

## Mandala in Operation of Web 3.0

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## Mandala in Operation of Web 3.0

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### ABSTRACT

**Purpose:** *There is no other means of expressing emotions in the world that can be compared to mandalas, rather its use in our festivals, rituals, behavior, rituals or many activities from birth to death carries not only our emotions but also resolutions and visions, that is why mandalas are a mandatory use in every operation in modern times of web 3.0. If it can be done, its possibility of easy operability will increase.*

**Design/Methodology/Approach:** *Secondary data as Case Projects followed by Primary data through consultation regarding use of Mandala and its outcome in response to Blockchain will be carried out systematically for assuring further application on the basis of features comparisons.*

**Findings/Result:** *Mandala is an integral part of Buddhism, culture, and philosophy. In the development of civilization, the influence of mandalas can be seen on various topics from the origin of the universe to daily life. From ancient times to the present, it seems that the art and subject of the mandala have been equally reflected in the culture, customs, and manners, political and social fields. With the development of technology, the practice of using ancient knowledge, skills and methods in an age-old manner has started to develop. Especially in the fields of literature and language, if such a practice had been going on for a while and it is an opportunity of applying the same in the field of technology and development also as an advanced data management tool in the field of applied IT as wider utility without boundary under decentralized data mechanism for rapid development of supplying Society 5.0 demands of web 3.0. In this regard, Japan is benefiting a lot by using the structural method of mandala in educational activities, while Nepal and India as Akhanda Bharat, which has made a significant contribution to the origin and development of mandala, should also be able to benefit by using it in the educational and professional fields.*

**Originality/Value:** *The study is have reinvented mandala as a new and innovative technology in the field of information technology.*

**Paper Type:** *Research paper*

**Keywords:** Mandala, Society 5.0, Web 3.0, Knowledge management, Utilization

### 1. INTRODUCTION :

In the post-Covid-19 pandemic, there is a global concern, interest and many uses on how to organize educational activities and move forward [1,2]. In this context, it seems that virtual learning can be changed into active participatory learning by creating an environment of educational activities based on the philosophical and structural basis of "Mandala" [3], the most powerful presentation of Eastern philosophy. For this purpose, a conceptual set development plan for mandala education and database

system has been prepared. This article is also based on this context.

## **2. INTRODUCING MANDALA AS MODERN DATA SCIENCE :**

The need of expressing Holistic: Development and Management could be presented in decentralized data base of web3.0 using blockchain technology [4, 5, 6, 7, and 8]. There is no other means of expressing emotions in the world that can be compared to mandalas, rather its use in our festivals, rituals, behavior, rituals or many activities from birth to death carries not only our emotions but also resolutions and visions, that is why mandalas are an essential use in education in modern times. If it can be done, its importance will increase as Teaching, Healing, sand, and many more mandalas [3].

In Buddhism, mandalas are used to depict spiritual peace, salvation, the nature of nature, the cycle of time, and the eight teachings given by the Buddha. In recent days it is very attractive and famous worldwide as art - meditation - yoga and decoration. In recent days, its use can be seen in a wonderful way in makeup and painting. As an art form, Mandala is a unique art that is manifested in unison [3, 9]].

Mandalas are used in Buddhist philosophy from many perspectives. Mainly, from the center of the soul to the universe, it is a mandala that reveals the complete form of each unit in a single circumference and the relationship of each unit to the center. Brahmakendri principle expressed in the Upanishad's sentence Aham Brahmasmi also seems to be close to the philosophical side of Mandala.

Mandala is very popular in different countries as a medium of art or meditation or religious feeling and it is also well known as an art that shows life-nature-soul and Paramatma or the universe as a whole.

Mandala is an artistic tool to symbolically express the deeper knowledge or meaning of the cycle of life and nature in ancient times in a simple way. The people understand the Mandala as a Yagya (Sacrifice), Vastu, and pictures, which maintain a fair relationship with our religion and culture. The historical importance of the mandala is also clear from the various chakras and mandalas used for martial arts during the Mahabharata period, so it shows that it is necessary to find the expression of the art expressed in the mandala to get success in the life struggle. In this way, it is seen that the mandala has an important influence on all spiritual, metaphysical, and spiritual life in Eastern society [10].

## **3. OBJECTIVES :**

To assess the application of mandala in the operation of web 3.0.

## **4. METHODOLOGY :**

This is an intellectual analysis of the researchers through long experience of readings across disciplines as productive discourse through Secondary data as Case Projects followed by Primary data through consultation regarding the use of Mandala and its outcome in response to Blockchain was carried systematically for assuring further application on the basis of features comparisons.

## **5. REVIEW AND DISCUSSION :**

### **5.1 Mandala in Nepalese life:**

In Nepal – Mandala Festival is celebrated in Thecho of Lalitpur and various artists embody the importance and definition of Mandala by displaying their artistry [11-12]. Adopting it as a part of Nepali culture, they are involved in the development of Mandala. Nepal's democracy has also become a political place to gather and express in mandala, so the use of expression also shows the importance of social rights and justice. Mandala is a material that has been used since ancient times in the teaching, teaching and meditation of Buddhism and philosophy. It also has an effective role in Buddhist tantra, rituals and lifestyle, so if mandala can be connected with modern technology, it can enhance educational effectiveness. Creating an opportunity to attract learners from the globe to develop Nepal as an educational hub [13]. For the development of educational research and development as a place or system for the development of a system of coordinated use of knowledge from a spiritual center to a wider scope, as well as a storehouse of knowledge obtained from educational activities will also be in our originality, so Mandala will become a world class decentralized database for fulfilling the social needs of society 5.0 under web 3.0 as advanced blockchain in Nepali form [5,6,7,8]. The mandala will become a picture of the perimeter of preserving the world's knowledge with Nepali originality.

### **5.2 Potential Applications of Mandalas in Technology:**

In today's era, one thing of one unit of mandala can represent something that hundreds of pages of code can do. Mandala can become a global educational database and technical platform with Nepali originality, so it is necessary to develop it as a basis for social educational research and training and storage of educational materials. By localizing and technicizing education, connecting the classroom to research with the workplace, connecting the needs and experiences of the society to the classroom through direct technology, and keeping a database of the work done in it. Therefore, Mandala is the largest and most comprehensive database in the world. Although each data has its own characteristics, it is more effective than any other system where the relationship with the central unit is established automatically. The inner secret of the current blockchain technology can also be seen by comparing it to Mandalas. Mandala is a social education theory that carries a lot of meaning, especially as a single unit is autonomous, but a small part can give meaning to the universe. Mandala is the world's most suitable data record system [2].

Mandala technology should be used as a bridge to connect education to practicality, practical and industrial work in the classroom and school to industry, industry to the market. Students easily get the opportunity to learn all these activities by sitting with their teachers and directly experience every aspect of scientific research and experience. Not only that, the students put what they have learned for testing in front of everyone, and by connecting the results obtained from the test with the professional aspect, they can also test the students and their abilities experimentally from the mandala.

After the corona period, not only the widespread use of technology in education, but also the laboratory of technology has become education itself, therefore the mandala can be an easy medium to understand and present the structure of relationships and the diversification and integration of its units by the doer himself. In this way, the personality of a teacher or researcher can also be researched and squeezed in the mandala. Therefore, considering mandala as the virtual presence of the school on the one hand, mandala can be an easy way for students and teachers to enact educational activities.

### **5.3 Experiences from Applications of Mandalas in Technology:**

Based on the integration of mentioned ideology or philosophy between technology and mandalas, since 2016, the work of learning using mandalas has started in Japan. There is no need to delay the work of creating a social educational center or educational research and activity management structure (Social Learning Management (LMS) in an extended form.

The philosophical aspect of Blockchain of modern technology meets somewhere, the second but most important thing is the modernization of the library of technology and its internal relationship, Mandala can be said to be a library.

Mandala can be developed as a laboratory with the aim of digital database or server, students and teachers in education, agriculture and botany using mandala, recording videos or photos of fieldwork and placing them in the mandala, other students sitting together in class and reading questions directly through the Internet. They can learn by making connections. To do this, it is not necessary to use very expensive equipment or goods; it is a simple and cheap technique because it is done through the Internet.

### **5.4 Experiences from Applications of Mandalas in Technology:**

From the facts so far, it is clear that the development of Mandala, its spiritual and philosophical importance, and its influence on civilization and culture is clear. This alone does not make the contemporary usefulness of the mandala worthwhile. In today's age of science and technology, only if it can be used in a timely manner, the new generation can understand its importance and justification. The use of mandalas in the present time can be explained in the following points.

- (1) To develop Mandala as a social educational resource.
- (2) Application development in personal server format to recognize the personal universe.
- (3) Creating a system that can connect from personal database to Global Star database  
(By star, it should be understood that the individual mandala is also a star of the global mandala)
- (4) Mandala LMS can be searched with a keyword from top to bottom.
- (5) Being educational research and training tools, single to multiple access, edit modify, correction and upload can be done easily.
- (6) In Modern Mandala Education LMS, we can easily perform

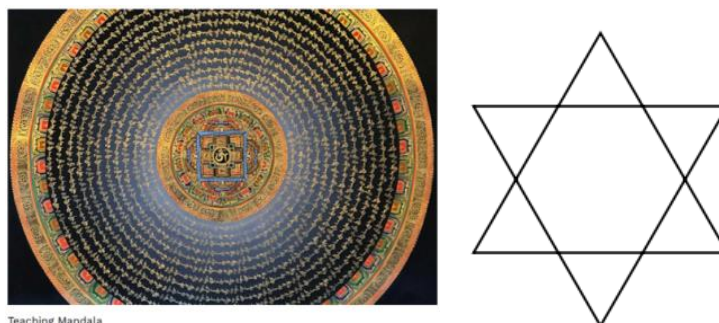
Text to Image

Audio to Video

Immigration to Experience

Resulting into a personal digital library or a personal digital album.

(7) Based on the description of the 6 items, the pricing, or marketing plan is prepared for how to use the value of your academic work or research.



Teaching Mandala

Fig. 1, a and b: Mandala

[https://royalthaiart.com/what-is-mandala-art/\[14\]](https://royalthaiart.com/what-is-mandala-art/)

Based on the philosophy of Semantic Information Structure Science, if we look at the usage in Japan, the mandala can actually be a means of providing more information and knowledge through the accumulation of minimal data in a vast database, which should be understood by ordinary citizens. By adopting this concept, the purpose of constructing the educational research structure of Mandala is Diamond Mandala Matrix Mandala.

### Vision of the Semantic Web:

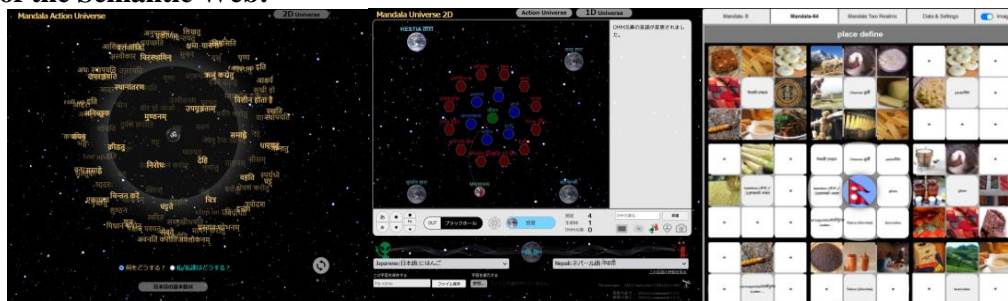


Fig. 2: a & b: vision of semantic web [15][16]

### 5.4.1 Practical Aspects of the Diamond Mandala Matrix (DMM) Purpose in Japan:

Under the program named Hokkaido Kitashiribeshi Wide Area Disaster Prevention Cooperation Project), 5 local governments, IT companies, colleges and students in Hokkaido using mandalas as a joint study tool for earthquakes, hurricanes, floods, landslides and snow disasters, research partnership work is going on.

### 5.4.2 Aoyama Gakuin University, Next Generation Agricultural Innovation:

MBA students use Mandala to exchange the latest ideas, studies and business plans in agriculture or business. And how to plan their overall future, they keep it in the mandala and proceed to give professional form to the good plans. They also do the process of choosing the subject they want to do or study in the future from the mandala at Aoyama Gakuin University.

<https://www=aoyama=ac=jp> [17].

### 5.4.3 Online Study Session:

Students of higher education learn online from professional people about the professional framework they want to study and do in the future and build a database by keeping what they have learned in a

mandala at Terakoya Mandala Cafe. This makes easy for university to create continuous learning centre [18].

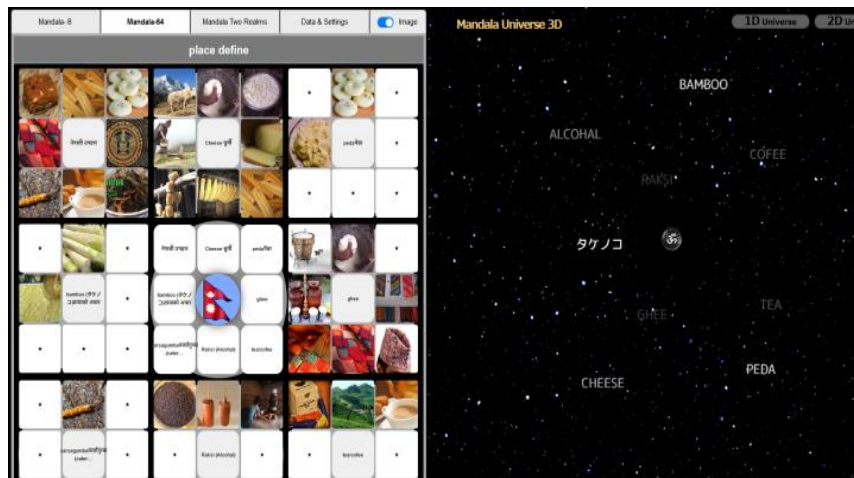


Fig. 3: a & b: online study session by NARAKI TAKAHIKO

**5.4.4 Agriculture in Mandala:**

The Kyoto college of graduate studies for informatics, KCGI, inviting research guests with various themes such as Agriculture , Separate Hypothesis (Smart Agriculture) Agriculture technology and much more etc., classroom study + teaching time + discussion time all in addition to making a report in the mandala, they will read from the experts and watch live conversations and videos directly from the workplace to the classroom and prepare the report in the mandala for everyone to see, learn how to use and develop technology in agriculture [19,20].



Fig. 4: a & b: mandala in agriculture [19]

**5.4.5 Minokamo City, Gifu Prefecture:**

In the project named ``Minokamo City, Gifu Prefecture'', the high school students of Gifu area, with the involvement of the local mayor, (Creating a forest where you can see the stars\_) named tree planting, tree protection and forest making programs by growing seedlings, will also learn from mandalas, discuss and test and The training research materials are done by the mandala.



Fig. 5: Presented at the forest project (by Seichiro Aoki)

[https://capconferences.org/2022/\[21\]](https://capconferences.org/2022/[21])

**5.4.6 Creation of Dojo Hachiya Persimmon Manual Target:** In the project named: Creation of Dojo Hachiya Persimmon Manual Target, Mandala is used to create a manual for the drying technique of the production of local persimmons (Halui), a traditional culture of Minokamo City that has continued since the Heian period, a craftsmanship technique. Because, this technology was a challenge for the farmers to transfer the technology. Using the digital mandala to (formalize) farmers' knowledge and imagination, the mandala has been used as a manual for young workers who want to transfer technology to a new generation.



Fig. 6: Online mandala session

[https://www.app.mandala.works/session-collabo/c413e77c-f3ff-4cd0-94af-03af1170e4d8\[22\]](https://www.app.mandala.works/session-collabo/c413e77c-f3ff-4cd0-94af-03af1170e4d8[22])

**5.4.7 Corporate Training Using Mandalas:**

World Heritage Shirakawa-go, Minokamo City), Japan's old town promotes corporate training using mandalas with local government, company employees, and students on how to preserve and use technology that works in accordance with the goals of sustainable development, Shirakawa -Go and Minokamo discuss what we can do with the community as individuals and professionals about the city's attractions and problems, focusing on improving the city's image and focusing on fieldwork, interacting with local people. Online after 1-2 weeks of training, what kind of inspiration did you get from the local people during this training, what do I want to do in the future, what do I want to do as a business person, what do I want to do as a member of the society, etc. Therefore, not only the educational aspect of Mandala is becoming more and more popular in the application of industrial development.



Fig. 7: mandala click from Aoki Seiichiro

### 5.5 Empirical Research on Mandalas:

The Kyoto college of graduate studies for informatics) KCGI “Next-generation agricultural information science”, (Analysis of Practical Examples of a Real-Time Online Class on Agriculture in Space, Using the Collaborative Learning Tool “Digital Diamond Mandala Matrix”) Likewise, the shape and history of the universe at Kansai University (Kansai University "An Analysis of Practical Example in Real-Time Online Classes of Fundamental Course for the Universe in a Flipped Classroom Format Using Digital Diamond Mandala Matrix") and Osaka of Science and Technology In the university (Osaka University of Science and Technology) a collection paper has been published.



Fig. 8: Mandala primitive [23]

- (1) Presented at KCGI Next Generation Agricultural Informatics OCCE2021 <https://www.ifip-tc3.org/occe-2021/>
- (2) Kansai University "Space and History" (real-time online class) <https://wcce2022.org/>
- (3) Osaka University of Economics "Introduction to Physics" "Modern times and Physics" (face-to-face classes) <https://www.facebook.com/TasteLifeOfficial/videos/making-dojo-hachiya-dried-persimmons-in-japan/589449118257490/>

### 5.6 Web 3.0 Implications through Mandala:

The term "Web 3.0" has been attracting a lot of attention as a representative of the concept of time. It has the potential to bring about significant changes not only in the digital world but also in various other fields. With the advent of distributed internet based on blockchain technology, unprecedented ideas will be necessary in the marketing field as well.

Now, the wave of change referred to as "Web 3.0" is growing, often called the "Age of Ontology." When considering the belief that social development will continue to progress through five stages beyond 2030, we must also explore the implications of web 3.0 and its role in society. As robots are expected to become an integral part of future society, they will rely on local time, situational assessments, and environmental suitability to perform their tasks. To accomplish these tasks, robots will need to draw from a combination of AI's local database and their own internal data. Decisions will not be made by a central server, but rather through a locally or organizationally based database. In the context of local digital transformation, Mandala refer to a system where all aspects of social and digital



work are brought together under one umbrella. This includes coordination between individuals and data units within a network, with all data being relations while each unit remains autonomous. This approach, as envisioned by the Mandala Digital System, allows for easy organization and management of data across multiple languages, locations, and time zones by multiple users. Additionally, it enables users to easily share data, contact other users, and make new discoveries as required. This type of digital system can be customized to meet the needs of individual users and can be expanded to cover a social digital range or even the entire universe, as envisioned by version 3.0 in the future.

## **6. CONCLUSION :**

Mandala is an integral part of Buddhism, culture and philosophy. In the development of civilization, the influence of mandalas can be seen on various topics from the origin of the universe to daily life. From the ancient times to the present, it seems that the art and subject of the mandala have been equally reflected in the culture, customs, and manners, political and social fields. With the development of technology, the practice of using ancient knowledge, skills and methods in an age-old manner has started to develop. Especially in the fields of literature and language, although this practice has been going on for some time, it is now necessary to use the ancient knowledge and skills in technology as well. In this regard, Japan is benefiting a lot by using the structural method of mandala in educational activities, while Nepal, which has made a significant contribution to the origin and development of mandala, should also be able to benefit by using it in educational and professional fields. The Digital Mandala LMS is being applied in fields such as digester management, student learning management, and agriculture business management. Users can learn or use the system in real-time or offline mode. If users want to have a real-time experience while using the internet, the data collection would be in real-time, which is possible with the Digital Mandala System.

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