU to improve the knowledge and skills of primary school students. Thus, the objective of this study is to develop TGfU-based for teaching and learning module in traditional games, to evaluate the usability of the TGfU module and to analyse the level of expert agreement on the usability of the module.

All learning activities need to considered existing knowledge of the children because mastery of knowledge is a process that involves the construction of new abilities based on existing students' abilities (23). This theory explains that children can master skills through observation, interaction, and active involvement with the environment.

Teaching Games for Understanding (TGfU) approach in teaching modules

The TGfU teaching approach (24) applied in TnL focuses on increasing the interest related to teaching and enhancing students' motivation to master skills and knowledge (25-27). Contrary to most traditional teaching methods, which emphasise mastery of skills and knowledge, causing students to show less interest in the subject (24,27). As a result, the concept of TnL usingTGfU was developed to assist teachers in attracting students' interest in the subjects taught. TGfU provides students with space to explore while producing more effective learning (28).

This approach is based on the diversity of traditional game types, given students' exposure during TnL. This method is a teaching model that can develop students' skills to solve problems and to make decisions about higher-order thinking situations (25). TGfU is an instructional model that focuses on developing students' abilities through games that have been modified to achieve goals (29). Webb, Pearson and Forrest (25) also explained that TGfU is a holistic pedagogical approach because it involves students who need to understand tactics and strategies, decision making, and problem-solving in a situation.

The concept of TGfU can help teachers do the planning and provide a good space in the process of holistic development of students related to academics and social (30). TGfU enhances the affective aspects related to fun, motivation, and maintaining engaged in comparison to the traditional approaches (31). Experiences of fun and excitement begin to emerge as traditional games become a high attraction and interest to children (32). This effect is not only felt physiologically but also affects the cognitive as a fun experience.

Methods

A comprehensive module has been developed to construct a module, including needs analysis, theory, literature review, and curriculum review. The module was reviewed by five field experts using expert assessment forms for improvement purposes. The expert's recommendations are formulated in the table in order to get an idea of which parts need to be improved. Suggestionobtained from the qualitative data was organised and scheduled to provide an overview of specific areas that need to be improved (33). The refined module was then presented to 11 panels of evaluators, consisting of eight field experts comprising lecturers from Institutions of Higher Learning (Universities) and lecturers from Teacher Education Institute with senior teachers from Physical Education, to evaluate and verify the accuracy of the module content in terms of

delivery, content, and language. Next, the evaluation of the module content validity was conducted using module content validity questionnaire, which requires evaluators to provide answers in the form of a five-point Likert scale, with (5) strongly agree, (4) agree, (3) uncertain, (2) disagree, and (5) strongly disagree.

The data were analysed using the content validity calculation method proposed by Ping & Osman (34), which was constructed based on the views of Rusell(35). This method states that the level of mastery or achievement of 70% is considered the module's content is good and shows a high level of achievement has been obtained. Next, in the implementation and evaluation phases, the module is tested for its usability in two real situations. Usability tests involve two groups of students. 63 students were selected for data collection. All students tested were involved with PE classes and were categorised into good, average, and weak groups in terms of existing physical and academic achievement.

Three PE subject teachers were selected to implement the teaching in the classroom. Physical Education classes are conducted at two different times. Assessment of students' work is based on the guidelines by theLearning Standard(*Standard Pembelajaran*) and Lesson Description Syllabus (*HuraianSukatan Pelajaran*) for the assessment of the development of primary school students in Malaysia (36).

Findings and Discussion

The findings of the first research question related to how this module was developed and evaluated its usefulness, the researcher reported based on the development and implementation phase. The development of TnL Modules based on TGfU in traditional games is produced based on the findings of needs analysis, theory, literature review, and curriculum review.

Information needs analysis is essential to produce a comprehensive module. The module development process is integrated and considers the relevance of theory, literature review, and curriculum review. The contents of the module are formatted into two parts, (a) introduction and description of traditional games, and (b) 10 proposed TGfU concept game activities. The final part of the module is prepared Daily Teaching Plan (lesson plan) on how teaching methods are implemented in the classroom by providing a structured teaching plan. The first part of the module contains small topics aimed at improving teachers' knowledge of the TGfU approach and skills in traditional games so that teachers fully know how to implement this approach in learning. The first part provides useful information so that teachers can perform teaching activities well. After following and understanding this section, the teacher can follow the teaching and learning activities. In the second stage, there are ten suggested traditional game activities developed in the form of teacher lesson plans.

The second part aims to improve the skills of teachers so that teachers can practice this approach in PE teaching classes. Each Lesson Plan (LP) contains detailed steps developed based on theory, curriculum standards, and literature review. These steps need to be followed by teachers to enable learning objectives to be achieved by students. Each teaching step integrates the four main skills in TGfU, namely attack, defence, netting, and looking. The activity steps emphasize the concept of TGfU in traditional games. The teacher's job is to guide students' learning so that they are more interested in learning. Table 1 shows the format and division of topics in the developed modules.

Table 1: Format and division of topics in the module

Part One	**Part Two**
• Introduction	• Activity 1: Ketinting
• Module Purpose	• Activity 2: LompatGetah (*Jumping Rubber*)
• Module Objectives	• Activity 3: Galah Panjang (*Long Pole*)
• Operating Procedures	• Activity 4: Konda Kondi
• Module Usage	• Activity 5: Baling Tin(*Cans Throwing*)
• Module concept	• Activity 6: Guli (*Marble*)
• Module Contents	• Activity 7: SepakBuluAyam (*Chicken Feather Soccer*)
• Play Approach	• Activity 8: TujuSelipar (*Aiming for the Slippers*)
• Activity Selection	• Activity 9: Gurah
• Types of Games	• Activity 10: Kick Ball

Eight different field expertsthen reviewedthe completed module. Expert suggestions are collected and scheduled to find similarities of ideas. Once corrected, the module is submitted back to evaluate the module content's accuracy to determine the validity of the content. Three PE senior teachers conducted assessments related to its usability, bringing the total number of evaluators to the module content's validity to eleven

evaluators. This method makes it easier for the researcher to identify which suggestions should be emphasised. The expert proposal equation's result is marked to see the similarity of opinion on a particular section. Expert recommendations are scheduled to be analysed as in Table 2.

Table 2: Analysis of Proposed Improvements by Experts

No	Suggested Assessment Experts and Teachers	Expert appraisers								Expert Teachers		
		P1	P2	P3	P4	P5	P6	P7	P8	G1	G2	G3
1.	Learning outcomes should be clearly stated (HSP, DSKP, and learning content).	√						√	√		√	√
2.	Clearly states the steps and types of games.			√					√	√		
3.	Activities need to meet the principles of students so that students master the skills taught.	√		√								
4.	The need to empower Traditional games that are increasingly swallowed by time.		√			√						
5.	The production of modules is booked as a guide for new teachers teaching aspects of skills in different forms.			√		√		√				
6.	Presentation in the form of media, pictures, and electronics in teaching and learning activities.				√				√			
7.	The language of delivery in writing this module/ book should be more relaxed and easier for users to understand.		√						√			
8.	The teaching steps provided can help teachers in TnL	√	√				√					
9.	The pictures and illustrations used need to get permission and preferably from their work.			√		√						
10.	The choice of the use of words, terms, and spelling Peru refers to field experts.				√	√						
11.	Include reinforcement activities, assessment, and post score form after TnL								√			√
12.	Target groups can be disseminated to be more beneficial	√								√		

Regarding the module's presentation, 100% of the evaluators agreed that the presentation of this module is suitable for primary school teachers. Only one evaluator expressed uncertainty about the sub-topics related to the design of the appropriate and interesting module'sfront, back, and bone graphic. In terms of size, presentation, content layout evaluator put high value (72% - 81%) While suggestions related to writing type and size Calibri 11 and line spacing 1.5 facilitate reading (*Mean* =81.8%) stated agree and only (9.0%) stated

no agree. Table 3 shows the analysis of the evaluator's agreement on the usability of the module related to delivery and presentation.

Table 3: Analysis related to Usability Levels and Module Presentation

No.	Module Presentation	11 Expert Assessors (%)				
		SA (5)	A (4)	NS (3)	DA (2)	SDA (1)
1.	The title corresponds to the purpose of the module.	7 (63.6)	4 (36.4)	-	-	-
2.	The graphic design of the front and rear is appropriate and attractive.	4 (36.4)	6 (54.5)	1 (9.0)	-	-
3.	The size of the module is according to the requirements.	8 (72.7)	3 (27.3)	-	-	-
4.	The text used in this module is presented.	6 (54.5)	5 (45.4)	-	-	-
5.	This module presentation is suitable for primary school teachers.	9 (81.8)	2 (18.1)	-	-	-
6.	The content arrangement of the module is easy for teachers to understand.	8 (72.7)	3 (27.3)	-	-	-
7.	The pictures in the module are related to the written text.	7 (63.6)	4 (36,4)	-	-	-
8.	This module presentation is user friendly.	5 (45,4)	6 (54.5)	-	-	-
9.	Caliber 11 font and line spacing 1.5 make reading easy.	1 (9.0)	9 (81.8)	-	1 (9.0)	-
10.	The binding quality of the module is quality.	4 (36.4)	4 (36.4)	3 (27.2)	-	-
	TOTAL (*Mean*)	53.6%	41.8%	3.7%	0.9%	

SA – Strong Agree, A – Agree, UN – Uncertain, DS – Disagree, and SDA – Strongly disagree

Regarding aspects of the content,the module shows that almost all evaluators respond strongly agree and agree, for example,suggested activities make it easier for teachers to do lesson planning (*Mean* =91.0%) and agree. While one evaluator stated disagree with the statement. The module's learning outcomes are clear, and the induction set creates the motivation of children to continue learning (9.0%). Overall, the evaluators think that the module content is appropriate to the development of primary school students. Table 4 shows the analysis of module content on the usability of the module.

Table 4: Module Content Usage Level Analysis

No.	Module Content	11 Expert Assessors (%)				
		SA (5)	A (4)	UC (3)	DA (2)	SDA (1)
11.	The learning outcomes of the module are clear.	6 (54.5)	4 6.4)	-	1 (9.0)	-
12.	Suggested activities make it easier for teachers to do lesson planning.	10 (91.0)	1 (9.0)	-	-	-
13.	The arrangement of content and suggested activities are organized in a very helpful way for teachers.	9 (81.8)	2 (18.2)	-	-	-
14.	Induction sets create children's motivation to continue learning.	8 (72.8)	2 (18.2)	-	1 (9.0)	-
15.	Suggested activities can improve teachers' knowledge and skills on how to do teaching	7 (63.6)	4 (36.4)	-	-	-
16.	Suggested activities can improve children's mastery of skills.	6 (54.5)	5 (45.4)	-	-	-
17.	Suggested activities are appropriate for the	9	1	1	-	-

	developmental stage of primary school children.	(81.8)	(9.0)	(9.0)		
18.	The steps of the activity are presented accurately and structured.	7 (63.6)	4 (36.4)	-	-	-
19.	The suggested game material is interesting.	6 (54.5)	5 (45.5)	-	-	-
20.	The implementation period of the proposed activity is following the activities carried out.	6 (54.5)	5 (45.5)	-	-	-
21.	Details of the topic in the form of paragraph text, illustrations, graphics, tables, flow charts, and diagrams help comprehension.	4 (36.4)	7 (63.6)	-	-	-
22.	Checklists can help teachers evaluate students based on what has been taught.	7 (63.6)	4 (36.4)	-	-	-
	TOTAL (*Mean*)	64.4%	33.3%	0.8%	1.5%	

SA – Strong Agree, A – Agree, UN – Uncertain, DS – Disagree, and SDA – Strongly disagree

Regarding learning materials and TnLactivities, only one evaluator stated that he was not sure about the activities and training's feedback to help teachers master the course requirements (0.8%). A total of 9 evaluators strongly agrees and agree (98.2%). The example that learning materials are appropriate to help learning and activities and training are appropriate to their respective values (81.8%). While related to the quality of diagrams, illustrations, flow charts, tables, and formulas are clear and clearly stated agree (81.8%). Table 5 shows the analysis of the assessor's level of assessment on the learning materials and TnLactivities of teachers.

Table 5: Usability Analysis of Learning Materials and TnL Activities

		11 expert assessors (%)				
No.	**Learning Materials / TnL Activities**	**SA (5)**	**A (4)**	**NS (3)**	**DA (2)**	**SDA (1)**
23.	Learning materials are appropriate and helpful.	9 (81.8)	2 (18.2)	-	-	-
24.	The quality of diagrams, illustrations, flow charts, tables, and formulas is bright and clear.	2 (18.2)	9 (81.8)	-	-	-
25.	Activities and exercises are appropriate.	9 (81.8)	2 (18.2)	-	-	-
26.	Activities and training provided help with teaching mastery and course requirements.	6 (54.5)	5 (45.5)	-	-	-
27.	Appropriate guidance is given in completing activities and exercises.	5 (45.5)	6 (54.5)	-	-	-
28.	Feedback related to the results of activities and training helps teachers master the needs of the course.	6 (54.5)	4 (36.5)	(9.0)	-	-
	TOTAL (*Mean*)	56.4%	42.8%	0.8%)		

SA – Strong Agree, A – Agree, UN – Uncertain, DS – Disagree, and SDA – Strongly disagree

The final assessment aspect is related to language presentation. The findings show that the writing and language aspects used are easy to understand and very suitable for primary schools teachers. All evaluators gave a positive response by marking the column strongly agree and agree for the evaluation related to this aspect (63.6% to 81.8%). Simultaneously, all evaluators (*Mean* =100%) agree that the writing style and presentation of the module are appropriate, accurate, and easy to understand according to the teacher's understanding of teaching. Table 6 shows the analysis of usability levels related to Language Presentation in the module.

Table 6: Language Performance Usability Level Analysis

No.	Language Presentation	11 expert assessors (%)				
		SA (5)	A (4)	NS (3)	DA (2)	SDA (1
29.	The writing style of this module is easy to read.	9 (81.8)	2 (18.2)	-	-	-
30.	The words used in the module are spelled correctly.	8 (72.7)	3 (27.3)	-	-	-
31.	The language used in the module is easy to understand.	7 (63.6)	4 (36.4)	-	-	-
32.	The writing of this module is suitable for the use of teachers in helping to master knowledge and skills.	7 (63.6)	4 (36.4)	-	-	-
	TOTAL (*Mean*)	70.4%	29.6%			

SA – Strong Agree, A – Agree, UN – Uncertain, DS – Disagree, and SDA – Strongly disagree

The results of the calculation of the level of achievement of the validity of the module content by eight field experts (P1, P2, P3, P4, P5, P6, P7, and P8) and 3 PE teachers (P9, P10, and P11) showed a very high percentage value (*Mean* =93.88 %). These findings indicate that the module has good content validity and meets the target of evaluators who are field experts and target users. Table 7 shows the validity values of the module content obtained from 11 panels of evaluators.

Table 7: Value of validity calculation of module content

Assessor	Percentage of Approval (%)			Total / Level of Content Validity
	strongly agree	ee	uncertain	
Asssessor1	81.3	3.7		100%
Assessor 2	65.6	4.4		100%
Assessor 3	84.4	5.6		100%
Assessor 4	56.3	7.5		93.8%
Assessor 5	-	1.3	18.7	81.3%
Assessor 6	46.9	3.1		100%
Assessor 7	62.5	7.5		100%
Assessor 8	56.3	7.5		93.8%
Assessor 9	62.5	4.4		96.8%
Assessor 10	62.5	7.5		100%
Assessor 11	74.6	5.4		100%
Total (*Mean*)	59.96	6.92		93.88%

The usability of TGfU concept teaching modules in traditional games

After being evaluated by experts and teachers, the module was implemented. It's usability was evaluated in two classrooms in different schools to see the effect of module implementation on learning. To give a clearer picture of student involvement in learning activities, the six students'data in the good, medium, and weak categories were collected and summarized in the table. Table 5 shows how students (M) for each category of master learning through involvement in play activities.

Table 8: Summary of student involvement in TGfU concept learning activities

No.	Traditional Games	Students									
		Good					Average			Weak	
		M1	M2	M3	M4	M5	M6	M7	M8	M9	M10
1.	Ketinting	1	1	1	1	1	-	1	-	-	-
2.	LompatGetah	2	2	2	2	2	2	-	-	2	-
3.	Galah Panjang	4	4	2	2	2	4	2	4	-	2
4.	Konda Kondi	3	2	2	3	3	3	2	2	3	2
5.	Baling Tin	1	1	1	2	2	1	1	2	1	2
6.	Guli	1	1	1	1	1	1	-	1	-	-
7.	SepakBuluAyam	3	3	3	3	3	1	1	1	-	1
8.	TujuSelipar	1	1	1	2	2	2	1	1	2	1
9.	Gurah	1	1	1	1	1	3	1	-	-	1
10	*Kick Ball*	2	2	2	1	2	2	1	2	1	1

1 – *Target*, 2 – *Striking/ Fielding*, 3 – *Net/Wall*, and 4 – *invasion*

Besides, summaries are also made based on anecdotal record data to see how students master the skills in games with the concept of TGfU and show interest in TnLthrough activities developed in the module. Table 5 shows a summary of students' mastery of skills through activities in the module. The module development process involves evaluating content by field experts and users more implicitly impacting the effectiveness of the module. All the information gathered has contributed to the production of more practical knowledge-based modules. In general, this study found that; Information needs analysis is important to produce modules that teachers can use.The module development process needs to take the combination of several theories to produce a comprehensive knowledge-based module. The literature review provides important information to produce child-centred learning activities.Curriculum review is important to produce teaching and learning activities that can meet curriculum goals.The review of experts in various fields has provided rich information in terms of theory and practice.Module evaluation by both experts and users is important to produce modules that fit the field studied and used by users.

Usability tests have also provided space for researchers to find out how children master listening, speaking, reading, and writing skills through play experience. This study found that children show interest in and desire for learning activities through play materials. The constructivist theory concept can be seen when they actively build knowledge through interaction with materials and friends. The role of teammates in learning is found to be very important. Students' potential can be developed in group activities because students who are weak and good at being in the same group will work with their group members(37). In the context of this study, a summary based on anecdotal record data found that all six students mastered listening, speaking,

Conclusion of Contributions and Implications of the Study

Based on a combination of theory and empirical data, the findings of this study are expected to impact teachers' existing teaching and pedagogical practices(14,20). The development of knowledge in the new pedagogical form produced in this module is expected to change the existing practice of teachers to meet the educational challenges of the current and future generations of children. This study's results can be used as a reference for parties involved with curriculum planning, development, and implementation to improve the existing curriculum, especially for aspects of students' intelligence and pedagogical approach. The TnL module in this study can be used as a guide for teachers at the primary school level in providing a more efficient and lesson plan structured.

TnL materials produced at the primary school level and children's desire to stay focused while learning has been carefully taken into account can significantly impact educational excellence at the school level(38). Ultimately, the development of modules and teaching guides for teachers at the primary school level is relevant to challenge the next teaching staff in motivating students to learn. TnL activities developed through traditional student-centred games can give children a more meaningful learning experience(39,41). Studies also prove that the construction of the concept of TGfU in TnL is seen as something that needs to be transferred in an integrated manner to maintain interest, fun, and interactive psychological impact in student learning(40,41). Through this study, children were found to be able to master 3M skills (listening, reading, and writing) through

playing in TnL. Children are seen using play experiences throughout learning activities by understanding abstract concepts such as creative movement, coordination, speed, and agility. They master the skills naturally through the exploration of their activities and initiatives. Interaction with friends while playing improves not only literacy skills, but also social skills. Through planned activities, children are seen to build emergent skills and understanding through a little teacher guidance.

Funding: The study was partially supported by the Research University's Individual Grant from the UniversitiSains Malaysia (1001/PPSK/8012370).

Conflicts of Interest: The authors declare no conflict of interest.

References

1. Arbaa R, Jamil H, Abd Razak N. The teacher-student relationship and its relationship to student learning commitment: Does quality teachers produce learning differences between students' gender. *Malays J Educ*. 2010;35(2):61-69.
2. MacNaughton, G. Doing Foucault in early childhood studies: Applying poststructural ideas. Psychology Press. 2005; Routledge, New York.
3. Fitzpatrick M, Knowlton E. Bringing evidence-based self-directed intervention practices to the trenches for students with emotional and behavioral disorders. PrevSch Fail. 2009;1;53(4):253-66. https://doi.org/10.3200/PSFL.53.4.253-266
4. Guardino CA, Fullerton E. Changing behaviors by changing the classroom environment. Teach Except Child. 2010;42(6):8-13.https://doi.org/10.1177%2F004005991004200601
5. Duflo E, Hanna R. Monitoring works: getting teachers to come to school. NBER working paper No. 11880. National Bureau of Economic Res. 2005. https://doi.10.3386/w11880
6. De Souza Fleith D. Teacher, and student perceptions of creativity in the classroom environment. Roeper Rev. 2000;22(3):148-153.https://doi.org/10.1080/02783190009554022
7. Sharan Y. Cooperative learning for academic and social gains: Valued pedagogy, problematic practice. *EurJ Educ*. 2010;45(2):300-313.https://doi.org/10.1111/j.1465-3435.2010.01430.x
8. Almon J, Miller E. The crisis in early education: A research-based case for more play and less pressure.Alliance for Childhood.2012.
9. AlcaláDH,Garijo AH. Teaching games for understanding: A comprehensive approach to promote student's motivation in physical education. *J Hum Kinet*. 2017;59:17-27.https://doi.org/10.1515/Hukin-2017-0144
10. Alcalá DH, Fonseca AS, Garijo AH, Pueyo ÁP. Relationship between the level of physical activity and the motivation of physical education teachers. Sportis: Revista Técnico-Científica del Deporte Escolar, EducaciónFísicalPsicomotricidad. 2018; 4(2):331-348.https://doi.org/10.17979/sportis.2018.4.2.3291
11. Vickerius M, Sandberg A. The significance of play and the environment around play. Early Child Dev Care. 2006;176:207–217.https://doi.org/10.1080/0300443042000319430
12. Archer T, Fredriksson A, Schötz E, Kostrzewa RM. Influence of physical exercise on neuroimmunology functioning and health: Aging and stress. Neurotox Res. 2011;20(1):69-83. https://doi.org/10.1007/s12640-0109224.
13. Gunn B, Vadasy P,Smolkowski K. Instruction to help young children develop language and literacy skills: The roles of program design and instructional guidance. NHSA Dialog. 2011;14(3):157-173. https://doi.org/10.1080/15240754.2011.586611
14. Blanchette I, Richards A. The influence of affect on higher-level cognition: A review of research on interpretation, judgment, decision making, and reasoning. CognEmot. 2010;24(4):561595.https://doi.org/10.1080/02699930903132496
15. Konter E, Kueh YC, Kuan G. Relationship between passion and courage among the experienced male soccer players. *Malays J Med Sci*. 2020;27(4):85-96. https://doi.org/10.21315/mjms2020.27.4.8
16. Piaget J. Play, dreams, and imitation in childhood. London, England.1951; Routledge and Kegan Paul; London.
17. Vygotsky LS. Mind in society: The development of the higher psychological process. 1987; Mashasscusett: Havard College.
18. Bruner JS. Towards a theory of instruction. Mashasscusett: Harvard College.

19. Haney M, Bissonnette V. Teachers' perceptions about the use of play to facilitate development and teach prosocial skills. Scientific Res. 2011;1 (2):41-46.https://doi.org/10.4236/ce.2011.210
20. Miller E, Almon, J. Crisis in kindergarten: Summary and recommendations of why children need to play in school. A report from Alliance.Early Childhood Education; Elementary Education, Kindergarten; 2009.http://www.allianceforchildhood.net/
21. Stronge JH.Qualities of effective teachers. ASCD.3td edition.2018; Virginia, USA.
22. Graf S, Kinshuk, Liu TC. Supporting teachers in identifying students' learning styles in learning management systems: An automatic student modeling approach. *J Educ Techno Soc*. 2009;12(4):3-14.
23. Branch RM. Instructional design: The ADDIE approach. USA: Springer Science and Business. Brodin, J. &Reinblad, K. Reflections on the revised National Curriculum for preschool in Sweden: Interviews with the heads. *J Early Child Dev Care*. 2009; 184 (2): 306–321.https://doi.org/10.1007/978-0-387-09506-6
24. Bunker D, Thorpe R. A model for the teaching of the games in the secondary school. Bull Phys Educ. 1982;10:9-16.
25. Webb P, Pearson P, Forrest G. Teaching games for understanding (TGfU) in primary and secondary physical education. Paper present at ICHPER-SD International conference for Health. Physical Education Rec Reaction Sport and Dance 1st Ocean Congress Wellington. New Zealand. 2006.
26. Holt NL, Strean WB, Bengoechea EG. Expanding the teaching games for understanding model: New avenues for future research and practice. *J Teaching PhysEduc*. 2002;21(2):162-176.https://doi.org/10.1123/jtpe.21.2.162
27. Griffin LL, Mitchell SA, Oslin JL. Teaching sports concepts and skills: A tactical games approach. 1997; Human Kinetics Publishers (UK) Ltd.
28. Mandigo J, Lodewyk K, Tredway J. Examining the impact of teaching games for understanding approach on the development of physical literacy using the Passport for life assessment tool. *J Teaching Phys Educ*. 2019;38(2):136-145.https://doi.org/10.1123/jtpe.2018-0028
29. Harvey S, Gil-Arias A, Claver F. Effects of teaching games for understanding on tactical knowledge development in middle school physical education. *J PhysEduc Sport*. 2020;20(3):1369-1379.https://doi.org/10.7752/jpes.2020.03189
30. Mckeen K, Webb PI, Pearson PJ. Promoting physical activity through teaching games for understanding in undergraduate teacher education. 2007; 251-258.
31. Kirk D, MacPhail A. Teaching games for understanding and situated learning: Rethinking the Bunker-Thorpe model. *J Teaching PhysEduc*. 2002;21(2):177-92. https://doi.org/10.1123/the.21.2.177.
32. Zakiah MA, Azlina MK, Yeo KJ. Persepsidanamalan guru novisterhadappenggunaanpendekatanbelajarsambilbermain. Presented atthe International Conference on Early Childhood and Special Education (ICECSE). 2011; 10-12 Jun.http://spaj.ukm.my/jpbm/index.php/jpbm/issue/view/22
33. Kueh YC, Kuan G, Morris T. The physical activity and leisure motivation scale: A confirmatory study of the Malay language version. *Int J Sport Exerc Psychol*. 2019;17:3:250-265.https://doi.org/10.1080/1612197X.2017.1321029
34. Ping ILL, Osman K. Laboratory-modified argument-driven inquiry (lab-made) module: content validity process. *Jurnal Pendidikan IPA Indonesia*. 2019;8(1):129-140.https://journal.unnes.ac.id/nju/index.php/jpii/issue/view/1047
35. Rusell JD. Modular instruction: A guide to the design, selection, utilization readiness for change.1974; New York,
36. Bahagian Pembangunan Kurikulum, Kurikulum Standard SekolahRendah (KSSR). Kementerian Pelajaran Malaysia. Putrajaya: Kementerian Pendidikan Malaysia; 2011.
37. NorsuhailyAB, Normadiah D, Nadhirah N, Abdullah AH. Developing integrated pedagogical approaches in play pedagogy: Malaysian experience. 2015.https://doi.org/10.5539/ass.v11n4p234
38. Lansford JE, Dodge KA, Pettit GS, Bates JE, Crozier J, Kaplow J. A 12-year prospective study of the long-term effects of early child physical maltreatment on psychological, behavioral, and academic

problems in adolescence. Arch PediatrAdolesc Med. 2003;156(8):824-830.https://doi.org/10.1001/archpedi.156.8.824

39. O'Donovan G, Blazevich AJ, Boreham C, Cooper AR, Crank H, Ekelund U, Hamer M. The ABC of physical activity for health: A consensus statement from the British association of sport and exercise sciences. *J Sports Sci*. 2010;28(6):573-591.https://doi.org/10.1080/02640411003671212
40. Mayer JD, Caruso DR, Salovey P. Emotional intelligence meets traditional standards for an intelligence. Intell.1999;27(4):267-298.https://doi.org/10.1016/S0160-2896(99)00016-1
41. Zelazo PD, Lyons KE. The potential benefits of mindfulness training in early childhood: A developmental social cognitive neuroscience perspective. Child Dev Perspect. 2012;6(2):154-160.https://doi.org/10.1111/j.1750-8606.2012.00241.x