

The Innovative Methods of Teaching Ashtang Yoga for School Children Snake and Ladders Game

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Abstract

Yoga is being widely practiced as an activity in schools nowadays; however children may not be aware of eight folds of 'Patanjali Ashtang Yoga'. It is need of the hour to teach 'Patanjali's Ashtang Yoga' essence to the children in a simplified and interesting manner. In this study, the nectar of Patanjali aphorisms has been designed and developed as Snakes and Ladders Boards Game and its efficacy was tested among sixty students of standard 4 to 11 at a shelter home in Kurukshetra, Haryana. The study found that the Snake and Ladder Board Game is effective in providing value education on the principles of eight folds of Ashtang Yoga at a young age. It also found that children may understand how good deeds lead them to rise; bad deeds worsen to falls and emphasise the underlying impact of positive and negative forces.

INTRODUCTION

Board Games can be offered as a teaching tool to teach Ashtang Yoga for children. It is the need of the hour to teach Patanjali Ashtang Yoga essence to the children in an interesting and playway manner. Of course, a rigorous effort will have to

be made to delineate a pedagogy that is precise, compact and meaningful. In the proposed research the goal is to transform the nectar of Patanjali Ashtang Yoga by using Snakes and Ladder board game. Patanjali Ashtang Yoga philosophy essence may be taught through game on

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S and L board game. Yoga is a discipline having both theory and practical aspect. After learning theory, practice of yoga may make the children perfect. This statement is also based on our interactions with many yoga instructors. It is a presupposition that practice of yoga along with theory might be a part of school curriculum. In our study, we administered theory teaching sessions through snakes and ladder game along with practical sessions which included asana, pranayama, etc.

REVIEW OF RELATED STUDIES

Games liked by children can immensely help them in learning swiftly, especially when the moral aspects of such games are well highlighted and demonstrated. This study overviews that the development of “Snakes and Ladders (S and L)” game emphasises the moral aspect of the game approach in order to promote moral education amongst children (Ibam et al. 2018). However, some researchers (Gardner-Anopol, 2007) have developed Yoga board games and derived various methods of teaching Yoga. In the referred research, students were asked to perform only yoga postures while following the breathing techniques. The main goal was to help them relieve stress and help improve their mental well-being. This research has proved that children love innovative board games and learn from them easily. A Hindu board game called *Leela* teaches an important lesson; good work makes you rise, whereas

bad deeds are responsible for your downfall (Althoen et al, 1993). Good deeds like— hard work lead to success whereas bad deeds like disobedience could worsen the player down to bad luck. Good habits may be nurtured amongst students at a very young age, and prepare them to become better and responsible citizen. The researcher found the S and L game to be effective in teaching the reading of narrative texts (Saputra, 2016). In her thesis (Saraswati, 2016), she explores very perfectly; that board games are appropriate tools for teaching English speaking to children aged 9 to 11. The S and L game was anciently known as *Moksha Patam* (the opening door of liberation) which originated in India. It was used as a tool to teach the effects of good over bad virtues. Generosity, faith and humility are shown as ladders, whereas lust, anger and theft are characterised as Snakes. Ladders were few whereas the numbers of snakes were more. It concludes that S and L game can improve students’ vocabulary in the first year students of senior high school, by using quantitative research design. In this study, it was evaluated with concrete evidence that S and L board game could enhance student’s vocabulary in senior high school. The experimental group was taught by using S and L board game, while the control group was not. The analysis of pre and post tests by using t-test reveal the level of significance of the study (Fitriana and Maro, 2018). Children can develop their knowledge and social interaction with their

friends freely without any pressure and also feel happy while learning English by playing an interesting media. This study provides enough evidence that instructional games act as a great tool in shaping the learning habits (Yemima et al. 2019). The game of S and L is included in one of the props used for learning; it is used to enhance the capability in children's learning. Based on the results of the research carried out, the author concludes that the S and L media may improve the ability of simple summation in children with special learning disabilities like dyscalculia (Julaiha and Zulmiyetri, 2019). Playing board games is a dynamic process, which supports children's learning process. This study concluded that by watching animated videos and playing the S and L game, one can increase knowledge and can create interest and information will be more easily embedded into children's memory (Wulanyani et al. 2020). Giaccaglia (2018) describes *Moksha Patam* as a game associated with traditional Hindu philosophy that was later marketed in England as 'Ladders and Snakes'. Originally, the game focused on two concepts— *karma* (good deeds) and *kama* (bad deeds), i.e. destiny and desire. The "ladders" were represented as generosity, faith and humility, while the "snakes" as lust, anger, murder and theft. Student's level of knowledge about street food security and general description about the school was assessed through questionnaires by the

students. After using S and L game as intervention, the number of students showing good category knowledge was 100 per cent (29 students) (Hadisuyitno et al. 2017). The study aims to play therapy as one method in reducing anxiety and increasing children's cooperation during undergoing treatment procedures. The conclusion of the research shows that giving bibliotherapy and "S and L game therapy" is helpful in increasing the cooperation of children in undergoing nursing actions during hospitalisations (Widyaningrum and Siwi, 2019). The educational game based learning media in the form of S and L is expected to motivate students to learn (Patmanthara et al 2019). S and L game is effective in improving the level of knowledge regarding prevention of worm infestations among samples (Santhanalakshmi, 2016). The health education using S and L game affects the students' behaviour in selecting snacks (Suryaningsih and Naviati, 2019). The Snakes and Ladder game based health education effects significantly on healthy practices amongst primary school children (George). S and L game was effective in stimulating the aspects of moral attitude (Kusumawardani, 2013). The custom-built board game encourages the students to interact and keep them interested in learning (Hoy, 2018). From the period of sage Patanjali, i.e., from 2nd century BCE to 4th century BE (Raghavan et al., 1968), *Patanjali Yoga* has been a part and parcel of Indian life itself. The textbook series,

'Let us learn Yoga' (*Aao seekhen yog* in Hindi) based on yogic education for students of Classes I to V is written in multiple regional languages (Balkrishnan, 2010). NCERT (2015) has also published 'Yoga: A healthy way of living' for upper primary stage children. Douglass (2010) reveals exclusively for the children to learn yoga through stories and pictures and it was a part of curriculum (optional). According to National Education Policy (NEP), 2020, in all stages of education, experiential learning will be adopted, including hands-on learning, arts-integrated and sports integrated education, and story-telling based pedagogy. A hybrid board game which combines analogue and digital media, orchestrating the use of physical Artwork Cards, present the game-authorising platform and the mobile client application to support the creation and provision of the game experiences (Vayanou et al. 2019). A board game named Survival focused on principles of wellness, have significant impact on emotional wellness, perceptions of current relationships, and identification with the game characters of the students (Solway, 2011). An easy to use and age appropriate yoga program enhances the children's understanding of specific topics reinforced through yoga poses, games and activities (Rawlinson, 2013).

NEED AND SIGNIFICANCE

It is need of the hour to teach Patanjali's *Ashtang Yoga* essence

to the children in a simplified and interesting manner. As the present study includes a play way method for holistic approach to ancient yogic tradition for students, it may be helpful to achieve the goal of National Education Policy (NEP) 2020 which is focused on building character and creating holistic and well-rounded individuals enriched with skills and development of traditional Indian values and all basic human and constitutional values such as *asavea* (service to the humanity), *ahimsa* (nonviolence), *swatchchhata* (cleanliness), *satya* (truthfulness), *nishkam-karma* (selfless deeds), *shanti* (peace), sacrifice, tolerance, diversity, pluralism, righteous conduct, gender sensitivity, respect for elders, respect for all people. It is in this context the investigators thought of exploring the impact of *Ashtang Yoga* based Board Games on the conceptual understanding of *Ashtang Yoga* practices with the following objectives.

Objectives

1. To develop innovative methods of teaching important concepts of *Ashtang Yoga* in a simplified way.
2. To design and develop yogic Snakes and Ladders Board game for basic understanding of *Ashtang Yoga* concepts.
3. To test its efficacy among school children by the intervention of Yoga theory as well as practical sessions.

HYPOTHESES

Ho: There is no relationship between designed and developed yogic snakes and ladders board game and yoga education.

Alternatively,

H1: There is a relationship between designed and developed yogic snakes and ladders board game and yoga education.

METHOD

Board Design

Snakes and Ladders is a game wherein two or more players can play on a game board; having numbered squares from 1 to 100. Game board, coloured tokens and small dice are the main accessories for this game. The size of each square in the board game may vary from 5x5 cm, 8x8 cm, 10x10 cm, or 12x12 cm. The snakes and ladders are arranged on the board, the path of the game consists of squares from “Start” to “Finish” and on the route, and players will find the snakes and ladders. Each player is represented by coloured game piece token, e.g., blue, red. A single dice is rolled to determine random movement of a player’s token in traditional form of play. The dice has six sides, all marked with the dots in an increasing order (i.e. six sides have six different nos. of dots). The dice will decide how many steps the players should move and the number of dice

decides in which sequence the players will play. Winner of this game is the one who grasps the “Finish” square first (Saraswati, 2016). Another interesting part of the game is that players are allowed to take their next turn, until the right answer related to that term (printed on Snakes and Ladders) is given. The player who reaches at box/square no. 100 (which denotes Kaivalya) first by crossing all the snakes and ladders is the winner in this game.

SNAKES AND LADDERS BOARD No.1

There are ten snakes and ten ladders on this board. The concepts of five *yamas* and *niyamas* as ladders and ten *vitarkas* (opposites of *yamas* and *niyamas*) as snakes may easily be grasped. As described in Patanjali

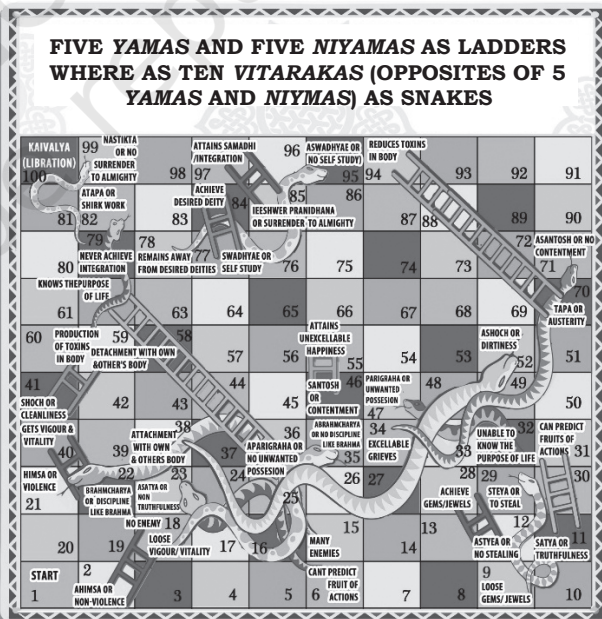


Figure 1: Yogic Snakes and Ladders Board No.1

possible respective ways to rise via ladder in this game. It means that the ladders allow the players to climb up or rise and results in uplifting player's token. Next chance of using the dice to the player was only provided if the marked word definition or question related to that is being answered correctly.

There are ten snakes and eight ladders on this board. While playing, if the player's token reaches on step no. 21 then the snake bite of *avidya* (wrong knowledge) will make that player fall down to step no. 15, the result of which is that the player will have lack of true knowledge. Likewise (other *kleshas* and *hurdles*) for step no.23 to 06, 29to 09, 35 to 18, 47 to

Figure 2: Yogic Snakes and Ladders Board No.2

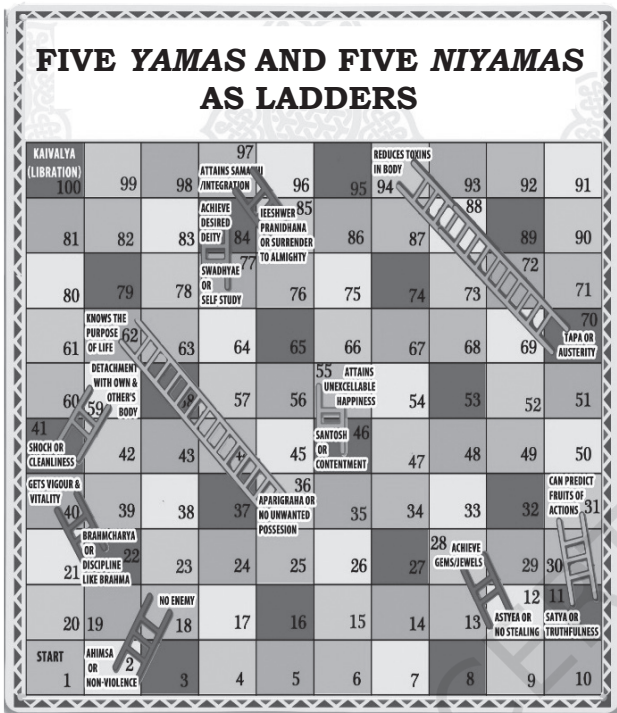


Figure 3: Yogic Snakes and Ladders Board No.3

32, 52 to 38, 71 to 34, 82 to 59, 95 to 78 and 99 to 79 numbered squares (Figs. no 2, 6 and 13). It means that all snakes' bites make the player(s) to fall down and the resultant of all snakes' bites is a fall. And if the player's token reaches at step no. 2 which denotes *Asana*, then the ladder will uplift him to no. 18, the resultant of which is that conflicts never hurt him "tato dvandvānabhighātaḥ". (Sadhan Pada-48) Likewise, other limbs of Ashtang Yoga like *Pranayama*, etc. and *Abhyasa* (practice) and *Vairagya* (detachment) may uplift from step no. 11 to 31, 12 to 28, 22 to 40, 36

to 62, 41 to 59, 46 to 55, and 70 to 94 numbered squares respectively (Figs. 2, 5 and 14). It means that the ladders allow the player(s) to climb up or rise and hence the player moves up in the game. Next turn is only permitted, if the marked word (on the box of snakes or ladders at which token has reached) definition or question related to that box term is being answered correctly. As box/square no. 100 denotes *Kaivalya/Moksha/Liberation*, the winner of the Snakes and Ladders game is supposed to get liberation or supreme spiritual wellness; hence whosever reaches firstly on box/square no.100 is declared the winner of the game.

DICE AND TOKENS DESIGN

Dices and tokens were purchased from the market for the purpose of research.

STUDY MATERIAL DESIGN

To simlify the matter on S and L boards, four table charts (Figs. 7 to 10) were designed expressing yogic terms used in S and L boards, their literal meanings, box no. at which fixed, box no. at which slides or jumps and the results or impacts if followed. It was provided as study material to the children. Sage Patanjali's *Yoga sutras* nos. 35, 36, 37, 38, 39, 40, 42, 43,

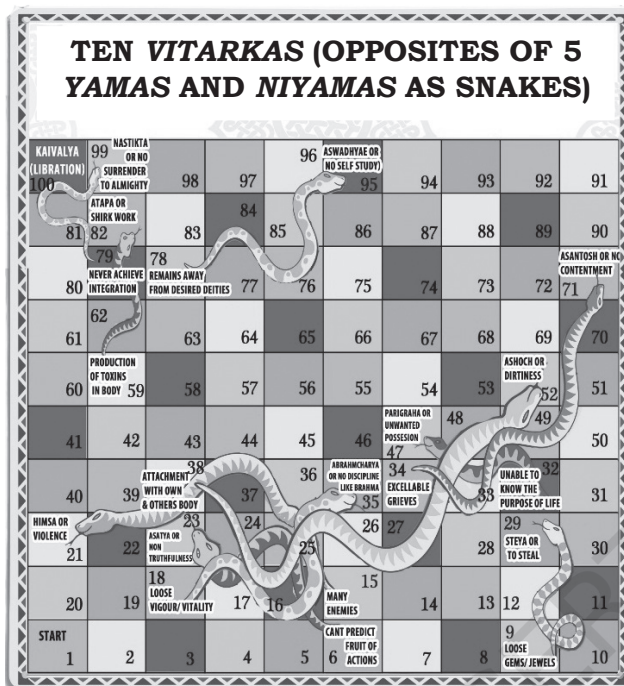


Figure 4: Yogic Snakes and Ladders Board No.4

44, 45, 48, 53 and 54 of chapter two (sadhan pada) and 1, 2 and 3 of chapter three (vibhuti pada) are summarised. We have developed a methodology module based on designing the Snakes and Ladders boards with innovative ideas (from Patanjali Ashtang Yoga). Innovative “S and L” board pictures and study material was designed as shown in Fig. 1 to 10.

SAMPLE AND SAMPLING PROCEDURE

A sample of 60 students from 4th to 11th class (aging between 8 to 17 years) of various schools with day boarding at a shelter home “VatsalyaVatika”, Brahma Colony, Kurukshetra, Haryana, India, was selected randomly. The selected

sample were assigned a new task of snake and ladder game and the same group was tested again after Ashtang Yoga training practices. It's with and without yoga practices of the same group.

Inclusion criteria: The students above 8 years and below 17 years were selected and both boys and girls have been treated at the same level.

Exclusion criteria: We have excluded the students who were physically disabled, suffering from chronic ailments and unhealthy participants.

PROCEDURE

A pre, post-test design is a random selection where measurements are taken before and after a treatment of the same sample. Paired statistical ‘t’-test analysis can then determine if the intervention had a significant effect. Students were asked to appear in pretest, comprising of a multiple choice questionnaire having 50 questions related to Patanjali Ashtang Yoga. Thereafter, they were taught about Ashtang Yoga (eight limbs), Vitarkas (opposites of Yamas and Niyamas), Abhyasa and Vairagya, and ten hurdles (five kleshas and five distractions) as well as their impact with the help of creatively designed and developed Snakes and Ladder boards (Figs. No 1, 2, 3, 4, 5 and 6) and study material (Figs. No 7, 8, 9 and 10). They were allowed to play with both the S and L boards



(Board No. 1 and 2), as per the instructions given to them before beginning the game, instructions included 30 minute daily sessions for five days. While playing, students were allowed to move next turn only if they answered the related word mentioned on the square of S and L with the help of study material provided to them. For the next half an hour, they were allowed to practice different *Asanas* (*padamasana*, *tadasana*) and *Pranayamas* (*bhramri*, *anulom-vilom*), *Hasya yoga*, *Gyan mudra* as well as Om chanting, *Trataka* (Gazing) and Prayer. Post-test was conducted thereafter. In the pretest, students were asked 50 multiple choice questions related to *Ashtang Yoga* before applying the experiment. The questionnaire was framed with the consultations of yoga experts. The questionnaire given to the candidates to solve in pre-post test was validated with five yoga experts. The content validity index (CVI) was found to be 0.94 (Polit and Beck 2006; Polit et al., 2007). Cronbach's alpha value is 0.7. After reviewing the designed boards with experts, their suggestions were taken into account in simplifying the boards. According to their suggestions, the boards were redesigned and finally these were framed.


Vitarkas (Opposite of Yamas and Niyamas)	Literal Meaning	At Box No.		Fall to Box No.	Results (as described in <i>patanjali yog sutras</i>)
<i>Himsa</i>	To Harm	21	Falls to	15	Many enemies
<i>Asatya</i>	Non Truthfulness	23		06	Can't predict fruits of action
<i>Steja</i>	To steal	29		09	Looses gems/jewels
<i>Abrahmcharya</i>	Not to follow Brahma	35		18	Looses vigour or vitality
<i>Parigraha</i>	Po possess more than need	47		32	Unable to know the purpose of life
<i>Ashoch</i>	To be dirty	52		38	Attachment with own and others body
<i>Asantosh</i>	No Contentment	71		34	Increased griefs
<i>Atapa</i>	Shirks Works	82		59	Production of toxins in body
<i>Aswadhyaya</i>	No self Study	95		78	Remains away from desired duties
<i>Nastikta</i>	No belief in Almighty	99		79	Never achieve integration

Fig. 7: Study Material Yogic Snakes and Ladders Board No. 1-A (How Snakes Affect)


Yamas and Niyamas	Literal Meaning	At Box No.		Fall to Box No.	Results (as described in <i>patanjali yog sutras</i>)
<i>Ahimsa</i>	Non Violence	2	Jumps to	18	No Enemies
<i>Satya</i>	Truthfulness	11		31	Can predict fruits of action
<i>Asteya</i>	No stealing	12		28	Achieves gems/jewels
<i>Brahmcharya</i>	Follow brahma	22		40	Gets vigour and vitality
<i>Aparigraha</i>	No Unneeded Possession	36		62	Knows the purpose of life
<i>Shoch</i>	Cleanliness	41		59	Detachment from own and other body
<i>Santosh</i>	Contentment	46		55	Attains greatest happiness
<i>Tapa</i>	Austerity	70		94	Reduces toxins in body
<i>Swadhyaya</i>	Self-Study	77		84	Achieves desired diet
<i>Ieeshwer Pranidhana</i>	Surrender to Almighty	85		97	Attains Samadhi or Integration

Fig. 8: Yogic Snakes and Ladders Board No. 1-B (How Ladders Affect)


Ten Distractions	Literal Meaning	At Box No.		Fall to Box No.	Results
<i>Avidya</i>	Wrong Knowledge	21	Falls to	15	Lack of knowledge
<i>Asmita</i>	Am-ness	23		06	Becomes egoistic
<i>Raga</i>	Attachment	29		09	Increased demands
<i>Dvesha</i>	Aversion	35		18	Increased griefs
<i>Abhinivesha</i>	Fear of Death	99		79	Desire to live more and more
<i>Vyadhi</i>	Disease	47		32	Imbalance in body
<i>Styan</i>	Dullness	52		38	Unable to involve in good actions
<i>Sanshey</i>	Doubtfulness	71		34	Undetermined mind
<i>Pramada</i>	Carelessness	82		59	Losses due to carelessness
<i>Alasya</i>	Laziness	95		78	Loosed opportunities

Fig. 9: Yogic Snakes and Ladders Board No. 2-A (How Ladders Affect)


Six limbs of ashtang yoga, abhyasa and vairagya	Literal Meaning	At Box No.		Lift to Box No.	Results (as described in patanjali yog sutras)
<i>Asana</i>	Yogic Pose	02	Jumps to	18	Conflict never hurt
<i>Ranayama</i>	Control upon breathing	11		31	Fitness of mind to achieve concentration
<i>Ratyahara</i>	Inward Senses	12		28	Complete Subjugation of Senses
<i>Dharna</i>	Concentration	22		40	Attains Focused Conceptual Sphere
<i>Dhyana</i>	Meditation	36		62	Promotes Focused Sphere
<i>Samadhi</i>	Integration	41		59	Attains Power to Merge with supreme soul
<i>Abhyasa</i>	Practice	46		55	Attains Perfection
<i>Vairagya</i>	Detachment	70		94	Attains Worldly Detachment

Fig. 10: Yogic Snakes and Ladders Board No. 2-B (How Snakes Affect)

DATA ANALYSIS

By using paired ‘t’ test, data obtained in pre and post-test was analysed with the help of SPSS version 25. The data collected from the sample is shown in the chart drawn below. The blue line and brown lined data corresponds pre and post data respectively.

RESULTS

Tables 1 and 2 show descriptive statistics and paired sample t- test. The alpha value is found to be 0.7 which is acceptable reliability value. Tables 1 and 2 depicts descriptive statistics and paired t-test values. The intervention drawn from snakes

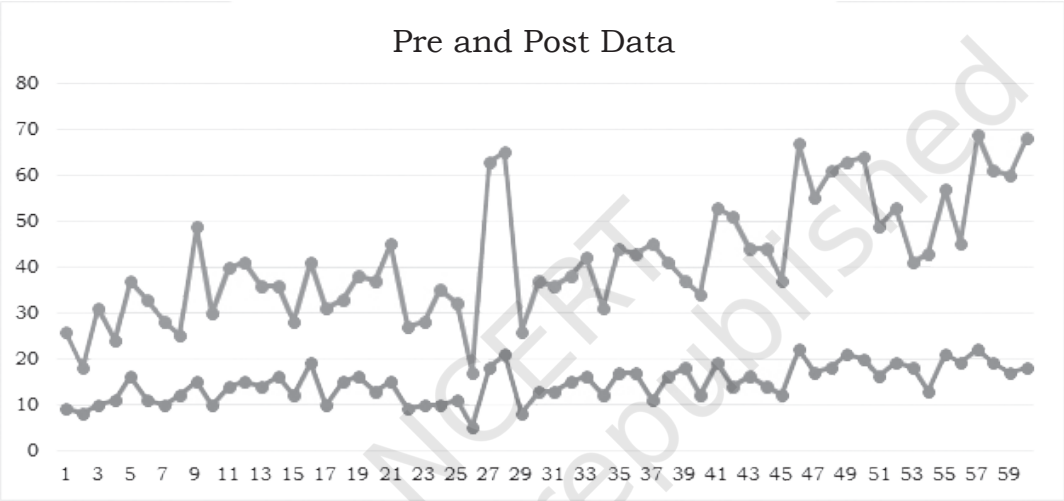


Table 1
Descriptive Statistics

	N	Mean	Std. Deviation	Std. Error Mean
PRE	60	14.6333	3.94868	0.50977
POST	60	27.2500	9.90228	1.27838

Table 2
Paired sample t- test

Mean	Std. Deviation	Std. Error Mean	Lower	Upper	T	df	Sig.(two tailed)
-12.61667	7.46765	0.96407	-14.54577	-10.68757	-13.087	59	0.0001

and ladders game is found to be significant at $p < 0.0001$, for a sample size of 60 children. The calculated absolute value of paired 't' statistic was found to be 13.087, which is compared with table value, i.e., 3.291 at 59 degree of freedom, which was significant at $p < 0.0001$ level of significance. As the calculated value of 't' was much greater than the table value, so it can be said that the t in the present study is very much significant and can be used as an effective media and as a teaching aid for children.

DISCUSSION

The textbook series, "Let us learn Yoga" (*aa seekhen yog*) based on yogic education for students of Class I to V, is written in multiple regional languages. (Balkrishan, 2010). Though, NCERT, (2015) has published "Yoga: A healthy way of living" for upper primary stage children, there is a felt need of exploring *Ashtang Yoga* essence through S and L game. It was found that no research work exploring *Ashtang Yoga* philosophy on S and L game was carried out. Some studies were traced in which yogic boards were developed but that is limited to *Hath Yoga* only. Media development of learning ladders educative subthemes for plants was tested for first grade elementary school children only while our range was from 1st to 3rd standard (Agustin, 2020). Rome (2013) stated that earlier, it was called S and L game as *Moksha Patam* (the opening door of liberation) and later Britishers named

it as a game of snakes and ladders. This made us to do deep research in basics of Patanjali *Ashtang Yoga* and redesign the entire game of S and L as per original text of Patanjali (Karmbrelker, 1986). The unique contribution from our studies shows that statistical t-test significance of design of "S and L" efficacy in making children understanding essence of sage Patanjali's *Ashtang Yoga* compared to others (Gardner-Anopol 2007; Balkrishan, 2010). Most of the reviewed studies are focused on other subjects and not on Yoga, how "S and L game" may affect different problems like Mathematic summation (Althoen, 1993), vocabulary teaching (Fitriana, 2018), street food safety (Hadisuyitno, 2017), the teaching reading of narrative text (Saputra, 2016), children's moral attitude aspect (Kusumawardani, 2013), to improve learning outcomes in computer networking (Pratmanthara, 2019), health education (Suryaningsih, 2019), teaching of speaking English to children (Saraswati, 2016), science cognitive (Amin et al 2019). Brazil economy was compared with S and L in the research (Giaccaglia, 2018). The *Ashtang Yoga* positive forces as ladders and negative forces as snakes may explore the essence in a better way perhaps. In the manuscript's abstract, it is mentioned that Yoga (not *Ashtang Yoga*) has been taught as a subject in the schools. It has been stated that children may not be aware of Patanjali *Ashtang Yoga* and it is the need of the hour to teach

Patanjali's *Ashtang Yoga* essence among children.

CONCLUSION

The major objective of the study is to design, develop and test the efficacy of yogic Snakes and Ladders boards for basic understanding of Patanjali *ashtang yoga* philosophy for school children. It may be concluded that "S and L boards" may improve the learning of basic concepts of sage Patanjali's philosophy. On specially designed "S and L board" nos. 1 and 2, students can learn and understand the essence of *Ashtang Yoga* easily. From Board no.1, children can understand and learn about the five *yamas*, five *niyamas* as ladders and ten *vitarkas* as snakes. From Board no. 2, they may learn ten

hurdles/obstacles (five *kleshas* and five distractions as snakes and six limbs of *Ashtang Yoga* along with *abhyasa* and *vairagya* as ladders. Children may also understand how good deeds lead them to rise; bad deeds worsen to falls and emphasise the underlying impact of positive and negative forces. This game could be a tool for all yoga teachers, physical education teachers (PTIs) and Yoga educators to teach essence of Yoga at initial stage of schooling in a playful manner. The educational policy makers and administrators may popularise it by making it a part of syllabus or the curriculum so that children can get benefits. The future research may be carried out in developing *Ashtang Yoga* Snakes and Ladders game as a Mobile App.

REFERENCES

- ALTHOEN, S.C., L. KING AND K. SCHILLING. 1993. How long is a game of snakes and ladders? *The Mathematical Gazette*, Vol. 77, No. 478. pp. 71–76.
- BALKRISHAN, A. 2010. Let us Learn Yoga. Divya Prakashan. ISBN No. 978-93-85721-15-1
- BERSMA, D. AND M. VISSCHER. 2003. Yoga Games for Children: Fun and Fitness with Postures, ladders? *The Mathematical Gazette*, Vol. 77, No. 478. pp. 71–76.
- BHARATI, S.V. 2001. Yoga Sutras of Patanjali: With the Exposition of Vyasa (Vol. 3). Motilal Banarsidass Publications.
- BOATWRIGHT, B.S. 1995. Boatwright-Bracken Adult Attention Deficit Scale: Construction and preliminary validation. *Attention Deficit Disorder: A Monograph of the Journal of Psycho Educational Assessment*, pp. 106–129.
- DOUGLASS, L. 2010. Yoga in the public schools: Diversity, democracy and the use of critical Movements and breath. Hunter House.
- FITRIANA, D. AND MARO, R. K. 2018. Teaching Vocabulary through Snake and Ladder board game in the tenth grade of SMA Muhammadiyah 1 Malang. *Celtic: A Journal of Culture, English Language Teaching, Literature and Linguistics*, Vol. 3, No. 1. pp. 82–93.
- GARDNER-ANOPOL, MARITA. "Yoga board game and methods of teaching yoga". U.S. Patent Application 11/418,671, filed November 8, 2007.

- GEORGE, G. The Effectiveness of Snake and Ladder Game Based Health Education On Healthy Practices among Primary School Children-A Quasi Experimental Study. *Review of General Psychology*. Vol. 14, No. 2. pp. 113-121.
- GIACCAGLIA, C. 2018. Brazil: Ladders and Snakes. *JANUS. NET e-journal of International Relations*. Vol. 9. pp. 155-169.
- HADISUYITNO, J., A.A. ASWIN AND S.I. UTAMININGTYAS. 2017. The Effectiveness of Snake and Ladder Game to Street Food Safety Knowledge Level At Elementary School Students. *IEESE International Journal of Science and Technology*. Vol. 6, No. 4. pp. 1-4
- HOY, B. 2018. Teaching history with custom-built board games. *Simulation and Gaming*, Vol. 49, No. 2. pp. 115-133.
- IBAM, E., T. ADEKUNLE AND O. AGBONIFO. 2018. A Moral Education Learning System based on the Snakes and Ladders Game. *EAI Endorsed Transactions on e-Learning*. Vol. 5, No. 17.
- JULAIHA M. AND Z. ZULMIYETRI. 2019. Effectivity of Snakes and Ladders Media to Upgrade to the Summation in Children Learning Difficulties. *EDUTEC. Journal of Education and Technology*. Vol. 2, No. 2. pp. 54-61.
- KARAMBELKAR, P. V. 1986. Patanjali Yoga Sutras: Sanskrit Sutra with Thinking in educational debates. *Religion and Education*, Vol. 37, No. 2. pp. 162-174.
- KLATT, M. AND O. WEBSTER. 2019. Yoga: Theory and Practice—A Course that Illustrates Why Transliteration, Transtation[sic], and Commentary. *Kaivalyadhama*.
- . 2019. Yoga Belongs in the Academy. *International Journal of Yoga Therapy*. Vol. 29, No. 1. pp. 109-118.
- KUSUMAWARDANI, D.R. 2013. The Effectiveness of Smart Snake-Ladder Game as a Stimulation of Children's Moral Attitude Aspect in Taman Belajar PAUD Arema. *Skripsi Jurusan Psikologi-Fakultas Pendidikan Psikologi UM*.
- NATIONAL COUNCIL OF EDUCATION RESEARCH AND TRAINING. 2015. *Yoga: A healthy way of living*. NCERT, New Delhi.
- PATMANTHARA, S., O.D. YULIANA., F.A. DWIYANTO AND A.P. WIBAWA. 2019. The Use of Ladder Snake Games to Improve Learning Outcomes in Computer Networking. *International Journal of Emerging Technologies in Learning*. Vol. 14, No. 21. pp. 243-249.
- POLIT DF, CT. BECK. The content validity index: are you sure you know what's being reported?
- CRITIQUE AND RECOMMENDATIONS. 2006. *Research in Nursing and Health*. Vol. 29, No. 5. pp. 489-97. <https://doi.org/10.1002/nur.20147>
- POLIT DF, CT. BECK, AND SV. OWEN. 2007. Is the CVI an acceptable indicator of content validity?
- APPRAISAL AND RECOMMENDATIONS. 2007. *Research in Nursing and Health*. Vol. 30, No. 4. pp. 459-67. <https://doi.org/10.1002/nur.20199>
- RAGHAVAN, V.; ET AL. 1968. *New Catalogus Catalogorum*. 11. Madras: University of Madras. pp. 89-90. Lists ten separate authors by the name of Patañjali.
- RAWLINSON, A. 2013. *Creative Yoga for Children: Inspiring the Whole Child through Yoga, Songs, Literature, and Games*. North Atlantic Books.
- SANTHANALAKSHMI, S. 2016. Effectiveness of snake and ladder game on knowledge and knowledge on practice regarding prevention of worm infestations among primary school children at selected Corporation Schools, Coimbatore (Doctoral dissertation, Kongunadu College of Nursing, Coimbatore).

- SAPUTRA, A.W. 2016. The effectiveness of snakes and ladders game in the teaching reading of narrative text (an experimental study at tenth grade students of MAN 2 Semarang in the academic year of 2015/2016) (Doctoral dissertation, UIN Walisongo).
- SARASWATI, M. A. 2016. A Thesis (Doctoral dissertation, Yogyakarta State University).
- SOLWAY, S. 2011. Wellness through Board Games (Doctoral dissertation. The Chicago School of Professional Psychology).
- SURYANINGSIH, D. AND E. NAVIATI. 2019. The Effect of Health Education with The Ladder Snake Game Media against Children's Behavior in Choosing Snack in SD Negeri Bulusan Kecamatan Tembalang. *Media Keperawatan Indonesia*. Vol. 2, No. 2. pp. 54–59.
- VAYANOU, M., Y. IOANNIDIS., G. LOUMOS AND A. KARGAS. 2019. How to play storytelling games with masterpieces: From art galleries to hybrid board games. *Journal of Computers in Education*. Vol. 6, No. 1. pp. 79–116
- WIDYANINGRUM, R. AND I.N. SIWI. 2019. Effects of Bibliotherapy and Snake-Ladder Game's Therapy on the Cooperative Level of Children during Hospitalization. *Jurnal Info Kesehatan*. Vol. 17, No. 2. pp. 152-160.
- WULANYANI, N.M.S., I. W.B. SETYANI, A. MARHENI AND P.Y.S. PRATAMA. 2020. How Animated Videos and the Snakes–Ladders Game Can Prevent Sexual Abuse in Children. In *International Conference on Educational Psychology and Pedagogy- "Diversity in Education" ICEPP 2019*. pp. 202–205. Atlantis Press.
- YEMIMA, M., L. WIJAYANINGSIH AND M. KURNIAWAN. 2019. Enhancing English Vocabulary through the use of Snake and Ladder Media for 4 to 6 year-old Children. *Satya Widya*, Vol. 35, No. 1. pp. 1–
- YOGA, A. 1978. *The Yoga Sutra of Patanjali*. Trans. and commentary by Swami Satchidananda. Pomfret Center, Conn.: Integral Yoga Publications.
- YUSOFF, M.S.B. 2019. ABC of content validation and content validity index. (<https://www.mhrd.gov.in>)https://www.mhrd.gov.in/sites/upload_files/mhrd/files/NEP_Final_English_0.pdf