Joyig is the form of cursive writing used in Bhutan. It is a distinct style of writing, and has evolved for many centuries. Bhutanese write in it everyday. According to Buddhist records, there are three hundred sixty languages and sixty-four different scripts. In Bhutan, there are nineteen languages spoken in different regions. They are part of the three hundred and sixty four languages. Similarly, Joyig is also one among the sixty-four scripts. Ancient records make references to a script called Monyul Yige. Earlier, Monyul included territories between Paro in the west to Lawog Yulsum in the east. The script of the people of Monyul was therefore, known as Monyig. Joyig is not different from Monyig. They are the same. All correspondences in Monyul were written in Monyig or Joyig for centuries. The style of Joyig is based on Uchen. This would mean that Joyig developed at the same time Uchen did. Uchen is in turn, based on scripts of the Gupta period in India. The term Joyig came to be used only in later part of the nineteenth century. Earlier, it was known as Monyig or Lhoyig.

Some scholars are of the view that Denma Tsemang, one of the twenty-five disciples of Guru Rinpoche, developed Joyig in the eighth century. They argue that his handwriting is contained in the terma, treasure of Kathang Desheg Duepa, hidden by Ngada Nyangrel. At a closer look and analysis, Denma Tsemang’s handwriting is similar to Umed, and bears no similarity whatsoever to Joyig. If Joyig is one among the sixty-four different scripts, it is certain that Denma Tsemang didn’t invent it, since these different scripts were developed before his arrival. It is possible that since he was well-versed in all the sixty-four scripts, he used Joyig to write the instructions of Guru Rinpoche and hid it as treasure, since he had written in it earlier, and found it to be faster to write with. The tradition of writing in Umed had not been introduced in Bhutan that time. Even today, no Bhutanese can read and write in Umed.

Some of the treasures discovered from Tunhuang contained writings similar to Joyig. The Turkish armies have obtained a treasure text of Prajna Paramita (Sherab Nyingpo), which was written in Lhoyig. The British Museum has a copy of Lhoyig as one of its collections. This is similar to the Joyig.

Before Denma Tsemang came to Bhutan in 737 A.D, Guru Rinpoche gave initiation on Thuje Chenpo Chagchuma’i Gom De to the Chakhar
Gyelp and his people. It is definite that at that time, there existed at least one script. It must be either Uchen or Monyig.

Monyig or Joyig had been occasionally used since the 7th century. Later, Bhutanese tertön (treasure revealers) wrote in Joyig and also in Uchen Jogtshugma while they wrote down the interpretations of the dayig (sacred codes which when translated reads as ‘guide letters’) of the terma. It was from then on that many tertön used Joyig and Uchen Jogtshugma. Today, Joyig and Jogtshugma can be found in their treasure box, and sacred artefacts, retained in their residences and lhakhang. For instance, it is mentioned in the Peling Namthar (biography of Terton Pema Lingpa) that when Padma Lingpa revealed treasures in the 15th century, one well-versed writer from Bumthang Ura wrote the interpretation of the ter text in Jogtshugma.

In the 17th century, Zhabdrung and the succeeding penlop wrote all correspondences to Tibet in Umed. However, all edicts and orders issued to different lama and lopen and the people within Bhutan by the Zhabdrung, succeeding Je Khenpo and the kings of Bhutan were made in Joyig. Some of the kasho can still be seen in National Library, Thimphu and National Museum in Paro. Some of the kasho were also written in Jogtshugma. People who were good at writing Joyig enjoyed great respect. They were known as drungyig chenpo or drungyig gongma. The free style of Joyig and the skills of drungyig (secretary) can be demonstrated in every letter of the alphabet. Owing to the greater flexibility in writing Joyig, it can be written at greater speed as against Tshugyig.

Today, all schools, the Central Monk Body, monastic communities, government and private correspondences and records use Joyig. It is also used by national newspaper editors, radio and television reporters, and in keeping accounts and drafting agreements.

**Origin of Different Writings in Bhutan**

Different styles of writing developed in Bhutan at the same time Buddhist teachings first flourished. It is understood that the writing in Uchen began that time. At the same time, the writing of Joyig, Lentsa and Wartu also developed. Umed developed much later. Uchen has different ways of writing. However, the most used is Uchen Tshugma. It is possible that a different writing system existed in India before Uchen developed. For example, the writing of Arjun, a student of Lopen Ludup, on a slate, about the existence of a tooth relic of Buddha Yoedsung inside the choeten at Sha Razawog, resembles lentsa. Considering that the letters are written based on Gupta scripts, it appears that there were a few persons who knew how to write in that Indian style.
There is no written evidence about the nature and style of language and letters Guru Rinpoche used when he taught the Dharma to the ministers and people of Chakhar Gyelp, after he visited Mon Bumthang in 737 A.D. However, it can be assumed that Chakhar Gyelp and Guru Rinpoche might have conversed in an Indian language since both of them came from India, while Guru must have taught the people in chokey. It is however, certain that manuscripts were written in Uchen Jogtsham known as Jogtshum. This is because, writing in Uchen was in vogue in Tibet for more than two generations by then. According to Bon scholars of Yungdrung, Uchen had developed even before the time of Thonmi Sambota. But he composed eight new texts on grammar. Nevertheless, since both Bhutan and Tibet are associated with Buddhism, it is certain that pilgrims and merchants travelling to Bhutan from Tibet introduced Uchen in Mon Bumthang and Paro valley.

Generally, people living in the Himalayan region need not learn the sacred six-lettered mantra of Avalokitesvara from any teachers. This mantra called Mani is inscribed in Lentsa and Wartu on stones, trees, copper and iron materials. The people in the region came to believe that these two writings are scripts of gods and nagas. Letters of Lentsa bend upwards while those of the Wartu bend downwards. Hence, the reason for considering them scripts of gods and nagas. These two writings had developed in Bhutan since ancient times.

**Origin of Joyig**

Guru Rinpoche visited Bhutan three times. His first visit was in 737 A.D to Mon Bumthang from Nepal. His second visit was to exile the Tibetan prince Khikharathoed to Khenpajong. During his third visit, he was accompanied by Denma Tsemang. He was the best among twenty five students of Guru Rinpoche. He was thus sent by the Tibetan king, Thrisong Detsen to accompany Guru Rinpoche to Mon Bumthang. This was a token of the King’s gratitude to Bhutan for having supplied thousands of loads of deyshog papers, which was popular for its durability, in writing the Buddha's teachings and commentaries at Samye monastery. Since Bhutan needed someone well-versed in writing, the king sent Denma Tsemang.

Besides his mastery at writing at great speed, he was also learned in all the thirty four different scripts. Thus, while Guru Rinpoche was teaching, he would write them down. Some of these writings were hidden as treasure, some given to the king, ministers and devotees of Bumthang as sacred relics, and some, he took with him to Tibet. Hence, the longhand used by Denma Tsemang came to be referred to as Lhoyig by the Tibetans. This is known as Joyig in Bhutan. Therefore, it is evident
that Joyig was the main form of writing during the time of Guru Rinpoche, Lotsawa Denma Tsemang and King Sindhu Raja. Joyig is one among the sixty-four different scripts, and Denma Tsemang was well versed in all of them before his visit to Bhutan. While in Bumthang, he wrote all of Guru’s teachings in Joyig. Since Denma Tsemang was exceptionally good at longhand, he wrote Joyig in a way that is very distinct. Then on, Bhutanese wrote by taking Denma Tsemang’s writing as the standard. Styles emulating the writing of Denma Tsemang gradually spread into different parts of the country.

**Analysis of the Development of Joyig**

Many scholars argue that Lotsawa Denma Tsemang first composed Joyig. Since Monyig or Joyig belongs to the sixty-four different scripts, it is not possible that Denma Tsemang would have composed it. Joyig cannot be excluded from the sixty-four different forms of writing. Therefore, it is doubtful to attribute the first composition of Joyig to Denma Tsemang. Nevertheless, it is certain that he was one of the persons in Bhutan who wrote Joyig with extraordinary skills. While Joyig was used in Bhutan much earlier, it became popular after Denma Tsemang’s visit. The confusion therefore, arises from the misinterpretation between the popularity of Joyig after his visit and the assumed authorship. Since the people of Mon were already familiar with Monyig, Denma Tsemang wrote the teachings of Guru in Joyig so that they easily understand the writings. Hence the possibility of increased popularity of Monyig. Writing Guru’s teachings in Uchen would have demanded longer time; and the people would not have understood if they were written in Umed.

It is possible that when Uchen was first introduced in Bhutan, some people found it difficult to imitate the style and hence, gradually developed a style of faster writing by adopting surmounted and subjoined letters in addition to the alphabet and vowels. Around that time, there lived a person called Gomchen Haminatha in Bumthang, who was skilled in traditional arts and crafts; there also there lived Monmo Tashi Kheudon, daughter of Hami Rao, King of Khoma located in Kurtoed valley. It has been proven that they used Monyig, which has come to be known as Joyig today. Since Gomchen Haminatha excelled in all traditional arts and crafts, it would not be possible that he did not use Monyig. He went to Samye attending to Guru Rinpoche and received teachings and initiations as one of Guru’s twenty-five renowned disciples. It was him, who designed treasure box to store Guru’s sacred treasures. The Tibetan King, Thrisong Detsen gave him the teachings of the deity Tandin called Namchag Mei Khorlo as his choekel (share of the
Dharma). This is mentioned in the book, Rinchen Terzoed. It was a teaching of Guru Rinpoche given to free King Sindhu Raja from illness inflicted by the deity Shelging Karpo and eight different types of his followers.

Monmo Tashi Kheudon was one of the five consorts of Guru Rinpoche. The others are: Lhacham Mandarava and Kala Singha from India, Shacha Deva from Nepal and Khando Yeshey Tshogyal from Tibet. Monmo Tashi Kheudon was born at Khoma in Kurtoed. When she was herding cattle, she met Khando Yeshey Tshogyal, who was meditating at a secret cave as instructed by Guru Rinpoche. She offered milk to Yeshey Tshogyal, who realized that Monmo Tashi Kheudon was also a khandom, and offered her to Guru Rinpoche, who accepted her by saying, "I got a girl (Khomo) I needed." The village then came to be known as Khomoche. Today, it is known widely as Khoma. The people there say that since then, a girl gifted with celestial signs of khandom is continuously born in the village. Guru then stayed at Khoma bridge subduing the evil spirits. He also hid many treasures. Later, Terton Ratna Lingpa revealed from there a phurpa (ritual dagger) of the deity Karma Heruka. This dagger can still be seen at Karphu Gonpa.

Before Lotsawa Denma Tsemang visited Bumthang, there lived a person called Kunnon, who was a minister of King Sindhu Raja. It is highly possible that there was a literature on arts, crafts and medicine written in Monyig or Joyig since it was absolutely necessary for the livelihood of the people of his time. Hence, it can be fairly assumed that Joyig would have developed much earlier.

Lotsawa Denma Tsemang was born at Denma in Kham, Tibet. He was named Tsemang. Later, when he went to Samye Lhasa, and became a disciple of Guru Rinpoche, the name of his birthplace was appended before his real name. Since he was well versed in different scripts, he was one of the many renowned translators and scholars from Tibet and India, who were engaged in translating the teachings of the Buddha at Samye. The three people that excelled that time were Denma Tsemang, for writing at great speed, Loden Gyalpo, for writing in excellent hand, and Kawa Peltseg, for great clarity. Out of the three major and three minor translators, Denma Tsemang was one of the best translators among the major translators. Thereafter, he came to be known as Lotsawa Denma Tsemang. Some scholars believe that he was born in Mang Yul. This is a misplaced view. During the time of King Sindhu Raja, a child born at Gungthang Mangyul also excelled at writing after he went to Samye at age eight, attending Guru Rinpoche. This person, who is confused with Denma Tsemang, is different.
Origin of Names: Monyig, Lhoyig, Joyig, Juyig, Joyig and Jogtshum

Since times immemorial, Bhutan was known by many names. During the time of Lord Buddha, Bhutan was known as Khawa Ridragi Yul, and the people, Ridragpa. After the first century, Bhutan acquired the name Mon Yul, and the people, Monpa. Geographically, Bhutan is located to the south of the Himalayan range, and thus the name Lho (south) and the people, Lhopa. In the 12th century, Tibetan physicians came to Bhutan to collect medicinal herbs, which were abundantly available. Hence, they called the country Menjong Lha’i Zhingsa. In the 17th century, Zhabdrung Ngawang Namgyal came to Bhutan and introduced the Drukpa Kagyud tradition of Buddhism. The name of the Buddhist tradition he followed was given to the country. Therefore, the name, Druk Yul, and the people, Drukpa. Since there are many Juniper growing in abundance in all parts of the country, the name Lho Tsenden Keypai Jong was given. While the name of the country changed depending on factors mentioned above, the form of writing, Joyig, however, did not change.

But, the same scripts assumed at least five different names. In ancient times, it was known as Monyig. Except for Uchen and Joyig, no other forms of writing developed that time. Hence, the people in the Himalayan region called it Monyig. Since Uchen already existed in Tibet for a long time, it would not have been called Monyig. As such, it is definite that Joyig was referred to as Monyig. The evidence for calling Bhutan, Mon in olden days, is found in old manuscripts. The names such as Mon Paro and Mon Bumthang appear in those manuscripts.

The term Lhoyig was used instead of Joyig for the form of writing in Bhutan, since the country was located south (lho) of the Himalayas. This was the form of writing used by people of that region, who constituted of three valleys, three hidden lands, three regions, five provinces and four cliffs. The Tibetans were the people, who referred to the writing as Lhoyig after the 8th century. Guru Rinpoche had mentioned in scriptures he had hidden, "Those who practice the Dharma after me/ They should go to the hidden valley of Lhorong/ Turn southward to Lhorong to seek your destination." It can be inferred then that before the arrival of Guru Rinpoche in Tibet, Bhutan was called Monyul, not Lhoyul. In the later part of the 8th century, the term lho was prefixed to Mon, and hence, the names such as Lho Mon, Lho Rong, Lho Jong, Lho Yul and Lho Lung. The form of writings of the people of the region was called Lhoyig for a very long time. For instance, even during the time of Gongsa Ugyen Wangchuk, many Bhutanese monks went to monastic institutions in Kham and other parts of Tibet to learn philosophy and sciences. People from Bhutan sent cash and other sacred items through these monks to be
offered to learned lama in Tibet in dedication to their deceased parents and relatives. The monks listed these items in Lhoyig. When these were presented to the lama, they had to ask the monks to read the lists since they were unable to read Lhoyig.

In the middle of seventeenth century, the Bhutanese scholars who based their Joyig on Uchen wrote at great speed that the term Joyig came into being for the first time. Today, the term Lhoyig or Monyig is no longer used. It is the form of writing that is unique to Bhutan since ancient times. If such a form had developed in Tibet, there must be a specific name. For instance, Umed written at a greater speed was known among the Tibetans as Chugyig. The people of western Bhutan pronounce Joyig as Jugyig is or Juyig. However, there are only a few people who refer to Joyig as Jugyig.

Uchen, written a little faster is called Jogtshugma. All those who can read and understand Uchen face no difficulty in reading Jogtshugma. However, Joyig Chugchen can be read only by a few Bhutanese scholars, who are well versed in different scripts. When students begin to learn Joyig, they begin with Jogtshugma. Umed also developed in Bhutan only after the 17th century. So, all correspondences between Bhutan and Tibet were written in Umed. If the correspondences were written in Joyig, the Tibetan scholars were unable to read them. Some of the Zhabdrung's kasho were in Umed. Samples of such kasho can still be seen today. While most of the correspondences with Tibet were written in Umed, kasho issued to Bhutanese people were written either in Jogtshugma or Joyig.

**Development of Joyig in the Later Half of the 19th Century**

In the later half of the 19th century, there lived a well-known person called Lopen Gangchen from Kheng region. He was also known as Kuenga Pelden. He was highly learned in traditional arts and crafts. Besides, he excelled in painting and calligraphy. He was later appointed as the secretary to the 51st Desi, Jigme Namgyal. He was also responsible for writing down the accomplishments of Jigme Namgyal. He trained young and good clerks in writing Joyig in the best possible way. It is to his credit that Joyig developed and, came to be known so during his time. Before this, it was known as Monyig or Lhoyig.

Later, during the reign of King Ugyen Wangchuk, there was another person called Drungyig Tshering Ngodrup, who also excelled in writing Joyig. He was from Manjabi in Kurtoed. At a young age, he went to study at Mindroling Dratshang; there he mastered philosophy and sciences. After returning to Bhutan, he became the personal secretary to King Ugyen Wangchuk. He was responsible for drafting many of King Ugyen
Wangchuk's *kasho*, and other official and private correspondences. Some of the *kasho* written can still be seen today. A comparison between Drungyig Tshering Ngodrup's Joyig and the Joyig written today will clearly reveal the type of changes Joyig had undergone in style and form. Many scholars, who were good at Joyig also lived during the reign of King Jigme Wangchuk. He had five principle private secretaries, who included Dasho Kezang Dawa, Gaydon Thinley, Tangbi Kezang, Ura Yeshe Wangdi and Sonam Peljor. All of them were exceptionally good Joyig writers, writing with speed and clarity. Dasho Kezang Wangchuk popularly known as Shingkhar Lam from Ura, served as the private secretary to the late King Jigme Dorji Wangchuck.

Gongsa Ugyen Wangchuk's secretary Tshewang Ngodrup trained Zhongar Dzongpon Kuenzang Wangdue (1915-1967) and his two younger brothers. Later, Zhongar Dzongpon Kuenzang Wangdue became excellent at writing Joyig. Since he was not satisfied at the Joyig skills of his secretaries, he personally wrote many of the correspondences. Some of his hand written manuscripts can still be seen today. His younger brother, who was an expert in the thirteen traditional arts and crafts, trained many people from Tsenkhar.

Zhongar Dzongpon Kuenzang Wangdue's father Dorji Peljor was highly skilled in performing Boedcham, and in traditional etiquettes. He started Boedcham in the different *dzong*. Further, he was responsible for re-establishing Boedcham and etiquettes in Trongsa Dzong. During the reign His Majesty Jigme Wangchuk, all the chief mask dancers in the country received trainings from him. Due to him, Boedcham and traditional etiquettes are firmly established today.

Earlier, the writing of Joyig was not practised by drawing lines on papers. However, those people who learnt Joyig during the time of Zhongar Dzongpon Kuenzang Wangdue, practiced using lines drawn to scale. He trained his own son Thinley, who possessed sound knowledge in art, philosophy and calligraphy. His writing is elegant, clear and legible. The late king, Jigme Dorji Wangchuck appointed him *gaydon*. Since then, he came to be known as Gaydon Thinley. He occupied an important post in the service of the King. Later, Dasho Shingkhar Lam learnt Joyig from Gaydon Thinley. He was also appointed as the private secretary to the King. Among many people in the 20th century, who came to write Joyig combining the three qualities of speed, style and clarity, some of the most well-known were Lam Norbu Wangchuk from Tshangkha, Trongsa, Lopen Gonpo Tenzin from Chumey, Bumthang, Lam Pema Tshewang, Dasho Tenzin Dorji from Galing, Tashigang, Lam Tenzin from Ramjar, Trashi Yangtse and Lam Kuenzang Wangdue from Bartsham, Trashigang.
When Simtokha Rigzhung Institute was established in 1961, Lam Pema Tshewang from Bumthang was appointed as the principal. His students include scholars such as Tenzin Loden from Chungkhar, Pema Gatshel, Yonten Phuntshog from Tsakaling, Mongar, Dasho Sangay Dorji from Bumthang, and Lopen Nado from Bartsham, Trashigang.

Joyig developed during the time of 51st Desi Jigme Namgyal and his descendents, the hereditary monarchs. Officials such as drungpa, ramjam, penlop and mangap wrote correspondences either in Jogtshugma or Joyig. Records of taxes, labour contribution and store items were maintained in Joyig. There were many people by then, who knew how to write in Joyig. The dratshang and gomdey, which increased over the years, also conducted their daily Jungtsi and Zedtsi trainings in Joyig. Monks and laymonks became proficient in writing Joyig; their skills of writing developed much more. Clerks and accountants working at dzongkhag and drungkhag mainly constituted of monks and laymonks, who mostly come from the dratshang. Some of the monks attained such skills that they could even write 50 pages a day in Joyig.

Since the reign of Gongsar Ugyen Wangchuk till the third King, annual ledgers of Chathrel, and kasho were maintained in Joyig. Those clerks were proficient in Joyig. In their villages and communities, they were held in high respect as drungyig gom. Samples of their writing are available. The National Museum in Paro has 289 manuscripts of kasho and records of that time. It also has on display, kasho written by the Zhabdrung and the successive desi (civil rulers).

After 1960, when modern education system was first started, all Dzongkha subjects were written and published in Joyig. People's literacy in Joyig increased significantly. Many subjects were taught in Dzongkha by scholars, who were proficient in Joyig. Thousands of books were written and published in Joyig, and distributed in schools. Hence, the knowledge and skills in Joyig developed at unprecedented level during the reign of His Majesty Jigme Dorji Wangchuck.

The first scholars who composed materials for Dzongkha subjects that time, included important persons such as Gonpo Tenzin from Chumed Zhuri in Bumthang, Lopoen Nado, Lopoen Pema Tshewang, and Dralop Namgyal.

**Number of People Using Joyig**

As of 2003, there are more than 1,30,000 students in schools around the country. When they take lessons daily in Dzongkha, they use Joyig. Similarly, monks in Zhung Dratshang and gomdey maintain their ledgers and registers in Joyig. Besides, correspondences in government and
private organizations are also made daily in Joyig. It can be estimated that more than two hundred thousand people write in Joyig everyday.

All students have to write their examinations of Dzongkha subjects in Joyig. Dzongkha teachers use Joyig to prepare their lessons. Because of this, Joyig literacy has increased at an unsurpassed level. However, the style, form and elegance of writing Joyig have declined in comparison to those written by drunyig gom earlier. The standard is however, maintained by those in dratshang and gomdey.

Reports of news in Kuensel and Bhutan Broadcasting Service, draft proceedings of the National Assembly, draft kasho of His Holiness the Je Khenpo and His Majesty the King, correspondences in government and private organizations are all written in Joyig. Joyig is an indispensable form of writing among the Bhutanese. Students of Non Formal Education are also taught Jogtshugma and Joyig. The Ministry of Education has declared its intention of achieving complete literacy in Joyig by 2012.

During the reign of the successive desi in the 18th century, correspondences among drungkhag and lhakhang goendey of Shar Tsachogdrong, Lho Gatikha, Nub Dalikha and Jang Lingzhi were made in Joyig. For instance, during the reign of 13th Druk Desi Sherub Wangchuk, there were more than 300 Drungwog and lhakhang goendey. It is known that all their correspondences and records were made in Joyig.

Today, there are 20 dzongkhag, 15 drungkhag, 201 gewog, 17 rabdey, 40 shedra, 351 gomdey, 408 education institutes, 350 NFE centres and central monastic body of Punakha and Thimphu, who write letters and maintain records in Joyig.

**Joyig - Variation in Forms and Style**

Although Joyig has a standard style for its letters, consonants, vowels, surmounted and subjoined letters, different styles emerge depending upon personal writing skills. There are more Joyig written in the form close to Jogtshugma. There are more instances of writing kasho in Uchen in a faster hand during the time of the Zhabdrung and successive desi. Similarly, the dratshang publishes it annual calendar, which is handwritten in Jogtshugma. In the last decade of the 18th century, Joyig came to be written at greater speed and ease.

In the 20th century, office secretaries also wrote Joyig with greater ease, but clustered together with less spacing among letters. Incidentally, students of astrology and medicine write elegant Joyig at greater speed. Many calendars prepared by astrologers, and written in Joyig are still preserved in the National Library.

Joyig written in ancient times were slightly adapted from Uchen. However, surmounted letters such as Ra, La, and Sa are today, written on
lines below which the cardinal letters are written. Such Joyig can be easily read and understood. Some Joyig scholars write at great speed using Pungyig (abbreviated words) in order to reduce wastage of papers. In fact, Joyig is called by its name because of the fact that it is written at faster speed, and that Punyig is used.

The main feature of Joyig is that it can be written fast in longhand. Although Joyig has been written for centuries, it has not undergone major change in form. Joyig written in ancient times can be read with ease today. Language and letters are interdependent. But language also undergo changes. However, once the letters were composed, they did not undergo changes even after many generations. Only some letters and their forms had undergone minor changes, but their main features remained intact. Except for Sanskrit, all the other three hundred languages had undergone changes in the way they are spoken, and in ways some words are pronounced. This resulted in changes initiated in different regional dialects.

**Impact of Computers on Joyig**

Earlier, even a letter was hand written. In goendey and dratshang, texts for prayers and rituals were copied based on one principle source. There was no printing technology. Even texts published on wood blocks were first hand written before printing. Only then were the manuscripts fixed on wood blocks and carved. Since all letters and characters are programmed in computers, the number of people who can write with good handwriting is decreasing. Even those who can write do not attain the level of skill and elegance of writers of early times. As computers increase in numbers over the years, it greatly affects the calligraphic skills of the people. Computers have both positive and negative impacts on the calligraphic skills. For example, the uniformity and consistency of handwriting can be guaranteed if it were used as computer fonts. It takes lesser time to edit and make corrections. Multiple copies can be generated from a single source with a short time. The negative impact is the declining calligraphic skills. People dependent on computers become handicapped when they have no access. Should they choose to write with hand, the handwriting is bad; it also takes longer. Although a mark of education is reading and writing skills, even scholars would appear incomplete without competent writing skills.

In 1970, the Japanese government provided hundred typewriters for typing Uchen. There was however, no one who had typing skills. The late King's private secretary, Dasho Lam Kuenzang Wangchuk and Finance Minister, Chogyal initiated typing guidelines and provided training to young office secretaries of the government. Since then, the calligraphic
skills in writing Joyigand Uchen decreased year after year. In 1989, Kuensel adopted Uchen based on Lopon Pema Tshewang's handwriting and developed it into computer font. So, both Kuensel and other publications were published using computers; this resulted in gradual decrease in the number of people who could write Uchen.

In 1997, the National Library organized a national competition for writing Joyig. The national astrologer, Lopen Gelong Rinchen's Joyig was chosen for development into a computer font with the assistance of a German consultant. Since then, correspondences in Joyig and Uchen were made using this font. They are hand written only in gewog offices, gomdey and villages where there is no access to computers. However, it is certain that computer will soon become available. The font developed by the National Library is now used in many organizations.

**Resources and Technique of Writing Joyig**

Let alone Joyig, all forms of writing requires good writing papers, ink and pen. It is mentioned in Sheja Kuenchab Zod that even the best calligraphers are disappointed with their writings, which are affected if inferior quality of any of these resources are used. Joyig writing requires papers where other forms of writing can also be written at ease. The paper should be soft, white or black as the writer deems necessary. Most writings, using Joyig, were done on deysho. For instance, the famous writing of Lotsawa Denma Tsemang in the 8th century called Zogchen Selwai Melong was written on deysho. Deysho was widely used around that time. Parchments on which teryig or treasure scripts were written were known as shogser. Aromatic and lean Kashmiri paper fluid was spread over the deysho giving it a saffron colour. Hence, the name shogser.

Similarly, writers used ink produced out of mixed camphor and Kashmiri paper fluid. To make it sticky, cereals are roasted, and the residues, soaked in water. The black liquid and leather gum were mixed to produce ink, which is long lasting. Such ink were called nagisha zangwa, and manuscripts written with it were not damaged by rain.

There were varieties of writing pens: si nyug, lho nyug, rong nyug and chag nyug. Whichever is used, the nib should be smooth. A pen whose ink doesn't dry up readily on parchments is called nyug khasel. Since there are abundant bamboo shoots in Bhutan, the most popular writing pen was the si nyug made from them. Its nib had a fine line carved for ink flow. Si nyug are no longer available. Chag nyug is widely used. Buddhists believe that any pen has qualities of deities, Rigsum Gonpo who are Manjushri, Avalokitesvara and Hayagriva. The sharp nib represents Manjurshri, the main trunk, Hayagriva and the base, Avalokitesvara.
Jogyig: the National Script

Since time immemorial, different languages were spoken in Bhutan. It was only later that Joyig and Uchen were used as writing scripts. However, Uchen was widely used the Himalayan region. But Joyig is distinct to Bhutan. No other people can write in Joyig. Generally, every country has its own language and writing script. Just as they are considered integral part of their culture, Joyig is part of Bhutan's age-old culture and heritage. Although there are many languages in Bhutan, only Dzongkha has a written script. In 1971, when Bhutan joined the United Nations, Dzongkha and Joyig were declared as the national language and script respectively.

Both chokey as well as Dzongkha can be written in Joyig. Chokey is different from all other languages spoken in Bhutan. It is the form of writing and speaking common to the whole of Himalayan region. It is essentially used in writing Dharma texts. Dzongkha used to be spoken in dzong for official interaction; however, it is the medium of communication, both in written and spoken forms, in all parts of the country. Dzongkha is written, spelt and pronounced distinctly from other languages; hence, it has been adopted as a unique national identity. Dzongkha and Joyig are the main means of promoting education. Besides, they are like the life-tree for promotion Bhutan's unique cultural heritage.

Those who wrote in Joyig used to keep the parchment on the left palm, and write without using any shingles or tables for support. Larger papers were first folded before writing. Bhutanese pilgrims and merchants travelling to Tibet and India had their passports as well as records of expenses maintained in Joyig. There are accounts of how scholars of these countries were stupefied, unable to read Joyig. When the 9th Je Khenpo, Je Shakya Rinchen was undergoing meditation in Tibet, he wrote the difficult and main themes of philosophy in Joyig. He also wrote many literary compositions in Joyig, which amazed Tibetan scholars. Some of them even took to learning Joyig.

Generally, Bhutanese scholars draft any composition using Joyig. For instance, many hagiographies and religious treatise of former Je Khenpo were first drafted in Joyig. Then, scholars re-wrote them in Uchen and were carved on wood blocks. The writings of the 69th Je Khenpo, Geshe Gedun Rinchen were all in Joyig. These writings are in the possession of his relatives and students. While writing Joyig, the nine letters, which have extended 'legs' are either folded inward (eg. nya, ta, da, na, zha and ha) or outward (eg. ka, ga and sha). In 1970's, there developed a style of folding out the 'legs' of all these nine letters.
However, today, writers fold them outward or inward depending upon the letters.
Bibliography

Guru- bKra-shis kyi chos-byung mkhas-pa'i dga'-ston
Mani- bka' '-bum
dGe-'dun-chos-'phel gyi gSung-rtsom
Kon-sprul gyi Shes-bya-kun-khyab-mdzod
mGon-po-dBang-rgyal gyi Chos-kyi rNam-grangs shes-bya'i
Norling 'jug pa'i gru-gzings
sLop-dPon gN ag-mdog gi 'Brgu-dkar-po
sLop-dpon Pad-ma Tshe-dbang gi Rgyal-rabs 'Brug-gsal wa'i sdron-ma

dGe-shes dGe-'dun Rin-chen gyi Chos-'byung bLo-gsar rNa-rgyan
Pad-gLing bKa'-'bum Mun-sel sGron-me
rGyal-po Sin-dhu-Ra-dza'i rNam-that
Bod-lJongs Zhib-'Jug gi Dus-deb
Krung-go'i Bod kyi Shes-rig Dus-deb
Krung-go'i Bod-lJongs Dus-deb