From illumination to manuscript: a best practice in reconstruction of illuminated manuscripts

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Abstract: Reconstructing cultural artifacts, as some practitioners do, may be considered as an alternative to the digitalisation process. As a cultural institution, PADI ARTGROUND considers its potential to support such reconstruction project of culturally-related artifact, especially illuminated manuscript. Through its illumination division, PADI ARTGROUND pursues a project of illuminated manuscript reconstruction as a continuation process from the illumination design and development. This paper will present an experience in the project of illumination design and development towards illuminated manuscript reconstruction. It will be described from raw material research, design sketching, method of reconstruction using computer, to the final work delivery.

Keywords: writing tradition; illumination design and development; illuminated manuscript.

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1 Introduction

Indonesia has much cultural potential, both material and otherwise. This condition is indeed advantageous for all citizens. However, with no proper preservation, this cultural potential will be useless and will potentially be lost. Being aware of such a situation, plenty of organisations interested in preservation are emerging, and are supporting the efforts to safeguard any cultural asset, either in three-dimensional or two-dimensional form.

The preservation of the two-dimensional artefacts, such as manuscripts, is rarely explored. One of the reasons is that manuscript preservation requires a lot of effort, special materials and treatment, and extra finances. Therefore, manuscript preservation is mostly being managed by authorised governmental institutions, such as the National Library. However, it is possible for any non-governmental institution to take part in manuscript preservation due to the invaluable content recorded in the manuscript. One activity is to draw up an appropriate method towards the accomplishment of a specific action in manuscript preservation.

2 Writing traditions in Indonesia

According to the records, the Yupa inscriptions which are found at the Kaman estuary, Mahakam riverside, Kutai, West Kalimantan (approximately 400 AD) are the earliest use of writing in Indonesia. However, recent discoveries show that there are some evidences which prove that the writing tradition in Indonesia began earlier than the Yupa inscriptions. Nonetheless, since then, regardless of the time of the discovery of the inscriptions, the writing tradition in Indonesia had already developed and was used as a medium in recording intellectual heritage.

2.1 Illuminated manuscript

According to the advanced learner’s dictionary of current English, illumination is the decorative element of a manuscript. In this case, most Indonesian manuscripts are not illuminated; neither do they have any decorative illustration within their composition. However, based on our review, illumination can still be seen in several manuscripts that are written and composed for specific purposes.

For example is wadana. Wadana are ornamental frontispieces that acted as gateways, giving access to the inner pages of the text, and then leading out of the sacred textual space at the end (Darmawan and McGlynn, 2003). Figure 1 shows a wadana from the allegorical Serat Suryaraja of Sultan Hamengkubuwono II, found in Java.
In Aceh, the capital city on the northern tip of Sumatra Island, there is a similar artefact, which has been named the *Serat Yusuf*, the tale of the Biblical and Koranic Picture of Joseph. This frontispiece originated from *Palembang* in the 18th century (Figure 2).

Another interesting example of illumination design application is the letter from Raja Ali of Riau Panyengat to the governor general of the Dutch East Indies (Figure 3). The letter shows an artistic as well as a lavish visualisation.
These manuscripts are assets for Indonesia and for countries that possess such cultural artefacts. In fact, the ultimate threat might be the lack of attention to preservation issues. The safeguarding of that heritage must be triggered by individual initiative and backed up by associations, by specialists and by institutions; only then will the national authorities take it into account (UNESCO, 2003). Such a disturbing reality drives PADI ARTGROUND of Bandung – Indonesia, to take action in the matter and protect the cultural assets from extinction.

3 From illumination design to illuminated manuscript: a reconstruction

PADI ARTGROUND is a cultural institution which concerns cultural study and development. This institution inaugurated an illumination division within the framework of the national agenda in cultural preservation through a creative response, by producing artworks based on traditional philosophy.

Within the context of manuscript reconstruction, PADI ARTGROUND holds the view that it is almost impossible to do what manuscript artists did in the past. There are too many differences that people will find as an obstacle, such as different cultures, different mentalities, and the availability of material for production. One issue that might be raised as a primary question here is how we can capture the value and express it in a new fashion. According to van Peursen (1998), culture is like an unfinished story, which should be continued. Thereby, the reconstruction process of a manuscript, for PADI ARTGROUND, is at the cost of studying and capturing the value that is implied in cultural artefacts and then expressing it through a similar manuscript related work for some particular audiences and purposes.
3.1 Illuminated manuscript reconstruction project

In 2002, PADI ARTGROUND established a division, namely, the Illumination Division. The main focus of this division is on the study of illuminated manuscripts, including the reconstruction project. During the process of illuminated manuscript reconstruction, the illumination design becomes an integral part of the project. In this case, in the middle of the whole project, there would be two deliverables: a single illumination design, and a combination of illumination designs which are composed as an illuminated manuscript.

All ideas in this reconstruction project are generated from the existing cultural artefact. Illumination design ideas are generated from several ornaments which can usually be found in architectural elements, book illustrations, temples, or textiles. Meanwhile, the illuminated manuscript research and development is inspired by most textual artefacts, such as *Wadana*, or other ancient letters.

The execution of this illuminated manuscript reconstruction project consists of three main phases. These are manuscript analysis, manuscript development, and manuscript finishing (Figure 4). Each phase consists of several activities.

**Figure 4** Method of illuminated manuscript reconstruction

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3.1.1 Manuscript analysis

*Manuscript visual analysis.* The analysis of a manuscript will focus on the ancient manuscript as a reference. From this analysis, it is expected that there would be a certain formulation from which the illuminated manuscript visualisation is inspired. One example is the module(s) of illumination design. Most illuminated manuscripts consist of some illumination design modules. In this case, the visual analysis will focus on the module mapping as shown in Figure 5.
The result of this visual analysis will determine three modules of illumination design:

- main module
- corner module
- centre module.

These modules are important to keep the illumination design as a continuous pattern. Sometimes, the critical point is on determining the corner, as well as the centre module. These modules require a neat accuracy in the illumination design implementation. Otherwise, it will ruin the whole composition.

**Concept and further studies.** This phase begins with a rigorous study of the literature, archival study, and some museum visits. The activity in this phase is designed to acquire a complete set of basic conceptual thoughts before developing an illumination design. The expected style of the illumination design as well as illumination manuscript will be determined here. In this phase, the study will provide the manuscript with a theoretical or philosophical content. For example, the intended style that will be developed for the illumination design and illuminated manuscript is Mega Mendung (Sundanese: Dark Cloud), an ornamental style from Cirebon (a city in the Province of West Java). Then, the exploration in form and shape, as well as in colour selection, will be derived from a study of the original style of Mega Mendung, including the history and/or aphorism that the style might have. As a result, the illumination design and illuminated manuscript may contain the socio-cultural aspect, and may contribute a novel design as a variation from the existing ornamental design.

The concept and further studies will also produce a diversification in visual concept. In some cases, there are some discussions for determining the visualisation for a prospective manuscript based on several points, such as, illumination design pattern, composition, colour scheme, and technique. However, due to the experience of the illumination division team in handling similar works in the previous projects, there would be no significant obstacle in determining a novel style that combines this different visual concept with the existing socio-cultural approach as already mentioned above.

On other hand, this concept, and further analysis, may also be considered as a manuscript contextualisation. In this phase, several major considerations are formulated,
such as the purpose of manuscript production (exhibition, charity, etc.), prospective audiences (art-lover, governmental institution, educational institution, etc.), technique of production (full digital, manual – digital combination, printing, etc.), design pattern and visualisation (circular, rectangular, special illumination design, etc.), and textual content (religious, aphorism, idiom, etc.). Briefly, manuscript contextualisation is the phase that tries to make an illuminated manuscript more acceptable to, and appreciable for, any targeted audiences.

The conceptual formulation obtained from the manuscript analysis phase will be important material for the next phase: manuscript development.

3.1.2 Manuscript development

Sketching. Sketching plays an important role in idea exploration. This phase produces several alternatives of illumination design pattern that will eventually be discussed and be selected from among the illumination division members. The team will diligently review each design, in order to avoid any misapplication and misapprehension of the existing value.

Sketching is used for two purposes: first, for the development of illumination design and the second, for manuscript development. From the diagram in Figure 4, sketching appears to be the main process before proceeding to illumination design computerisation and manuscript preparation as well. This is because sketching requires tight coordination between the illumination design team and the manuscript team. Only through this coordination can the expected result be achieved; a result that visualises the harmonious expression of all elements that form an illuminated manuscript.

Sketching an illumination design is the phase that brings the concept to the visual stage and consists of exploring the design in accordance with the concept that has been approved at the conceptual stage, followed by further study. Meanwhile, manuscript sketching will develop the manuscript ideas, including some predictions of manuscript composition to which other elements are going to be applied, such as the prediction of illumination design scale and position, the place and proportion of calligraphy.

Illumination design (computerisation). This phase will begin with scanning the illumination design sketches. The scanned file will then be traced and be converted into the vector file. Tracing process usually uses Computer-Aided Drawing software to get an expected vector quality (Figure 7). This computerising phase (Figure 6) is undertaken in order to make sure that each illumination design has a definite drawing scale, sharp line, and good image resolution. The file of the traced sketch will also be stored in the image library as a master file.
Manuscript Preparation (template). Manuscript preparation emphasises the process in setting up a manuscript template. This is the process which will translate all listed predictions obtained from manuscript sketching phase into a measurable manuscript template. The illuminated manuscript that is being developed will have the same proportions, as well as precise dimensions. Thus, considering this symmetrical equilibrium composition, this phase will only prepare a quarter part of the whole dimension of the prospective manuscript. Then, logically, the quarter part template will only need to be mirrored, both horizontally and vertically, to get a perfect combination of the four quarter-parts into a single composition of an illuminated manuscript (Figure 8).

Figure 7  Tracing process

Figure 8  Mirroring process (see online version for colours)
Manuscript setting and printing. In the manuscript setting phase, the manuscript template will be combined with the vector file of illumination design. All processes will be undertaken on the computer. The logic of manuscript setting is adopted from the previous template mirroring procedure. All vector files of illumination design will be placed in a certain position in a quarter of an illuminated manuscript, whether as main module, corner module, or centre module. Once all modules are in position, the filled quarter will be mirrored until the full manuscript composition is achieved. The critical point after this mirroring process is the neatness in jointing of each centre module. In some cases, there should be an incremental process in fixing the centre modules in order to achieve neat jointing. If the situation is insisted, it is possible to replace a centre module with another one, as long as the replacement module is available and the style of its illumination design is appropriate with the overall existing design.

After the manuscript setting is done, the file will be processed towards an illuminated manuscript printing which will only show the outline in either duotone or greyscale scheme. There are two means of producing a printed illuminated manuscript: first, by plotting (large printing that is usually used for architectural or civil engineering drawing production; the printing machine is usually known as plotter), and the second is by silk-screening (some practices are conventional which operate manually). Choosing the production means might be a complex situation which consists of some interrelated consequences. Frequently, a complex situation arises as the production budget and expected quality are mutually being considered (Figure 9).

![Figure 9 Budget and quality as mutual consideration](image)

As it happens in everyday matters, it is obvious that the budget might have a significant impact on the expected result. In this case, the quality of illuminated manuscript printing will be influenced by the production cost. On the other hand, the production cost will be influenced by the material selection or means of production. In Table 1, there is a review table which will help in deciding the production means related to some considerations.

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<th>Plotting</th>
<th>Silk-screening</th>
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<td>Selection flexibility on paper thickness</td>
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The paper thickness may appear as one factor that affects manuscript endurance. The plotter has a limitation for the paper thickness. Meanwhile, silk-screening will do on almost all papers with various thicknesses. However, the printing quality using a plotter will be far more satisfactory than the quality obtained from silk-screening. In this case, the selection of paper quality, especially its thickness, will have a significant effect on the printing quality. If the printing quality is important, then the paper quality should be modified; and vice versa.

Regarding budgetary concerns, silk-screening may be more expensive as it requires a film. However, the film might be useful when manuscript reproduction is needed. The budget would be less expensive than for the first production. Meanwhile, the plotting budget for a reproduction might be as expensive as the first production.

Nevertheless, the selection of these printing options should be based on a careful consideration, especially of the purpose of the illuminated manuscript production itself. Most illuminated manuscripts produced by PADI ARTGROUND are for exhibition. An exhibition event is usually organised for more than a week. Thus, there should be a consideration of the endurance quality of the displayed material during the exhibition. For this reason, PADI ARTGROUND chooses silk-screening to print the illuminated manuscript, and chooses thicker paper to ensure its strength while on exhibition.

3.1.3 Manuscript finishing

Colouring and calligraphy. Once the manuscript is successfully composed, the colouring and calligraphy writing team will do their task. This is also a critical phase where the visual quality of each manuscript will depend on the accuracy and neatness of colouring and inking. Tight supervision is the most important task during this process. Furthermore, the supervisor has the authority to postpone the work when he finds either an incorrect working procedure or unexpected quality.

Either colouring or calligraphy may be the first to begin the phase. The colouring and calligraphy task is an interesting and important step. It is interesting because the visual expression of the illuminated manuscript becomes more visible once the colour is applied and the calligraphy is written. Furthermore, it becomes important because the whole process in this phase can also represent the values of cultural content in the illuminated manuscript. In short, colouring and calligraphy may appear as the final effort to delineate between the theoretical and philosophical values as formulated in the concept and further studies.

The paint that is used in this colouring process is water-soluble. A water-soluble paint will give the option to adjust the colour saturation in order to emphasise some details and to get acceptable colour balancing as well. Sometimes, the colouring process will take two to three weeks depending on the visual detail of each illumination design. The more the detail of the illumination design visualisation, the more time would be needed by the colouring team to accomplish their task.

Meanwhile, the calligraphy only deals with one black ink. However, the task is also critical due to some grammatical rules. According to some findings, most manuscripts in Indonesia are written in some language, such as Malay and Sanskrit, whose usage is influenced by cultural syncretism. Malay usually uses Arabic (style) typography, while Sanskrit uses Jawi (style) typography. In Arabic (style) typography, there are a number of specific kinds of script, such as diwānī, kūfī, or thuluth. Therefore, once again, the conceptual formulation obtained from the concept. Further studies will also be helpful
in calligraphy for determining the typography as well as the script selection. Most illuminated manuscripts of PADI ARTGROUND currently use Arabic style calligraphy, and some kinds of script.

**Finishing and delivery.** Finishing is the final process where an illuminated manuscript is almost ready to be displayed for an exhibition (Figure 10). Before installing the frame, the surface of the manuscript should be protected by a coating spray. It will preserve the quality of manuscript visualisation, especially the colour which will be protected from becoming pale and being scratched. Once all the necessary procedures have been perfectly completed, the illuminated manuscript is ready to be delivered for some particular purposes.

**Figure 10** Illuminated manuscript final delivery

4 Conclusion

The experience of PADI ARTGROUND in reconstructing an illuminated manuscript can be treated as a best practice by some cultural institutions which have the same enthusiasm and intention in preserving national cultural assets. In such a reconstruction project, no matter what method is chosen, what material is selected, or decision made, the result should be appreciated by society so that they can eventually appreciate their own culture. Although the final product is different from the original artefact, the intrinsic value can still be preserved. Furthermore, the final product itself can eventually be projected as a variant that will enrich the grand narration of the cultural asset.

References


Bibliography


