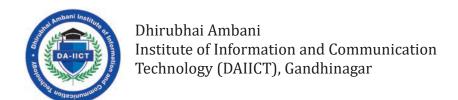
Synergy

Learning aid for raising constitutional awareness

Name : Diksha Mishra Student ID : 202014008

Guide : Prof. Binita Desai





Feedback Page

1. Acknowledgement

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2. Introduction

A country is run by the government, judicial bodies, its people, and most importantly by the Constitution. The Constitution serves as the backbone of the country. It is the collection of many rules and principles that comprise the organisation of the nation's legal bodies. It defines the way we live and interact with each other. The Constitution is the embodiment of fundamental regulations and principles according to which the country and its people are supposed to work. Therefore, understanding the Constitution is very important.

Access to Justice is fundamental for democracy, essential to human development, ensuring democratic governance and for the purpose of dispute resolution and prevention. India's judicial and legal system has constitutional and legal safeguards for access to justice; an independent judiciary and other voluntary and information channels like media. The country has progressive laws in many areas such as the recognition of historical injustices, the importance of group rights, and affirmative actions for vulnerable sections. including women and children. Legal and judicial reform include improving the efficiency of the justice delivery system for marginalized groups, who do not have strong lobbies to ensure that their rights are guaranteed. Such reforms while being thought of in terms of institutional and organizational changes are not possible without information delivery, public participation and discussion.

Radical changes occur at the grassroot level, in people's minds, particularly among the young who grow up and become members of society.

People being legally literate, bring positive changes in mindsets and attitudes. In a democratic and civilized society. there is no scope for widespread cases of rights violations and increasing trend of crimes against disadvantaged sections. India has a large body of legal professionals who specialize in their domain but the legal terminology and underlying context are largely inaccessible to the general public. This becomes a limitation when people continue to live ignorant lives, accepting injustice and not knowing if their rights are being violated or their actions violate the rights of others. Considering the size of the country and the need for improved access to justice for people, information access becomes one of the most important considerations while addressing the problems at hand. This becomes critical for starting discussions, inspiring behaviour and taking action in otherwise unideal socio-economic reality.

India has one of the world's youngest populations. Children of today are adults of tomorrow. Constitutional knowledge is imparted at the school level to students. Knowledge delivery and assimilation are further affected by the quality of education. After a certain point, students stop learning about these topics and eventually forget them. Therefore, it becomes important to address the gap in learning that occurs. Learning occurs in a somewhat isolated manner having no real connection to the real world.

When there is misinformation, when people are confused, they can always return to the ideals that founded the Indian democracy.

The project's topic is somewhat specific to Indian democracy, but the ideals of equality, freedom, and justice are universal, so there is a conscious effort to keep them as a foundation for any discussion, whether looking at it as a part of the system, in terms of abstract concepts, or grounded in the reality of the situation.

The project is about more than just designing information; it is about encouraging a way of thinking, interconnecting concepts, a learning approach that can be extended to other areas of life, and encouraging a holistic way of learning.

According to the findings of the study, students found it difficult to answer basic questions about the constitution, rights, government, and other topics covered in school. It was also discovered that the majority of students understood some social problems but were unable to connect them to their classroom learning. Their learning was restricted to the purpose of examination. All of the students agreed that it was important to have some constitutional awareness because it was related to their daily lives. The goal of this project is to impart some fundamental constitutional knowledge in the context of a real-life situation. The proposed medium is a learning aid in the form of flashcards.

3. Problem Statement

Problem Statement - I

To create a platform to give information about upcoming laws and raising awareness among the citizens so that it would encourage a discussion among people and further democratize the process of law-making.

There is a lack of legal awareness among citizens but addressing the issue of upcoming laws (laws which have not been passed in the parliament) posed certain challenges. Firstly, they were very specific, giving it a legal, terminologyspecific standpoint of view, making it more suitable for legal professionals. Secondly, trying to address drafts of laws that are in a continuous process of change within the government and the parliament, makes it impractical to convey to the public in a concrete way.

It was also important to judge in an individual capacity without having a background in law as a designer how much of it I understood and what kind of design solution I was proposing whether it was simplifying the language or creation of infographic material. For this, I went through a draft on Consumer Rights (GOI,2021) and tried to understand the controversial farm laws and why they were strongly opposed.

Based on the feedback I received, I shifted my focus to the laws that were already in the constitution but were unknown to the public. Addressing laws that were already in the constitution and had been passed through a discussion and debate in parliament provided some static solidity to the content that was to be communicated.

The problem needed to be addressed from an individual point of view also and how it affected a person's life. An individual can have multiple identities like individual, cultural, social, geographical, professional etc. These identities were directly affected by the laws and regulations written in the constitution for example, rights of children, senior citizens, women etc.

Problem Statement - II

To design a medium to educate young people so that they gain some constitutional awareness in connection to the events that they see or experience in their life.

Initially, I was under the assumption that school students learn the subject of civics up to class tenth and these concepts are forgotten after the school. To explore the problem better I had a series of conversations with students to understand what they knew about the subject and what they thought about it. I discovered a few problems, like the way in which the reading material was designed and taught at the classroom level and low levels of interest in the subject. Since this learning is limited for the purpose of examination, it is often ignored and undervalued.

I tried to understand what it was like to be back in school from the students, learning about their lives, interests, and motivations. Through a few case studies, I also attempted to read about the various complexities that can arise in a legal battle. I realised I needed to stop trying to be a lawyer and put myself in the shoes of a student.

There was a sense of disconnect between what the students were learning and what they saw in their daily lives. For example, how similar or dissimilar was dispute resolution within a group of friends in comparison to dispute resolution between individuals and organizations that they could find in current events. When students were asked to discuss rights and democracy in a context, there was a lack of knowledge and understanding. This gave me a better understanding of what could be a possible learning strategy for the students.

Through this project, I wish to bridge this gap by encouraging a holistic way of learning, interconnecting ideas, critical thinking and analysis among the students.

4. Research

a. User Research -I

Research was critical in the development of this project. It was essential to engage with the user at this stage in order to better understand them. Students from grades 8 to 12 took part in this study through a semi-structured interview. Images and audio recordings were used to document the process. For this purpose, students were asked a variety of open-ended and close-ended questions.

No of Student - 10

Goals of the research

- 1. To understand the background of students and know how lessons are taught in a classroom setup.
- 2. To assess the depth of students' understanding of the social science subject and to determine whether students can recall basic subject knowledge (specifically civics).
- 3. To determine whether students can directly or indirectly relate their school learning to their daily lives.
- 4. To ascertain whether students believe they require fundamental legal/constitutional knowledge.

The interviews were divided into sections in order to establish rapport and let the the students to speak freely.

- 1. Background Participants were asked to introduce themselves, their name, class, school, hobbies, likes and dislikes.
- 2. A day in the life of a student Participants were asked about their daily schedule at the school, followed by how lessons are taught i.e teaching methodology.
 - How does your teacher teach in a period?
 - What kind of discussions you have in the class?
- 3. About social science Students were asked about whether they like the subject or not. If not, why? Students were asked about basic concepts they have learnt in civics, followed up by additional questions to understand the depth of knowledge.
 - What is constitution?
 - What is a right?
 - What is government?
- 4. Learning outside the classroom Students were asked about general events around them.
 - What was the last news you saw on a television? Did you understand any context behind it?
 - What are the other things you have learnt outside school?
- 5. Conflict resolution To understand how students experienced or witnessed conflicts.
 - Have you ever been involved in a fight? What happened?
 - How do adults solve their fights? Where do they go?



Atul Sadhwani | Class 8 talkative, inquisitive, likes competing



Tilak Pandya | Class 8 Plays cricket, like to write diary entries



Mitva Modi | Class 11 Social, loves spending time with friends



Pujan Bhatt | Class 11 Plays Tabla, likes to read

4a. Some of the Participants



Shubham Pandya | Class 9 *Likes swimming, e-sports*



Shreya Vaghela | Class 9 Loves to draw, finds math difficult



Dhruvil Trivedi | Class 9 likes volleyball, swimming and esports



Yashraj Patel | Class 8 likes math, solving puzzles

4a. Some of the Participants

Result Summary

Students talked about their schedules during a typical school day, their likes and dislikes. They also talked broadly about various other subjects relating to family, friends, and extra curricular activities. Getting them to talk about themselves helped create a comfortable space to talk and did not make them feel like they were being tested.

- 1. 7/9 participants had difficulty answering basic question like "What is the constitution?", "What are rights?'
- 2. All students could understand some social issues that they brought up in the discussion(harrasment, ragging, discrimination, widow remarriage, climate change). They felt it was important to have some idea about legal recourse.
- 3. Students could recall their personal experiences when it came to learning for example learning percentages while calculating GST, learning about a disease when a family member suffered from it, learning an excel sheet from an elder
- 4. Students used a simple language to explain their answers.
- 5. 6/9 students found the subject difficult to understand or boring.

a. User Research -II

An interview with Teachers

After interviewing the students, it was also important to understand that students learn from teachers. For this, I conducted an interview with two teachers, a B-ed student and a life skills teacher from a private school, to learn about their teaching strategies and experience with students.

Suman Bishnoi, a B-ed student

Suman Bishnoi is a 3rd-semester B-ed student. I conducted an interview with her to learn about various teaching methodologies that are taught at the B-ed level. According to her, teacher training involves the study of child psychology, where a teacher should ideally respond to the needs of students. Different students have different needs in terms of learning ability and age. The special needs of children who are differently enabled are also addressed to some extent in the training.

Different kinds of teaching methods that are adopted by teachers are chalk and talk, demonstration, comparison method, inductive/deductive method, etc. Teachers also have the responsibility of preparing and gathering various teaching learning aids (TLAs) to aid in a better understanding of the students. Teachers also have the responsibility of counselling the students wherever necessary.

Suman Trivedi, life skills teacher

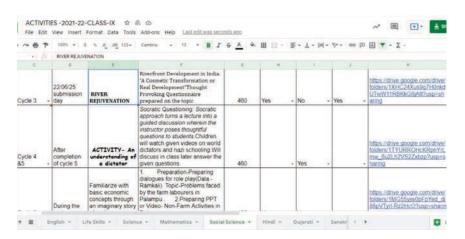
Mrs. Suman Trivedi is a life skills teacher at a private school. I conducted an interview with her to learn about the various teaching methodologies that are adopted at the school. The primary aim was to get some insight into the teaching programme and to learn about the kinds of learning aids that are used. The interview was an informal conversation, and I had a detailed discussion about the teaching plans for various classes. She was also able to provide documentation of various activities that were conducted by teachers and submissions by students.

In the online learning mode, each class has a dedicated excel sheet (4b) related to different subjects. It contains lesson plans and any activities organised by the teachers. In terms of legal awareness, students are educated about child abuse through the use of a movie, Komal, a poster, presentations, and sometimes roleplay. The school has a policy against sexual harassment and bullying. Students are given a warning card (yellow card) with counselling for misbehaviour and eventually a suspension if the student does not comply.

Various newspaper-based activities are carried out. A student used newspaper abstracts and information from the web to do a project on the effects of riverfront development (4c). In another activity, students are asked to go through a newspaper clipping and have a discussion based on it.

The constitution and concepts of democracy are taught within the lessons, and students are encouraged to use visualisation whenever possible (4d).

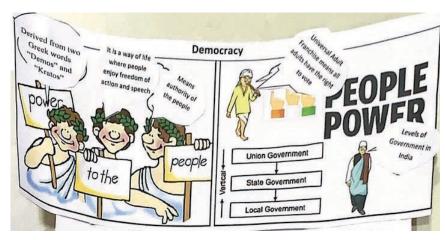
The teacher emphasised the need to make the student understand the difference between "being inspired" and "being influenced" when it comes to the issue of peer pressure. Students are encouraged to reach out to the counsellor for complaints or any queries, for which the students also have the option to write a letter and deposit it in the grievance box, and then the student is contacted individually.



4b. Excel sheet showing lesson plans



4c. Use of news clippings by a student



4d. Combination of text and imagery by student

b. Group Activity

After initial phases of research, the students engaged in group activities in the form of extempore or small reading exercises through which their level of engagement, ability to help each other and come up with new ideas could be judged.

1. Extempore

An extempore is a speech given on the spur of the moment without any prior preparation. At times, there are a few minutes given to prepare for a topic, like 2-3 mins. Extempore is conducted to understand various points from a candidate and hence has a lot of challenges like instantaneous thinking, analysis of topics, and identification of issues.

Methodology

Students were asked to pick up random pieces of paper chits from a bunch and were asked to reveal the topic/question they got to speak on. Initially, no aid was provided to prepare the topic in a limited time of five minutes. If the student could not come up with some points, they could use help from an external aid like a textbook or the internet to quickly learn about the topic and prepare some talking points.

Goals

- 1. To understand the level of knowledge the students had about the topics.
- 2. To understand how the students engaged in a group, whether they actively helped each other or not.
- 3. To judge the role of an external source of information and how it was utilised by the student.

Results

- 1. Most students (3/6) could not attempt the exercise properly without the help of an external source of information.
- 2. Students showed interest in a group, doing an activity with their friends.
- 3. Students mostly used the internet to find out about the topics given by the use of keywords.
- 4. They helped each other when someone got stuck and found it difficult to speak.
- 5. Students showed different levels of engagement in the activity based on their personal interests.

2. Reading and analysing the news

A newspaper is quite a powerful tool that circulates information to people. It is one of the greatest means of communication between people and the world. In addition, they are also a great source of knowledge. It is quite a reliable source that gives us information only after thoroughly investigating the information. Other sources of news can be television, the web, and word of mouth etc. With the aim of judging how students read and interpret newspapers, I conducted a group activity.

Methodology

Students were asked to skim through a newspaper in a limited period of time (10 min) and make notes on some news items that caught their attention and interest in order to summarise and debate them (4e). After a period of 10 minutes, students were asked to stop and take turns talking about what they read from the newspaper..

Goals

- 1. To understand how students use newspapers.
- 2. To find out what interests the students
- 3. To determine how much information the students can read and understand.

Results

- 1. Students picked topics that were relevant to them. For example, girls talked about increasing the marriageable age, which was a report in the newspaper, saying that it was a good initiative. The boys talked mostly about the sports section and a few other relatively random news items.
- 2. Contrary to the assumption, students did not pick news items from the front page or according to hierarchy. They read out news items that interested them.
- 3. Reading the newspaper and having a reference point helped the students talk about different topics and discuss them among themselves.



4e. A group skimming though the newspaper

c. Conclusion

From the formulation of the problem statement to user research, there were many points where a lot of my assumptions were broken and they led to the formulation of the problem statement.

I began with the presumption that learning in schools might be a little isolated and that people might eventually forget certain crucial civics-related information as they get older. I started my research in an effort to understand it from the perspective of a student. The way people read, interpret, and react to events can be greatly influenced by their general knowledge of particular topics. Students could discuss certain specific point of views, but they lacked a comprehensive understanding of democracy and the principles of the constitution. It was merely a subject for examinations.

This research also involved a significant amount of parallel analysis of the reading material, which is discussed in the following section. It gave some insight into what was being consumed.

From the User Research, I could understand some needs and behaviours of students. Some of the common observations were.

1. According to the students, the classroom instruction was relatively uninteresting, which may have contributed to the students' lack of enthusiasm and interest. The students described it as boring, which seemed to be at odds to what the teachers had said about their teaching methods.

- 2. The students were a mix of CBSE and Gujarat Board students from both public and private schools. This highlights the obvious bias of some schools being better than others, private vs. public, resulting in varying levels of educational quality. A disconnect and apathy toward the subject matter were also noticeable, possibly as a result of the teaching material and the rush to finish the syllabi. There was definitely a lack of discussion that I felt should have occurred in class.
- 3. This study was carried out during the covid period when some of the students sat at home and did not have access to online classes because of the lack of infrastructure in the schools. This could have been a temporary problem at the time but also pointed out to lack of initiative. The students had to resort to online platforms like youtube for learning.
- 4. Although civics is taught as part of Social Sciences from class six onwards, the user group I could target was from class eight because they demonstrated some level of understanding and the ability to form opinions on certain issues regardless of whether they could link back to their learning.
- 5. This exercise also taught me that as a researcher, I needed to engage with the students more in order to pique their interest, whether through group activities or by discussing unrelated topics. I was able to understand their interests and motivations, which may not have completely contributed to the formulation of the problem statement but did provide me with some direction to work with. I realized that engagement had to be a part of the project as well.

5. Goals

a. Learning goals for Students

1. Learning Basics

One of the main goals of this project is to raise constitutional awareness. Even though the students learn from textbooks, their knowledge is disjointed, and they are unable to discuss the fundamentals. A learning aid can provide a break from the usual format of textbooks by providing something different to look at. Students will be able to read bite sized content from the medium and be in a position to gain some basic knowledge.

2. Establish relevance in real life

In a real-life situation, if they are confronted with situations in which their or others' rights are violated in real life, they should be able to make that assessment on constitutional and moral grounds.

3. Making connections

The learning goal is also about making connections, any event in life maybe directly or indirectly connected to a legal point of view. Social situations can be complicated, and having a basic understanding of the democratic system can assist them in making informed decisions in their lives.

4. Encourage a way of thinking

Education is a continuous process, and students should be able to find a way to think that encourages them to examine the material and develop an independent way of thinking. As a result, this project can serve as a model for any present or future learning. The goal is not to spoon-feed, as passive learning is relatively ineffective. Critical thinking and analysis can assist students in spending time with the content, conducting their own research, and coming up with solutions. This format may assist them in applying the same to different areas of learning and encouraging them to explore on their own.

b. Design Goals

1. Break from textbook

To design a learning material that will help students learn more effectively by combining concepts. The material's design should be able to break the monotony of a standard textbook and present the content in a new and unique way.

2. Keeping it simple

To combine text and visualisation in a way that is easy to read and understand without creating an information overload. Students should be able to return to their textbook and learn how to read, interpret, and combine concepts from different chapters.

3. Making connections

A passive approach to reading the material may not be very beneficial in the long run. To keep students thinking actively, the learning material should pose questions that encourage them to think about the material, go over it again, do their own research, and come up with solutions to the problems.

4. Look and Feel

To design a learning aid that simplifies the technical jargon of legal literacy and educates in a simple manner. Communicate the concepts in a unique, visually exciting and engaging way. The look and feel of the design should be inviting for the students.

Although the subject is vast, it may be impossible to cover it entirely. The content can be somewhat customised based on the user group that is best suited for the project.

6. Outcome

Through this medium, the target user group should be ideally,

1. Learn the material better

Keeping the language simple and providing them with an additional resource to learn from will help them retain and recall more information. Although academic performance is not one of the learning goals, if the students learn better, it will eventually create an interest and allow them to perform better in the subject.

2. Develop a way of thinking

Since the emphasis is not on spoon-feeding and providing everything, covering some fundamentals and presenting them in the form of connected concepts will encourage them to examine events, news items, and their personal experiences from a constitutional or legal standpoint. This can be done while encouraging free thought and also keeping in mind the democratic system that has been established based on constitutional values. For example, whether caste-based discrimination is right or wrong should not be a question.

3. Becoming informed individuals

Through this medium, students will be able to understand the bigger picture in a democratic system, so that when they grow up, they will be a part of an aware and responsible society.

7. Target Audience

Adults over the age of 18 were initially identified as the target audience. Following the user research, I discovered a learning gap at the school level. Also, I wasn't sure how the chosen adults would interact with the material, whether they belonged to specific groups like women or not. According to the findings of the research for this project, the target audience is 14-16 year olds with some knowledge and the ability to think about the subject holistically.

Background

The target audience for this project is urban students who can read and write. They have access to better educational conditions in terms of infrastructure or educational quality, which can range from average to excellent. Because they have been studying civics since sixth grade, they have a basic understanding of it. They have access to a library, newspapers, as well as other forms of media such as television and the internet. They are welcome to take part in group discussions and other activities.

Age Group

In the research phase, I discovered that students could not recall what they had learned in their classrooms. Students transitioning from primary to secondary school were somewhat unfamiliar with the concepts taught and lacked concrete opinions on various topics. This project's target audience is 14-16 year olds who are somewhat familiar with the concepts. These students could recall terms and discuss them with hints. When encouraged, they could read, write, and express their opinions.

Why this age group?

Understanding the students' backgrounds allowed me to not only think about the content of the material, but also to make an accurate assessment of the resources they had access to, such as schooling, books, newspapers, and other media.

The research also assisted me in understanding the student's linguistic and articulation abilities. Many of the terms were difficult for the students to understand, so I had to consider how the language could be simplified.

The students found the text books difficult and boring, so they had to rely on rote learning. I had to consider how to break up the monotony without overloading the material with information and facts that required active memorization.

In group activities, students interacted with reading materials such as newspapers. They were asked to repeat those sentences, recalling what they understood rather than what they read. They had been encouraged to think about the material in some way, to reflect on what they had learned, and to be able to answer some questions based on both the material and their own understanding.

The age group chosen is transitioning to late adolescence. They cannot be treated as a much younger child or expected to behave as an adult. As a result, there must be a space for them where they can be treated as fun-loving, enthusiastic students who can also learn with some level seriousness.

8. Literature Survey

a. School Textbooks

The project's first source of information was school textbooks. This provided insight into the subject covered in school. Through this exercise, I was able to examine the content of the textbooks, as well as how they were presented. I tried to analyse the school textbooks (NCERT) for content, ways of presentation, increasing complexity with successive standards, and potential knowledge gaps.

A comparison of the school textbooks have been given in a tabular format (Table 7a).

Questions of Interest

- 1. Various topics taught in the textbook somewhat work in an isolated manner. Do they manage to provide a broader perspective? Do they help in the direct or indirect understanding of societal, legislative, and judicial complexities?
- 2. What is the primary motivation behind reading a textbook? The end goal is to test students in a written exam but does also invoke an interest in them and makes them realise it is an important part of their life.

Class	Name of Textbook (NCERT)	Topics Covered	Elements of Lesson	Additional Notes
6	Social and Political Life	(4 Units, 9 Chapters)1. Diversity2. Government3. Local Government and Adm.4. Livelihood	Case Study(Stories) Activities Quizzes	The textbook explains concepts through real-life examples, storytelling is dominant
7	Social and Political Life	(4 Units, 9 Chapters)1. Equality in Indian Democracy2. State Govt3. Gender4. Media Market	Storyboards Text excerpts Some Historical context In chapter an end chapter question	Descriptive text becomes dominant
8	Social and Political Life	 (4 Units, 10 Chapters) The Indian Constitution and Secularism Parliament and The Making of Laws The Judiciary Social Justice and The Marginalised Economic Presence of the Government 	Storyboards. In-text and end of chapter questions Photo essays- historical background is introduced	The text becomes descriptive and direct (essay like format)

Table 7a. Comparison of school textbooks class 5-8th

9	Democratic Politics	 (5 Chapters) What is democracy? Constitutional Design Electoral Politics Working of Institutions Democratic Rights 	Text Use of Dialogues In text and end of chapter questions Cartoons	Social and Political Life
10	Democratic Politics	 (8 Chapters) Power-sharing Federalism Democracy and Diversity Gender, Religion and Caste Popular Struggles and Movements Political Parties Outcomes of Democracy Challenges to Democracy 	Text Use of Dialogues In-text and end of chapter questions Cartoons	Social and Political Life

Table 7a. Comparison of school textbooks class 9-10th cont.



7a. page from class 6 textbook

7b. page from class 7 textbook



7c. page from class 9 textbook

7d. page from class 9 textbook



7e. page from class 10 textbook

- 3. After a certain point, students stop learning about these topics and eventually forget them. Where is the gap?
- 4. Would a person be interested in learning from a school textbook either in hardcopy or softcopy if he wished to gain some legal awareness?
- 5. Does overall legal awareness invoke a sense of social justice among people and help them develop empathy towards those less privileged than them? Recognize 'wrongs' and equip them with the right information to stand against them.

b. Cognitive Theories

1. Mere Exposure effect

The mere exposure effect (Mere Exposure Effect - How It Works, Examples And Tips, n.d.) is the tendency to develop a preference for something simply because you are familiar with it. Such behaviour can be observed with words, songs, faces, and shapes, among other things. The effect is common with both visual and auditory (sound) data. It is one of the human brain's cognitive biases. The frequency with which you hear something and the time interval between each occurrence determine how much you like it. If you listened to the same song ten times in one day, you'd start to dislike it.

For decades, researchers have studied the mere exposure effect, which shows that with enough exposure, fondness for the new object increases. Subliminal exposure occurs when an image appears and disappears so quickly that you are unaware of what you have seen. However, your subconscious mind notices and remembers it later. Subliminal messages are possible in a lab or an application designed specifically for this purpose.

2. The Perceptual Process (The Perceptual Process – Introduction to Consumer Behaviour, n.d.)
Perception is the process of selecting, organizing, and interpreting information. How we perceive people and objects around us affects our communication. The perceptual process develops a consumer's perception of a brand and formulates the brand's position vis-à-vis the competition.

Consumers are bombarded with messages on television, radio, magazines, the Internet, and even bathroom walls.

Some, but not all, information makes it into our brains.

Selecting information we see or hear (e.g., Instagram ads or YouTube videos) is called selective exposure. Attention is the next part of the perception process, in which we focus our attention on certain incoming sensory information. Since we can't tune in to each and every one of the thousands of messages and images we're exposed to daily, we tend to only pay attention to information that we perceive to meet our needs or interests.

The first part of the perception process is selecting and organising incoming stimuli. The second part is interpretation, where we assign meaning to our experiences using mental structures known as schemata. Schemata are like databases of stored, related information that we use to interpret new experiences. It's important to be aware of schemata because our interpretations affect our behaviour. A fundamental process of perception is sensory adaptation—a decreased sensitivity. When we experience a sensory stimulus that doesn't change, we stop paying attention to it. When a stimulus is constant and unchanging, we experience sensory adaptation. During this process, we become less sensitive to that stimulus.

With enough exposure, I thought I might create familiarity
with the subject matter through the product. I also gained
some valuable insight from the perceptual process. I
applied this in a form learning diagram that I created in
order to understand how a person received, processed,
and acted on a stimulus, which may be visual, auditory, or a
combined experience.

2. Learning How To Learn - Barbara Oakley This book contains learning strategies used by experts in art, music, literature, arithmetic, science, athletics, and other professions. It describes how the brain organises ("chunks") information and employs two distinct learning processes, namely "Focused" and "Diffused" Modes. It also presents strategies on how to deal with procrastination, and research-backed best practices for mastering difficult subjects and other techniques like Chunking, recall, bite-sized testing etc.

The book was very insightful on various learning techniques. Dr. Oakley urges her students to understand that people learn in different ways. Those who have "race-car brains" snap up information; those with "hiker brains" take longer to assimilate information but, like a hiker, perceive more details along the way. Recognizing the advantages and disadvantages, she says, is the first step in learning how to approach unfamiliar material.

She also emphasises the fact that one learns better when they spend time with the content and grill through the problems. For example in mathematics, a learner can assimilate the material better if he/ she solves the problems herself even if he/she struggle without looking at the solution. Brains form neural connections during the process of learning and it results into better recall and retention if those connections are strong. (Oakley et al., 2018,)

c. Research Papers and Other Articles

During the research phase and throughout the project, I read a lot of research papers to aid in a better understanding of the content. I could also expand the scope of content from the textbook and use various resources for the content. For example, caste-based discrimination when it comes to water access (Indulata Prasad, 2021), water politics (Acharya, 2021), freedom of expression, RTE, etc. I could understand various complex issues regarding availability and access to water. I could also take some examples from these resources to formulate the content for the project. Whenever I could not find a relevant explanation from the textbooks, web resources (istor, blog articles) helped a lot. The book, "Aj bhi khade h talab" by water conservationist Anupan Mishra, was also a valuable discovery that I enjoyed reading. (Mishra, 2011)

d. News Articles

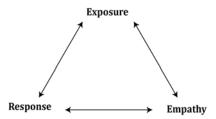
Keeping the content current was a priority for the project. Everyone is updated about events happening in India and throughout the world, thanks to newspapers, TV, and the internet. As part of being a global citizen, it enables people to engage in discussions and stay informed. I read a number of articles from various sources to gain a better understanding of the subject and to use some of the information.

9. Learning Strategy

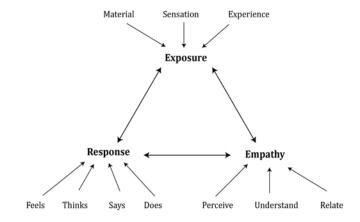
After conducting user research and a literature review, I was in a better position to understand the type of content that I wanted to design for the students, but I also had to consider how I could incorporate what I had learned from the research thus far into the design process. Without understanding how one learns, one cannot have a holistic approach to designing educational materials.

In addition to determining how a learning material was designed, I made an attempt to understand how any material would be perceived and eventually processed by the student because the larger goal of the project is retention and recall of the subject matter so that it can be carried into lifelong learning.

To better comprehend this, I began by drawing a diagram. It took a three-step approach to solve the problem. At this stage, I call it the EER Triangle, in which the E's stand for Exposure, Empathy, and R for Response. It depicts three phases in which the students would optimally process the subject matter. The triangle is shown in images (8a) and (8b).



8a. 2ER Traingle - 1



8b. 2ER Traingle - 2

a. 2ER Diagram

Exposure - The first step in learning is exposure. Exposure can be material, a sensation, or an experience. In this case, exposure is thought of in terms of the learning material and any other experience that a student has witnessed in his/her life. This is individual and unique.

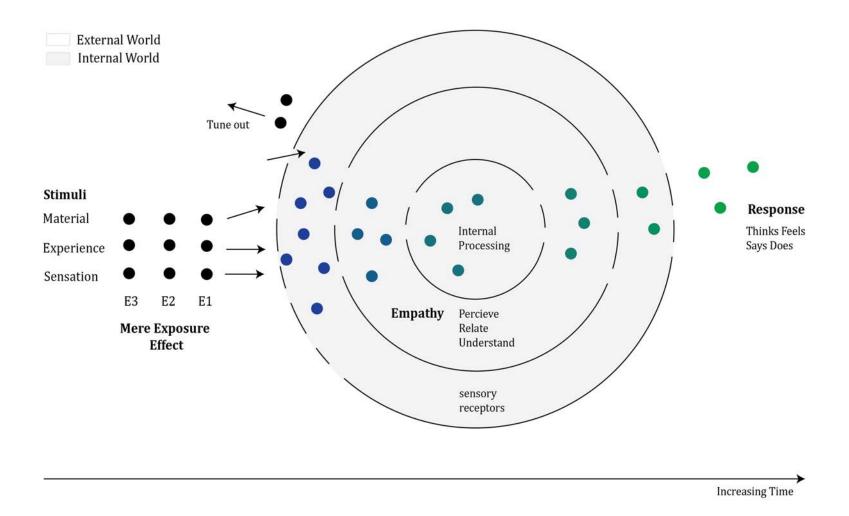
Empathy - Once a person is exposed to a particular material, sensation, experience or combination thereof, he/she processes that information and may empathise with it. The more they relate, the better. An effort to make the design solution relatable can invoke a sense of empathy for a situation.

Response - After empathising with the situation, a person might be motivated to exhibit a response. (thinks, feels, says, does).

All the three factors are connected with bidirectional arrows, indicating that they are related to each other and affect each other.

Although this diagram helped me frame a mindset for students to ideally have. I tried to think about it in a larger concept to open it up a bit to a range of ideas. However, this diagram is specific to the project and might not be applicable to other learning materials. An emphasis of this project in the larger context is to encourage students to become informed, responsible citizens.

The exploration, research, and reading I had done so far helped me create another diagram which was dynamic and addressed a variety of concepts.



8c. Learning Diagram

b. Learning Diagram

The learning diagram(8c) was an attempt to understand the outcome based learning process constructed from the various cognitive theories and the EER diagram. The diagram can be deconstructed into the following aspects.

Internal and External Worlds- The internal world of a student consists of his/her physical human body and mind. The external world consists of the environment in which he/she lives.

Sensory Reception - The boundary between the internal and external world is not solid and closed, there is a continuous inflow and outflow of material. It may be thought of in terms of information that is received by the body through vision, sound, sensation or a combination thereof. These stimuli can be singular or repetitive, appearing at varying intervals of time.

Empathy- According to the Mere Exposure Effect, a person can develop a liking for an exposure based on repetition at different intervals of time. Different kinds of stimulus can invoke emotions in an individual. They might be pleasant, unpleasant, or the student might feel neutral about them. When they perceive a particular piece of information and also relate to it, it leads to better learning.

Inner Processing - Learning occurs in two modes; they are "focused" and 'diffused' modes. When learning occurs in diffused mode, the brain is not actively thinking about it. This happens when a person sleeps, listens to music, or does some other activity that does not require active thinking. In this phase, the brain processes the information that it has received in 'focused modes'.

Response - Students should be able to apply what they learn ideally. They should be able to think critically and analyse situations, events in life. They should be able to voice their opinion and, if possible, take action.

Time -The time between the generation of stimili and the response is not fixed. To explain it better, any learning can stay with a person, and that person should be able to use that piece of information when they need it. The process might not take place in a linear time based fashion. It can start and stop at various stages, stay there and re-start when prompted to.

For example, if a student learns about a right in class 8, he learns the concept and finds no immediate consequence to it, but he is able to empathise with the situation. Over a period of time, through his personal experience and learning, he might be in a position to internalise that learning and use that knowledge when he/she sees a right being violated. He or she is able to recognise and use that learning to stand up against it, not behave against it.

10. Choice of Medium

While exploring th choices of medium one important question that needed to be though about was, "Where is the solution positioned?"

The solution could be positioned in the following ways based on the accesiibility of the targeted user group.

- 1. For class environment
 - Advantage The material can be incorported in the school curriculum and learning can be supervised.
 - Constraint Adoption by teachers/schools
- 2. For self-learning,
 - Advantage Ideal for self exploration, out of a regulated environent
 - Constraint individual interest and motivation, access to library, book stores, web (if online) Or both.

User Scenarios

Based on the research conducted while interviewing students, I tried to learn about how students were studying the subjects. I was interested in knowinf what kind of resources they uses whether it was online or offline and recorded some of the situations that they told me. I recorded them in the a table 10a.

Online		Offline	
1.	For Pujan, online learning was limited, he had to depend on the internet to	4.	Mitva likes going to school, interacting with friends, and teachers in person.
 3. 	cover topics. Shreya often googles terms she does not understand and tries to find relevant material to help her learn. Atul relies on visualization used by ed-tech platforms to understand the text	5.6.	Suman is a teacher who teaches at a government school and wants to use learning aids to teach students. Shubham feels that class discussions are important when learning.
	better	7.	Tilak did not like reading from textbooks and prefers learning outside of the classroom. He prefers learning concepts directly, to the point.

Table 10a, User Scenarios

a. Exploration of Mediums

Books on Constitution - I found two books on the Indian Constitution for children.

- 1. The Constitution of India for Children Subhadra Sen Gupta (Gupta 2020)
- 2. We the Children of India: The Preamble to our Constitution -Leila Seth. (Seth, 2010)

Attempts have been made to illustrate constitutional knowledge to children by authors and illustrators in different countries. Going through a few pages, improvements can be made in content and visualization. These books were somewhat very similar in the way they were presented and suitable for a younger audience than the said age groups.

Web Resources

There were little to no web resources available on the subject. There were a few websites, but they did not appear from a simple keyword search. Other content, like pdf documents of the Constitution, is available on the GOI website. There wasn't a dedicated web medium which could cater to the audience targeted in a simplified manner.

Many of the students did not have access to online classes during the COVID period (2020-21) as the schools did not have the infrastructure to support the same. Not all students had laptops, and it was somewhat difficult to assume how they would interact. with the web medium. Did it pose a limitation to a group learning activity? Would schools provide access to the web if the solution were to be adopted in schools? These were the kinds of questions that I had while exploring the medium.

b. Flashcards

Flashcards are one of the classic study tools — they promote studying through active recall, which is one of the practises through which our brains learn most effectively. In cognitive psychology, there's a concept called the Picture Superiority Effect, which describes how people tend to remember imagery a lot better than words. A flashcard is a mnemonic device that can be applied to a large number of concepts. In view of the larger goal of making students aware as well as interested in some basic knowledge about rights and responsibilities, a flashcard provided a break from the textbook format, forcing a student to actively think about the situation presented at hand. It opens the scope for discussion and can make a learning experience interactive. It serves the purpose of delivering bitesized information in a concise manner. The flashcard medium is replicable and scalable to cover a wide range of topics. A combination of imagery and text can promote better learning and recall. Introducing a concept through a flashcard forces a learner to analyse and think about the situation presented before trying to come up with an answer. A student can use them without support. It can be used as a self-study tool.

Explored medium have been summarized in table 10b with some points of consideration.

Medium	Points to Consider	
Storybook • text and visualization adapted for students to make it interesting	 Positioning of the book in a bookstore/library Cost to the user - Paid Illustration skills 	
 Explore content through the use of keywords/ concepts that students do not understand from the textbook. Watching a video tutorial, taking a quiz for recall. 	 To make the content interesting, engaging Accessibility of a website, availability of devices - mobile/laptop Cost to the user - Free 	
 Flashcards A flashcard is based on recall and recognition instead of passive reading. Format Text + Text / Text + Visual Leitner System - Spaced Repetition 	 Is the flashcard digital(can be interactive) or print Adoption by teacher/students Cost to the user - free/paid(print) 	

Table 10b. Explored Mediums

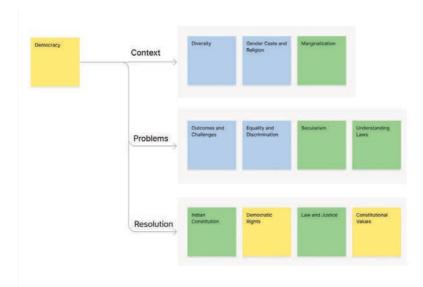
11. Content Strategy

While thinking about the content in the initial stages, I had a few ideas that I wished to work on.

- Imparting constitutional knowledge ideas about rights, the constitution and democracy.
- Giving a sense of right and wrong.
- Developing a sensitivity to the events around such that it complements the learning and stays with him/her.

In an otherwise complex society, it becomes difficult to decide some concrete defining rules under which an individual conducts himself/herself in society. The constitution, therefore, serves the purpose of being the rule book, a constant text that applies to all regardless of one's geographical, religious, cultural or sexual identity.

The scope of the constitution is very wide and the aim of the project is not to make the students become masters of the constitution or takeover the legal professional. The choice of the content, therefore, becomes important and the sections that contribute to the all-round development of an individual take precedence over the other unrelated topics like 'corporate' for the said age group of students.



11a. Information Flow

For example, fundamental rights protect the liberties and freedom of citizens. They are very essential for the all-round development of individuals and the country. Fundamental rights are essentially human rights but are regulated by the Constitution in India. The Constitution also provides for the enforcement of these rights, which empower a citizen to protect, respect, and fulfil the rule of law. They uphold the equality of all individuals, the dignity of the individual, and national unity. A textual description of the same is not enough when the context is rooted in socio-economic realities.

- 1. This learning cannot be limited to a simplified text explaining the rights, it needed to be real and relatable.
- 2. The primary source of the content was gathered from textbooks, constitution, articles, published papers and news items. The first level of the information will be of explainer kind, explaining the basic fundamental rights.

I skimmed through the text books to arrange and rearranged topics based on how the problem could be looked at. This was done through a flow diagram (11a). At this stage I sorted content based on how I wanted to ideally like the chapters to be arranged with intermixing of topics from different classes.

Since the main subject of the project is constitution, it had to be the central unifying factor having other topics surrounding it. In order to do this, I created some categories of topics that were related to basics of constitutional knowledge like functions, features, rights, democracy which could cover some basics as well as paint a larger picture of the democratic system of India and how it works. These sets which show a tumbnail view of the project is shown in image (11b).

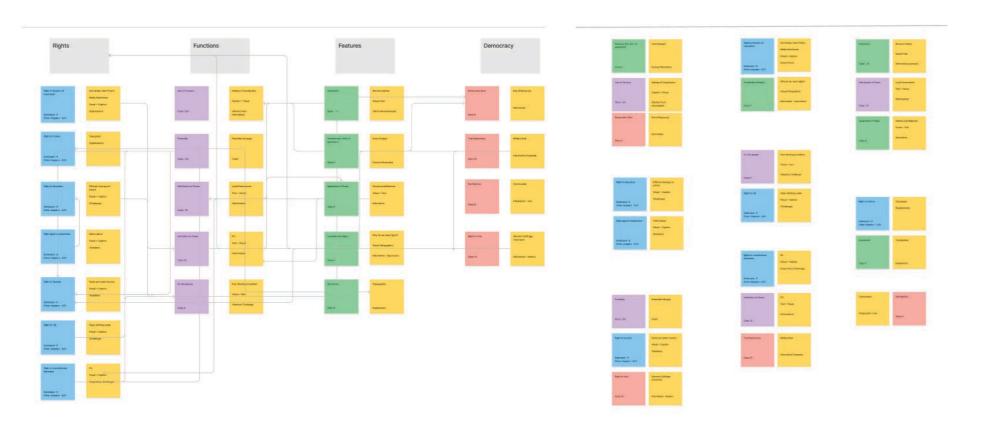
The same sets can be rearranged in different ways. These are shown in image (11c) and (11d). Through this exercise I could find an opportunity for the students to also find these connections. Thus I could think of a new set which engaged the students in activities and expanded the scope of the project. It encourged the students to use the material but also do their own research and engage in some small activities.

Rights **Functions** Features Democracy

More focused on Constitution

11b. Redistribution into different Sets

Premise



11c. Interconnection of Concepts

11d. Rearrangement and Grouping

12. Design Process

a. Exploration of formats

The project built up over a period of time and went through numerous iterations at each and every step. The idea of newspaper had to be included in the product. So, I started with collecting a few newspaper clipping and placing them to see how it played out. This was the kind of material I could obtain from the students and was the evidence of what students did when it came to assignments, projects. This is shown in image (12a).

Using mascots and gamifying the cards In an attempt to introduce a narrator and to gamify the experience, I took the topic of freedom struggle in Myanmar and made a few cards to cover the functioning of a democratic system. This is shown in image 10(b). The size of this card was A6. I also worked in a colored version complete with imagery. After this I conducted a first round of testing with the students which has been covered in the following sections.

The newspaper clippings show crime against a marginalized group alomst 50 years apart. Has anything changed?



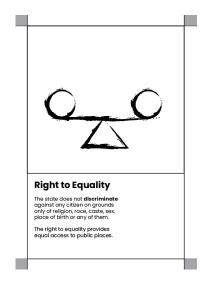
1968 2017

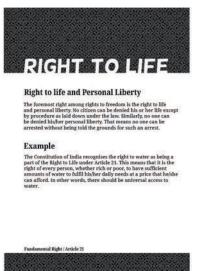
12a. Combining newspaper clippings





12b. Exploration of format - 1







Child Labour.

Lorem ipsum dolor sit amet, con-

magna aliquam erat volutpat. Ut wisi enim ad

sectetuer adipiscing elit, sed diam nonummy nibh euismod tincidunt ut laoreet dolore

12c. Exploration of formats - 2,3,4,5

Other Formats

After the first round of testing, I discovered students were somewhat confused with the complexity of the material and mascot did not not add a lot of information or interest in the students. I decided to take a much simpler approach this time now and decided to keep it simple. The sizing was also much smaller and did not give a lot of space to work with.

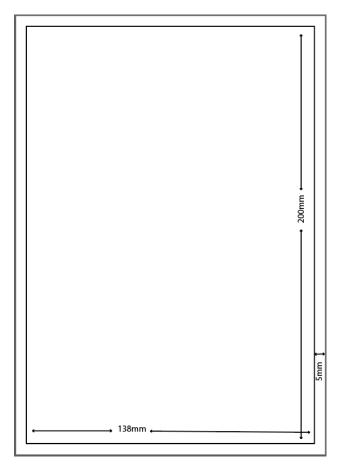
Some of the other formats (low level designs) are shown in (10c)

b. Sizing and Grids

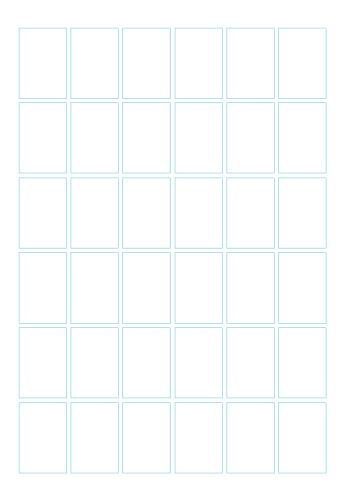
Based on iterations, trying different formats, I had to think of a way to structure the cards so that they looked consistent throughout when it came to the basic structure and spacing. These acted as guidelines for placements of texts and imagery.

Size of the card - A5 Dimensions - 148 x 210 mm Orientation - Portrait (See image 12d)

Grid - 6x6, 2mm gutter (See Image 12e)



12d. Sizing and Dimensions



12e. Grid

c. Colours

Explorations

Since this product is meant for kids, I had to think of keeping the palette fun and exciting. Initially, I tried to explore bright colours by using colours from the colour wheel and modifying them. I tried to study how they interacted with each other and with the text. These are shown in image (10), which includes one use case.

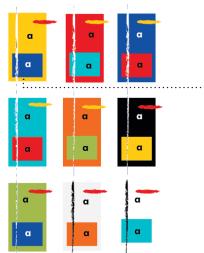
After the previous exploration, the colours were a bit brighter. The contrast with text worked for lighter colours, but it didn't work that well with darker colours like blue. I had to think about modifying the palette in such a way that it was still fun and exciting but at the same time gave good readability. Images in section (12g) show the colour modification and use cases.

Colour Palette (Final)

The content of the project was divided into different sets based on the topics. So the colours have been used to colour code cards that belonged to the same set.

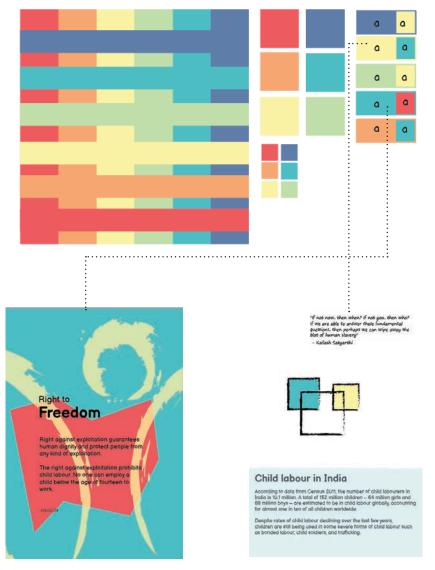
This could help establish some connection when it came to the cards and view then in sequence or randomly. The cards were conceptually connected as discussed in the previous sections.



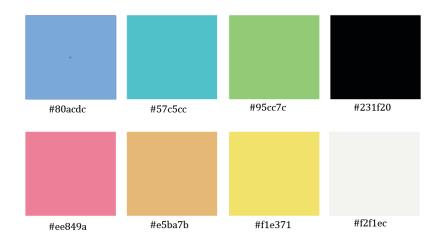


12f.Colour Exploration and Use Case - 1





12g. Colour Exploration and Use Case - 2



12h. Colour Palette for the project

The image above (12h) shows the colour palette that has been used in the final product. These colours have been used to depict different sets in combination where the colour used in the larger proportion is the colour of the set and another colour used in graphic elements and highlights in combination. The text in the entire prototype is black, yellow is used in four sets based on rights, democracy, features and functions for graphic elements.

Set 5, that is entirely activity based is kept neutral (#f2f1ec). This was added later on and has coded this way as the questions and activities were based on interconnection within all the sets. For example one activity could involve cards from sets on rights and democracy. Also, a lot of empty space has been provided for the students to work with. This could be seen as a worksheet.

d. Typography

Fonts Used

While choosing the fonts, the emphasis was to keep it simple, readable while adding an element of interest as well. The fonts had to be used in combination, with sufficient readability and their combination with various diagrams and illustrations.

Formata Pro (Variables - regular medium, bold)
Formata Font is a modern typeface that was designed by
German font designer Mr. Bernd Mollenstadt. This font was
released in 1984. Thanks to the designer that gives us a new
typeface. It comes in 25 styles, including Medium Bold, Outline,
Regular. This has been mostly used in headings and body texts.

Inkfree 9 (regular)

Ink Free Font is a handwritten typeface. It is a delightful and friendly typeface. Along with its slim and unique appearance, it can be used for various stylish purposes. In the project, I have used this form in combination with others to present the content matter in a typographic form. This has also been used for labelling along with the visualizations.

Balsamiq sans - b	aeioucghqhg oooc	Heading
Balsamiq Sans - r	a e i o u c g h q h g o o o c	body
Seoge print	aeioucghqhg oooc	illustration/quote
quicksand - m	aeioucghqhg oooc	ref.

12i. Font explorations

Heading (34pt)

Sub Heading 1 (21pt)

SUB HEADING 2 (21PT)

Body 1 (12pt)

Body 2 (12pt)

12j. Fonts Used

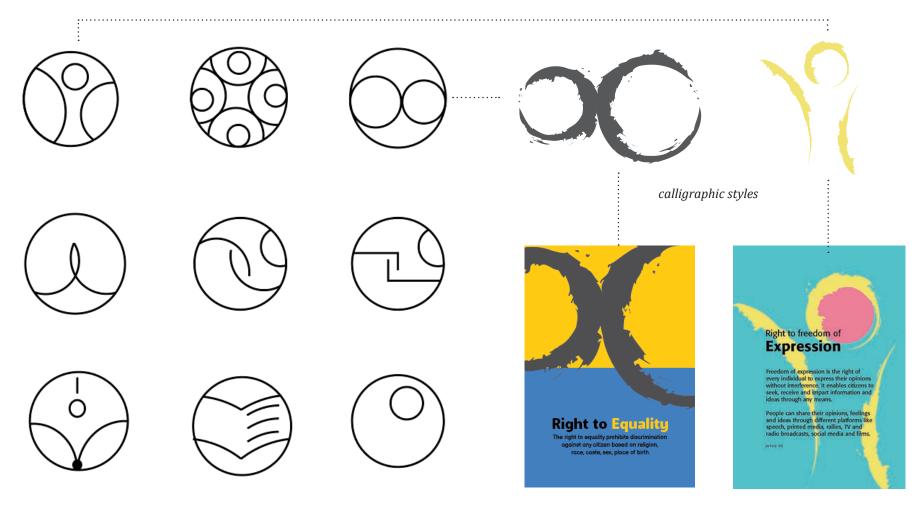
d. Graphic elements

The content for the project is somewhat dense. In a simple format, I had to think of ways to make the content more interesting. The idea of a constitution is also basic to life, which is how I formulated the project. Visually, how could I present something that conveys the same idea?

Circles

Circles can represent many things. It can be combined in different ways to illustrate different ideas and form symbols. The outline of a circle can serve as a band or ring representing a cycle or continuing action. A circle can represent a hole punched out on a page. Parts of circles and circular forms like ellipses can be used in a variety of ways to communicate meaning and create interest.

Two unequal circles can depict unequality, or two equal circles can depict equality. I could create various combinations initially and find ways of using them as visual elements throughout the project. Some of these are shown in image 12k.



Use Case

12k. Use of circular elements

e. Illustrations

Initially, I used photographic images and processed them to create certain visual effects, like the half point pattern seen in traditional printing. I layered it with a solid colour after. Photographs varied in size and quality, ultimately affected the end output. It was difficult to maintain some level of consistency in the visualizations as they looked different in terms of clarity, depth, and pattern.(Shown in 12l)

I also tried to use simple line drawing in vector format (12n) in an effort to simplify the visualisation and create emphasis where it was required.

Hand-drawn Illustrations

It was difficult to maintain consistency and not all visualisation worked with the vector. It was solid and flat. At this stage, I started drawing to explore the illustration style. These explorations are depicted in 12(o). Out of the four illustration style, line drawings (120 - 4) was chosen for the following reasons.

Since, the cards were colour coded, this style could be used as line drawing. As the figure was a a transparent png, it could be layered with different colored vector shapes and graphic elements to highlight. Over a period of time, this style could be develop into a consistent style with a lot a practice. Some other illustrations that use photographic images and their use case is shown in (12p).

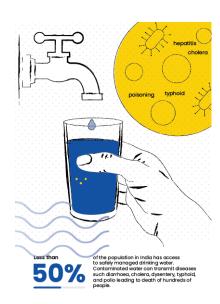




12l. use of image processing and enlarged part showing texture



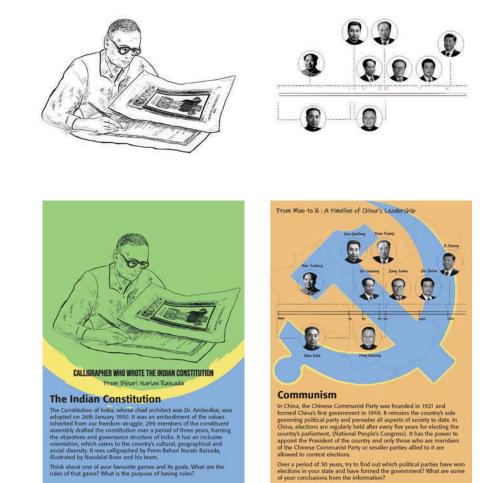
12m. Use Case - Halfpoint pattern and layering



12n. Vector Illustration



120. Different illustration styles for same subject



12p. Illustrations with their Use

13. Product Identity

a. Naming

While naming the product I had a few ideas in mind. Some of these factors taken into account while considering the name of the product were - simplicity, ease of recall, resonance with audience, scalability, visibility, distinctiveness and in continuation of the value that I wished the product would provide to the user group.

The user group consisted of both introverted and extroverted students, they might not have been fluent or possessed the skill of articulation but they are young enthusiastic kids who wish to learn and care.

Synergy

Synergy is the concept that, the combined success, energy, or power gained by two or more people or organisations working together is better than the result achieved by them working separately. In a simple phrase, it means' working together means better outcomes.

Collaboration and critical discourse are at the heart of any democratic system. If people know the system better, they could talk about it, they could collaborate and create a ground for a growing mindset where people are treated equally. They have access to justice and have a say in what happens to them. The word also sounds a lot like energy. It is easy to read and encourages dialogue. With this product, I wish my target user group could actively work with the concepts discussed and feel confident when anyone asks them about the democratic system of India, rights, and the constitution. It should give them the tools to actively think, give them the confidence to speak their minds.

Some of the other explorations while naming the product were,

- 1. Dhara in Hindi dhara means a stream or a constitutional article.
- 2. Pro-Vision Provision is also a constitutional term, adding a hypenation extends the scope of the word.
- 3. Clause Deck Clause is also a legal term and deck refers to the deck of cards of the prototype.
- 4. My Rights -self explainatory
- 5. Democratic Ethos a set of ideas and attitudes associated withdemocracy
- 6. Loop inspired from the use of circular forms in the project as well as conveying basicity.
- 7. Webbed interwoven ideas like a spider's web

The naming of the product had to include ideas of participation, engagement, and how it all adds up and affects them. Therefore, words with one-dimensional meanings were discarded.

d. Logo Design

The logo of the project (13a) carries the essence of the project. The sectional quarters complete the whole circle and the white space between them intersects through the concepts discussed in the sets symbolically. The bold solid colours are representative of the set of cards and the calligraphic stroke is inspired from the graphics used in the product. The circle is also in continuation of the design elements used in the project.

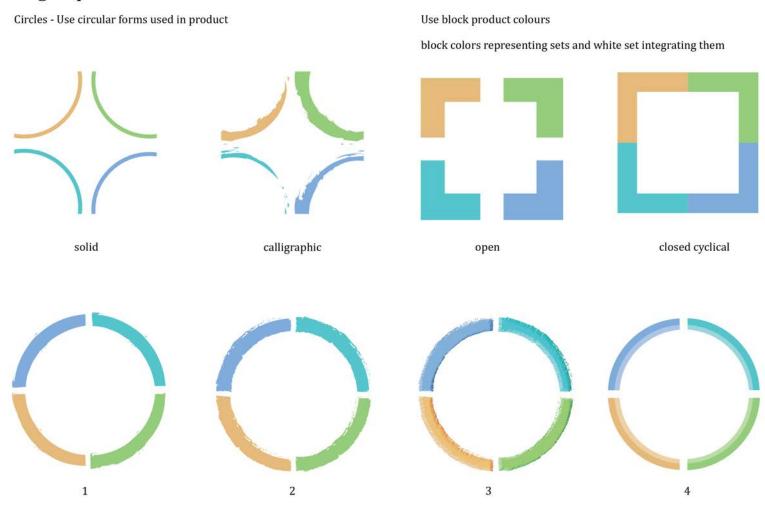
Other Explorations

Various other explorations for the project have been shown in (13b) on the next page. The final logo is a combination of the ideas from the explorations.



13a. Logo - Synergy

Logo Options



13b. Exploration for Logo

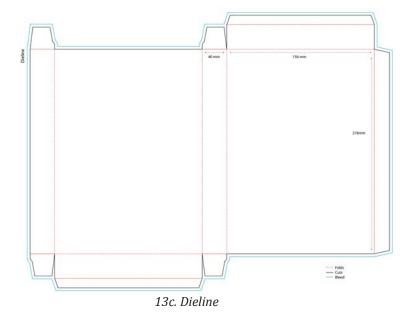
d. Packaging Design

As they were separate cards, the sets required a physical box to store or hold them together when not in use. To do so, I first determined the dimensions of the box that was required. Because the cards had to fit snugly within the box, I added an extra 1-2 mm for folds and cuts on both sides, keeping in mind the dimension of the cards.

I sketched out a rough dieline for box (13c). The term "dieline" refers to a template used in the packaging and printing industries to ensure the correct layout of a final physical package. This template is a diagram that marks all of the folds and cut lines of a flattened package.

This dummy dieline was first made by hand and then cut and folded to form a box to determine if it was the right size. (13e) Initially it was a little big, so I adjusted the dimension to the width of the cards.

The design for the box (13f) is inspired by the concepts that are a subject of the product and combined typographically to create a background. The base of the card is off white, taken from the colour palette. The final print and mockup are shown in (13g) and (13h).





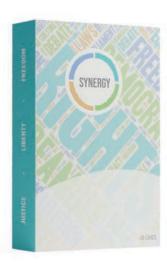
13d. Dummy Box



13e. Design for the box



13f. Cutting and folding



13g. Mockup

14. User Testing and Feedback

User testing was carried out throughout the the project at various stages to judge if the design was working or not.

User Testing - 1

Methodology - Unmoderated, open ended Goals

- 1. To observe how students interact with the material.
- 2. To assess the amount of information they can recognise and interpret.
- 3. If the students are capable of solving the problems in the sets.

Results

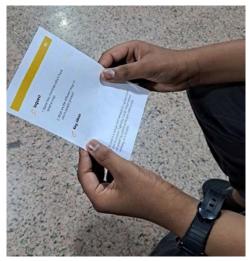
- 1. The material was a little difficult for the students to grasp. They read the cards in a jumbled, distracted fashion.
- 2. Two of the set's cards were difficult to grasp.
- 3. The students were unconcerned about the gamification or the mascot.
- 4. The size was a little small, and there wasn't much room for students to work out problems if they wanted to.



Set of cards shown to the students



14a. User testing - 1



closeup of the card in student's hands

After this stage I got rid of all the information that was proving to be a distraction. The concepts were a bit scattered within the same card. Although the students did appreciate the break from the textboook but it was a bit complex and demanded backgroud knowledge from the students.

I changed the size of the card from A6 to A5. Instead of tryting to cover everything (periphery topics) as a part of main content I needed a focus and constitution needed to be at the centre of it.

User Testing - 2

I had gone through a few iterations and prepared a card on 'Right to Equality' with an example of a right violation for this testing.

Methodology - Unmoderated, open ended Goals

- 1. To understand how the student interacted with the material.
- 2. To judge whether they are able to read and interpret the concept.
- 3. If the students found the card interesting and allowed them to bring forth their opinions.

Results

- 1. The card was bright and interesting to look at.
- 2. The students liked the wavy patterns and illustration (14b,c)
- 3. A few words were difficult to comprehend.
- 4. One student suggested to add an element of comic to it.

At this stage, I got a positive response from the students. I had to find different ways to make the dull content, interesting to look at. I tried patterns, bright colours, and highlights. Not all the feedback could be incorporated into the design, as topics were a bit open and it was difficult to weave all the topics into a story. For example, one could make a story on caste-based discrimination, but it would expand the topic, content-wise, and it would not be covered in a single card.







14c. Student asking what a particular term means

There were also issues with the flow of the narrative. If the cards got mixed up, students would not be able to establish a sequence without assistance.

Based on the feedback and internal discussion with my guide, I moved forward on the project.

User Testing - 3

For this testing I was a bit advanced in the project and this set of card are closer to the final product.

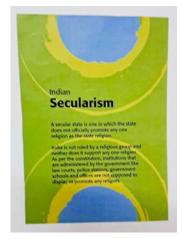
Methodology - Unmoderated, open ended Goals

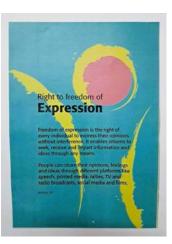
- 1. To understand how the student interacted with the material.
- 2. To judge what they understood from visualisation and text.
- 3. To find gaps in learning if any.
- 4. To get anymore suggestions that might be a part of the card.

Results

- 1. The students were slightly taken aback in surprise.
- 2. They read the cards slowly. The establishment of the concepts with the content on the front was not exactly clear to some.
- 3. Students discusses ideas and questions as to what else could be done with a material, like doing a debate or an impression.

I did not find any major problems in this round of testing. I added questions at the end of each card in an effort to encourage the students to think about the material.





Cards shown to the students





14d. Student reading the material

Other Iterations

There were other rounds of iterations throughout the project, keeping in mind the readability of the content. I had to change colours and try different types of content to judge what suited the best.

After the majority of the sets were in place, I started thinking about ways in which these concepts could be arranged and rearranged again. This led to the creation of another set which was more focused on how the students could interact with the material and do their own research. This expanded the scope of the project.

Set E

This set was an activity-based set which was like a workbook where students had to use the colour-coded cards and solve some problems. There was a conscious effort to challenge and break away from the examination pattern where a student spends most of the time on a table. It involved them in activities like doing additional reading, going out and talking to people, collecting and analysing data, producing plays, writing speeches and debates. Going through the set should ideally provide the student with a necessary tool on how to learn better by grilling through a material, actively discussing with peers, and participating in activities.

Maintaining Consistency

There were many iterations of the visualisation to make it look consistent. Since printing the sets would have flattened them out, I had to spend a good amount of time refining characteristics, adding textures, and hatchwork. The illustrations need to be grounded in reality but at the same time carry a delicate feel.

There were other minor adjustments, like positioning the graphics in such a way that they were not jarring to the eye or compromising readability.

15. Product Use

a. As reading material

As a learning aid, the product can be used in combination with textbook material. This has been designed keeping in mind that the students attend school and are exposed to the material in some way regardless of their competency in the subject. Students can go through the material and learn about some constitutional basics, learn about democracy through real life examples. This can be part of a library where students can access it.

b. For Group Activity

The cards can be viewed in a group. They can be passed around and discussed. The students may arrange and re-arrange the cards. Each card has a follow-up question which can be discussed. Set E has many group activities that the students can engage in. For example, conducting mock plays, giving speeches, debating, collecting news clippings, etc.

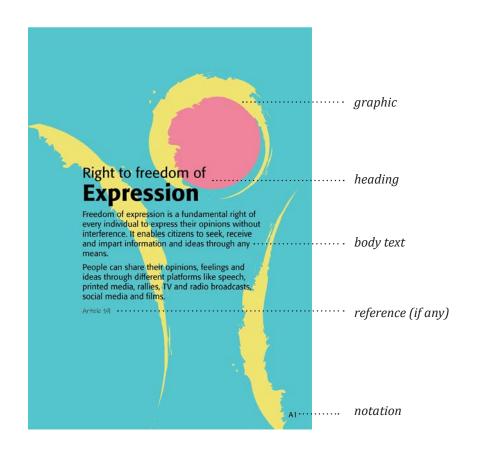
16. Product Specifications

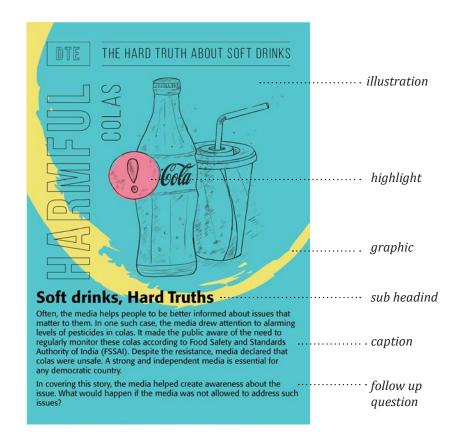
a. About

Synergy is a flashcard-based learning medium that teaches students about their rights and the overall operation of India's democratic system. It explores constitutional values, rules, and regulations while keeping the ideals of democracy, equality, liberty, and justice in focus. The constitution is the backbone of the country and the main subject of the cards, to which everyday life can be linked. It connects concepts by using real-life examples, points of view, diagrams, and challenges. It also encourages students to form connections by challenging them to combine and integrate topics from cards. The various suggested activities encourage students to explore, research, and combine information.

Total number of cards - 40 Total number of sets - 5 Size - A5 Medium - Print

The cards follow a standard format (shown in 16a) for sets A-D. Set E contains activities and problems for the students to solve.





16a. General Format of Sets A, B,C,D

b. Set Descriptions

User Guide

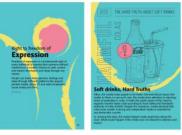
The top card introduces the product, and the back side gives some information on the colour coding of sets according to topics. This is to familiarise the user with the cards and how to use them. The front and back side (L-R) shown in 16b.



16b. Introduction/user guide

Set A - Rights

This set covers the fundamental rights of citizens. Every right is covered in the form of a statement on the front side and covers an example on the next. This may be a right violation, a challenge, a possible solution, or a description (typographic).













16c. Set A

Set B - Functions of the Constitution

The following set explains the functions of various levels of government, such as the functions of local governments. It also gives an introduction to the Preamble of the Constitution, which is also known as the identity card of the Constitution, and explains the essential features of the judicial system of the country.

Set C - Features of the Constitution

The following set explains the very basic features of our Constitution and government setup, such as Three-Tier Federalism, Secularism, and Separation of Powers. It aims to inculcate the values enshrined in the constitution while giving essential knowledge of our democratic setup.









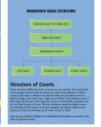




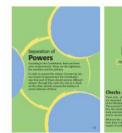














16d. Set B

16e. Set C

Set D - Democracy

The following set seeks to define and make students understand the meaning of democracy, the various other forms of government, such as communism and monarchy, and the most fundamental right to vote. The examples paint a larger picture of the political situation around the world.

Set E - Interconnections and Problems

This set seeks to tie the rest of the material together through problems. It has various activities and questions that can engage the student in active recall that they can do individually or in a group. Some of the cards in a reduced size are shown in 16g.



















16g. Set E 16f. Set D

c. Printing

After designing the product, I had to explore some printing options to give a physical shape to the designs. The papers used for the prototype were 200 gsm with a matte finish. Different printers also gave different quality prints. There were some issues with colour, like saturation, clarity, etc. Some of these test prints are shown in 16h. Through this exercise, I could have a better judgement of what the prototype could look like to look like. However, actual product in manufacturing might be different. The few test prints were hand cut and, when printed in bulk, were cut by a trimming machine. For packaging, I used 300 gsm paper. It was cut by hand and folded into a shape. This is shown in image 16i.



16h. Different Test Prints



16i. box



16j. Printed Prototype

17. Scope

a. Dynamism - The product enables students to look at events from a constitutional point of view, which leads to better understanding. While the constitution is a living document and it keeps changing through ammendments, its core values remain static. The examples used in the project can be current, so that relevance can be established. Any further iterations can be based on it.

b. Scalability - The constitution is a huge document and the scope is very wide. I have designed this product for a specific target group, but in terms of scalability, a wide variety of topics can be added within the boundaries of the sets and content can be expanded.

c. Future Scope - The dynamism and scalability of the product make it relevant in the future as well. After a certain period of time (10 yrs), the content might need to be updated to make it more relevant.

18. Conclusion

I hope this project will help students take one step closer to being aware and active citizens of their country. However, no solution is perfect and behavioural changes are complex. Learning happens when the learners take an interest and when they engage with the material. I hope this project can take the discussion ahead from the standard phrase, "of the people, by the people, and for the people" while coming back to the same again and again. Equality, Justice, and Liberty are essential to living a dignified life, and through this project I have tried to keep these values in focus.

During the course of the project, I went through the entire design process. I interacted with a group of enthusiastic kids who were ready to jump in and sometimes tried to grab onto the cards that I showed them. I had to get into the mindset of a student as well as an educator. I gained a lot of knowledge by reading content on a wide variety of topics. This project helped me revisit the learning that I gained during the course of the M.Des programme at DAIICT. I improved as a designer, learnt some new skills and the value of practice. I also learnt that complexity does not always mean better. I went from the most complex version of the card to the simplest one.

I hope I have done justice to the subject matter and have made a decent effort to cater to the targeted audience.

19. Bibliography

- 1. Government of India Ministry of Consumer Affairs, Food and Public Distribution (2021, July 21). PRS India. https://prsindia.org/files/parliamentryannouncement/2021-07-21/CommentseCommerce Rules2020 upto 21July2021.pdf
- 2. Mere Exposure Effect How It Works, Examples And Tips. (n.d.). Productive Club. Retrieved June 18, 2022, from https://productiveclub.com/mere-exposure-effect/
- 3. Oakley, B., McConville, A., & Sejnowski, T. (2018). Learning How to Learn: How to Succeed in School Without Spending All Your Time Studying; A Guide for Kids and Teens. Penguin Publishing Group.
- 4. The Perceptual Process Introduction to Consumer Behaviour. (n.d.). Kwantlen Polytechnic University. Retrieved June 18, 2022, from https://kpu.pressbooks. pub/introconsumerbehaviour/chapter/the-perceptualprocess/
- 5. Social and Political Life, III: Textbook for Class VIII. (2014). National Council of Educational Research and Training.

- 6. Social and Political Life Part 1 Textbook in Social Science for Class 6 658. (2015). National Council of Educational Research and Training.
- 7. Social and Political Life Part 2 Textbook in Social Science for Class VII. (2014). National Council of Educational Research and Training.
- 8. Prasad, I. (2021). Caste-ing Space: Mapping the Dynamics of Untouchability in Rural Bihar, India. CASTE / A Global Journal on Social Exclusion, 2(1), 132-152. https://doi.org/10.26812/caste.v2i1.232
- 9. Khanna, H. R. (2008). Making of India's Constitution. Eastern Book Company.
- 10. GOI. (2019, April 1). THE CONSTITUTION OF INDIA. https://legislative.gov.in/sites/default/files/COI.pdf
- 11. Johns, H. (n.d.). Stigmatization of dalits in access to water and sanitation. National Campaign on Dalit Human Rights (NCDHR).
- 12. Acharya, D. (2021). Water and Public Policy in India: Politics, Rights, and Governance. Routledge.
- 13. Mishra, A. (2011). Aaj Bhi Khare Hain Talab. Prabhāta Peparabaiksa.

- 14. Rowkith, S., & Bhagwan, R. (2020). Honoring Tribal Spirituality in India: An Exploratory Study of Their Beliefs, Rituals and Healing Practices. Religions, 11(11), 549. MDPI AG. Retrieved from http://dx.doi.org/10.3390/rel11110549
- 15. Gupta, S. S. (2020). Constitution of India for Children. Penguin Books India PVT, Limited
- 16. Seth, L. (2010). We, the Children of India: The Preamble to Our Constitution. Puffin Books.