Research Article

Bridging the gap between graphic design education and profession in India

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Abstract

The graphic design profession has evolved and moved far beyond its past skill-centric connotations. Today's graphic designers are no longer expected to be merely skilled hands working in silos; instead, they are expected to work with multidisciplinary teams, equipped to handle new challenges of the profession and as professionals. Literature indicates towards lack of preparedness of fresh graphic design graduates to meet the demands of the rapidly changing professional landscape. Thus, it is necessary for design education-curriculum designers, educators and policymakers to design and implement learning environments towards the development of some essential professional skills in view of contemporary work scenarios. This study attempts to ascertain from Indian professionals who employ fresh graphic design graduates, the need for fostering collaboration & teamwork, communication, critical thinking, problem-solving, project planning & management skills in graphic design students to thrive in the workplace. The information is necessary to facilitate the design education fraternity for developing strategies to foster these skills in the academic space. The study results indicate strong support from the employers towards the aforementioned skills.

Keywords: Graphic Design, Design Education, Employers of Graphic Designers, Essential Professional Skills, Graphic Design Profession.

INTRODUCTION

In recent times, there has been an exponential growth in graphic design education in India. "Given the positive demographics, rising educational aspirations, openness to pursuing alternate careers, employment opportunities and increased affordability of higher education, the number of design aspirants is increasing every year" (British Council & India Design Council, 2016: 6). With the mushrooming of design institutes in the country, a significant role is played by formal design education to prepare graphic designers for their professional careers. Historically, the emphasis of graphic design has been on the visual aspects as an essential requirement of graphic design praxis. However, today's graphic designer's role is beyond just visual aesthetics. They are no longer expected to be merely skilled hands or mouse pushers, "designers today are expected to think beyond mere artefacts and be more strategic in their work" (Confederation of Indian Industry (CII), 2009: 23). The graphic design profession has evolved and changed in unpredictable ways. To respond to vast and rapid changes in working conditions, business practices, social and cultural phenomena; higher education in graphic design needs to be more inclusive and accommodate changes to respond appropriately to workplace requirements.

Literature indicates towards lack of preparedness of fresh graphic design graduates to meet the demands of the rapidly changing professional landscape. The Future of Design Education in India is a comprehensive report published in 2016 by the British Council in partnership with the India Design Council about design education

in India. The report draws from the experience of the design education sector and the industry. It categorically points out that from the employment perspective, the industry needs much more than disciplinary skills or software knowledge which is the focus in many Indian design education institutes. The report shares the industry viewpoint on many aspects of design education. As regards the skills, a significant number of industry professionals expressed that there is a lack of communication skills, analytical and problem-solving skills, managerial skills, critical thinking, time management skills, project management skills in fresh design graduates. A substantial number of employers confirmed that they provide additional training in varied areas to the design graduates in the first year of employment (British Council & India Design Council, 2016: 24-25).

The India Design Report published in 2015 in collaboration with the Confederation of India Industries (CII), while discussing the industry expectations from design graduates, listed the need for various skills including teamwork, professionalism, communication, project management and time management (2015, 83). Further, the National Educational Policy (NEP) 2020 of India is a comprehensive document focused on improving the quality of education in the country. The NEP 2020 has given significant importance to critical thinking skills, problem-solving skills, interpersonal skills, etc., besides building foundational capacities (Ministry of Human Resource Development, 2020: 4).

Literature review revealed that research in graphic design in India is very uncommon, The Future of Design Education in India - 2016 report points out that academic research in the field of design in India is a rare phenomenon. Publications by academics are minuscule. Further, no design research journals are published in India. Apart from few exceptions, there have been no conferences held in India where papers were invited, peer-reviewed and then published (British Council & India Design Council, 2016: 17; IndiaDesign Report 2015, 2015: 82). Globally too research in graphic design is an emerging area. Wang, (2006: 4) notes, the paucity of research in relation to requisite competencies and curricula in graphic design education can be due to its fairly recent popularity in the higher education sector, the same thought has been corroborated by Cross (2006: VIII). Considering the research lacuna, it is pertinent to identify the requisite skills and competencies to be nurtured in a successful 21st-century university-level graphic design program (Bridges, 2012: 6). Wilson (2014: 1) argues that it is essential to discern the profession's need for entry-level designers to inform design education. Further, Bridges (2012: 6) stressed that the agreement of higher education institutions regarding skills, content knowledge and tools required to adequately prepare students of graphic design for the workplace is vital. In the recent past, a few studies have been conducted globally to identify the essential competencies required in graphic design graduates for professional performance. These studies indicate a wide range of skills—time management skills, project management skills, communication skills, interpersonal skills, problem-solving skills, teamwork skills, critical thinking skills (Adu, 2015: iii; Chiang et al., 2018: 75; Dziobczenski & Person, 2017: 46). However, there is a huge lacuna of research in the Indian context. The current situation necessitates understanding from employers in India who are hiring the services of graphic designers regarding the aforementioned skills for thriving in the world of work.

Thus, this study is an attempt to address the existing gap in graphic design research in India regarding some requisite competencies and skills in fresh graduates. The information will potentially inform policymakers, curriculum planners, and educators to evolve the pedagogic framework and learning environments for learners' holistic development in alignment with workplace requirements.

Understanding Graphic Design

McCoy explains: "Graphic design was a spontaneous response to the communication needs of the industrial revolution in capitalist market-based economies, invented to sell the fruits of mass production in growing consumer societies" (2005: 3). The profession of graphic design has been in constant flux, Bernard suggests that graphic design has evolved beyond the skilled wrist for hire profession to a respectable visual-intellect profession (Bernard 1999 as cited in Damon, 2004: 29). The traditional understanding of graphic design limited its scope and nature to a product-oriented approach where the graphic designer was a maker of beautiful, eye-pleasing designs limited to the aesthetic arrangement of various components; however, the profession has evolved and moved far beyond its past connotations. Cezzar (2018), in the book titled The AIGA Guide to Careers in Graphic and Communication Design, defines graphic design as follows:

Graphic Design, also known as communication design, is the art and practice of planning and projecting ideas and experiences with visual and textual content. The form it takes can be physical or virtual and can include images, words, or graphics. The experience can take place in an instant or over a long period of time. The work can happen at any scale from the design of a single postage stamp to a national postal signage system. It can be intended for a small number of people, such as one-off or limited-edition book or exhibition design, or can be seen by millions, as with the interlinked digital and physical content of an international news organization. It can also be for any purpose, whether commercial, educational, cultural or political (2018: 15).

Background of Graphic Design Education in India

India Design Report (2009) published by CII, states, "Indian design education system offers diverse programme choices at all levels such as certificate, diploma, undergraduate and postgraduate programmes" (CII, 2009: 31). In India, the four-year undergraduate programmes in graphic design are offered under various titles such as communication design, visual communication, graphic and communication design, graphic design, visual arts, etc. resulting in a BDes -Bachelor of Design degree (Taneja, 2021: 22). Furthermore, within graphic design, there is a four-year programme called applied arts leading to a BVA degree - Bachelor of Visual Arts (University Grants Commission, 2001), that can be pursued after completing twelve years of school education (CII, 2009: 30).

In Indian design education, communication design seems to have acquired dominance as a superordinate term under which graphic design, animation film design, exhibition design, film and video design, user experience design have been categorized. Another common programme name in Indian universities/institutes is visual communication that offers a similar programme mix under its wing. The interested students enroll in a more generic category such as communication design or visual Communication but as they proceed to higher semesters, they opt to specialize in a specific area through their choice of electives courses offered along with common for all courses. Some programmes also offer three-year specializations after a common foundation year. The objective of these undergraduate programmes is to prepare students for the design practice (Taneja, 2021: 23-25). While discussing the scope for graphic designers, CII (2015: 53) mentions that graphic designers work in design agencies, advertising agencies, corporate communication departments of businesses or independently in the area of information design, type design, packaging design, environmental graphics, film title design, TV graphics, signage design, publication system design, system design, illustrations, strategic design.

Graphic Design Pedagogy

Swanson (2005: 22) informs, Bauhaus provided the basic structure for most of modern graphic design programs. McCoy (2005: 5), while discussing the impact of the Bauhaus on today's design education, observes, "Today, if one peels away the layers in any design programme; the persistent residue of this movement is evident". Ranjan points out, the impact of Bauhaus on Indian design education came with the foundation programme in undergraduate studies at the National Institute of Design around 1970, which used the curriculum drawn from Bauhaus and Hfg Ulm (2005: 2), the impact of the same is still continuing and has seeped into most design education institutes in India. 'Learning by doing' through design exercises has always been at the heart of design education. The core belief of a design curriculum is the best way to learn to design in by doing it (Dorst & Reymen, 2004: 1).

The studio is well established as a physical place and a unique pedagogic method in design education. Central to studio learning are projects which are often complex with open-ended questions (Kuhn, 1998: 66). In design education, the teacher fills in for the client, providing projects/problems to the students throughout their journey as a student during the undergraduate and graduate time period (Lehrer, 2006: 74). Seo (2010) explains, during the foundation level courses, the instructions are more defined, rigid and organized, designed to acquire necessary artistic capabilities and develop basic skills through experience. As the student proceeds to a more advanced stage of learning to design, there is a shift of focus from skill development to a more subjective approach and critical thinking for conceptual development. There is a shift from a more skill-based approach of learning to create designs to creating designs that are more practical and of professional quality. Green (2012) brings to light the abundance of disciplines found within graphic design,

Typography, poster design, identity/branding, editorial design, web design, user-interface design, typeface design, packaging design, three dimensional design, motion graphics, information design, etc. graphic design utilizes many old and new production processes and technological advents, it calls upon a large variety of mediums and is collaborative in nature (2012: 11).

Graphic Design Profession

The graphic design profession has evolved and changed in unpredictable ways -from the conventional hand skill-centric connotations; it has moved far beyond into a profession of professionals expected to deliver end to end solutions. All conventional parameters- defining peripheries of graphic design have been challenged, expanded and redefined. Today's graphic designers are no longer expected to be merely skilled hands or mouse pushers working in silos, instead, they are required to be participating intellectual minds who can work with large multi-disciplinary teams, equipped to handle new challenges of the profession and as professionals.

Framework for the Study

The Partnership for 21st century learning or P21 developed a framework for twenty-first century learning for students' success in the new global economy. In this, besides mastery of core subjects, the emphasis is placed on the 4 C's under the broad category of learning & innovation skills

- Critical thinking and problem solving
- Communication
- Collaboration
- Creativity and innovation.

The aforementioned skills are considered vital for success in an increasingly complex life and work environment (Framework for 21st Century Learning, 2009: 3-4). The literature review indicates an undisputed consensus of design educators, scholars and practitioners towards creativity and innovation being a critically important skill for designers (Casakin & Kreitler, 2005: 87; Sarkar & Chakrabarti, 2011: 348; Williams et al., 2011: 66). Furthermore, the nature of professional work demands effective time management and planning to meet tight deadlines (Adu, 2015: 84; British Council & India Design Council, 2016: 25; Curran, 2006: 322; Drews, 1997: 34; Richerson et al., 2007: 1; Wilson, 2014: 61). Hence, based on the robust foundational framework for the twenty-first century developed by P21 and the review of literature, a framework (Figure 1) for this study was developed. The framework served as a basis to ascertain from senior professionals (who employ graphic design graduates) the need to foster critical thinking & problem solving, collaboration & teamwork, communication, project planning & management skills apart from core disciplinary skills.

Collaboration & Teamwork

Communication

Critical Thinking & Problem Solving

Project Planning and Management

Figure 1. Skills framework for the study

METHOD

In seeking to understand how employers respond to the identified skills in India, a survey questionnaire was designed and administered to industry professionals who hire graphic designers. The questionnaire consisted of a total of thirty-five survey items, out of which ten questions sought to collect general information about

respondents' backgrounds. Each of the remaining items was to be responded based on a 5-point Likert scale ranging from 1 as a result of not important to 5 as a result of extremely important. The questionnaire aimed to ascertain the need for critical thinking & problem solving, collaboration & teamwork, communication, project planning & management skills in graphic design graduates. The last question was open-ended that sought to ascertain other skills and competencies deemed important by employers besides the aforementioned skills.

The questionnaire was administered through Google forms using personal contacts on Linkedin, WhatsApp and emails. Social networking groups consisting of design practitioners and design entrepreneurs in different design disciplines, including graphic design, were identified on Facebook and WhatsApp where the questionnaire link was shared. Further, the questionnaire link was also shared with personal contacts who are graphic design professionals to share it further in their networks. Fifty-eight responses were collected in the survey from respondents who are based in India. Irrelevant and duplicate responses were removed in the data cleaning process. Out of fifty-eight respondents, seven responses were invalid, and one response was duplicate. The following reasons became the basis of the data cleaning process.

   a. Respondent did no recruit graphic design graduates
   b. Respondent submitted the questionnaire more than once
   c. Respondent was not based in India

RESULT AND DISCUSSION

This segment presents the results of the questionnaire. Table 1-Table 2 inform about the demographic data obtained from the respondents. Table 3-Table 7 present findings of the research on five sections (Section A-Section E) collaboration & teamwork, communication, critical thinking, problem-solving, project planning and management skills. Finally, there is a discussion based on gathered responses. The data presented in tabular form is followed by the descriptive analysis in which the result of important and extremely important have been combined. Finally, there is a discussion based on gathered responses. The data presented in tabular form is followed by the descriptive analysis in which the result of important and extremely important have been combined. Section F- Table 8 presents the analysis of the open-ended question. For the analysis of the open-ended question, a qualitative analysis technique was employed. All responses to the question were listed; then, the repeating terms were identified and categorized under broad themes. Several themes emerged from the open-ended questions. After the data analysis, data were interpreted to draw conclusions and better understand the results. The data regarding the gender, age and work experience of the respondents has been presented below in Table 1.

Table 1. Respondents' gender, age and experience profile

		Frequency (n=50)
Gender	Female Participants	19
	Male Participants	31
	Total	**50**
Age (at the time of data collection)	25 – 35 years	3
	36 – 45 years	25
	46 – 55 years	17
	56 – 65 years	5
	Above 65 years	0
	Total	**50**
Work Experience (at the time of data collection)	0-10	3
	11-20 years	25
	21-30 years	14
	31-40 years	8
	Total	**50**

Information was sought from employers regarding the name of their company, job title (Designation), core services offered, the total number of employees, company's geographical location. All respondents were at

senior level positions-Founders, Co-founders, CEOs, Creative Directors, Managing Directors, etc., with the number of employees ranging from 1 - 10000+. Services offered by the respondents' companies included:

- Graphic design/communication design services
- Allied fields-animation, film and video, UI UX, retail design, exhibition design, advertising design, etc.
- Multidisciplinary design consultancy services-product design, new media solutions
- Some responses were from the design departments of large corporate companies

The maximum number of the respondents (forty-seven) had significant professional experience between 11-40 years. Thus, the respondents' profile is both reliable and relevant for this study. The response was received from eleven different geographical locations within India (Table 2). Rich geographical participation further heightens appropriate representation for the study. The following table gives an overview of the geographical distribution of responses.

Table 2. Geographical distribution of responses

Location	Frequency (n=50)
Delhi NCR	10
Mumbai	9
Ahmedabad	8
Pune	7
Jaipur	6
Bangalore	3
Hyderabad	3
Bhilwra	1
Goa	1
Lucknow	1
Vadodara	1

Section A

This section consists of six statements that required employers to give their feedback on collaboration and teamwork skills. These responses reflect employers' perceptions as shown in Table 3 below.

Table 3. Collaboration and Teamwork

Collaboration and Teamwork					
Statements	Extremely Important	Important	Moderately Important	Slightly Important	Not Important
A1. Ability to work in collaboration with other members of the team	74.0%	18.0%	8.0%	0.0%	0.0%
A2. Ability to build rapport with fellow employees	42.0%	48.0%	10.0%	0.0%	0.0%
A3. Openness to accept feedback given by the team	68.0%	32.0%	0.0%	0.0%	0.0%
A4. Ability to respect different voices in the team	56.0%	40.0%	4.0%	0.0%	0.0%
A5. Ability to handle interpersonal conflicts	22.9%	66.7%	10.4%	4.0%	0.0%
A6. Ability to respect diverse nature of thinking of their colleagues	52.0%	46.0%	2.0%	0.0%	0.0%

Employers were asked to respond to questions related to the need of collaboration and teamwork skills in fresh graphic design graduates. Ninety-two per cent of respondents think that it is important for fresh graduates to

be able to work in collaboration with other members of the team (A1). Ninety per cent of respondents think that it is important to be able to build rapport with fellow employees (A2). All (100%) of the respondents think that it is important to have the openness to accept feedback given by the team (A3). Ninety-six per cent of the respondents think that it is important for fresh graduates to respect different voices in the team (A4). A large number of respondents, 89.6% indicated that it is important for fresh graduates to be able to handle interpersonal conflicts (A5). A vast majority, 98% of respondents indicated that it is important for fresh graduates to be able to respect the diverse nature of thinking of their colleagues (A6). The overall response in this section indicates undisputed agreement of employers over the importance of collaboration and teamwork skills.

Section B

This section consists of four statements that sought feedback on the need for communication skills in the work environment. These responses reflect insights on employers' perceptions, as shown in Table 4 below.

Table 4. Communication Skills

Section B – Communication Skills					
Statements	Extremely Important	Important	Moderately Important	Slightly Important	Not Important
B1. Ability to communicate effectively with team members	42.0%	52.0%	6.0%	0.0%	0.0%
B2. Ability to articulate their own point of view	52.0%	42.0%	6.0%	0.0%	0.0%
B3. Ability to resolve conflicts through discussions and negotiations	42.9%	44.9%	12.2%	2.0%	0.0%
B4. Ability to present their work to the team members	42.9%	36.7%	20.4%	2.0%	0.0%

Employers were asked to respond to questions related to the need of communication skills in fresh graphic design graduates, 94% of respondents think it is important for fresh graduates to be able to communicate effectively with team members (B1). Most respondents, 94% indicated that it is important for fresh graduates to have the ability to articulate their point of view (B2). A vast majority, 87.8% of respondents indicated that it is important for fresh graduates to have the ability to resolve conflicts through discussions and negotiations (B3). Further, 79.6% of respondents think it is important for fresh graduates to have the ability to present their work to the team members (B4).

Communication skills are deemed necessary by employers. The need to articulate, express, present, convey, negotiate, etc. emerged strongly in research results.

Section C

This section consists of four statements that sought feedback on the requirement of critical thinking skills. These responses reflect insights on employers' perceptions, as shown in Table 5 below.

Table 5. Critical Thinking

Section C – Critical Thinking Skills					
Statements	Extremely Important	Important	Moderately Important	Slightly Important	Not Important
C.1 Ability to take decisions after critical evaluation	31.9%	36.2%	31.9%	4.0%	2.0%
C2. Ability to make conclusions based on evidence and reasoning	28.6%	59.2%	12.2%	2.0%	0.0%

C3. Ability to defend their decisions by explaining the criteria applied for taking the decision	30.6%	40.8%	28.6%	2.0%	0.0%
C4. Ability to analyse others work and give constructive feedback	22.2%	37.8%	40.0%	8.0%	2.0%

A total of 68.1% of respondents indicated it is important for fresh graduates to have the ability to take decisions after critical evaluation (C1). A vast majority (87.8 %) of respondents think it is it is important for fresh graduates to have the ability to make conclusions based on evidence and reasoning (C2). Findings show that 71.4 % of respondents consider it important for graphic design graduates to have the ability to defend their decisions by explaining the criteria applied for taking the decision (C3). However, only 60 % of respondents indicated that fresh graphic design graduates should have the ability to analyse others work and give constructive feedback (C4).

Results of this section reflect a strong inclination towards critical thinking skills. However, relatively lesser respondents feel the need for a critical evaluation and feedback on others' work, while the same is considered important by a vast majority with regards to their own work.

Section D

This section consists of four statements that sought employers' feedback on the requirement of problem-solving skills. These responses are shown in table 6 below.

Table 6. Problem Solving

Section D – Problem Solving Skills					
Statements	Extremely Important	Important	Moderately Important	Slightly Important	Not Important
D1. Ability to think of ideas to solve problems at different stages of the project	40.8%	49.0%	10.2%	2.0%	0.0%
D2. Ability to explore alternative options and methods before drawing a conclusion	44.9%	42.9%	12.2%	0.0%	0.0%
D3. Ability to make a decisions after evaluating all options	34.7%	44.9%	20.4%	0.0%	2.0%
D4. Ability to solve complex problems	23.4%	44.7%	31.9%	4.0%	2.0%

The majority of respondents (89.8%) indicated that it is important for fresh graduates to have the ability to think of ideas to solve problems at different stages of the project (D1). A total of 87.8% of respondents acknowledged the importance of fresh graduates to have the ability to explore alternative options and methods before drawing a conclusion (D2). Further, 79.6% of respondents indicated it is important for fresh graduates to have the ability to make decisions after evaluating all options (D3). However, only 68.1% of respondents think it is important for fresh graduates to have the ability to solve complex problems (D4).

There was an agreement over the need for problem-solving skills by a vast majority of respondents; however, while many respondents think it is important to be able to solve problems, relatively fewer respondents endorsed the idea of solving complex problems at the beginning of their career.

Section E

This section consists of four statements where employers have given their feedback on the requirement of project planning and management skills. The responses are shown in Table 6 below.

Table 7. Project Planning and Management

Section E – Project Planning and Management Skills					
Statements	**Extremely Important**	**Important**	**Moderately Important**	**Slightly Important**	**Not Important**
F1. Ability to organize their work effectively	50.0%	42.0%	8.0%	0.0%	0.0%
F2. Ability to meet targets based on the timeline	71.4%	28.6%	0.0%	2.0%	0.0%
F3. Ability to set and meet daily goals	42.9%	44.9%	12.2%	2.0%	0.0%
F4. Ability to systematically implement the daily plan for desired results	40.8%	42.9%	16.3%	2.0%	0.0%

A large number of respondents, 92 % consider it important for fresh graphic design graduates to have the ability to organize their work effectively (F1). Most of the respondents (98 %) think that it is important for fresh graphic design graduates to be able to meet targets based on the timeline (F2). Further, 87.8 % of respondents consider it important for fresh graphic design graduates to have the ability to set and meet daily goals (F3). Finally, the findings show that 83.7 % of respondents indicated that it is important to be able to systematically implement the daily plan for desired results (F4).

Project Planning and Management undoubtedly emerged as a necessary skill. The ability to organize work, set goals, implement daily plans, meet deadlines has been strongly supported by the employers.

Section F

An open-ended question was meant to determine other competencies considered relevant by employers. A lot of responses further reinforced and reverberated strongly in alignment with the quantitative results of the study in six categories. However, these responses also pointed out various other skills and personal traits employers appreciate. Table 9 below illustrates the varied responses of the employers.

Table 8. Response to the open-ended question

Open-ended question:	
Please write briefly about the skills that you expect the fresh graduates in graphic design/communication design to possess besides collaboration and teamwork, communication, critical thinking, problem-solving, core design knowledge & skills, project planning and management skills.	
Personal Traits	Sincerity, friendly disposition, hard-work, humility, perseverance, dedication, passion, integrity, initiative, persistence, grit, adaptability, leadership, punctuality, ethical and moral, positive attitude, empathy, flexibility, humour and wit
Creativity	Ability to think of new ideas, creativity and imagination, out of the box thinking
Learning Mindset	Willingness and curiosity to learn new things, aptitude for learning, initiative to upgrade skills according to industry requirements, ask questions, hunger and passion for learning
Research Skills	Research skill, ability to come up with new ideas based on research
Digital Skills	Good software knowledge and skills, know basic software to a high level of expertise, understanding of 2D and 3D software
Other	Skills to imagining and modelling the future, socially and environmentally responsible design skills, skills to design with empathy, multi-disciplinary skills, production supervision and quality assurance skills, reading habit, eye for detailing, ability to turn down projects on moral and ethical grounds, observation skills, understanding of business, understanding the motivation of buyers, understanding of consumers

The analysis of the open-ended question provided further insights into employers' expectations. The data was analyzed through coding, categorizing, and finally, by drawing themes from the qualitative responses. There was a recurrence of themes— problem-solving, teamwork, communication skills, project planning and management skills, core discipline knowledge and skills; however, some new themes (illustrated in table 9)

also emerged— creativity, learning mindset, research skills, digital skills, socially and environmentally responsible design mindset, multi-disciplinary skills, understanding of business, etc.

CONCLUSION

Graphic design is a practice-based profession. There is a long-standing debate between practitioners and educationists; design organizations and educational institutions about what should be taught and how should designers be prepared for design praxis. The profession of graphic design has been in transit. There are questions about what is needed as regards skills and knowledge in contemporary times. A constant discourse and feedback from the communities of practice to revisit the convention and chart out new paths to meet the changing demands of the profession is the way forward. The peek into real industry needs from the ivory tower is necessary to prepare graphic designers for what lies ahead. Hence, what transpired in the study results can serve as a guideline to tailor the curriculum and pedagogy.

The study results indicate an undisputed agreement of employers over the importance of collaboration and teamwork skills. Communication skills are also deemed necessary by employers. The need to articulate, express, convey and negotiate emerged strongly in research results. Critical thinking emerged as an important skill for graphic designers. However, the need for critical evaluation and feedback on others' work was given lesser importance compared to critical evaluation of self-work. Problem-solving skills emerged as an important skill for fresh graphic design graduates, however, fewer employers endorsed the idea of solving complex problems at the beginning of their careers. Project Planning and Management undoubtedly emerged as a necessary skills. The ability to organize work, set goals, implement daily plans, meet deadlines were strongly supported by the employers.

Thus, the study results show that besides command over core design skills and knowledge, the ability to integrate, plan, connect, express, negotiate, rationalize and resolve in the context of graphic design praxis and professional environment is important. Employers wholeheartedly support the necessity of fostering collaboration & teamwork, critical thinking & problem solving, communication, project planning & management skills in graphic design graduates to thrive in the workplace. Therefore, it is essential for design education—curriculum designers, design educators and policymakers to design and implement learning environments towards the development of the aforementioned skills in view of contemporary work scenarios. The academic fraternity must identify and implements pedagogical approaches to present opportunities that maximize the learning environment for the development of these skills.

India has formulated and adopted a National Design Policy in 2007 and constituted India Design Council in March 2009 to implement the National Design Policy's major provisions (CII, 2011: 5). One of the National Design Policy mandates is to improve the quality of design education. The India Design Council focusing on uplifting design education can play a pivotal role in guiding new design institutes towards implementing effective curriculum, pedagogies and establishing conducive learning environments.

Various other skills, competencies and personal traits have emerged from the research. Further research is needed to arrive at a consensus regarding some more emerging skills, content knowledge and tools needed to adequately prepare graphic design students for challenges of the profession.

Authors' Contributions

There is a single author in this paper who contributed 100%.

Competing Interests

There is no potential conflict of interest.

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