

Dialogue Between Religion and Technology: Case Study of Fo Guang Go

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Abstract

The use of technology to recreate and enhance religious experiences has been increasingly present nowadays. An important Buddhist organization based in Taiwan, Fo Guang Shan, practices Humanistic Buddhism. Its founder, Master Hsing Yun, is famous for his use of technology in Dharma propagation. The purpose of this study was to investigate the case of Fo Guang Go mobile application sponsored by Fo Guang Shan Monastery and to gain a better understanding of how religious experiences were recreated and perceived. So far, Fo Guang Go has undergone three major iterations. Three major research questions guided the design of this study, including: (1) What functionalities are included in Fo Guang Go? How do they evolve over the iterations? (2) What are the ideas and intentions of Fo Guang Go and their relation to Dharma propagation? and (3) How do users perceive Buddhism in Fo Guang Go? Qualitative interviews were adopted as the major research method. Participants were recruited, including the director of the monastery, one information officer, and two users. In addition, video clips and presentation notes on Fo Guang Go were also collected for further analysis. The research results indicated: (1) The drive for iterations evolved from presenting tourist information to attracting young people and later to establishing religious practices; (2) Technology was regarded as a convenient tool for Dharma propagation, and the technology-mediated experiences were carefully crafted to fit religious teachings; and (3) Fo Guang Go was perceived as informative and comforting and made Buddhism approachable to the public.

Keywords: Religion and Technology, Fo Guang Go, Dharma Propagation

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Introduction

The use of technology to recreate and enhance religious experiences has been increasingly present nowadays. For example, people used to go to temples to worship gods and ask for signs. Nowadays, people watch sermons on the internet and worship gods via mobile applications. Cutting-edge technologies such as artificial intelligence are adapted and become means of Dharma propagation. In Beijing Long Chung Temple, Xian-er Robot, empowered by the technology of artificial intelligence, is responsible for welcoming tourists and answering questions.

Fo Guang Shan is an international Chinese Mahāyāna Buddhist organization founded in 1967 by Master Hsing Yun. The monastic order practices Humanistic Buddhism. The headquarters, Fo Guang Shan Monastery, is the largest Buddhist monastery in Taiwan. Master Hsing Yun promotes Humanistic Buddhism and emphasizes keeping up with the times. He is known for his efforts in the modernization of Chinese Buddhism. Master Hsing Yun plays a pioneering role in introducing records, slides, broadcasts, TV, and the Internet into Dharma propagation. In Fo Guang Shan Buddha Museum, there is even a 4D movie theater playing the life story of the Buddha.

Buddhism and Technology

Buddhism especially Mahāyāna Buddhism has a long tradition of holding science and technology in high esteem. According to the Buddhist scripture, Buddhists should diligently study five sciences. The five sciences include the science of language, the science of logic, the science of medicine, the science of fine arts and crafts, and the inner science of spirituality. The knowledge of the five sciences is believed to have to do with the ability to serve the needy masses altruistically. Master Hsing Yun took the Buddha as an example to illustrate the relationship between Buddhism and technology and said,

When the Buddha was young, he studied the five sciences. After he became a monk, he visited various teachers and ascetic monks. Because the Buddha knew the worldly law and the eternal law, he was able to teach and transform people, give medicines to the sick, and relieve their physical and mental afflictions. (Shih, 1999)

The relationship between Buddhism and technology is rather complementary and cooperative. Veidlinger (2017) claimed, “Buddhism has long been considered a religion that is more amenable to scientific ways of thinking than many others.” He suggested that Buddhism focuses on techniques that can be scientifically investigated. From a Buddhist perspective, Buddhism is the subject and technology the object. The use of various technologies seems to be taken for granted on religious occasions as long as they can assist in the implementation of the Buddhist teachings. Ma (2005) mentioned that Buddhism regards technology as a way of Dharma propagation, convenient living, and validating Dharma.

In addition to the fact that technologies are used in the context of Dharma propagation, Master Hsing Yun believed that Buddhism can guide the development of science and technology. He said,

Looking at science from the standpoint of Buddhism, Buddhism is actually a beacon that guides science. In Buddhist teachings, there are many profound ideas and concepts related to the spiritual and material world, which can provide ideas and directions for the

development of scientific research. The more developed it is, the more it will prove the rationality and authenticity of Buddhism. Therefore, the advocacy of Buddhism not only has no conflict with science but also provides accurate verifications in terms of scientific methods and effects. (Shih, 2008)

Founder of Fo Guang Shan, Master Hsing Yun, a major promoter of Humanistic Buddhism, devoted himself to the modernization of Buddhism. As the scripture goes, the Buddha Dharma is in the world, not apart from the world. In order to achieve this goal, he made an effort in utilizing various modern technologies, such as records, slides, broadcasts, TV, and the Internet to increase the effect of Dharma propagation.

Fo Guang Go Mobile App

In this research project, Fo Guang Go is the subject under investigation. It is a mobile application sponsored by Fo Guang Shan Monastery. Users can download it from the Apple App Store and the Google Play Store. The available language settings are traditional Chinese and simplified Chinese. As shown in Figure 1, Fo Guang Go falls into the category of tourism and is free for all users. The current version is 3.1.2 and was submitted about two years ago. In total, 27 raters rated this application, and the rating is 4.7 on a 5.0 scale. The current functionalities include three major components: tourist information, interactions, and practices.

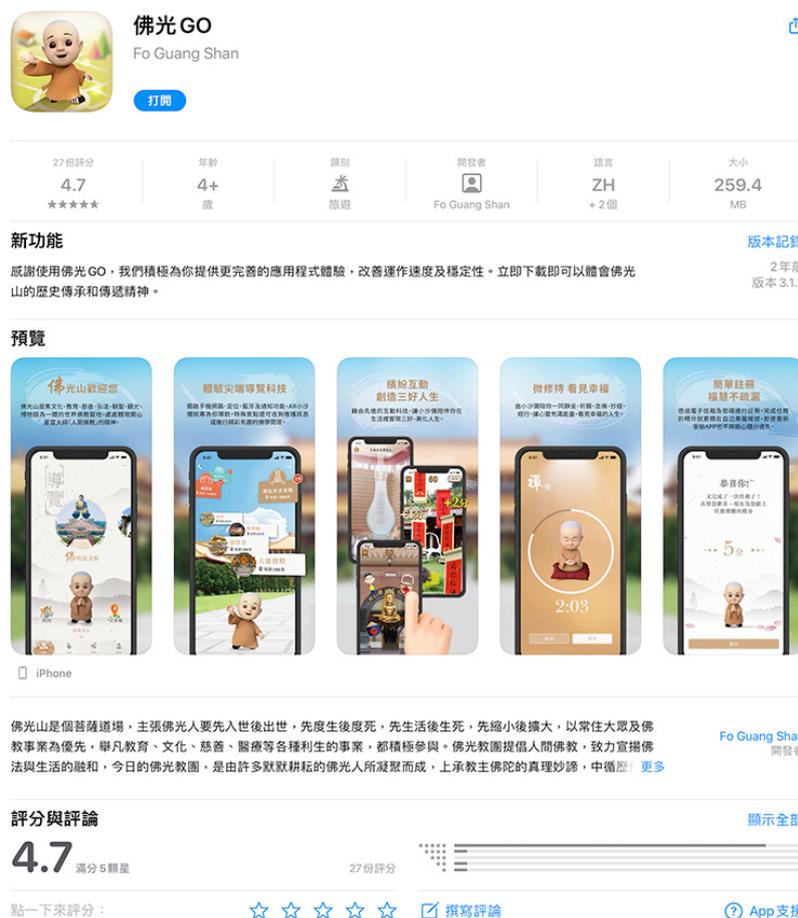


Figure 1: Fo Guang Go Introduction Page on the Apple App Store

Tourist Information

The first component of Fo Guang Go is tourist information. It presents visitor information about the scenic spots in Fo Guang Shan Monastery, Fo Guang Shan Buddha Museum, and Fo Guang Shan Satra Repository. For each scenic spot, the information covers its location, introduction, services, photo album, and opening hours as shown in Figure 2.



Figure 2: Tourist Information

In order to enhance visitor experiences, the technology of augmented reality is adopted. With the assistance of Bluetooth, Geo AR (location-based augmented reality) is initiated when visitors get close to geo-based markers attached with interactive and digital content. This cutting-edge technology allows visitors to navigate the surroundings and provides guidance on their tours.

In addition, interactions are designed for specific locations. For example, the Great Compassion Shrine is embedded with two interactions, Buddhist Quiz and Dharma Water. While touring the site, visitors can participate in these two activities to improve their understanding of Buddhism and learn Buddhist practices.

Interactions

Interactions are activities that visitors can carry out while they are visiting Fo Guang Shan or at home. Interactions include AR Post Card, AR Camera, Interactive Games, and Dharma Words. AR Post Card and AR Camera are mainly for visitors to use on-site. They can take pictures of the scenes along with the animated monk.

Interactive games are games embedded with Buddhist teachings. Different from typical computer games, these games are specially designed to teach Buddhism. For example, Little

Monk Run is a game similar to Temple Run, in which players need to grab lotus flowers (good merits) and avoid bad desires (stones) in order to win the game as shown in Figure 3.



Figure 3: Little Monk Run Instruction Page

Dharma Words is an activity similar to drawing lots when people visit temples physically. Different from drawing lots, Dharma Words is facilitated by technology and can randomly select good words for users. The good words fall into six categories including career, health, virtue, study, family, and doing things. This activity is for users to read good words to encourage themselves or to send the good words in the form of photos to others via email or social media.

Practices

Practices are the latest development and include religious activities such as Prayer, Meditation, Chanting the Buddha's Name, Walking Meditation, and Sutra Transcription. These activities are mainly for visitors to carry out at home. Different from Buddhist daily practices, these activities are facilitated by technology. Users can get easy access to sutras and timers. In addition, Fo Guang Go will keep track of their progress. Figure 4 is the demonstration of Chanting the Buddha's Name. There are various sutras for users to choose from. As they press the play button, audio will be played, and users can chant with the audio with the assistance of the timer.

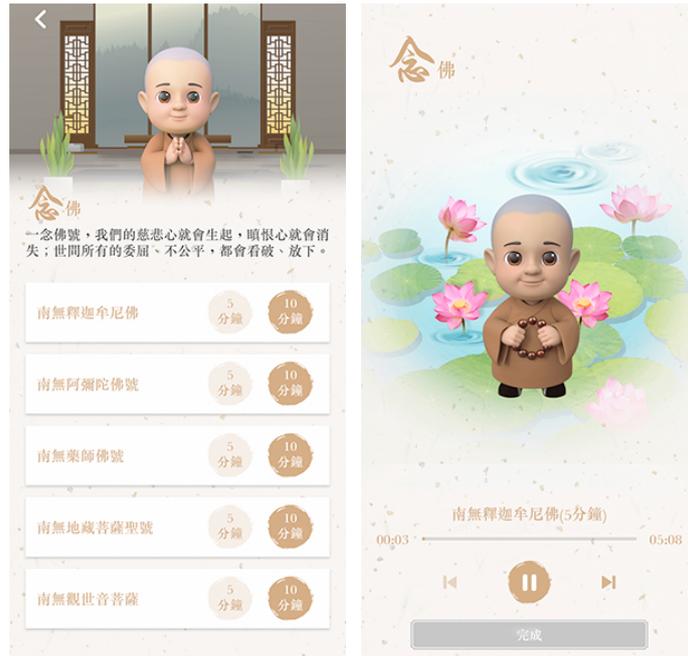


Figure 4: Chanting the Buddha's Name

Sutra transcription is a popular practice done by a lot of Buddhists. Some temples even print sutras for followers to transcribe. The origin of sutra transcription can be dated back to the Han Dynasty. At that time, the circulation of Buddhist scriptures relied on manual transcription with paper and ink. The style of transcription was deeply influenced by Chinese calligraphy and became part of the culture. Followers would transcribe sutras using various calligraphy styles. Buddhists believe that sutra transcription has a lot of good merits and can calm the body and mind easily (Shih, 1997). In Fo Guang Go, sutra transcription can be done easily. Without the preparation of paper, ink, and brushes, users can select their favorite sutras and use their fingers to write on the screen of mobile phones as shown in Figure 5.



Figure 5: Sutra Transcription

Methodology

The purpose of this study was to investigate the case of the Fo Guang Go mobile application in order to gain a better understanding of how religious experiences were recreated and perceived. Qualitative interviews were adopted as the major research method. Participants were recruited, including the director of the monastery, one information officer, and two frequent users. Semi-structured interviews were conducted with a set of guiding questions. Each interview lasted approximately one hour. The interviews were later transcribed and subjected to thematic analysis. In order to gain a broader understanding, video clips and presentation notes on Fo Guang Go were also collected for further analysis. Three major research questions guided the design of the study, including: (1) What functionalities are included in Fo Guang Go? How do they evolve over the iterations? (2) What are the ideas and intentions of Fo Guang Go and their relation to Dharma propagation? and (3) How do users perceive Buddhism in Fo Guang Go?

Results and Discussions

RQ1: What functionalities are included in Fo Guang Go? How do they evolve over the iterations?

Fo Guang Go originated from an encounter between the director of the Monastery and the CEO of a computer game company in 2015. In November 2015, the CEO came to Fo Guang Shan for a visit. He hoped to turn technologies such as online games into an educational method to benefit students. The director of the Monastery felt that the CEO agreed with the teachings of Humanistic Buddhism. At that time, Fo Guang Shan would like to build a touring system for the whole campus, and the CEO's offer of help just came in time. During the development process, they often communicated with each other in order to make the application fit the need of Fo Guang Shan.

Fo Guang Go was first launched in 2017. There were three major developmental stages. Stage one was the trial period when Fo Guang Go was first implemented as a touring system for Fo Guang Shan. Stage two was the attraction period when interactive games were added to make it appealing to people, especially young people. Stage three was the practice period when Buddhist practices were introduced to provide in-depth religious experiences.

Stage 1: Trial Period

The main purpose of the first version was to enhance the visitor's on-site experience during the Chinese New Year. During the Chinese New Year, a lot of people came to Fo Guang Shan for sightseeing. With the aid of the application, visitors could receive tourist information and enjoy interactive games while visiting specific scenic spots. In the first version, the technology of Geo AR was a major attraction. The application instructed users to turn on Bluetooth and the positioning service of the device as shown in Figure 6. When they approached certain spots, visitors could receive the tour information and participate in the activities of various scenic spots. After collecting points in the activities, visitors could even redeem souvenirs.



Figure 6: Beacon Instruction Page

The first version of Fo Guang Go was well-received by the visitors during the Chinese new year in 2017. The director of the monastery was deeply impressed by how one interactive game attracted a young couple to stay in the monastery. He said,

Then one coworker took a picture and showed it to me. At that time, I did not know what she meant by the picture. She said that the family in the photo consisted of three members: Father, Mother, and Kid. The parents were playing the AR game of catching lotus flowers and forgot the existence of the child. When I heard this, I was very curious. It never occurred to me that the game designed by Buddhists could attract this young couple so much that they even forgot the existence of their kid.

As nowadays more and more young people are moving away from religion, Fo Guang Shan viewed this application especially gaming as a bridge between religion and young people.

Stage 2: Attraction Period

Interactive games were seriously implemented in the second version. In version one, there was only one AR game for visitors to catch lotus flowers. In version two, five interactive games were added including Receive the Great Compassion Dharani Water, Catch Master Hsing Yu's Calligraphy, Build the Buddha Statue, Little Monk Run, and Little Monk Spring Festival Couplets. In order to distinguish themselves from the common computer games, the design of these interactive games had a strong tie with Buddhist teachings and practices. For example, Build the Buddha Statue is a game for users to collect and move building materials to the construction site in order to build a big Buddha statue as shown in Figure 7. It is a game for users to experience the difficulties encountered in building Fo Guang Shan Monastery.



Figure 7: Build the Buddha Statue

Fo Guang Go had a formal debut in the Chinese new year in 2018. The monastery encouraged visitors to download Fo Guang Go while they were touring Fo Guang Shan campus. Due to the promotion, the number of downloads reached 10,000. Though Fo Guang Go was popular and well-received when visitors came to Fo Guang Shan, there were still problems. The first problem was that the usage of the application dropped after people left. Fo Guang Go did not attract users to use them on a daily basis. The director felt that the attraction of technology was short-lived. Second, interactive games provided limited religious experiences. More religious activities were needed for people to have a better understanding of Buddhism. In order to solve the above problems, the development team decided to offer religious activities that people could do after they left Fo Guang Shan.

Stage 3: Practice Period

In the third iteration, religious practices were added to the application. Widely observed Buddhist practices such as meditation, prayer, and sutra transcription were included in Fo Guang Go. These activities were incorporated into the application and formed a new category called Practices. In total, four religious practices were implemented; they were Prayer, Meditation, Chanting the Buddha's Name, Walking Meditation, and Sutra Transcription. All these activities are mediated by technology. As long as users have the application with them, they can perform Buddhist practices anytime and anywhere.

RQ2. What are the ideas and intentions of Fo Guang Go and their relation to Dharma propagation?

Fo Guang Shan practices Humanistic Buddhism and emphasizes the importance of keeping up with the times. Its founder, Master Hsing Yun, is famous for his use of technology in Dharma Propagation. Technology is regarded as the conduit of culture including religion. The purpose of using modern technologies is to let people know about Buddhism and then understand Buddhism. Two major themes emerge as Buddhism encounters technology. The

first theme illustrates the use of technology in Buddhism, and the second theme discusses the formation of technology-mediated religious experiences.

Theme 1: First entice with desire, then lead into the Buddha's wisdom

Fo Guang Go is the first touring system introduced into Fo Guang Shan. It has undergone three major stages: trial, attraction, and practice. The original intention was to enhance visitor experiences. In the beginning, it was functional in the sense that the purpose of its existence was to help tourists in their visits. But after witnessing the potential of the application among young people, the development strategy was changed into attracting people to use it. As said in the Buddhist scripture, "First entice with desire, then lead into the Buddha's wisdom." Thus, in the second stage, interactive games with Buddhist teachings were implemented in Fo Guang Go. After users got familiar with the application, in the third stage, religious practices facilitated by technology were introduced for people to have a better understanding of Buddhism.

The director of the monastery was enthusiastic about the use of technology in religion. During the three development stages, he was able to see the potential and opportunities of Fo Guang Go and led its development in the direction of Dharma propagation. He explained the reason for introducing interactive games into Fo Guang Go and said,

One of our ideas for implementing games at that time was just to entice people with desire, and then lead them into the Buddha's wisdom. Gaming is not my real focus. My real intention is to get people to know Master Hsing Yun's Humanistic Buddhism. I want people to know that in fact Buddhism can be found in all walks of life and in all places.

According to the director, gaming was like a lure to attract people to know Buddhism. He went further and explained what technology was like. He said,

After we achieve our goals, we don't need to care about the means. We treat all kinds of technological devices in the game just as a way to help guide people into Buddhism. In Buddhism, it is what we called the finger that points to the moon. So all the technologies employed are just fingers pointing to the moon (the heart). This is the intention that I originally planned. Otherwise, it is no different from others.

In the context of Fo Guang Go, technology served as a convenient tool to achieve the goal of attracting people to know Buddhism.

Theme 2: Design of religious experiences

The design of experiences is a major consideration in the development of Fo Guang Go. Such considerations were first revealed in its naming. The information officer said,

We hope that the application could be highly accepted by the public. But at the same time, we hope that people would not feel that the application was highly related to religion. Consequently, we named it Fo Guang Go because we would like people to associate it with Pokemon GO, which was popular at that time.

In the very beginning, the development team knew well about the kind of technology-mediated experiences that people liked and tried to comply with the interest of the public. By increasing the association with Pokemon GO, the application was likely to be accepted.

Fo Guang Go, However, was designed with the intention to propagate Buddhist teachings. In order to distinguish Fo Guang Go from ordinary applications, the technology-mediated experiences had to be carefully crafted and anchored in Buddhist teachings. In the interview with the director, he shared with us several examples of how to redesign the technology-mediated experiences to make them loaded with Buddhist teachings. For example, he transformed a popular racing car game into a game with religious meanings. He said,

When people get close to the art museum, a car racing game will be initiated. It was originally a car racing game with many obstacles. But we changed it into a little monk walking on the smooth road of life. On the road, the little monk encounters a lot of bad things like greed, hatred, and ignorance. In order to win the game, he needs to know how to get rid of greed, hatred, and ignorance. In addition, he has to carry out the three acts of goodness and four givings. When he sees lotus flowers, he has to catch them, indicating doing good things and speaking good words. When he sees stones, representing greed, hatred, and ignorance that hindered the progress of his life, then he has to avoid them.

In addition to the car racing game, the director mentioned the redesign of a VR game for visitors to experience during the Chinese new year. In order for the game to fit the Buddhist teaching, he explained how he designed the technology-mediated experience. He said,

In the beginning, I did not know what to do with the VR game. The game was full of fighting and killing and did not fit what we promoted in Buddhism. People would think the game played in Fo Guang Shan was no different from the game played elsewhere. So we kept thinking about how to solve the problem...In the game, there was a thief running out. The player was standing in the castle and holding an arrow aiming at the thief. The scenario was like what was described in the scripture, "Studying Dharma is like guarding a city, guarding against six thieves day and night." It means that greed, hatred, and ignorance would come to people all the time. The player needed to shoot the troubles one by one. But in the end, the development team told me that the idea would be too dangerous to carry out in a VR game.

The design of the technology-mediated religious experiences has to consider the capabilities of technology as well as the appropriateness of religious connotations. Even though the director was able to redesign the game to fit Buddhist teachings, the idea was unable to be carried out due to the safety issue.

Later, the VR game project was pursued by adding a device to simulate horse riding. As players would sit on the device, there was no risk of falling. The scenario was changed into horseback riding and shooting. The director had to resort to other religious connotations. He said,

As a result, the VR game became a horse-riding shooting game. We began to think about how it should be designed. In the end, we gave a definition to it. I said that this bow was called the Zen bow. Because if you want to shoot arrows, you have to hold it very firmly. This is the power of meditation. I called the arrow the wisdom arrow because without wisdom you can not get rid of the devil. This is why they were called the Zen bow and the

wisdom arrow. And this is why I entitled the game Overcoming Demons by Wisdom Arrows.

The director felt that it was an important practice for a Buddhist to overcome demons every day in order to keep a clear mind. When it came to designing the interactions in the application, the developers tried hard to build connections with Buddhist teachings. Fo Guang Go intended not only to attract users but also to provide meaningful religious experiences.

RQ3. How do users perceive Buddhism in Fo Guang Go?

Fo Guang Go has three major components, including tourist information, interactions, and practices. The two users were interviewed about how they perceived these functions and their relation to Buddhist teachings.

Tourist Information

In terms of the first component, tourist information, both of the users believed that it was important for first-time visitors and that the tourist information helped visitors obtain geographical information and gained a better understanding of the religious meaning of the locations. One interviewee said,

When I visited Fo Guang Shan without Fo Guang Go, I felt that I only had a superficial understanding of the locations. Now I have the app, I can have a basic understanding of the locations. So when I visit the scenic spots, I come to realize the meaning of the locations and know more about the geographical environment.

Interactions

In terms of interactions, Dharma Words was popular with the two users. Because of the COVID-19 pandemic, they used this function to distribute good wishes to important others and encouraged their family members to use it. As to interactive games, they felt that these games were embedded with Buddhist teaching. One interviewee said,

You can also learn some Buddha Dharma in the games. The Buddhist teachings are simple and easy to understand. As long as you try to comprehend them with your heart, you can learn Buddhist teachings about being kind, compassionate, and benevolent to others. The games also have to do with three acts of goodness and four givings. They encourage people to practice Buddhism in this direction.

Practices

As to practices, the two interviewees felt that Prayers for different occasions were comforting and meaningful. They played the audio of the prayers whenever they were free. They indicated that prayers were colloquial and easy to understand and thus could increase the understanding of Buddhism. One user said,

Prayers can increase the belief in Buddhism. Buddhism may seem difficult to understand. But Prayers simplify Buddhist teachings and make them colloquial. By listening to Prayers, people without contact with Buddhism can quickly understand its teachings.

Conclusion

The research sought to examine the relationships between Buddhism and technology by means of Fo Guang Go. Drawing from the interviews with the director of the monastery, one information officer, and two users, this study illustrated the development process of Fo Guang Go, and the strategies adopted in each developmental stage. As Fo Guang Go was a technological product serving religious purposes, the development team had to keep a balance between Buddhist teachings and technological capabilities. Therefore, they needed to carefully redesign the technology-mediated experiences to fit the Buddhist context. Such an effort was perceived by the users as expressed in their interviews. The research results indicated three major findings in correspondent to the three research questions. First, the drive for iterations evolved from presenting tourist information to attracting young people and later to establishing religious practices. Second, technology was regarded as a convenient tool for Dharma propagation, and the technology-mediated experiences were carefully crafted to fit religious contexts. Third, Fo Guang Go was perceived as informative and comforting and made Buddhism approachable to the public. The research findings highlighted the case for the integration of information technologies into Buddhist practices and would contribute to the understanding of the relationships between Buddhism and technology.

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