International Journal of Innovative Social & Science Education Research 12(4):17-21, Oct-Dec, 2024

© SEAHI PUBLICATIONS, 2024 www.seahipublications.org ISSN: 2360-8978

DOI: 10.5281/zenodo.13955711

Fie Draft Board: A Game Designed With The Use Of Division Operator For The Upper Basic Education Learner

Foluke Eze[1] & Aprebo Fiepre Clever Yenogha[2]

Department of Science Education (Mathematics Unit)
Faculty of Education
Federal University Otuoke, Bayelsa State, Nigeria

ABSTRACT
The game is specifically designed for Upper Primaries. This is purposefully done to replace there wasteful playing period with playing-in-learn. The operational symbol used here is the multiplication sign. This sign is chosen for the Upper Primaries with the assumption that the learner must have leant from the volume 2 of Fie Draft Board that entails the use of multiplication sign. The achievable goals in this game are: the child's time is not wasted in playing; the child will improve on his multiplication capability; the game will help develop the learner's concentration ability; it will help consolidate the identification of numerals and will as well learn the trait of tolerance among his peers. The early child's proper foundation is the bedrock of his higher educational footing. The study therefore recommend this game to all upper primaries pupils to achieve the educational goals highlighted above.
Keywords: Draft Board, Game, Computation Column, Numbers' Pool, Answer Column, Division

INTRODUCTION

An investigation made by Saghir, Abid, Ayesha, Khadija and Misbah,(2016) on play and cognitive Development concerning students, revealed that, there was significance difference between memorization, exploration, understanding and problem solving abilities on the basis of the learner play-duration. In other words those students who give more time to play in a day, their abilities of cognitive development are enhanced rapidly due to play-duration and their achievement level is also high among students operational stage. Through play, children develop the basic skills needed to make choices in life (Jones,2016). Piaget,(1985) equally opined that play is literally cognitive development through which children learn information and acquire skills that are crucial to their development,. The use of educational games to Selvi[1] and Cosan[2] (2018),also improves collaboration, active participation, attraction of attention, effective communication, self expression, knowledge reinforcement, correction of their own mistakes, engagement in the material and self-confidence among students. Using games as teaching strategy to Hurix,(2023) findings, it boosts motivation, cultivates teamwork and collaboration, problem-solving and critical thinking, personalized learning experience, active learning, increased engagement and get students excited about learning,. Shatz & Loschiavo, in Riordan (2023) stated that playing games in the classroom has lightened students' mood and facilitated greater creativity and as well boosted their Morales. Game-based learning has equally improved computer-Based knowledge on students,(such as the control of the mouse, the keyboard, browsing, creating usernames, setting of password, etc); it also increases the capacity to memorize things, longer time retention of information, helps to develop their logic, accuracy and ability to think on their feet and out of the box later in life, (Tamosevicius, 2022). When academic game is designed correctly, Nina and Rana, (2021) said, it promotes an increased engagement and participation among

students. Game-based learning to Alsawaier,(2017) induces desirable behavioural change among learners. While Shonnon,(2022) opined that learning games are an effective way for students to review current and previously taught content. And Zaretta in Shannon (2022), attested that "the very act of playing the game encourages the brain to strengthen the new neural pathways by making the learner continuously search his memory for information".

The above literatures are evidence that games have played greater roles in the teaching and learning pedagogical processes. Therefore creating or designing more games in the field of mathematics education is a dream that has been made manifest in this article 'Fie draft board: a game designed with the use of division operator for the upper basic education learner'.

Table 1: Computing numbers from 0 to 9 with division operator

COMPUTATION COLUMN					ANSWER COLUMN				
N	÷	N	=	ANS	0	0.11	0.13	0.14	0.17
N	÷	N	=	ANS	0.2	0.22	0.25	0.29	0.33
N	÷	N	=	ANS	0.38	0.4	0.43	0.44	0.5
N	÷	N	=	ANS	0.56	0.57	0.6	0.63	0.67
N	÷	N	=	ANS	0.71	0.75	0.78	0.8	0.83
	LELVEL 1: 0 – 9				0.86	0.88	0.89	1	1.13
	NUMBERS' POOL				1.14	1.17	12	1.25	1.29
0	1	2	3	4	1.33	1.4	1.5	1.6	1.67
5	6	7	8	9	1.75	1.8	2	2.33	2.5
Each number will be duplicated three times, giving a total number of thirty pieces of numbers.					2.67	3	3.5	4	4.5
					5	6	7	8	9

Table 2: Computing numbers from 10 to 19 with division operator

COMPUTATION COLUMN					ANSWER COLUMN				
N	÷	N	=	ANS	0.53	0.56	0.58	0.59	0.61
N	÷	N	=	ANS	0.63	0.65	0.67	0.68	0.69
N	÷	N	=	ANS	0.71	0.72	0.73	0.74	0.75
N	÷	N	=	ANS	0.76	0.78	0.79	0.80	0.81
N	÷	N	=	ANS	0.82	0.83	0.84	0.85	0.86
	LELVEL 2: 10 – 19				0.87	0.88	0.89	0.92	0.93
	NUMBERS' POOL				0.94	1.06	1.07	1.08	1.09
					1.10	1.12	1.13	1.14	1.15
10	11	12	13	14	1.19	1.20	1.23	1.25	1.27
15	16	17	18	19	1.29	1.30	1.31	1.33	1.36
					1.38	1.40	1.42	1.45	1.46
Each number will be duplicated three times, giving a total number of thirty pieces of numbers.					1.50	1.54	1.58	1. 60	1.63
					1.64	1.70	1.72	1.80	1.90

Table 3: Computing numbers from 20 to 29 with division operator

COMPUTATION COLUMN					ANSWER COLUMN				
N	÷	N	=	ANS	0.69	0.71	0.72	0.74	0.75
N	÷	N	=	ANS	0.76	0.77	0.78	0.79	0.80
N	÷	N	=	ANS	0.81	0.82	0.83	0.84	0.85
N	÷	N	=	ANS	0.86	0.87	0.88	0.89	0.91
N	÷	N	=	ANS	0.92	0.93	0.95	0.96	0.97
	LELVEL 3: 20 – 29				1.00	1.04	1.05	1.07	1.08
	NUMBERS' POOL				1.09	1.10	1.12	1.13	1.14
20	21	22	23	24	1.15	1.16	1.17	1.18	1.19
25	26	27	28	29	1.20	1.21	1.22	1.23	1.24

Each number will be duplicated three times, giving a total number of thirty pieces of numbers.

1.25 1.26 .27 1.29 1.30
1.32 1.33 1.35 1.38 1.40
1.45

Table 4: Computing numbers from 30 to 39 with division operator

COMPUTATION COLUMN					ANSWER COLUMN				
N	÷	N	=	ANS	0.77	0.79	0.81	0.82	0.83
N	÷	N	=	ANS	0.84	0.85	0.86	0.87	0.88
N	÷	N	=	ANS	0.89	0.90	0.91	0.92	0.94
N	÷	N	=	ANS	0.95	0.97	1.00	1.03	1.05
N	÷	N	=	ANS	1.06	1.07	1.08	1.09	1.10
	LELVEL 4: 30 – 39				1.11	1.12	1.13	1.15	1.16
	NUMBERS' POOL				1.17	1.18	1.19	1.20	1.22
30	31	32	33	34	1.23	1.26	1.27	1.30	
35	36	37	38	39					

Each number will be duplicated three times, giving a total number of thirty pieces of numbers.

Answers are in two decimal places:i.e numbers 5 and above are taken as 1.

Table 5: Computing numbers from 40 to 49 with division operator

COMPUTATION COLUMN					ANSWER COLUMN				
N	÷	N	=	ANS	0.82	0.83	0.84	0.85	0.86
N	÷	N	=	ANS	0.87	0.88	0.89	0.90	0.91
N	÷	N	=	ANS	0.92	0.93	0.94	0.95	0.96
N	÷	N	=	ANS	0.98	1.00	1.02	1.03	1.04
N	÷	N	=	ANS	1.05	1.07	1.08	1.09	1.10
	LELVEL 4: 40 – 49				1.11	1.12	1.13	1.14	1.15
	NUMBERS' POOL				1.17	1.18	1.20	1.23	
40	41	42	43	44					
45	46	47	48	49					

Each number will be duplicated three times, giving a total number of thirty pieces of numbers.

Answers are in two decimal places:i.e numbers 5 and above are taken as 1.

Table 6: Computing numbers from 50 to 59 with division operator

COMPUTATION COLUMN					ANSWER COLUMN				
N	÷	N	=	ANS	0.85	0.86	0.88	0.89	0.90
N	÷	N	=	ANS	0.91	0.92	0.93	0.94	0.95
N	÷	N	=	ANS	0.96	0.97	0.98	1.00	1.02
N	÷	N	=	ANS	1.04	1.05	1.06	1.07	1.08
N	÷	N	=	ANS	1.09	1.10	1.11	1.12	1.13
	LELVEL 6: 50 – 59 NUMBERS' POOL				`1.14	1.16	1.18		
50	51	52	53	54					
55	56	57	58	59					

Each number will be duplicated three times, giving a total number of thirty pieces of numbers.

Answers are in two decimal places:i.e numbers 5 and above are taken as 1

Mode of Playing

The game is meant for two players at a time with a recorder who doubles as a time keeper. The first player will pick two numbers from the number pool and place them on the first two N cells. The second player will then pick the answer from the answer pool and place it on the ANS cell. The first player goes on to do the placement of numbers on the rest of the N cells and the second player will also pick the answers from the answer pool and place on the ANS cells accordingly. At the end of the first round the recorder will announce the result and the game continues until the six series are completed.

Scoring Pattern

Each correct answer is awarded with 1mark; so the first round to be played will be scored over 5marks, the second will be over 10marks, the third will be over 15 marks, the forth will over 20marks, the fifth will be over 25 marks and the six will be over 30marks.

CONCLUSION

In accordance with Piaget(1962) and Vygotsky(1978) in Hamid (2018),Learning through playing theories, the process (playing) promotes a number of skills such as cognitive development, social skill, emotional maturity, self-confidence, problem solving, kindness and sharing and organization. Equally Shonnon,(2022) opined that learning games are an effective way for students to review current and previously taught content. Capping on these educating quotes, Zaretta in Shannon (2022), also contributed that "the very act of playing the game encourages the brain to strengthen the new neural pathways by making the learner continuously search his memory for information". These and more are the traits needed in the life of a growing child, and the best and only way to inculcate these traits in the child is for him (the learner) to get involve in playing these games. The paper on this strength encourages the learner to engage himself/herself with this game series to develop the use of the division operator.

REFERENCES

Alsawaier, Raed (2017). The Effect of Gasification on motivation and Engagement; Emerald Publishing. International Journal of Information and Learning Technology; 35(7),00-00, DOI-10…

Hamid Kay (2018). The Psychological Theories Behind Learning Through Play. Pentagon Play. https://www.pentagonplay.co.uk.

Hurix, (2023). Integrating Games in Education: Using Games as a Teaching Strategy. Hurixdigital; https://www.hurix.com > integrating...

Jones, E. (2003). Playing to get SMART, Young children, EJ837004 58(3),32-35.

Nina Dorfner and Rana Zakerzadeh (2021).Academic game as a form of increasing students engagement in Remote Teaching. Springer Nature-PMC COVIC-19 Collection, Biomed Eng Edu: 1(2), 335-343.

Riordan O' Fiona,(2023). Games as an Engaging Teaching and Learning Technique: Learning or Playing? Deborah Kirkland; Griffith College Dublin. Deborah.kirkland@gcld.ie

Saghir, Ahmad, Abid Hussain Ch, Ayesha Batool, Khadija Sittar and Misbah MaliK, (2016). Play and Cognitive Development: Formal Operational Perspective of Piaget's Theory. Journal of education and practice, ISSN 2222-1735(paper), ISSN 2222-288X.(online),7(28).

Shannon Jones (2022). 17 Favorite Classroom-learning games .**Education Week**. Math Games. Shannon.I.jones@mcpsmd.net or @MsJonesLuvsMath.

Selvi Meryem[1] and Ayse Ozturk Cosan[2] (2018). The Effect of using Educational Games Teaching Kingdoms of Living Things. Universal Journal of Educational Research 6(9): 2019-2028,2018, DOI:10,13189/ujer.2018.060921.National Education Directorate, Ankara, Turkey.

Tamosevicius Romas,(2022). Why is Game-Based Learning Important? eLearnng Industry.