NANO LEARNING - The Futuristic Approach to Education

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Abstract **- In present scenario when everything is changing so rapidly and people are involved in multi-faceted tasks at a time then need arise for the learning that should be easily accessible, available anywhere and anytime in shorter time slots, then came the concept as said- "Chhota Packet Bada Dhamaka" nomenclature as "Nano Learning". It is called as modern concept of learning where in, the time and content is reduced to short bites, yet deliver the same intended value of the concept. In this study, the researcher has conceptualized the concept of Nano Learning in education accompanying with features, benefits, shortcomings etc. To attain the objectives, the researcher has framed the Google form through which data collection was done, involving 106 respondents. The opinion of the respondents is presented in the form of bar diagrams. Thus, in this research paper, the researcher has conceptualized the whole concept of Nano learning in education along with spreading awareness regarding it.**

Index Terms **- Learning, Modern Concept, Nano Learning.**

INTRODUCTION

The covid-19 pandemic can be ascribed with advancing more new learning trends that are enduring, even when the pandemic is over. E-learning or online learning is undoubtedly a trend that will persist even after the pandemic ends, simple as it advances with so many benefits. The submerging of the e-learning in the educational process has resulted into indisputable decrease in attention span. The attention span of the learners has nearly restricted to 18 to 20 minutes during Covid-19 phase. As time passes, the fragmented content, less focus, visual fatigue and other inadequacies has resulted into crumbling of learning and attention span in the learners. This scenario has brought new challenges in front of the entire educational system as how to conduct a smooth and effective teaching-learning activities that will help in achieving the learning outcomes in condensed time frame. So, demand arises for delivering the content in bite-sized. Here comes the hero i.e. "Nano Learning" which is conceptualized as "Small Wonder" in today's educational system. The introduction of Nano Learning act as a means for accelerating equality and equity. It enhances equity in the accessibility and use of education along with equality in learning outcomes. So, entry of Nano Learning has fulfilled the entire societal needs that are very much desirable. Thus, in this study the researcher will explore the concept of "Nano Learning" which is termed as "The Futuristic Approach to Education" along with the benefits and shortcomings of it.

RATIONALE OF THE STUDY

In this competitive world when everyone is running and competing with each other, in that societal environment need arise on the part of each one of us to enrich ourselves with latest knowledge, skills, activities and strategies to update them regularly. To fulfil this very objective, the time span has become one of the biggest bottleneck for enlarging our cognitive domain. In context to "Nano Learning" has provided the much needed solution for that. To know more about the concept of Nano Learning along with its features, benefits, limitations etc, the researcher has conceptualized her study on the newly emerging trend in the learning environment i.e. Nano Learning. So, the need of the hour is to study this concept. In addition, very few work has been done in defining the arena of Nano Learning in education.

STATEMENT OF THE PROBLEM

"Nano Learning - The Futuristic Approach to Education."

RESEARCH OBJECTIVES

- To conceptualize the concept of Nano Learning which is entitled as Futuristic Approach to Education.
- To study the benefits one can availed along with limitations through Nano Learning in Education.

WHAT IS NANO LEARNING?

Nano Learning is a personalized solution for 21st century learners who cannot assimilate long hours of learning in their fast-paced lives. It is also called as bite-sized learning where the learner attains knowledge by taking concise learning capsules or modules. Nano Learning programs can be deployed through varied methods such as short e-learning tutorials like text, images, audio and video.

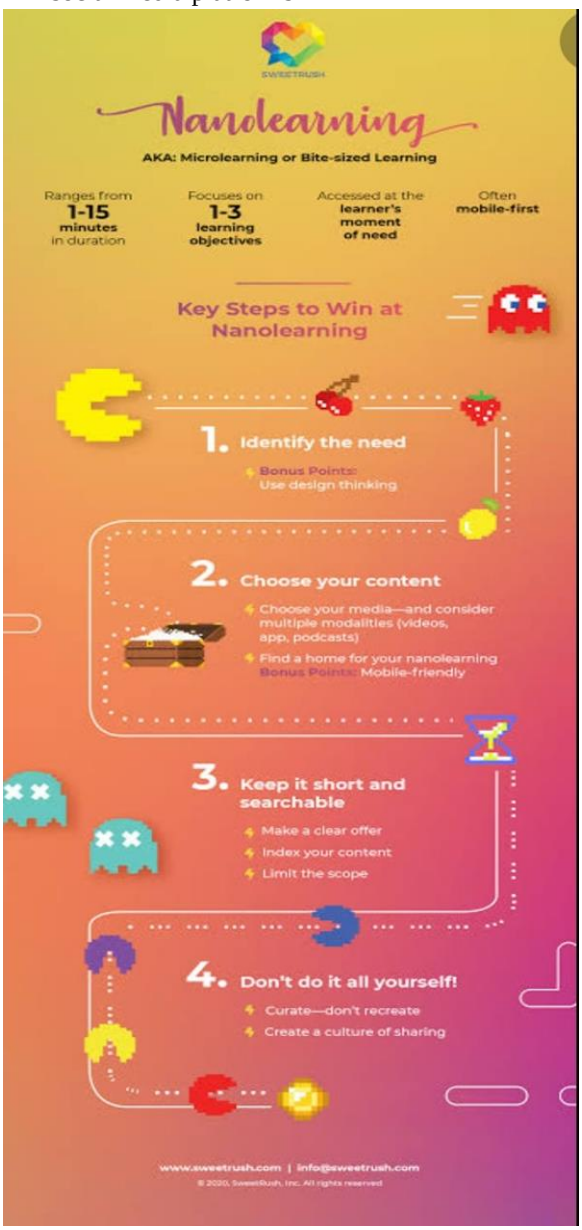
In Cambridge Dictionary, Nano is defined as one billionth of the stated unit and extremely small. Nano learning capsules or modules are the billionth of the books/hours that you have to spend on your studies, training etc. The National Association of State Boards of Accountancy (NASBA) has designed Nano learning as a tutorial program designed to permit a participant to learn a given subject in ten-minute time frame through the use of electronic media and without interaction with the real-time instructor. Thus, it is highly focused through bite-sized learning content in an engaging manner having single learning goal.

FEATURES OF NANO LEARNING

- Duration is one to 15 minutes long
- It is highly targeted way as it deals with a single objective
- As one learns through self-pacing, so it is called as self-contained
- It offers small nuggets of information
- One can view it on a range of devices
- It is easy to find
- One can learn in it through diversified electronic mode of learning comprised of text, video, sound, images etc.
- It is goal-oriented learning as it provides immediate benefit from the learning
- It allowed flexibility to learners

Determinants to consider while Implementing Nano Learning

- One has to study about the concerned learner group
- Modules should be kept short
- Identify the learning objective and limit it to only one objective
- One should provide accessibility of the phone or tablets for the learner groups
- The instructor has to assess the desirability of the learner in context to audio- based or video-based learning
- Encourage the culture of sharing learning as most learners engage through informal learning by social media platforms



REASONS WHY NANO LEARNING ARE HERE TO STAY?

The application of Nano Learning will help one to avail below stated benefits-

- As it is learner-centric so, it meets the required learning needs of the student.
- As it is short and quick, so one can repeat it to reinforce learning in short span of time.
- Inclusion of multiple modes will assist learning with text, audio, video, pictures etc.
- As learning is in short modules, so it helps in thrashing the learning fatigue.
- Perfect for modern learners.
- Conceived for constructive knowledge transfer.
- Stimulate spaced repetition.
- Provide budget friendly learning options. Under it, the modules that are created are stimulated for the users through tools such as animation, interactive learning etc.
- As it provides immediate benefit from the learning so it is as goal oriented learning. In it Nano learning apply the "Less is More" approach as learners choose to learn or focus on one thing at a time.
- Suitable and ideal for progressively digital audience to assimilate.
- Minimize the time correlated with learning.
- Work for all types of learners.
- Adequate one to interject education at a suitable time.
- It provides better learning experiences.
- It very well versed with the feature of just-in-time availability of the learning modules.
- It has more accessibility and flexibility feature attached to it.

SHORTCOMINGS IN NANO LEARNING

Nano learning has reaped various benefits but on the other hand, it has some shortcomings also that are-

- Individualized feedback is not possible.
- As no face to face interaction is possible that can lead learners to be in social isolation which can lead to problems like stress, anxiety and negative thoughts etc.
- Issues like self-motivation and time management has to be managed.
- This platform is not providing the way out for the learners to work in team setting.
- Under this, the learning is focused on theoretical aspect other than the practical one.
- Absence of face-to-face communication.
- This does not cater to all the disciplines of the education system especially in which the learners have to conduct experiments and has to gain hands-on experiences.
- This learning option is unapproachable to the computer illiterate population. So, one can say that it has limited reach.
- Sometimes the accreditation and quality insurance is at stake.

NANO LEARNING AND MICRO LEARNING

Similarities

- Perfect for present day learners.
- Formulating for transferring knowledge in an effective way.
- Both are rooted on the Pareto principle whereby applying 20% of your effort in a learning activity will result in 80% of learning.
- Stimulate spaced repetition.
- Contributed towards budget-friendly learning options.

Dissimilarities

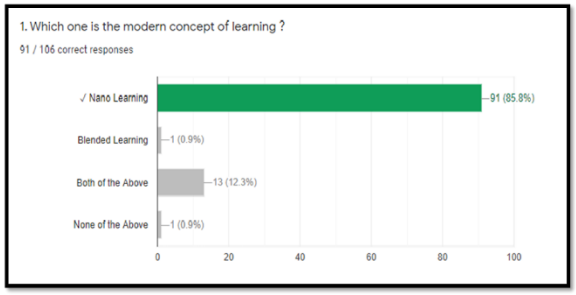
Nano Learning	Micro Learning
Concentrated on outcomes	Concentrated on approach
Having better knowledge retention	Having less knowledge retention comparatively to Nano learning

RESEARCH METHODOLOGY

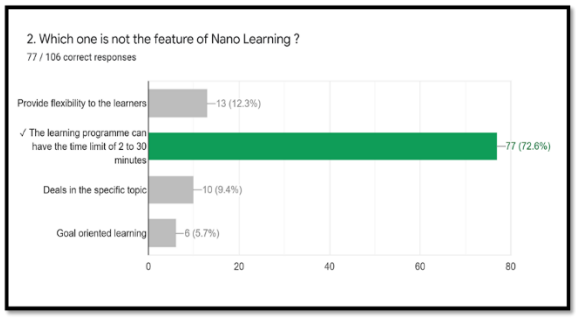
Type of Study	Descriptive Study
Research Universe	India
Sample Size	106 Respondents
Sampling Method	Random Sampling

Method of Data Collection	Questionnaire (Google form)
Sources of Data Collection	Primary and Secondary
Data Analysis Technique	Bar Diagrams

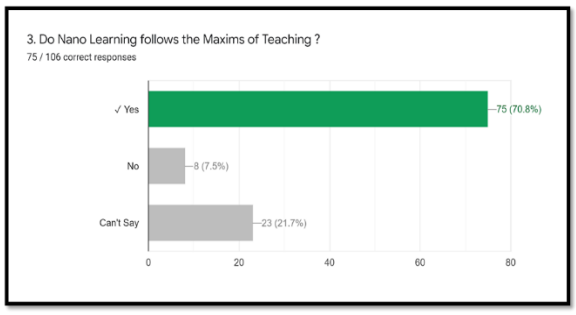
DATA ANALYSIS AND INTERPRETATION



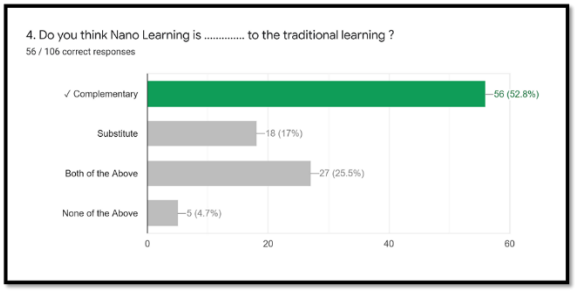
Interpretation- 91 respondents out of 106 i.e. 85.8% respondents thought that Nano learning is the modern concept of learning whereas 0.9% thought that blended learning is the one. 12.3% respondents said that both Nano learning and Blended learning are the modern concept of learning.



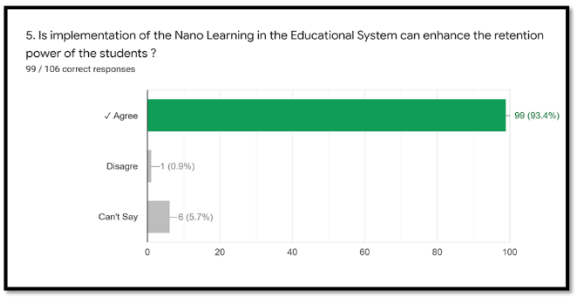
Interpretation- 72.6% respondents believed that the feature stated as learning program can have the time limit of 2 to 30 minutes is not the feature of Nano learning whereas 12.3% thought flexibility to the learners, 9.4% stated deals in the specific topic and 5.7% respondents said that goal-oriented learning is not the feature of Nano learning.



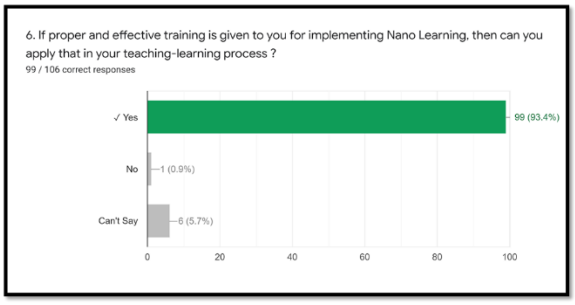
Interpretation- 70.8% respondents stated that Nano learning follows the maxims of teaching on the other hand 7.5% respondents said that it does not follow the maxims whereas 21.7% respondents can't say anything about it.



Interpretation- 52.8% respondents thought that Nano learning is complementary to the traditional learning whereas 17% respondents believes that both are substitutes to each other. In addition, 25.5% respondents believed that Nano learning is both complementary and substitute to the traditional learning, on the other hand, 4.7% respondents thought that it is neither complementary nor substitute to the traditional learning.



Interpretation- 93.4% respondents agreed with the notion that implementation of Nano learning in the educational system can enhance the retention power of the students. 0.9% respondents disagree with the statement that implementation of Nano learning can enhance the retention power of the students whereas 5.7% respondents can't say whether implementation of this will enhance the retention power of the students or not.



Interpretation- 93% respondents expressed that if proper and effective training is given to them for implementing it, then they will apply that in their teaching-learning process. 0.9% respondents thought that even if proper and effective training is given to them still they will not apply that in their teaching-learning process whereas 5.7% respondents are ensure about the application of Nano learning in their teaching-learning process.

FINDINGS

- Nano learning is conceptualized as a modern concept of learning.
- Majority of the respondents believed that Nano learning follows the maxims of the teaching.
- Nano learning is stated as complementary to one traditional teaching-learning process.
- Respondents are eager to implement Nano learning in their teaching-learning process if effective training is given to them.
- Application of Nano learning will enhance the retention power of students and also assist in strengthening the teaching learning process.

EDUCATIONAL IMPLICATIONS

- Nano learning will empower both learners and teachers to learn fast, more adaptable and instruct effectively.
- Accessibility of the content has been enhanced.
- Helped in bridging the gap between leading experts and highly effective communication and pedagogy.
- Helped in removing the learning gaps of the traditional teaching-learning process.
- Retention power of the students increased.
- Learning strengthened in a short span of time.
- It can play a complementary role to the traditional style of learning which further enhances the teaching-learning process.
- Nano learning has enhanced the learning horizon for the learners.
- Nano learning provides easy availability of the learning modules in short period of time.

DELIMITATIONS OF THE STUDY

- The study delimited to only 106 respondents.
- As data collection is done through Google form, it caters only to the educated ones.
- Sample area is confined only to Haryana state.
- This study caters to the application of Nano learning in the educational field only.

CONCLUSION

As it has been stated that digital era has revolutionised one's life but in this pandemic phase when all the classes are online where every stakeholder is facing the problem of fall in the attention span of the children, Nano learning has come as a blessing. Nano learning has helped in decreasing the screen fatigue by providing the learning modules in the shorter form. It focuses on delivering information or knowledge in smaller amounts over a short period of time. The art of giving information in small bits has increased the inclination of educational stakeholders and others in this way of learning, that's why it is called as "Futuristic Approach to Learning" which enhance the efficiency, seeking attention of learners, assist in the capability to learn in this period when all the current practices are overloaded with lot of information.

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