



# Information Visualization and Documentation for themes of Visual Culture

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**Citation:** Nanki Nath, et al. (2024), Information Visualization and Documentation for themes of Visual Culture, *Educational Administration: Theory and Practice*, 30(5), 56-66, Doi: 10.53555/kuey.v30i5.2769

| ARTICLE INFO | ABSTRACT  |
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|              | <p>Visual Culture envisages a trajectory of creations with information, visual styles, concepts and practices by both the makers and receivers. This paper presents the applications of popular cognitive theories during the information visualization stage followed by the graphic design students in the course of Documentation of Visual Culture at a design school in India. The baseline approach in the course has been to impart the theories and models from the fields of information visualization, cognition, history, social space and visual imagery. The course contributes a conceptual framework of 5-Pillars of Cognition: 1) What and How to Observe, 2) How to See, 3) How to Read, 4) How to Plan a Theme and 5) How to Create a Visual Language for a Visual Space/Culture. Each student applied these five pillars along with the theories of cognitive semiotics to form, reform and transform the documentation designs. The research methodologies tap the styles and trends in the context of readers' preferences, social milieus and the linked technological scenarios. Designs showcase the styles in documentations with respect to the information content, readers, social milieus, heritage scenarios and communication. The insights articulate the rationale behind preserving form-content associations in the visual culture themes.</p> <p><b>Keywords:</b> Cognition theories, Conceptual framework, Documentation, Visualization, Semiotics, Visual Culture</p> |

## Introduction

The field of cognition with semiotics<sup>1</sup> is a trans-disciplinary field that integrates methods and theories developed in the disciplines of cognitive science with methods and theories developed in humanities. The aim is to provide new insights into the realm of information perception, human signification and manifestation in cultural practices. Practice is not viewed as a 'context for' but as constitutive and constituent of the cognitive process itself. It is a constitutive aspect of all forms of thinking, from the simplest to the most complex (Trasmundi and Toro, 2023; Böhme et. al., 2022; Poizat, et. al., 2022).

At a systemic scale, semiotic interactions include specific media channels, with the term 'medium' understood in its broadest sense, including bio-entities along with artefacts and technologies that can be material, and thus physically perceived by humans and animals, but also digital, which can lie beyond the scope of perception (López-Varela Azcárate, 2022). Cognition and thinking approaches utilize the use of language in communicating the surrounding social situations involving senders and receivers in the circle of information dissemination, reception and retrievals. This makes up for the fundamental premise of a two-way communication for meaning making in information studies. In context of this objective, the present paper highlights the learning experience that aimed to capture how the visual language developments based on cognitive thinking could become instrumental in crafting a visual experience of cultures, spaces and people associated in the documentation designs done by the undergraduate graphic design students, 2018 -19 at the respective national institute in India.

<sup>1</sup> Zlatev, Jordan, "Cognitive Semiotics," in *International Handbook of Semiotics*, ed. Peter Pericles Trifonas (Germany, Berlin: Springer Science+Business Media Dordrecht, 2015), 1043.



Visualization and cognition in everyday life helps in building a continuous experience to draw things together, decipher meanings and their essential role in developing a language that undergoes transitions over time. Taking this as a guiding light to document novel experiences of visual media in a hybrid of texts, images, and sounds became the vision for the course of Documentation of Visual Culture [DVC] in the academic year of 2018 – 2019 as full 3-week units, 6.0 credits continuous education module. The course gave design students opportunities to build and communicate the identity, processes and meaningful perspectives that unpack a range of themes of visual culture in India (Figure 1). For instance, the story of the sawantwadi wooden toys from Maharashtra, India visual documentation contains detailed process involved in the making of these special sawantwaadi wooden toys through illustrations and pictures – clicked by the student himself as part of the fieldwork done in the city of Mumbai. Inclusive from all aspects; the book emphasizes its special place and/or use by children. They get an opportunity to make their own toys in the instructions provided in the ending sections of the documented book – using cut-outs and easy dismantling of pop-up shapes. For parents and their children as primary users, this documentation invites participatory design approach in the most playful and experiential way (Figure 1 and 2). Of all the documented books, only one DVC documented publication covered a global trend in a foreign city as a theme of visual culture as part of the course (Figure 7).

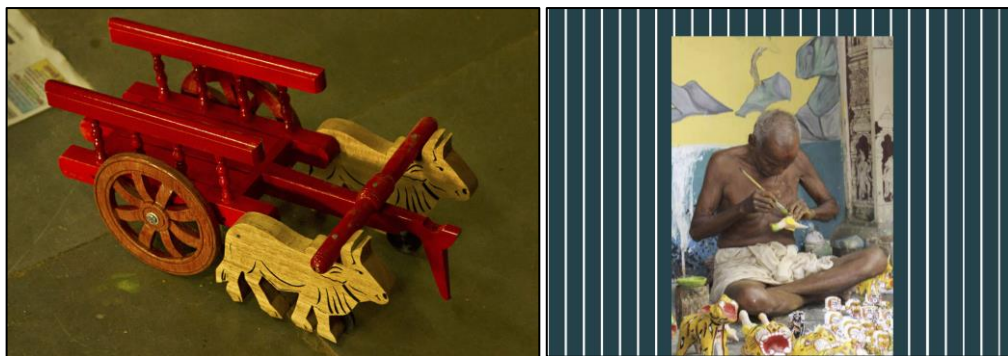


Figure 1. Sawantwadi Toys theme from Maharashtra, India (left) and Chitrakaar making the Pattachitra Art with Techniques from Odisha, India (right) © 2018-19 course documentation by Author Name (hidden for peer review).

Sawantwadi is famous for its art and culture, popularly known for Ganjifa playing cards and wooden toys made from mango tree. The craft is traditionally done by the Chitari or Chitrakar community recognized by the king. These communities migrated from Karwada and settled in Sawantwadi. These families survived mainly by supplying handicrafts items to the royal families. Later other communities also adopted this craft because of its commercial success. Queen Satwasheela Devi continues the tradition even today, where many of the families are involved in Ganjifa cards and wooden toys making. The toys have been made by assembling all parts to shape solid wood. Seasoned mango wood is chiseled or carved into desired toy shape. These examples have been the practice-driven content covered in the dvc documentation by the student (Figure 1 and 2).



Figure 2. Sawantwadi Toys documented visual culture theme from Maharashtra, India (left and right), © 2018-19 course documentation by Author Name (hidden for peer review).

India is a cultural melting pot of visually rich cultural identities, events, festivals, customs, arts, crafts, practices, etc. To deconstruct with a novel lens this rich visual culture in India, the present paper presents the course of DVC and the research methodologies applied by the graphic design students developed applied learnings around visualization and cognitive semiotics.

### Course Relevance

This course is important in the context of changing societal and technological scenarios. Visual approaches in everyday life has been changing frequently. In this context, documentation of special experiences around marked visual culture and the themes – that imbibes visual media in a hybrid as texts, images, analog



techniques and tactile surfaces; sound symbolisms, etc. as part of the course has been aimed to offer graduation students of graphic design to build rich, multi-perspective points of view of a range of themes as part of visual culture as a field of depth study and documentation.

### **Course Objectives**

- To provide understanding of visual sensibility in connection to several aspects - personal, national, ethnic.
- To provide understanding of strategic analysis on cultural visual forms.
- To understand the Rhetoric of the Image.<sup>2</sup> Rhetoric is a creative means to design and organize discourse in order for it to be persuasive but not manipulative (D'Armenio, 2022; Greco and Mazzalli-Lurati, 2022; Barthes, 1988).
- To understand comparison with popular visual culture for attention and traditional Visual cultures.
- To understand the image making<sup>[1]</sup> in context of everyday life<sup>[1]</sup> experiences.

### **Teaching Methodology and Course Detailing**

#### **1) Instructional Process**

- Lectures/ sessions included visual media-based presentations describing striking visual culture theories, models and concepts with respect to communication design, cognitive semiotics, visualization and publication designed for visual cultures. The specific aim helped teacher-learner as well as student-learners to plan and develop researched visual strategies for the creation of distinctive and reader-friendly documentations as part of the larger outcome-based education approach aided by the Bloom's taxonomy model.
- Demonstrative modes of orientating the students' batch to different and innovative ways of book binding, formats involved and the suitable fusion of printing methods have been imparted. The resulting documentations took those inputs as practice-based prompts at different stages of the ideation of final dvc documentations.

#### **2) Student-centric approach**

- The teacher-learner as well as each student-learner interacted over a series of studio-based feedback sessions by displaying parts of the dvc documents crafted by the student learners' for continuous evaluations and review feedback sessions organized three times (each time per week unit) by the teacher-learner in the total of 3 week units allotted for the course instruction.
- Honing of specific analog and digital techniques by student-learners'; alongwith participatory design approaches were a springboard for out-of-the-box ideas and final identity of the documentations designed by each student. Students' coordination of the head, the heart and the hand became unique, with respect to the strength of hand skills alongwith other soft skills of designing and representing 'content' alongwith 'form' for new meaning-making (in the context of cognitive semiotics).

### **Theories and Models of Cognition, Semiotics and Visualization**

Generally, Cognition alongwith semiotics Semiotics has been a transdisciplinary study that comprises modes of meaning-making, applications of methods and theories from semiotics, linguistics, psychology, cognitive science, computational modeling, anthropology, philosophy and other sciences. Cognition entails complex networks of biological processes and actions that encompass perception, attention, manipulation of objects, memory mechanisms, and the formation of knowledge by means of direct experience as well as by learning from others, for which forms of communication and comprehension are also necessary. It has often been assumed that one but not both of these two types of representations underlie processing in specific domains of cognition – for instance, perception, mental imagery, and language (Kaup, et. al, 2023; Azcárate, 2022). Participatory sense-making – a cognitive act of humans during interactions with the 'medium', addresses how our intersubjective interactions enter into meaning constitution as well as co-constitution of a meaningful world. It provides an answer to the question: How do we, together, interacting with each other, constitute the meaning of the world? (Gallagher, 2023; Shapiro and Spaulding, 2021).

Within the purview of DVC course objectives that imbibed a Special Focus within the context of Visual Cultures and Visual Language Development(s) with Communication as the *raison d'être*; Cognitive Semiotic Theories and Models were selectively collated, analyzed and implemented in the final print publication designs submitted for the DVC course documentations. Following are the prime theories and models applied by students in their DVC documents:

#### **1) Theory of the Actions of Signs and the Dialogical Model of Interspecific Communication**

Defined as the 'action of signs', semiotics has recognized the 'inter-actions' and 'intra-actions' of anything acting as a sign; present also within the framework of the 4Es -Embodied, Embedded, Enacted and Extended. The E-fields share the view, after all, that the brain-centrism of traditional cognitive science, as well as its dependence on the computer for inspiration, stands in the way of a correct understanding of cognition (Azcárate, 2023; Konderak, 2021; Shapiro and Spaulding, 2021). At a systematic scale, semiotic interactions

<sup>2</sup> Barthes, Roland, "The Rhetoric of the Image", from *Image - Music - Text*. Sei. and Trans. Stephen Heath. In: *Elements of Semiology*. New York: Hill and Wang, 1,977.32-51, (1977): 160-163.



include specific media channels, with the term ‘medium’ understood in its broadest sense, including bio-entities along with artifacts and technologies that can be materials, and thus physically perceived by humans and animals (Figure 3), but also digital, which can lie beyond the scope of perception.

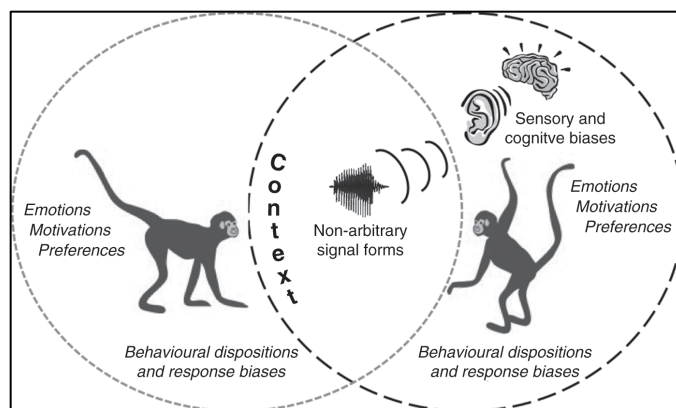


Figure 3. The Dialogical Model of Interspecific Communication © 2013 Drew Rendall and Michael J. Owren. Source: Drew Rendall and Michael J. Owren, “Communication without meaning or information: Abandoning language-based and informational constructs in animal communication theory,” *Animal Communication Theory: Information and Influence*, ed. Ulrich Stegmann © Cambridge University Press 2013, pp.173, <http://dx.doi.org/10.1017/CBO9781139003551.010>

## 2) Bio-cultural theory and the Semiotic Hierarchy model

There has been an attempt made to define a unified bio-cultural theory of meaning and lay context of Cognitive Semiotics for developing later hierarchical models (Wiggins, 2020; Silvera-Roig, 2020; Zlatev, 2019). One of the models expresses that:

“Our conception of meaning has become increasingly fragmented, along with much else in the increasing post modernization of our worldview. The trenches run deep between different kinds of meaning theories: mentalist, behaviourist, (neural) reductionist, (social) constructivist, function- a list, formalist, and computationalist deflationist... And they are so deep that a rational debate between the different camps seems impossible. The concept is treated not only differently but incommensurably within the different disciplines.”

The Semiotic Hierarchy: that each subsequent level somehow replaces the earlier one(s), for instance, a (minimal/enculturated/linguistic) self is independent of the ‘underlying biological self’, the organism (Mendoza-Collazos, et. al., 2021; Mendoza-Collazos, 2020). This model represents an affinity with ‘layered models’ of development with each higher level subsuming earlier ones (Figure 4).

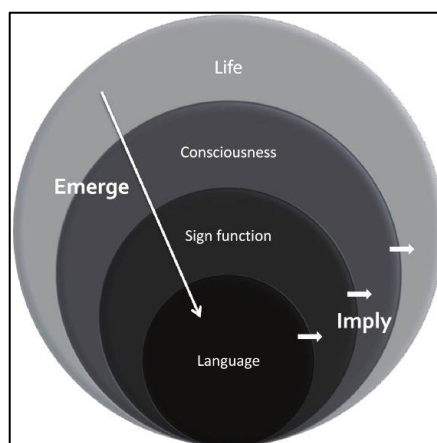


Figure 4. The Semiotic Hierarchy Model © 2009 Jordan Zlatev. Source: Jordan Zlatev, “The Semiotic Hierarchy: Life, consciousness, signs and language,” *Cognitive Semiotics*, no. 4 (Spring 2009), pp. 189 [https://doi.org/10.3726/81608\\_169](https://doi.org/10.3726/81608_169)

## Research Methodology

Students’ secondary research-based design language developments of their document designs envisaged applied learnings from two methodologies, namely: Phenomenology and Field Work. These applied learnings helped build the building blocks of a conceptual framework of reference to guide final ideations of a publication form for each documentation of visual culture per student.



### ***Phenomenology or the systematic study of lived experience(s)***

Phenomenology is grounded in certain traditions of philosophy and the humanities, and that aims<sup>[1]</sup> to reflect on pre-reflective human experience (Manen, 2023; Mendoza-Collazos and Zlatev, 2022; Køster and Fernandez, 2021; Vasterling, 2021; Stew, 2020). In this course, the students have applied the phenomenological methods of qualitative data collections in their fieldworks on selective visual cultures - that helped them accumulate their self-experiences of the history, material culture, social spaces, visualizations and cognitions (Figure 5 and 6). Individual students and quick orientations did fieldwork and warm-up exercises were given to students (Figure 4 and 5).

A brief collection of the ways of doing fieldwork were imparted to students covers following (in a nutshell):

- How people navigate to witness a visual culture?
- How and what to observe as they navigate?
- How to design a visual language for a given space incorporating the visual culture?
- What codes govern a special visual language to communicate that visual culture?
- What discourses are happening in these spaces of special visual culture themes?
- How a public interest gets constructed around a visual culture theme?
- Why is it important to consider this public interest in final DVC documents?

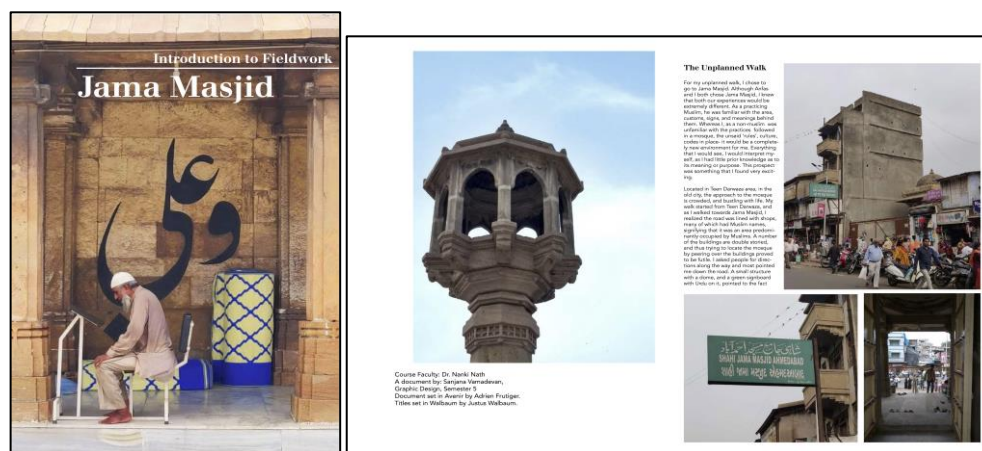


Figure 5. DVC documentation cover (left) and inside spread (right) of Jama Masjid as a visual culture theme  
© 2018-19 course documentation by Author Name (hidden for peer review).

### ***Special Content Developments for DVC course***

Students and the faculty instructor decided to document a range of distinct visual culture themes from the Indian land - aiming to draw things together at the intersections of bringing forth new knowledge and representation of: the People, the Environment, the Geographical Location, the tools and skills used for producing the visual material, any additional resources that are enablers in crafting special design language and communication of these themes (Figure 6). The content developments also include observations and depth analysis about how documenting the connection with larger communication goals alongwith identification of sources from everyday life, such as Cinema, Calendar, Persuasive Communication, Traditional Visual Influences, Cultural Influences, and Mythological Symbol, etc. carve out a meaning-making system of visual design elements for the final DVC documentations.

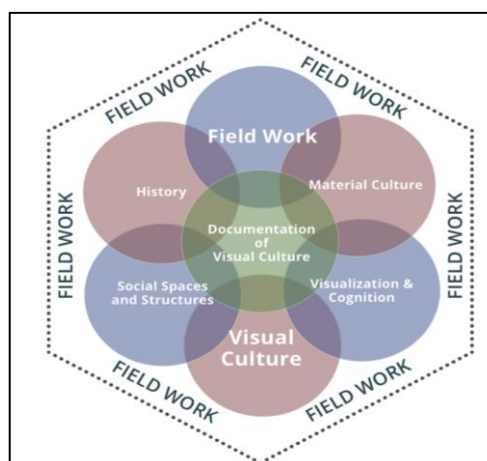


Figure 6. Information Content Mapping, Linking and Analytical approach in DVC documentations © 2018-19 course documentation by Author Name (hidden for peer review).



### ***DVC course: the five-pillar conceptual framework***

Analysing Bruno Latour's research and for course methodology to apply visualization and cognition for drawing things together to bridge Content, Form and a Visual Language Development became a pertinent series of in-classes, discourse oriented actionable tasks to ideate for the final design outcomes for each student's DVC publication cum documentations (Solberg, 2021; Wilde, 2020). The tone of voice in the descriptions below has a deliberate conversational tone of voice that has been an effort to bring forth the essence of this in-classes activity-oriented methodology. Following are the series of those activities that involved students' as well as the researcher of this paper, who as the faculty instructor implemented the method in five pillars, as follows:

#### **1) *What and How to Observe?***

Observation is a powerful method to understand human behaviour and patterns of living. In the context of space, students were required to apply observation in following ways:

- **Learn to Listen:** Developing the skill of *learning to listen* would help you to go, explore, interpret and infer the space of study within the larger space.
- **Temporal Discourse:** Space Discourse is always temporal. It changes with time. This discourse that you record will assume different identities; and hence interpretations with time. For instance, one of the B.Des student's DVC theme of 'Revitalizing Traditional Indian Toys' involving children experiencing the space with the document design as an enabler for the temporal discourse in real-time (Figure 7).
- This publication titled, 'Khel Khoj', talks about India's rich cultural heritage of crafts in toy making; based on the books, such as 'The Joy of making Indian Toys' by Sudarshan Khanna (2002). In the context of visual culture in India, 'toys' add an innovation-based dimension of experience with the resource-scarce tools and equipments that have been utilized keeping in mind the affordability and the low-cost parameter for better access to masses. This pulsating identity associated with Indian toys as a craft heritage has been the spine to structure the publication – including 'magic toys' with respect to the Indian land. The world knows it by the name, 'Jakob's Ladder'. The ladder form becomes the structure of opening, folding, reading as well as experiencing the visual culture of magic toys as part of this interesting experiential document design done as part of the course (Figure 7).



Figure 7. Revitalizing Traditional Indian Toys visual culture theme for DVC documentations © 2018-19 course documentation by Author Name (hidden for peer review).

#### **2) *How to See?***

Learning to See is the most essential quality that we as designers need to learn. It is because of those qualities that we will eventually learn in order to ideate designs (Peng, 2022; Vikas et. al., 2022; Cascini, 2021; Larraz-Rábanos, 2021).

- This is a blessing and a curse—once we have learned to see design, both good and bad, we cannot un-see. The downside is that the more you learn to see, the more you lose the distinct eye that you design with.
- For instance, one of the B.Des student's DVC theme of 'Documenting the city of Melbourne's Graffiti' involving the tactile and ephemeral quality as seen by the designer to become the core design identity in naming, visual language and compositional developments (Figure 8).
- Stencil City project as represented; has been a comprehensive document the depicts the unique beauty and aesthetics, modes/methods of creations, etc. as an integral part of graffiti and street art visual culture in the city of Melbourne (Figure 8). The detailing included in the documentation as field works included decoding the elements of visual aspects and cultural context that encapsulates the city's dynamic visual language. It equips the reader with graphical cues that narrate the social, economic and physical terrains of the city in an informed manner. The documentation celebrates this captivating visual culture theme of graffiti street art from



three perspectives that become chapters in the documentation, namely: a. The Fact, b. The Feel and, c. The Form. This special approach in content-form association build for the publication has been instrumental in painting a holistic picture of the graffiti scenarios in Melbourne city with technicalities and personalized travelogue section on personal interactions, observations and reflections with the graffiti painters and makers. Developing an Eye:

Good designers try to keep their ability to see things as a customer would. You need a designer's eye to design; and a non-designer eye to feel what you designed.

“See with one eye, feel with the other.” —Paul Klee



Figure 8. The Stencil City–Melbourne City’s Graffiti visual culture theme for DVC documentations © 2018-19 course documentation by Author Name (hidden for peer review).

### 3) How to Read?

Learning to See is the most essential quality that we as designers need to learn. It is because of those qualities that we will eventually learn in order to ideate designs (Peng, 2022; Vikas et. al., 2022; Cascini, 2021; Larraz-Rábanos, 2021).

- In the development of design skills, theory can get in the way of practice, but only until the theory becomes practice. With practice your intuition evolves, and the better you understand what you do, the deeper your intuition. Only once you do not consciously think about the theory anymore are you achieving mastery.

- How to Read, involves that approach of graphic design that gives to the viewer a range of images or indirect meaning related to the theme/subject matter. This is largely known to be image making in graphic design; wherein, a graphic designer through images communicates direct or indirect messages (Zhang, 2022; Xu, 2022; Günay, 2021). Denotations are direct, but connotations are indirect.

For instance, one of the B.Des student’s DVC theme of ‘Odisha’s Pattachitra’ involving the insightful content for augmenting readers’ interests to know the detailed product and processes involved in the making of ‘chitra’, that means a piece of an artwork or simply put, a painting, Pattachitra may literally translate to cloth painting (Figure 8). Derived from the Sanskrit word ‘patta’, that means ‘cloth’ or ‘canvas’; and, ‘chitra’ that means ‘a piece of an artwork’ / simply put; ‘a painting’ – is born the ‘pattachitra’. Famous as ‘Cloth paintings’, these pattachitras depict and celebrate the themes of ras lila, vastra haran, kaliya dalan, ten incarnations of the Lord Vishnu, nava grahas (nine planets), kanchi avijana of Lord Jagannath, panchamukhi Lord Hauman as well as the panchmukhi Lord Ganesha (Figure 9).

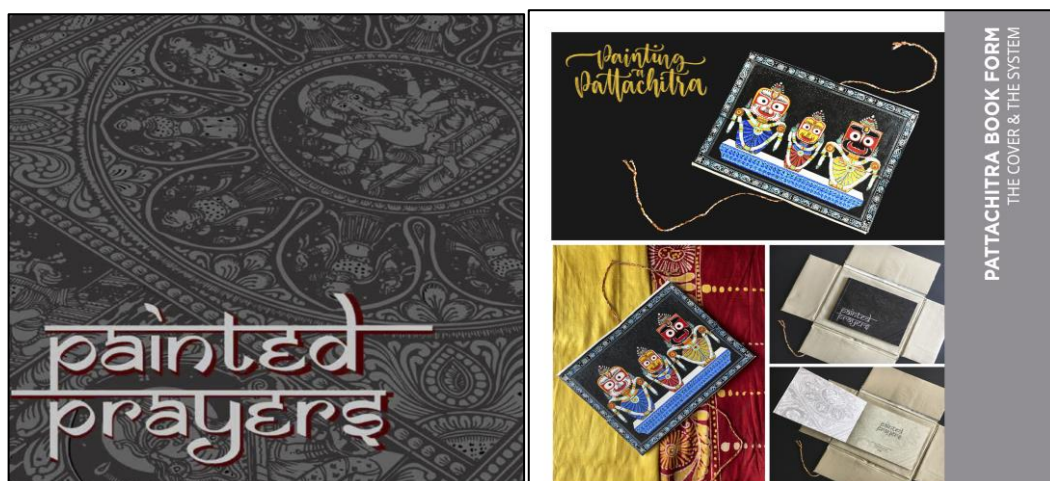


Figure 9. Painted Prayers –Odisha’s Pattachitra visual culture theme for DVC documentations © 2018-19 course documentation by Author Name (hidden for peer review).



#### 4) *How to Plan a Theme ?*

Brainstorm the ideas you wish to select as themes of Visual culture for your final document, as follows:

- Building an image library: Select different kinds of visual images. Some may be connotative (indirect) and others may be denotative (direct) representations of the main theme of your visual culture. Collect these by photo-documenting your space entirely. Eliminate any repetitive or incomplete pictures to do away with any confusing messages they convey.
- Construct a public interest: By including those texts from your notes, data collections, etc. that help define the identity, essence, cultural ethos and meaning of a particular visual theme for the public who would be the direct receivers.

In this context, customary practices within a space must be archived to the last detail (all micro and macro process steps). For instance, the festival of Holi imbibes a good prominence of customary practices as part of it as a visual culture in India. The larger context includes interesting associations with folklore and folk cultural practices that aim to build communities from socio-cultural as well as socio-political perspectives within the context of India.

Another instance to establish the unique significance of customary practices; when seen through the lens of rich visual cultures in India – is the dynamic Chhau dance from Bihar. The said dance form is a tradition – deeply embedded in the eastern fabric of India; especially Bihar. The dance form is used to enact episodes from the epics (including Ramayana and Mahabharata), local folklore as well as abstract forms of stories and storytelling. It's three distinct styles hail from the popular region of Seraikella, Purulia, Mayurbhanj in East India. Chhau, as a visual culture to be celebrated in the region – has been intimately connected with regional festivities; notably the spring festival Chaitra Parva. Its origin has been traced back to the indigenous forms of dance and martial practices. The vocabulary of movement includes mock combat techniques, stylized gates of birds and animals; and the movements modeled on the chores of village housewives. The effect of the dance form stand for the development of unsophisticated forms of folk dance to highly stylized forms. Chhau, symbolic of the earliest indigenous forms of dance in India – has demonstrated a living continuity with the past in order to acknowledge and preserve heritage within the silos of visual cultural practices and preservations.

While doing this as part of the fieldworks by each student, it should be kept in mind that conventions/rules define a certain cultural group's interaction and impact the related customary practice accordingly. For instance, the 'Paithani style of wearing saree from Maharashtra' is a tradition from the Western part of India as documented and designed in a coffee table book form to reach as well as touch resonance with a good section of public residing in Western India by one of the B.Des students (Figure 10). This DVC course documentation is in the form of a coffee table booklet – that visually celebrates the heritage process of wearing the iconic paithani sarees by the women of the concerned ethnic culture.



Figure 10. The Paithani: Maharashtra's pride as a visual culture theme for DVC documentations © 2018-19 course documentation by Author Name (hidden for peer review).

#### 5) *What to create as a Visual Language for a Space/Living Culture ?*

- Message selection and communication strategies for content developments:

In last three days of the first week of the course, rigorous discussions over each visual culture theme selected by these students. They were expected to share a two -page write-up that would cover as much data and information from following perspectives. These articles that they finally submitted on the week's end became individual blueprints for their targeted visual culture documents. These write-ups covered following in a nutshell.

For each header in the content, students would pick up 3-5 keywords that will associate the purpose of your chunk to be written under that header. The text of this chunk must imbibe following:

- Cognitive underpinnings of all the observations made.
- Continuity in-text of all the observations and the sections of the space covered. The sequence in text should ideally be linear and ordered.



- Composition of all Visual elements.
- Identity understanding and articulation of visual elements must be done with depth and sensitivity.
- Depending on your selected space, say a line as a visual element communicates a sense of alignment; or it may mean a boundary or lines in your space are facilitators of segmentation/divisions/ distributions, etc.

- Visual culture theme discussions with students:

The first two days of the second<sup>[1]</sup> week of the course was time put in extensively to discuss with each student his/her visual culture theme selection. Larger visual culture domains got defined from the thematic information collections the students shared in these sessions. Briefly, they collected thematic information under following categories of considering 'Space as a Social means of Culture and Communication'. The criteria are as follows:

- 1) Space and Associations with Class
- 2) Space and Associations with Materials
- 3) Space and Associations with History
- 4) Space and Associations with Multicultural Artifacts
- 5) Space and associations with Artifacts
- 6) Space and Associations with a City
- 7) Space and Associations with an Event / Festival / Space
- 8) Space and Associations with a Practice
- 9) Space and Associations with Seeing and Reading (observations and articulations or even conjectures)
- 10) Space and associations with Self-Image

### Insights and Discussion

Field work based research and the applied five-pillared framework for design outcomes as part of the DVC course works in this paper reveal guiding lights for future. Among them, some pertinent insights from teaching-learning perspectives can incorporate following visions for pedagogical developments around information visualization, cognition and semiotics, are as follows:

- Field works should include surveys and detailed interviews with the main stakeholders; in order to archive the processes employed by the concerned visual artists. Special story records of developing their arts, craftsmanship and entrepreneurship-based scope could be documented – for encompassing the complete circle of all the know-hows that students could experience in a better way at the grass root level.
- Ethnography, Participatory research modes of inquiry, co-creation research techniques are imparted to them as part of course and could be showcased as special chapter(s) in future documentations as part of such DVC courses. This would help them learn the importance of developing a mind and mode of operating as a design researcher.
- Students would tend to assume the role of a visual archeologist by filtering and harnessing content (text and graphics) to document varied kinds of visual cultures – in-depth through the lens of the people, the things (objects/artefacts, etc.) and the spaces in future DVC documentations. This would enhance information visualization, storage as well as retrieval in context of both socio-cultural and socio-spatial perspectives; bringing forth unknown facts and/or innovation aspects that represent the identity of a new kind of visual culture.
- Students need to understand the visual design aspects, print production aspects (selection<sup>[1]</sup> of paper makes / quality and print production process for final outcomes). They are able to speculate a workable budget for production of their document to learn making a mini business model around their book design – and this as production content could become part of the larger information content planned as a chapter for future DVC documentations.
- Innovation in future documentations may also include explorations of outside-field digital archival methods to gather research for interesting content developments; in consideration of the recent new normal future scenarios. Such an approach could be operated in a workshop-mode for the course.
- Visualization and experiments with book design formats for future DVC documentations would add responsiveness to their designs with respect to digital modes of visual representations.

### Conclusion

An in-depth and field work based research and documentation-cum-publication design courses and the applied five-pillared framework for design outcomes as part of the DVC course works in this paper reveal guiding lights for future that could incorporate following visions for pedagogical developments around 'Visualization' and 'Cognitive Semiotics'.

Visual culture may also be decoded and analyzed in a focused way with respect to the skills and craft of the<sup>[1]</sup> makers alongwith the unique legacy testimonials in their creations that imprint the relevance of a particular visual culture ahead of its time. In the realm of preserving the heritage of the analog or special manual capabilities of such makers/artists – the form-content associations implemented in the



documentations may cater to out-of-the box approaches in research, ideation and communication aspects needed to unravel the unknown stories of a good range of visual cultures from the present and the near future scenarios. Therefore, the researcher has summarized arguments in the form of research questions that would be needed to develop pedagogy around the said DVC course, as follows:-

- 1) Can these documentations by students be positioned as an essential source of knowledge creation about the visual arts, design and communication design?
- 2) Can they be produced as 'Visual Anthologies' or tangible collection of stories of a visual culture open to anyone to read and experience those - regardless of age, experience, ethnicity, or income ?
- 3) What sort of visual language design approaches would be needed in these special anthologies ?

In a nutshell, the above questions earmark the potential areas of scope that may regulate discovery of new qualitative methods for information content developments and information content to form associations for experimental research. Experimentations would aid reformation and transformation of existing practices related with documentations that celebrate the essence of a particular visual culture.

## References

1. Barthes, Roland. "Rhetoric of the Image." In: *Image - Music - Text. Sei. and Trans. Elements of Semiology*. Stephen Heath. New York: Hill and Wang, 1,977.32-51, (1977): 152-163.
2. Böhme, Jessica , Zack Walsh, and Christine Wamsler. "Sustainable lifestyles: towards a relational approach." *Sustainability Science*, 17 (2022): 2063–2076, <https://doi.org/10.1177/10597123211072352>.
3. Cascini, Gaetano et. al. "Perspectives on design creativity and innovation research: 10 years later." *International Journal of Design Creativity and Innovation*, 10, no. 1 (2022): 1-30, <https://doi.org/10.1080/21650349.2022.2021480>.
4. D'Armenio, Enzo. The rhetorical dimension of images: identity building and management on social networks. *Semiotica: Journal of the International Association for Semiotic Studies / Revue de l'Association Internationale de Sémiotique*, 246, (2022): 87-115, <https://doi.org/10.1515/sem-2020-0113>.
5. Gallagher, Shaun. "Embodied and Enactive Approaches to Cognition." In: *Cambridge Elements: Elements in Philosophy of Mind*, edited by Keith Frankish, The University of Sheffield, 1-65. UK: Cambridge University Press, 2023.
6. Greco, Sara and, Sabrina Mazzalli-Lurati. "Rhetoric." In: (eds) *The Palgrave Encyclopedia of the Possible*, edited by Glăveanu, 1431–1439. V.P. Palgrave Macmillan. Cham: Springer, 2022, [https://doi.org/10.1007/978-3-030-90913-0\\_8](https://doi.org/10.1007/978-3-030-90913-0_8).
7. Günay, Mustafa. "Design in Visual Communication." *Art and Design Review*, 9 (2021): 109-122, <https://doi.org/10.4236/adr.2021.92010>.
8. Kaup, Barbara et. al. "Modal and amodal cognition: an overarching principle in various domains of psychology." *Psychological Research: An International Journal of Perception, Attention, Memory, and Action*, 88, (2024): 307–337, <https://doi.org/10.1007/s00426-023-01878-w>.
9. Khanna, Sudrashan. "Joy of Making Indian Toys." New Delhi: National Book Trust, (2002): 1-125. ISBN-13978-8123722443 .:
10. Konderak, Piotr. "Towards an integration of two aspects of semiosis – A cognitive semiotic perspective." *Sign Systems Studies*, 49, no.1/2, (2021): 132–165, <https://doi.org/10.12697/SSS.2021.49.1-2.06>.
11. Køster, Allan and, Anthony Vincent Fernandez. "Investigating modes of being in the world: an introduction to Phenomenologically grounded qualitative research." *Phenomenology and the Cognitive Sciences*, 22, (2021): 149–169, <https://doi.org/10.1007/s11097-020-09723-w>.
12. Larráz-Rábanos, Natalia. "Development of Creative Thinking Skills in the Teaching-Learning Process." In: *Teacher Education-New Perspectives*, edited by Ulas Kayapinar. IntechOpen Books, United Kingdom, 2021. PRINT ISBN978-1-83969-288-8, <https://doi.org/10.5772/intechopen.94952>.
13. López-Varela Azcárate, Asun. "Posthuman Intermedial Semiotics and Distributed Agency for Sustainable Development." In: *The Palgrave Handbook of Intermediality*, edited by Bruhn, J., Azcárate, A.LV., de Paiva Vieira, M., 1213–1240. Palgrave Macmillan, Springer Cham, 2023, [https://doi.org/10.1007/978-3-031-28322-2\\_61](https://doi.org/10.1007/978-3-031-28322-2_61).
14. López-Varela Azcárate, Asun. "Mind and Matter - Challenges and Opportunities in Cognitive Semiotics and Aesthetics." IntechOpen Books, United Kingdom, (2022): 1-19. PRINT ISBN: 978-1-83969-935-1, <http://doi.org/10.5772/intechopen.95671>.
15. Manen, Max van. "Phenomenology of Practice: Meaning-Giving Methods in Phenomenological Research and Writing." 2<sup>nd</sup> Edi. Routledge, London, (2023): 1-520. <https://doi.org/10.4324/9781003228073>.
16. Mendoza-Collazos, Juan and, Jordan Zlatev. "A Cognitive-Semiotic Approach to Agency: Assessing Ideas from Cognitive Science and Neuroscience." *Biosemiotics*, 15, (2022): 141–170, <https://doi.org/10.1007/s12304-022-09473-z>.
17. Mendoza-Collazos, Juan and, Sonesson, G. "Revisiting the life of things: A cognitive semiotic study of the agency of artefacts in Amazonia." *Public Journal of Semiotics*, 9, no. 2, (2021): 30-52, <https://doi.org/10.37693/pjos.2020.9.22012>.



21. Mendoza-Collazos, Juan (2020). "On the importance of things: a relational approach to agency." *Cognitive Semiotics*, 13, no. 2, (2020): 1-11, <https://doi.org/10.1515/cogsem-2020-2034>.
22. Franke, Peng. "Design Thinking: From Empathy to Evaluation." In: *Foundations of Robotics: A Multidisciplinary Approach with Python and ROS*, edited by Damith Herath and David St-Onge D., 63–81. Springer, Singapore, 2022. [https://doi.org/10.1007/978-981-19-1983-1\\_3](https://doi.org/10.1007/978-981-19-1983-1_3).
23. Poizat, Germain., Simon Flandin and, Jacques Theureau. "A micro-phenomenological and semiotic approach to cognition in practice: a path toward an integrative approach to studying cognition-in-the-world and from within." *Adaptive Behaviour*, 31, no. 2 (2022): 109-125, <https://doi.org/10.1177/10597123211072352>.
24. Shapiro, Lawrence and, Shannon Spaulding. "Embodied Cognition." In: *Stanford Encyclopedia of Philosophy Winter (2021 Edition)*, edited by Edward N. Zalta. The Metaphysics Research Lab, Stanford University, USA, 2021. <https://plato.stanford.edu/archives/win2021/entries/embodied-cognition/>
25. Silvera-Roig, Marta. "Cognitive Semiotics and Conceptual Blend: A Case Study from The Crying of Lot 49." In: *Cognitive and Intermedial Semiotics*, edited by Silvera-Roig, M. and López-Varela Azcárate, A., 1-178. UK: IntechOpen Books, (2020): PRINT ISBN978-1-83880-552-4, <https://doi.org/10.5772/intechopen.92606>.
26. Solberg, Mads (2021). "A Cognitive Ethnography of Knowledge and Material Culture: Cognition, Experiment, and the Science of Salmon Lice." In Series: *Culture, Mind and Society*, 1<sup>st</sup> edi., 2637-6806. Switzerland AG: Springer Nature, 2021. Hardcover ISBN: 978-3-030-72510-5, <https://doi.org/10.1007/978-3-030-72511-2>.
27. Stew, Graham (2020). "Phenomenology – questioning consciousness and experience." In: *Critical Qualitative Health Research*, 1<sup>st</sup> Edi., 1-17. Routledge, London., 2020. <https://doi.org/10.4324/9780429432774>.
28. Trasmundi, Sarah Bro and, Juan Toro. "Mind wandering in reading: An embodied approach." *Frontiers in Human Neuroscience*, 17 (2023): 1-15, <https://doi.org/10.3389%2Ffnhum.2023.1061437>.
29. Vasterling, Veronica. "Phenomenology." In: *The Routledge Companion to Historical Theory*, edited by Chiel van den Akker, 1<sup>st</sup> Edi., 1-636. UK: Routledge, 2021. <https://doi.org/10.4324/9780367821814>
30. Vikas, T. N., et.al. "Design Thinking: A Review Paper." *International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)*, 2, no. 2, (2022): 405-412. <https://doi.org/10.48175/IJARSCT-2893>
31. Wiggins, Geraint A. "Creativity, information, and consciousness: The information dynamics of thinking." *Physics of Life Reviews*, 34–35, (2020):1-39. <https://doi.org/10.1016/j.plrev.2018.05.001>
32. Wilde, Danielle. "Design Research Education and Global Concerns." *She Ji: The Journal of Design, Economics, and Innovation*, 6, no. 2, (2020): 170-212. <https://doi.org/10.1016/j.sheji.2020.05.003>.
33. Xu, Dan. "Application Research of Graphic Design Based on Information Resource-Sharing and Big Data Technology." *Big Data Modelling of Engineering and Management 2022 [Special Issue]*, 2022. <https://doi.org/10.1155/2022/7321073>
34. Zlatev, Julian J. "I May Not Agree With You, but I Trust You: Caring About Social Issues Signals Integrity." *Psychological Science*, 30, no. 6, 2019. <https://doi.org/10.1177/0956797619837948>.
35. Zhang, Wei-wei. "Research on computer graphic and image design method based on visual communication technology." In Book: *MATEC Web of Conferences*, 365, 01043 (2022). ISC-BE 2022. <https://doi.org/10.1051/mateconf/202236501043>