CONTEXT AS A LEARNING LAB FOR DESIGN EDUCATION; INTEGRATING SOCIOCULTURAL CONTEXTS AND COMMUNICATION MEDIA

Archt. PrasannaPitigalaLiyanage[a], ShauriHettiarachchi[b]

[ab]University of Moratuwa, Moratuwa, SriLanka

Corresponding email: pitigalap@gmail.com

Abstract

The conversion of prominent themes in social discussions as contexts for the practice of design in the foundation level of the Department of Integrated Design, University of Moratuwa, Sri Lanka, provides students with an environment in which they can actively participate in and experience sociocultural aspects through a process of practice. With necessary guidance of educational facilitators, students systematically gain social consciousness, which allows them to convert prominent topics of social discussion into a problem solving process. In the preliminary stages of creating the solution, students develop a well-focussed logical argument working as groups. These ideas are then further developed to suit the context of the target audience, wherein the developed argument has relevance to the sociocultural environment. Ultimately, realizing the suitability and the potential of group-communication, a final event is executed creating an interactive learning lab for the students to participate in and gain a thorough understanding of a selected sociocultural context through real-time feedback. The research was made possible by a Senate Research Committee Grant, University of Morautwa, Sri Lanka under the grant number SRC/ST/2015/05

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1. Introduction

The student who has followed the curricula of primary and secondary education enters undergraduate education with a mere focused understanding of a pre-set combination of subjects available in the G.C.E. Advanced Level examinations. They are categorized to identify student capabilities of coping with a particular number of professions which are recognized as traditional. Such as, engineering, medicine, professional fields related to the fine arts, etc. Design with its varied definitions, conveys the idea that it includes both science and art and a continuous input of creativity. Hence, it comes in to light that the student with an 'I-shaped' subject knowledge – knowledge only within a specific subject field – must be converted in to an individual with a 'T-shaped' knowledge – knowledge and understanding of varied subjects and its integral affluences – of subjects. The subject knowledge provided must suit the understanding of all students alike, regardless of their previous educational background. The methodology of Human Centred Design (HCD) was identified as a viable approach to construct a

relevant curriculum encompassing students of various backgrounds. Furthermore, the curriculum was developed to make it possible for students to practice the 'empathic design' approach of HCD. Thus, the foundation level design student is provided with a process of coaching allowing them to realize individual potential. The process is practiced within a context based learning lab further emphasising the contextual relevance of HCD.

The research paper takes into account two learning labs developed within the entities of communication media to explore the research problem of how can the learning lab of a sociocultural context be utilized to develop aspects of HCD through modes of communication in the foundation level of design. The empirical data was gathered from learning labs, which are namely:

01.   Part I – Video Installation Project (VIP) –"Beyond Peace" (2010/2011)
02.   Part II – Virtual Media Integration (VMI) –"Dressing the Sky" (2011/2012).

The learning labs successively used communication media of Video Installation and Virtual Media Integration, wherein, design students explored sociocultural contexts of a post-war Sri Lanka.

2. Context as a Learning Lab
2.1 Defining a context

The term 'context' provides a meaning on its own, yet at times is proven hard and complex to understand when used in varied fields with specialized definitions (Abowd et al., 1999). The broader understanding of Gestalt psychological principles allows the theory to be recognized in non-visual terms as well. As explained by Wagemans et al. (2012), essential of the Gestalt theory is that humans do not perceive the figure and the background separately and construct a subjective idea in succession but develop a holistic structure through the conjuncture of both figure and ground. Therefore, developing the figure – ground theory – the Gestalt Theory – into non-visual terms it can be understood as following. The background – the context – gives a set of reasons, an object, or a figure the possibility to evoke its meaning. When the context is changed, the particular set of reasoning or the figure changes its meaning as well. This changing occurs due to our manner of perceiving objects relative to their meaning-generating background. Design which is often found hard to be precisely defined is at all times understood as a field to support social needs and that it must follow a process of social acceptance (Potter, 2006). To further define, "design is a field of concern, response and enquiry as often as decision and consequence" (Potter, 2006, p. 9). The notion of design, as an educational discipline as put forth by (Jones, 1984) "unites arts and science and perhaps goes further than either". Thus, the term 'context' for the purpose of design and design education can be understood as any set of pre-existing events in the surrounding that may stand to be effective for any creative intervention.
This broad definition of context provides the possibility of recognizing existing sociocultural phenomena and uses it as means to solve ill-structured problems in foundation level design education.

2.2 Human Centred Design and Learning Spaces

Having to ultimately design for people, it is essential that from the fundamental level, students are exposed to society-at-large and its realistic design situations. Essential to providing students with real life experience is ill-structured problems. A problem with unpredictable progression, in which the next level will always be dependent on the happenings and results of the previous

stage, can be considered as an ill-structured problem (Gallagher, 1997). Inclusive of social, political and economic problems, human emotions, responses and interactions create the core of such problems (McGrow & Shin, 2003) and HCD provides a methodology of realizing a design solution (IDEO, 2011). This creates a pathway which reflects the eventual professional practice methodologies to human centred problems and provides a viable and an intriguing platform to conduct relevant curricular content in the foundation level. Yet for such a practice a drastic shift which is required from didactic learning spaces to spaces where students can learn and explore human interactions and other relevant aspects (Radcliffe et al., 2009).

The idea of a learning lab proves optimal at this juncture. A lab stands to represent a space which provides the possibility of experimenting, gathering results, analysing and iterating the process if necessary. A similar construct of a lab, although a later development, can be recognized in the Teaching and Learning Laboratory (TTL) of Massachusetts Institute of Technology (MIT) as explained by (Klein, 2013). When considering a learning lab suitable for design education, the lab must provide students with the possibility of gathering, recording and analysing human reactions towards a design. Therefore, the lab must encompass necessary interactions and an atmosphere which can prompt the realization of varied responses resultant of human perceptions towards a design to ultimately gain better understanding of sociocultural contexts.

2.3 Curriculum and Learning Labs

As curriculum is a set of aims and outcomes are developed which is flexible enough to practice periodically varying content. The change in content becomes a necessity with changes in professional practice. Especially since the developed problems are based on ill-structured problems (McGrow & Shin, 2003). Moreover, the curriculum funds the possibility of practicing the strategic design methodology of HCD while letting students gain experience in the manner of conducting professional practice. The content for the curriculum; curricular content, defines the accord of the learning lab. The curricular content is two-fold: (a) the philosophical approach, and (b) the mode of expression. These hold the solution to the ill-structured problem, which is solved through a step-by-step process. To better recognize attributes of a sociocultural context some mandatory necessities for the curriculum and learning lab was recognized. Sociocultural contexts are perceived by individuals based on their own cultural constitutes (Freeman, Rule & Ambady, 2009). Therefore, designs for sociocultural contexts are intermittently dependant on varied perceptions of the people who are using and experiencing it. For students to better grasp this matter, the created learning lab must enhance this fact. Hence, a design solution which is primarily dependant on perception was recognized as an integral part of the solution.

Nourished by the development of ages, human communication encompassing non-verbal communication methods of communication such as sign and body language and verbal methods of communication such as oral and written, is the fundamental and the most extensively used expression of human interactions; the core of a sociocultural context. When creating a solution which is prominently considerate of human perceptions communication media becomes a viable option to allow students to practice a problem solving method by the means of HCD. Thus, the following aim and outcomes were developed as curriculum.

Aim – Formulate and apply a strategic resolution by means of communication to a current social issue.

Outcomes –

- Ability to revise and scrutinize current social issues through critical discussions
- Ability to establish topics commencing project openings through methods of basic communication
- Realizing social and physical aspects of the community
- Ability to analyse an assortment of varied recorded perspectives and determine a singular logical argument
- Developed skills in technology, tools and methods on communication media appropriate to work with the community
- Ability to refine design ideas/strategies and execute final idea through selected mode of communication media

Structuring the Learning Labs of "*Beyond Peace"* and "*Dressing the Sky"*

2.4 Contexts for initiating the development of learning labs

The recognition of effective reasoning – a figure – for the understanding of a sociocultural context can be realized by relating to pre-eminent themes in contemporary social discussions. At the time of project commencement; in 'Beyond Peace' the standing of the country when reaching the one-year mark after ending the thirty year long civil war was of popular discussion. The political basis of the topic made it possible for a range of opinions and experiences to be shared among students to create a platform suitable for project progression. While existing social phenomena – the context – provided the possibility of project introduction, for a more comprehensive study of sociocultural contexts the students were guided to recognize a secondary context for final execution upon which the learning lab was materialized.

In the process of Beyond Peace, the final execution was based upon the experiences and ideas of the social sector primarily living in the capital of the country; Colombo. While this was not an area which was directly affected by the war, based on political affluence a renewed and developed post-war über society was the expectation of many.

When developing the successive sociocultural context based learning lab; 'Dressing the Sky', the primary consideration was to make the final execution to be able to have many voices. Differing from 'Beyond Peace', in 'Dressing the Sky' the interactive learning lab of final execution was to fund a space where an individual can reflect their experiences, thoughts and opinions in a background of an audience who has experienced the same matter in a different manner and to ultimately execute these figures and backgrounds simultaneously in different contexts so that the figure and background may interchange according to the relevant physical context of execution.

With the gained understanding of the initial basis of the learning labs of Beyond Peace and Dressing the Sky, following described are requisites of a sociocultural context which can fund the development of a learning lab.

• Using a context which is of popular social discussion at the time of project commencement provides the benefit of being able to create a discussion platform in which all students can participate in and relate to the real-life aspect of the problem due, to the fact that they can draw not only from their personal experiences, but similar experiences have been encountered by people they can relate to.

• When the used context has a strong political background vigorous discussion can be initiated among students. Ultimately. it is these varied arguments that results as creative intervention for further progression of the project.

• Varied opinions fuels practice of shifting from a collection of possible design ideas to creating an individual logical argument that can be executed using relevant media; in group spirit.

• Recreating a context for presentation based around a target audience resulting in a learning lab provides the possibility for students to understand and experience interactions between people, opinions of people etc. more comprehensively.

• The process of generating a new context for presentation also allows students to actively participate in organizing an event, which provides the essential understanding of behavioural patterns and human-relations in a professional environment which they would ultimately be a part of.

2.5 Developing curricular content and learning labs

Based on the developed curriculum, structure for curricular content was created as following to realize sociocultural contexts through modes of communication. Beginning at stage one, where the task of the learning lab is determined, the learning lab is completed in another five stages. At the final execution. as well as through the creation of learning labs, students continuously gain social consciousness. The exact activities of each stage, regarding to Beyond Peace and Dressing the Sky is discussed later on, stage one is given here with to gain better comprehension regarding the nature of all stages.

The preliminary stage is the creation of a challenge or a task which can be given as a brief for the students to begin building the learning lab. This first stage is named as 'Developing Basics to Communicate'. Student and expert discussions brings out facts and especially experiences regarding the provided task. The students are then guided to create a conclusive logical argument regarding the task. For Beyond Peace, the task was to; create and execute a strategic approach to address a current social issue of a selected community via a chosen mode of communication media. For Dressing the Sky; to formulate and execute a strategic setting or a platform to confer a current post-war situation that relates to artistic-communication while responding to the spatial installation, spatial transformation, human insight and human interaction from end to end via communication media.

Following, students are introduced to various methods of communication media, known as 'Introduction to Visual Communication Media' through workshops. Video installation, virtual-integrated media and communication through human body are some of the methods that were introduced. Students then experiment trying to express their initially developed logical argument via a suitable communication medium.

In stage three, namely; Community Study. students analyse the perspectives of the community; with communal participation, regarding the given task. Social and physical forces of the community and the context are studied in-depth to gather social consciousness sufficient to recognize the initially given task and the developed argument as a problem-solving process. The modular community that is chosen for the study is identified as the target audience of the final execution.

Stage four; Strategic Communication, students develop a "big idea" – an individual holistic idea – on the previously provided context – the task – while relating to the selected target audience, working in student teams guided by an expert. The big idea encompasses the holistic philosophical approach to the given task. The approaches of teams are assessed and discussed

with experts. As it was mentioned before, since the manner of project progression is similar to the problem solving process of ill-structured problems successive stages are determined according to the pervious stage. Due to that, if a student team does not provide sufficient enough work to progress into the next stage additional expert support is given for development and is progressed to the next stage.

Stage five is Media Integration. At this stage, the viability of derived philosophical approaches and the potential to communicate to a wider audience through the chosen media of communication is tested. Furthermore, the idea – the figure – is tested and experimented in different contexts – backgrounds – allowing the students to realize the contextual dependency of developed ideas. Through these experiments related techniques and technology is mastered and liabilities are monitored in a pilot execution.

At the Final Execution, the final stage, the students record and measure the responses of the target audience. These responses serve as the success measure criteria of the communication design for the sociocultural context, which is also used for the final assessment.

2.6 Recognizing a context as a learning lab

As per the previous realization, if a context stands to be any set of effective reasoning that holds possible for any creative intervention, it can be understood that for these contexts to be used as learning labs a new plausible design environment must be created upon the initial reasoning, suitable to practice the relevant curricular content.

When experimenting within the labs of Beyond Peace and Dressing the Sky, to suit the developed curricular content on the foundations of HCD the following general characteristics were established.

• General opinions by the students upon the context, especially after introducing the task - the social situation- must be guided toward a pre-determined path which is sufficient to realize stages of curricular content. If the context related opinions results in a vast spectrum, comparison of execution methods may not be plausible.
• The chosen context must fund the attributes of practised and assessed activities.
• The context of the final execution must consist of crucible audiences who can give effective feedback to which foundation level design students can relate to.

3. Learning Labs; Actualization and Assessment

The previously defined project outcomes were realized through the following methodology, which at times succeeded progressively and in other instances laterally.

Stage 01 – Develop basics in communication Realized project outcome – Revise and scrutinize current social issues through critical discussions As it was mentioned before, the current social issue – the context – used for Beyond Peace was the post war situation reaching the one year mark. The discussions began with sharing experiences during the time of the war, the individual participation, views and opinions on the celebrations at the end of war and the expectations of a different or developed country. This was an open discussion where individuals could express their own point of view. When stable patterns on the discussions could be identified the students were put into teams with an expert for guidance. Student teams then had to build a logical argument relating to the open discussion. In developing the argument, students had to create a

singular logical argument while working as a team. Allowing them to explore and understand the process of converting varied individual ideas into a singular idea developed by a team.

Dressing the Sky commenced in a similar manner with discussions regarding contemporary Sri Lanka. The individual idea expressing stage was more structured and the expressions were both verbal and graphical. After the initial discussion the students expressed *Sri Lanka* in one word. Then via discussions and arguments students generated individual opinions on *Migration of Sri Lanka*. Following students presented an A3 sized 2D graphical presentation of *Contemporary Sri Lanka*. Then similarly to Beyond Peace students in teams developed a singular argument on contemporary Sri Lanka.
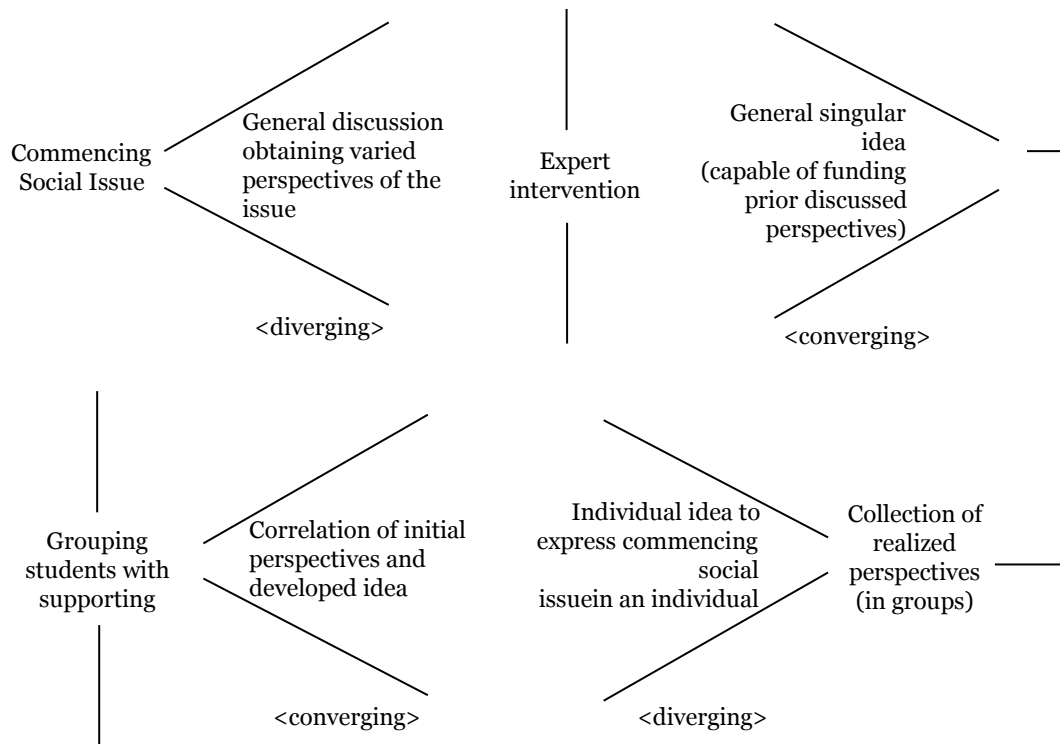

Figure 1: Basics to Communicate

Stage 02 – Introduction to visual communication media

Realized project outcome – Ability to establish topics for project commencement through supporting means of basic communication
In the development of both the learning labs of Beyond Peace and Dressing the Sky, after having developed a basic logical argument students were exposed to methods of communicating their argument. Beginning from simplistic direct 2D and 3D methods of communicating ideas, students were introduced to methods of communication, such as video installation including shadow casting, illusion of kinetic walls using back projections, video mapping and integrating media as well. When developing Dressing the Sky, the human body was introduced as canvas to express ideas upon. Then, as methods of furthering possibilities of the canvas, integration with dance and music was introduced. Finally how to use the canvas with ideas while relating to the physical context of execution and the context of design reason was introduced and explored.

After the introductory workshop of communication students were presented with the question, must the timely and evident social issue be communicated for others in the society? Prior to narrowing down to a precise target audience, the idea is established that mass communication is necessary to proceed further with the developed ideas. The conducted workshop served as precedence studies. Thus, with the gained knowledge, students showcased their developed logical argument, using a suitable medium of communication using a studio space. The extent of effectiveness of the student's ability to express their said logical argument through the introduced media was assessed as opposed to the comprehensiveness of the used technology, techniques, etc. which was developed at a later stage.

Stage 03 – Community Study

Realized project outcome – Understand social and physical aspects of the community

The learning lab fundamentally being focused on exploring how society functions, for the realization of this project outcome, a classroom module comprising of basic introduction to Sociology commenced laterally. Through this module, students learned concepts such as social organization, social role, social expectations, etc. and that a culture consists of both tangible and intangible components. The learned theoretical aspects of the society was thoroughly explored and understood by students through the perspective of their initially developed logical argument. These studies served as means for further development of the logical argument with contextual relevance.

Further, the identified target audience in the previous stage was explored band researched as field studies to gain new perspectives regarding the context in question. In Beyond Peace, the target audience was initially recognized by the students as the urban population of the capital city of Colombo. In Dressing the Sky, developing upon the audience of Beyond Peace, students expressed the need of wanting to have a more diverse spectrum of audiences and use varied perceptions to discuss the context. Hence, target audiences included the capital of Colombo; which was affected by suicide attacks and bombing from time to time and severely towards the end of the war and the northern city of Jaffna, which was severely affected throughout the thirty year long war.

Stage 04 – Strategic Communication

Realized project outcome – Analyse an assortment of varied recorded perspectives and determine a singular logical argument

With gained knowledge of communities, students further develop their initial logical arguments to suit their target audiences. In this development, with expert guidance students try to convert their logical argument in a manner which can obtain diverse perceptions to have a comprehensive learning lab and ultimately gain a better understanding of sociocultural contexts. The finally developed strategic idea was known as the *big idea*. The big idea is then converted into a sequence with a conceptual and rational strategy to be communicated to the target audiences. In Dressing the Sky, since there were multiple participation groups the developed sequence was discussed upon an internet based platform. This allowed the students to make the strategic communication sequence more provocative to result in batter communal interaction in the final execution.

Stage 05 – Media Integration

Realized project outcome – Develop basic skills, technology, tools and methods on communication media appropriate to work with the community.

Commencing the stage of media integration, students are equipped with a thorough understanding of their *big idea*, modular communities and a basic knowledge of communication media which can be used to communicate to the selected audience. Previously done simple exercises are developed in to more complex presentations related to the final execution media. Communication skills were further developed to be appropriate to work with the community and the presentation context changed. Technically, context changes let the flexibility of the communication solution be tested. The curricular advantage is provided in the process of alienating students from their usual surroundings. The idea that the final presentation is for an audience of unfamiliar people can be conveyed in a more practical manner opposed to mere suggestion through this process. The big idea was further developed, cross referencing the created communication sequence and chosen media of communication.

In Beyond Peace, it was understood that to communicate the created sequence to a single target audience in the same physical context, video installation is the optimal solution. In Dressing the Sky, due to the inclusivity of multiple target audiences' media integration was used. A studio space was parted into three divisions, namely, the generating lab, studio and theatre. Based on the developed communication sequence, a script was made and necessary backgrounds – audio/visual – for idea presenting was produced and saved at the generating lab. The studio consisted of a story teller in front of a screen where the previously produced audio/visual backgrounds were projected to enhance and support the story which was being told in real-time. Another screen projected the view of the theatre which could be viewed by the story-teller. The theatre had a projection screen and a platform to incorporate human body as a communication medium. The lab controlled what was projected on to the screen diverting between recorded backgrounds and audio/visuals from the studio. The story-teller responded suiting to the reactions of the live audience.

Stage 06 – Final Execution

Realized project outcome – Refine design ideas/strategies and execute final idea through selected communication medium

At the final execution students experience the full extent of organizing an event from its media release, rehearsal, launch and project review. Having constructed the learning lab in five comprehensive stages the final execution allows students to review and analyse a modular communal unit providing various responses based on their perceptions to a design solution. Additionally, to studying sociocultural variants the effectiveness of the design the target audience serves as the criteria for measuring the effectiveness of the design.

Project review is the final stage of assessment. The provided responses are and experts submit a grade to student teams as opposed to individual students. Then, experts and students undergo an extensive review process where students question themselves and other members of the team regarding the role played in the construction of the design solution, the final execution against the given grade.

This assessing process can be further developed to allow students to grade their own design solution against the obtained feedback from the learning lab further extending the effectiveness of the lab.

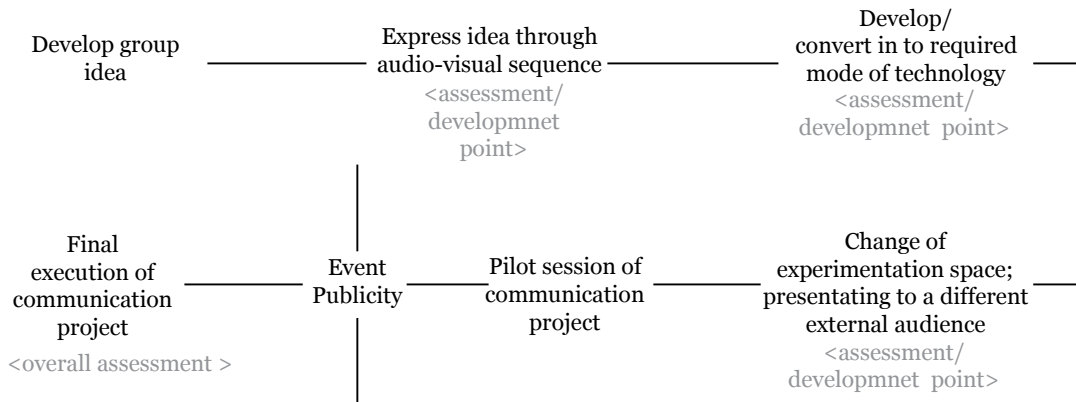The following diagram is a summary of the development of the learning labs, in a generalized format.

Figure 2: Generalized curricular content of learning lab

4. Developing a Curricular through the Integration of a Sociocultural Context and Communication Media

Through the course of the learning labs of 'Beyond Peace' and 'Dressing the Sky', by analysing and comparing with the developed curricular and the realization of curricular content both positive and negative factors were recognized.

The targeted performance criterion was achieved successfully in 'Beyond Peace'. For students to progress from the beginning through each stage to the final performance via an internal continuous marking system by experts and the level of success of the final execution was examined via the feedback given by the live audience. The obtained feedback was used to alter and modify the design –developed learning lab- through the course of three days. The involvement of collaborative institutions (British Council, Colombo and Goethe Institute, Colombo) supported to have a live design event and caused to reach a better live audience. In regards to the final project planning, some criteria were not achieved due to the lack of strength

in pre and post event arrangements for gaining publicity such as media conference days, media release, advertising media, which would have produced an extensive live-audience. Throughout the construction and duration of the learning lab and especially at final execution the lack of knowledge, technology and expertise in skill personnel related to the used communication media created certain disadvantageous situations.

The knowledge gaps, the grey-areas of technology was filled in the project 'Dressing the Sky' by skill personnel from overseas (India and Germany) and knowledge was distributed from workshops/conferences. Therefore the project outline, structure, mechanisms and overall standard was achieved at a higher level through new experiments and trial and error methods to obtain better execution with available technology. Yet, due to the lack of some technological facilities and insufficient resources required when attempted in large scale and inadequate budget to engage media facilities (video mapping, virtual media integration, web streaming, etc.) resulted in not being able to achieve certain criteria. The final execution of the project was disturbed by the academic and non-academic union action. Therefore the pre-arrangements for the project was changed and as a result collaboration among three universities and virtual media integration among three different contexts was not successfully achieved.

In conclusion through the process of accomplishing a solution to the initial problem of the research paper, how can the learning lab of a sociocultural context be utilized to understand sociological aspects necessary for foundation level design education through modes of communication? .The following was derived:
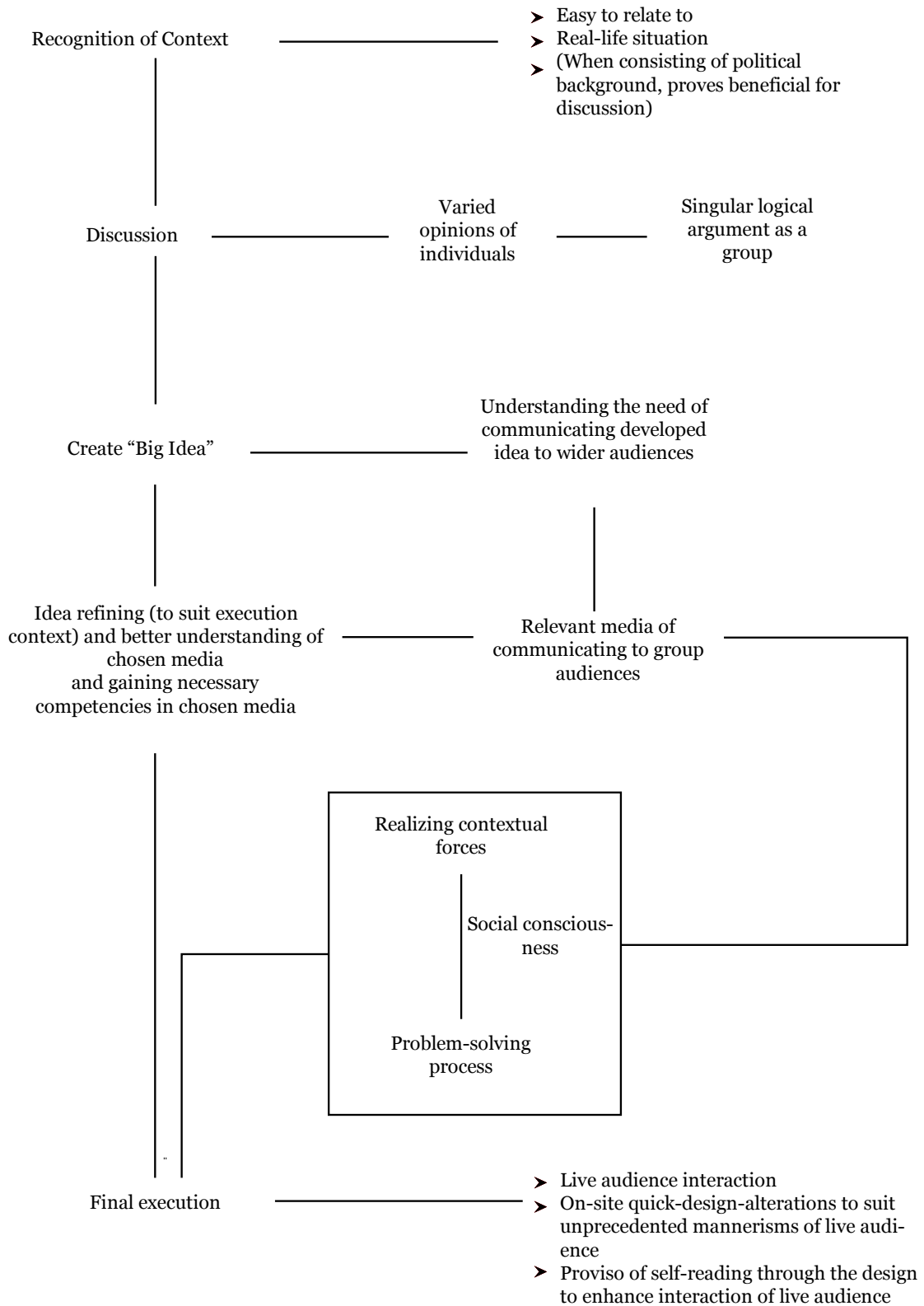
Recognition of Context ——————————— ➤ Easy to relate to
➤ Real-life situation
➤ (When consisting of political
background, proves beneficial for
discussion)

Discussion ——————— Varied
opinions of ——————— Singular logical
argument as a
individuals group

Create "Big Idea" ——————— Understanding the need of
communicating developed
idea to wider audiences

Idea refining (to suit execution
context) and better understanding of ——————— Relevant media of
communicating to group
chosen media audiences
and gaining necessary
competencies in chosen media

Realizing contextual
forces

Social conscious-
ness

Problem-solving
process

Final execution ——————— ➤ Live audience interaction
➤ On-site quick-design-alterations to suit
unprecedented mannerisms of live audi-
ence
➤ Proviso of self-reading through the design
to enhance interaction of live audience

Figure 3: Development of sociocultural context based learning lab through communication media

Conclusion

In the process of coaching the foundation level design student to become an individual with a developed sense for design, the understanding of how a socio-cultural-economic context functions and how a relevant problem-solving process can be practiced within the context is of extreme importance.

Understanding context as any set of pre-existing events in the surrounding that may stand to be effective for any creative intervention, selecting a contemporary socio-politico phenomena as a context for design intervention students can be guided through an interactive process of understanding the socio-cultural-economic contexts. Through this process, students are guided to express a developed idea through modes of group communication media to a selected target audience. As the final stage of the project a live performance is executed resulting in a compact interactive learning lab where students get to experience comprehensive viewer feedback due to the self-reading aspect of the final execution.

In this process devoid of didactic teaching-learning methods students are actively engaged in the process of learning as practice through experience. Additionally, due to the nature of learning activities students are able to gain important insights to the actualities of practicing professionalism through the course of projects as well as necessary curricular content.

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