unfolding the newspaper:

newspaper design by children, for children

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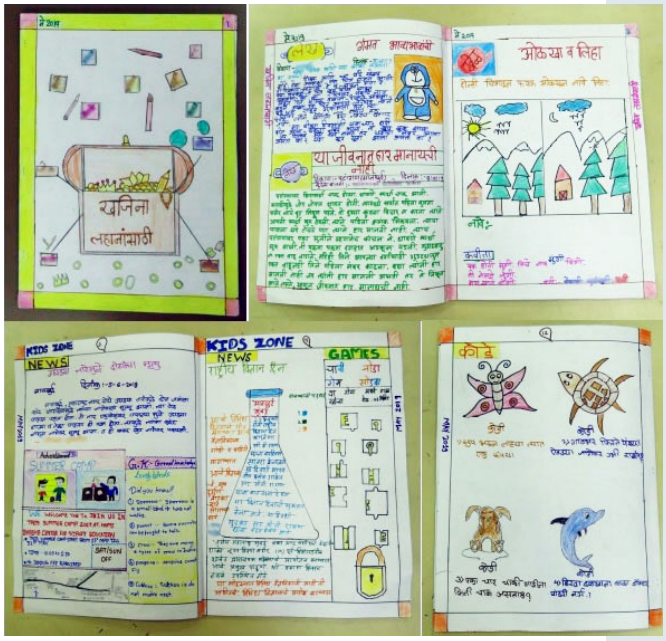

Introduction

The importance of design and technology (D&T) education has been advocated by numerous researchers over the last three decades. For instance, Nigel Cross suggests that in design education, there are ill-defined problems and "designerly ways of knowing" (2006). Today D&T in school education is employed globally and the common threads encompass reflective practice (Mawson, 2007) and user-centered approaches to innovation (Nicholl et al., 2013). In India, while there has been some research to envision a D&T curriculum in school education, the full potential of D&T is yet to be implemented and utilized. The current work builds on the insights gained from past D&T studies in India (Khunyakari et al., 2007) and is part of a longitudinal participatory action research (PAR) project involving a local school, its teachers, and its students (Deshmukh et al, 2018). A goal of this project is to engage students in D&T based collaborative activities, and provide them opportunities to develop creativity, design thinking, arts and crafts, language, and communication skills. This article reports observations of one such activity in the form of a design-based module conducted in a month-long summer camp for children.

Background

Benson (2017) conceptualized D&T activities to take three forms, which can provide a basic framework for education practitioners. Activities can be "Investigative and Evaluative," which include analysis, examination and exploration, such as exploring unfamiliar artefacts or evaluating a product that exists in diverse forms but performs similar functions, etc. (Ara, Natarajan & Chunawala, 2009). Such tasks may involve peer evaluation, iteration of designs, and product communication. Other activities can be "Focused Practical Tasks," which help students develop practical and technical skills, like learning to sew, cut, measure, saw wood, craft work, etc. These may also involve creating questionnaires, interview schedules, surveying, verbal or non-verbal communication, etc. The third form of activities can be "Design and Make Assignments," which integrate the two preceding activities to provide a holistic experience to students. Accordingly, the activity described in this article of designing and making a newspaper encompasses all of the above-mentioned forms of D&T activities.

The Design Task

Newspapers have often been used by teachers as a tool to improve general knowledge, scientific literacy, and language skills of reading, comprehension, and writing in children (Rupley, 1976; Elliot, 2006). Newspapers are easily available, and an inexpensive resource used by teachers to stimulate and elicit children's ideas and skills (Rhoades, 1994; NAAF, 2006). However, it is often observed that such pedagogical practices rely mostly on an adult's idea or on a text-heavy collection of sections in a template-based process, with formulated instructions to create sophisticated outcomes. Although providing clear instruction to students, these activities may be viewed as limiting imagination, agency, and opportunities to explore and design.

Newspapers as a medium of communication have a great potential for teaching and learning and provide a vast set of possibilities for self and collective expression. Unlike the general perception of newspapers as being rigid in both form and function, newspapers could also be explored as a fluid medium, open for interpretation as per the needs of the instructor, users, and research goals. For instance, in a study aimed at gathering children's insights and interests to develop an interactive game in a zoo, children were involved in newspaper design as a data collection tool. Further, they were also assigned roles such as photographer or reporter as a means to gauge their perspectives both as users and informants (Bekker et al., 2003). Thoman (2003) suggests that teachers should create their own toolbox of activities and resources to let their students reconstruct media in their own voice through activities such as journal writing, story boarding, or photography to stimulate inquiry in a continuous spiral of learning. The aforementioned potential benefits of newspaper design including the possible development of children's skills and their active participation serving as a motivation for the summer camp design module. Further, to keep the activity more open-ended and learner-centric, the responsibilities of students, content, and sections of the newspaper, as well as the themes were not predetermined. Rather, these evolved during the course of the camp.

Methodology and Participants

A month-long summer camp involved a newspaper design activity that was tailored for students moving from Grade 6 to 7, aged between 12 to 13. The activity included initial exploration and understanding of the task, followed by establishing of shared goals, which could impart a range of skills, finally leading to the development of the newspaper. This exercise also involved group work, peer evaluation among the students, and scaffolding by the facilitators.

The participating students attended a neighborhood government-aided school, affiliated to the Maharashtra State Board Syllabus, with Marathi as the instructional language (official language of the state of Maharashtra in India). The participation was voluntary and hence the number of students varied from 11 to 19, with an average of around 14 students daily. Informed parental consent was sought for participation in the summer camp.

Framework of the Camp

Designing a newspaper is an elaborate procedure of creating content arranged carefully within limited pages whilst achieving a balance between text, readability, engagement, and visual attractiveness. The various components of this multifaceted exercise of designing the newspaper were: script writing and enacting; exploring and analysing existing newspapers; organizing and recording everyday work; choosing and developing sections such as games, news, advertisements, riddles and poems, craft, and generating content for the newspaper. The latter included both incidental reporting and creative content such as conducting and reporting interviews. Other tasks included editing; creating a mini-version of the newspaper to organize the content; designing the front page and naming the newspaper; layout design, use of grids and margins, colour scheme, illustration, and composition, etc. (see image 1).

Image 1: *A student working on the composition of the front cover of the newspaper.*

The focal objectives for the summer camp and succession of activities were as follows: Progressive learning to execute elements of the newspaper; Integrating a range of hands-on activities to aid creativity and prototyping skills; and Promoting collaborative teamwork and camaraderie in each group to create a unique newspaper for children. Throughout the camp, students followed an iterative process wherein they identified design goals, collaboratively generated ideas, sought feedback, and engaged in prototyping—keeping the target audience in mind.

Design Process

Design is a co-evolving process (Wiltschnig, Christensen & Ball, 2013) in which the problem and solutions keep changing over time and either can influence the other. Dorst (2006) suggests that design problems are an amalgamation of different sub-problems centred on the basic challenge determined by designers' subjective interpretations. According to Cross (2004), factors common to all design problems are (a) a goal, (b) constraints, and (c) criteria to recognize the

solutions. The design task in the summer camp underscored a clear goal to conceptualize and make a children's newspaper. Constraints included making newspapers in a non-digital setting, with a fixed page size (37cms by 27.5cms), limited number of pages and the associated timelines. The criteria to gauge the final newspapers so produced were, them being child-friendly, attractive, scalable, and reproducible.

Students in a D&T-based classroom are often introduced to the design process through a procedural model prescribing the different stages of the design process, i.e., empathize, define, ideate, prototype, and test. The uniqueness of the design process is that it is non-linear and iterative (Baynes, 1992) where the stages often interact with each other. It has been observed that the structure of such design-thinking models is primarily based on professional design practices that may not be utilised by novice designers (Welch, 1999). Such procedural education practices may encourage fixation in children's design thinking (McLellan & Nicholl, 2011) and limit creativity and the ability to generate new ideas (Wells, 2016). Educationists suggest that students be encouraged to ideate while working towards their design goal at multiple stages either by free thinking in the initial phases or by reflecting on their ideas in latter stages while making (Dalvi et al. 2020) and evaluating. Welch (1999) found that children do not follow a set linear process and tend to jump to thinking of solutions without spending much time on analyzing the problem. For the purpose of this summer camp, the stages of the design process as indicated above were used as a superstructure (Kimbell, 1990). Students were not presented with a rigid framework to be applied, rather the stages were adapted as a set of reminders (Wise, 1990) with directions to enable ideation and group work.

In the current study, students represented the users themselves and were encouraged to explore personal experiences, desires, and choices while designing the newspaper. To better understand their design task, students undertook exploratory tasks where they browsed existing children's newspapers and engaged themselves in content and visual analysis. They noted what interested them, which sections appealed to them and why, and evaluated the sections that could be incorporated in their own newspaper. Decisions pertaining to language, style of writing, choice of imagery, placement of content, reading experience, and graphic design were taken by the students themselves keeping "children" at the centre of their design thinking. To help break away from the stereotypical newspaper, students were exposed to a variety of child-friendly presentation possibilities which included illustrations, layouts, colour schemes, etc.

The summer camp activity had an element of iterative ideation. There were several opportunities created for the students to generate ideas both during sub-tasks and for the main newspaper. Students maintained a portfolio of explorations, their writings, rough drafts, and drawings, which helped them to ideate. All the work produced by the students was handmade without the use of digital equipment. Though this was a practical constraint it was also desirable. Studies have revealed that technology can prove to be a distraction and may not help students focus on the actual task (Bekker et al., 2003). Therefore, while prototyping was challenging, it had its own benefits especially for children (novice learners) as it helped them to develop making skills. For instance, visualizing the newspaper and making it using a limited set of basic tools required attention to details, planning with respect to material acquisition and designing, and teamwork. To put it all together, the students initially prepared a mini-version of their newspaper before making the final one. Collaboration and cooperation were key elements as well, since students were required to work in groups throughout. Further, evaluation took several forms during the newspaper design activity. Timely intra- and inter-group review and feedback were included at various times during the camp. For instance, in the writing of the news articles, students who were good at language, edited and reviewed their teammates' work for grammar, spellings, and simplification of sentences. Similarly, for the game section of the newspaper, student teams put up their work for peer evaluation to be assessed for elements of fun and ease of understanding the game.

Observations and Outcomes

The key elements kept in mind while planning the "designing of a newspaper" exercise were content selection, writing, and visual design. Each of these elements involved a set of core tasks strengthened by some ancillary exercises. The exercise of writing content was a core requirement and proficiency in writing could be developed with a diverse set of assignments that students undertook, such as developing and enacting a script for a video telecast, captioning news items, preparing an interview schedule, as well as developing attractive advertisements, and other creative writing.

According to Bekker and colleagues (2003), the evidence for the success of article writing is that children are able to choose a topic they are interested in and are able to write an interesting story about it in their own words. In the camp, students brought in a diversity of content. They wrote short articles based on their real-life experiences, interviewed professionals on the basis of questions they had prepared and presented the conversation in a catchy yet honest write up. They reported real as well as fictitious accounts inspired by true events. For example, they reported accidents, missing persons and incidents of conflicts happening in and around their school and their neighbourhood such as: a monkey entering their classroom or some environment-related topics, such as the plastic ban in the city or a cleanliness drive in their area. While there were also topics that one may typically see in an adult newspaper, such as a building collapse or a cylinder blast, students also reported some everyday school events that held more relevance and connection to their own daily lives. They also explored how to engage their readers by including fictional stories, jokes, and riddles that explored intricacies of language. All the groups engaged in similar tasks, but their engagement led to substantially different outcomes.

Prototyping is an integral part of designing that helps designers visualize the artefact they are designing and provides primary feedback for their design ideas. Special attention was paid to enhance students' visual design and layout skills to aid the final deliverable.

Image 2: *Students using prototyping tools, learning grid making, measurement, cutting and placement.*

Image 3: *Examples of collaboration during the newspaper design camp.*

This was supplemented with some basic art and craft activities (see image 2) where the students learned measurement, proper use of tools, making margins and grids, composition, and visual hierarchy.

Each team engaged in prototyping by first making mini-newspapers roughly the size of an A5 page. This exercise detailed the number of pages, the placement of content, and the overall presentation of the newspaper. Interestingly, during the final making, students raised questions pertaining to layout design and content generation, as well as presentation of material and aesthetics. For instance, they asked about the orientation of sections within their newspaper and whether they needed to spread a particular section across the newspaper. They also brainstormed about possibilities of adding "fillers" in the borders and blank spaces and deliberated on how to present the front cover of their newspaper. "Do we keep all the 'news features' together?" "How much space do we leave between two articles?" "Do we have a mix of fun and reading?" are a few examples of students' questions. Overall, these questions led them to make decisions on how to proceed with their final design. The exercises and design exposure prior to the main task could have led to such contextual thinking and collaborative conversations about presentation ideas.

In this case of newspaper design by children for children, students did not resort to replicating existing children's newspapers to which they had been exposed to. Rather, they explored new ideas with respect to both content and presentation, borrowed elements that appealed to them, made decisions on what might be fun for their peers (the users) and ultimately designed a newspaper that was a child's perception of a newspaper rather than a replica of an existing adult version of a children's newspaper.

Collaboration is crucial for designing and was one of the major aims of the summer camp and promoted through teamwork. The activities were designed such that the team members had to distribute responsibilities among themselves, share ideas, discuss, evaluate, and co-create (see image 3). Students reviewed each other's work, within and across groups, and made appropriate changes as per the peer feedback. Team members shared tasks, with some doing the rough work and others finalizing the content or design. It was observed that shy members also became key contributors in their respective groups, indicating that the tasks opened up avenues even for otherwise passive learners to also contribute actively. However, at times facilitators had to intervene and remind students of fair distribution of tasks within a team. For example, they intervened to ensure that a specific task like "writing" was equally distributed amongst students with differing expertise, skill sets, and gender.

All the craft and making activities required teamwork and communication. Students meticulously worked towards making their portfolio folders functional and attractive and engaged in discussions on section names and aesthetics. They shared tasks both during ideation and execution such as theme selection, colour scheme, cutting and pasting, and presentation to make the overall frame attractive. Students took ownership of their work and highlighted the same by writing the names of all the group members on the front page of their respective newspapers.

The final four newspapers that resulted from the month-long camp indicated a successful outcome in which all the newspapers were unique both in terms of content and design. The final newspapers demonstrated that the students dabbled in a variety of themes, choice of content, and written and visual language as is evident from the front page of the newspapers (see image 4).

Conclusion

Overall, the newspaper design activity provided a holistic experience for the students that included the elements of investigat-

Image 4: *Preview of the newspapers designed during the camp.*

ing and evaluating, focused practical tasks, and an opportunity to design and make. Correspondingly, students first evaluated existing children's newspapers, followed by participating in the sub-tasks directed towards developing their skills of creating a layout, measuring, cutting, craft work, designing interviews, and presenting information. The camp gave students an opportunity to collectively produce a hand-made children's newspaper with engaging content and related visuals. Students were keen to learn new design skills and joyously used those skills to make their newspapers fun, easy-to-read, navigate, and create hierarchy to organize the content, and also be visually appealing. They designed games, shared their opinions and suggestions, and had numerous discussions on these.

Further, the overall experience and process of making a newspaper from scratch illustrates that students not only developed multiple skills but also expanded their understanding of the complex process of what goes behind creating a newspaper. Specifically, students worked on their language skills by writing articles, short stories, etc., and articulated their ideas both within and across groups. They thus worked on their communication skills and engaged in analytical, critical, and creative thinking.

This activity gives an opportunity to students to participate, create, and produce work towards a shared goal. It has the potential to engage different types of learners and give them a platform to express, create and share their ideas with others. Barring some minor instances, both girls and boys worked on all kinds of tasks such as scriptwriting, videography, content development, designing games, arts, and crafts, and other design tasks. From a pedagogical perspective, there are strong considerations for engaging students in such D&T-based tasks. Particularly, prolonged engagements with a design project such as the one described here can nurture otherwise latent learning opportunities since it offers a wide scope for design thinking, inclusion, and building confidence in students.

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