Socializing while Social-Distancing: Impact of the Covid-19 Pandemic on the Socialization Pattern of Freshers at IIIT-B

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Abstract—We present a qualitative study on the socialization pattern of freshers at the International Institute of Information Technology Bangalore (IIIT-B), in the wake of the Covid-19 induced lockdown. IIIT-B is a fully residential educational institute that fostered a tightly-knit community due to the extensive offline interaction of students and faculties alike. However, in the wake of the pandemic, the lockdown has limited the interactions to Computer-Mediated Communication (CMC). In this study, we attempt to analyze the CMC-based socialization of freshers, the emergent patterns, and their impact on an individual's college experience. Moreover, we study how these patterns are affected by various demographic factors. We used interview data from 16 participants (all belonging to Freshers 2020), where 7 were undergraduate students and 9 were graduate students.

Index Terms—socialization, freshers, computer-mediated communication

I. INTRODUCTION

Joining an educational institution brings about immense changes in the lifestyle of an individual. Every institute has its customs, traditions, ways of thinking, etc., and it often becomes challenging and overwhelming to adopt these attributes. Moreover, students entering the university from schools/coaching institutions view it as a time to be independent. They aim to experience freedom in living away from home while experimenting with new interests [1]. Socialization is of paramount importance for both aspects. It involves learning what it means to be a member of a group and navigating one's sense of self as part of that process. It allows individuals to adapt to their surroundings while incorporating changes as a group and simultaneously receiving validation for these changes. It also allows them to explore other cultures, identify and analyze the differences, and adopt what aligns best with their identity. It builds informal organizations, required to adapt to the demographic and organizational changes brought about on entering a foreign institute. Hence, socialization has a deep impact on the overall college experience of an individual. Moreover, the fresher year of college has a significant role in the socialization of college students [2].

Our research focuses on freshers' (2020) socialization patterns at the International Institute of Information Technology Bangalore (IIITB). IIITB is a 24/7, fully-residential campus, with a hostel capacity of 254 (Girls'

Hostel) and 754 (Boys' Hostel), with one hostel-building for each gender. The total built-up space is 5,60,483 sq. feet, making it one of the smaller campuses in relative terms. The confines imparted by the physical architecture of the campus leads to most public-spaces being heavily shared (like food courts, classrooms, sports facilities, etc.) Alongside this, the college offers courses predominantly in the field of Information Technology, with the majority of enrolled students belonging in the age-group of 17-27. The physical confinements, along with the shared age-group and broadly shared career-paths, have led the college-culture to manifest itself as a tightly knit community. The same set of students share an intricate inter-personal and professional relationship, at the same time. In these regards, the IIITB community and culture are in itself quite distinct from most colleges.

Since the third week of March, the Covid-19 pandemic has forced most colleges in the country to lockdown. IIIT-B is no exception to this, where the lockdown began on the 17th of March and has continued ever since. The following semesters have progressed in online mode, where the classes and assessments are both shifted to online platforms. This transition to the online-mode of learning has made the closely-knit culture of IIIT-B inaccessible to the freshers of 2020. It imparts a heavy toll on social interactions, as nearly all of it is reduced to online platforms. Prior research has extensive accounts on patterns and manifestations of socialization in educational institutes. Socialization and interaction through Computer-Mediated Communication (CMC) is also heavily researched. In this study, we attempt to analyze the CMC-based socialization of freshers, the emergent patterns, and their impact on an individual's college experience.

The organization of the rest of the paper is as follows: **Section II** presents a brief literature survey of relevant topics. **Section III** discusses the methodology involved in sampling, data collection, and data analysis. Moreover, it also contains the reflexivity and positionality of the authors in context to the study. **Section IV** discusses the findings of our study, and **Section V** contains a discussion based on the findings. **Section VI** discusses the limitations of our work, followed by the conclusion and acknowledgment in **Section VII** and **Section VIII**, respectively.

II. LITERATURE REVIEW

In this section, we summarize the relevant literature pertinent to our research. We focus on the importance of socialization for college-students, the impact of socialization on academic and non-academic experiences of students, and the usual patterns of socialization in college-freshers. We also inspect literature regarding how socialization takes place through Computer-Mediated Communication (CMC).

A. Importance of Socialization for College-Students

Several researchers have studied the importance of socialization in college. The work in [3] shows that poor socialization often manifests as issues of retention and withdrawal. Interestingly, both [3] and [4], also note that this facet is largely ignored in education research, even when it forms an integral part of the overall 'college-experience' of a student. We view the impact of socialization on college-students from two perpendicular axes:

- Impact on an individual's academics
- Impact on an individual's non-academic interactions

1) Academic Perspective: The foremost objective of college (and other educational institutes) is to impart learning, which in itself is primarily a social activity [5] [6]. Social interaction of a student with faculty and other students have a primary influence on the individual's learning and development [7] [8] [9] [10] [11] [12] [13] [14] [15]. Several studies have reported empirical evidence for the positive correlation of student-faculty interaction, with gains in cognitive and academic development [13], along with intellectual and personal growth [7] [16] [12]. Moreover, the correlation is increasingly apparent for students belonging to ethnic minorities [17].

Similar to faculty-student interaction, peer interactions of students is also invaluable for their academic growth. In several previous works, peer interaction is identified as "the single most important environmental influence on student development" [18]. It has a profound positive impact on an individual's development, providing for both personal and academic support networks [14]. Studies have positively associated cognitive development with peer involvement (both in-and-out of the classroom) [15] [19] [12]. The qualitative research literature also elucidates its positive association with several self-reported gains, such as intellectual development, general education, and personal/interpersonal development [20].

2) Non-Academic Perspective: A vital component of the college-experience consists of interactions that take place outside the classroom. Activities such as; membership in the student government body, social organizations, participation in clubs, volunteerism, learning about other cultures, interaction at shared campus facilities, etc., form the broad components of an individual's out-of-class experience. Peer interaction outside of academic context, and participation in extra-curricular activities is positively associated with improved self-esteem, better leadership qualities, increased social competence, along with also increased self-awareness and respectfulness for diversity [21] [22] [23]. It's also shown to directly (positively) impacts the individual's satisfaction and persistence [18] [24] [25]. It also provides social support, which is crucial to foster positive coping mechanisms to deal with stress [26] [27].

B. Socialization for College Freshers

Social interaction is predominant in the early period of college and often recedes with time. In prior literature, the reasoning is argued to be an increase in the academic load and greater demands from them, leading to an unwilling pruning of social interaction [28]. Its predominance in the early period is attributed to freshers' search for belongingness and engagement, in their new, uncertain, and anxious environment [29]. Freshers' are required to cope up with a sudden change, both in their geographical environment [30] [31], and that to an academically and socially more demanding environment [32]. Freshers' resort to social interaction as a coping mechanism, through which they receive validation for their beliefs and attitudes, which is perceived as rewarding [33]. The rewards stimulate further interaction and form a cycle that fosters the formation and maintenance of friendships [34].

C. Socialization through Computer Mediated Communication

Finally, we look at the literature corresponding to socialization through CMC and how it differs from the more traditional, offline interaction-based socialization. We shall use 'quality of relation' as a metric, where quality refers to the experienced closeness, trust, and understanding between individuals [35].

First, we shall define two kinds of social capital in context with the quality of friendship.

- Bridging Social Capital: It forms from weak ties and exists between individuals with weak connections. Such relations tend to provide useful information, but typically not emotional support.
- Bonding Social Capital: It forms from strong ties and exists between individuals who tend to be emotionally close. It fosters high-quality relationships, such as between family and close friends [36].

Interactions based solely on CMC tend to provide for bridging social capital [37] [38] [39]. It is consistent with several studies in the literature that elucidate the inferiority of online-friendships, compared to their offline counterpart, with quality as the metric [40] [41] [42] [43].

CMC is often deprived of non-verbal cues, which results in individuals overvaluing other notions of similarity (social section, demographic location, etc.) for basing their relationship. The Hyperpersonal Communication Framework [44] mentions it as an attempt to compensate for the lack of

non-verbal cues, with the available cues. Thus, individuals with similar 'backgrounds' tend to bond quicker and stronger [45] [46] [47] [48] [42] [34]. It is consistent with the Social Identity Deindividualization (SIDE) theory [49] [50], which demonstrates the replacement of individual-identity with group-identity in the social-cue deprived environment provided by CMC.

III. METHODOLOGY

A. Sampling Process

The study took place from September 2020 to December 2020. All the participants were freshers at IIIT-B, where nine were graduate students and seven were undergraduate students. The sampling procedure had two phases, separate for undergraduate students and graduate students as the prior joined the college in early November, where the latter joined in early September. The sampling method involved was convenience sampling. We sent out google forms requesting willing participants to volunteer and got around thirty responses. We stratified the prospective participants based on gender and ended up picking all the female volunteers. Afterward, we randomly sampled ten from twenty-four prospective male participants. The aim was to maintain a gender ratio close to half, and the number of female volunteers was only six. In the end, we ended up with six female and ten male participants. Except for one, we also consciously excluded volunteers who were present at the campus. Further details about the sample are presented in Figure 1.

The participants belonged to three different courses. Seven were pursuing an Integrated Masters in Technology (undergraduates), where one of the graduate students was pursuing a Masters in Science (Digital Society.) The rest of the participants (all graduate students) pursued a Masters in Technology. The participants were approximately equally distributed between Tier-1, Tier-2, and Tier-3 cities (5, 4, 5 participants respectively), whereas one participant belonged to a Tier-4 city, and another participant shifted frequently. The majority of our participants had either Hindi or Telugu as their mother tongue, where the count of participants having Sindhi, Marathi, Maithili, and Kannada as the mother tongue was one. It is also important to note that the participants who spoke Sindhi, Marathi, and Maithili were comfortable in Hindi. Moreover, all the participants were comfortable in English. The youngest participant in our sample was 17 years old (undergraduate), whereas the eldest was 23 years old. The youngest graduate participant was 21 years old.

The graduate participants had prior experience of college, whereas the undergraduates were coming straight out of school/coaching institute. Hence, we believed that the socialization patterns for the two groups would be significantly different. The interviews for undergraduate students took place in late November and early December, as they joined the institute in early November. It was a conscious decision to allow them to settle for the first few weeks. The interviews for the graduate students were spread across October and November.

B. Interview Process

The method of data collection was through in-depth semi-structured one-to-one interviews with the participants. The language used for interviewing was Hindi and/or English. Both the authors conducted eight interviews each, and both were comfortable with the languages Hindi and English. Fifteen of the sixteen interviews were conducted online, where three were conducted on a video-call and the rest on an audio-call. The technology used was Zoom meetings or Google Meet. One interview (for the participant who was present at campus) was conducted in an offline mode (in the campus cafeteria.) Each interview lasted about 45-70 minutes in duration. Even though the participants were ensured of their identities remaining confidential, fifteen of the sixteen participants did not consent to the interaction being recorded. For one participant that did consent to recording the interaction, the recorded data was lost due to a logistic error.

C. Interview Questions

Consent was taken from each participant before the interview process and they were also assured of their identities remaining confidential. Moreover, it was re-iterated that each participant could revoke their consent at any time in the project (before or after the interview.) During the interview, we asked the participants questions regarding how they first interacted with their peers, how they are interacting with peers for academic purposes (such as group projects), how are they participating in social activities in college, etc. Finally, we also asked the participants regarding their demographic information, such as their age, home-town, mother-tongue, caste, etc.

D. Data Analysis

The entire process of data-collection and data analysis (transcribing, coding, making field-notes, etc.) was done in English. Since we did not have recorded data, we took extensive field-notes while conducting the interview. Having performed the interview, we transcribed the data based on the field-notes and our memory. For analysis, we religiously adopted the Constant Comparative Method, where we went on to abandon the research literature and made inferences solely based on our data. The first step of our analysis was, "open-coding" where we went through the transcripts multiple times and grouped raw-data (unaltered in any form) from the transcripts under codes (which we denoted by short phrases.) The process was performed asynchronously by both the authors on a shared Google Document. The process was performed iteratively until we arrived at broad themes and patterns. At this stage of the analysis, we re-did the literature survey to compare our findings with the existing literature. The themes and

Participant	Gender	Age	City (Tier)	Educational Loan (Y/N)	Course	Mother Tongue
Participant-1	F	23	Tier-1	Y	M.Tech	Telugu
Participant-2	F	23	Tier-2	Y	M.Tech	Hindi
Participant-3	M	22	Tier-3	Y	M.Tech	Sindhi
Participant-4	M	23	Tier-4	Y	M.Tech	Telugu
Participant-5	M	23	Tier-3	Y	M.Tech	Hindi
Participant-6	F	22	Tier-3	Y	M.Tech	Telugu
Participant-7	M	24	Tier-3	Y	M.Tech	Hindi
Participant-8	M	18	Tier-1	Y	Integrated M.Tech	Marathi
Participant-9	M	18	Tier-2	N	Integrated M.Tech	Telugu
Participant-10	M	18	Pan-India	Y	Integrated M.Tech	Hindi
Participant-11	M	17	Tier-1	N	Integrated M.Tech	Maithili
Participant-12	M	18	Tier-1	N	Integrated M.Tech	Telugu
Participant-13	F	21	Tier-1	Y	M.Sc. (Digital Society)	Hindi
Participant-14	F	23	Tier-2	Y	M.Tech	Telugu
Participant-15	M	18	Tier-3	Y	Integrated M.Tech	Kannada
Participant-16	F	17	Tier-2	N	Integrated M.Tech	Hindi

Fig. 1: Demographic Information of Participants

patterns discovered during the process were grouped under appropriate categories, which has been explained in detail in the *Findings* section.

E. Reflexivity and Positionality

Both the authors are pre-final year integrated (bachelors and masters) students at IIIT-Bangalore. The first author is an upper-caste male from a Tier-1 city in Punjab, India, belonging to an upper-middle-class family. His mother-tongue is Punjabi. The second author is an upper-caste male from a Tier-2 city in Uttar Pradesh, India, who belongs to a middle-class family. His mother tongue is Hindi. Both the authors are comfortable in Hindi and English, the two languages used during the interview. The financial background for both the authors allowed them to spend on resources with a single focus on facilitating their convenience concerning the online-mode of college. Author-2's parent is a government employee, making most of their health-care expenses free or reimbursable.

The authors have been affiliated with IIIT-B for more than three years, having spent the first three years on campus. During the study, Author-2 was a Teaching Assistant for the course, "Mathematics for Machine Learning," taken by seven of the sixteen participants. Author-2 was also one of the few students (30 of 1000+) to return to campus before the interviews took place. These influence the power-dynamics between the authors and participants, where the authors are in a position of power.

Author-2 recalls joining the college as a homesick individual from a small town in Uttar Pradesh (UP). They were the only individual in the batch from UP, and that posed an initial barrier in socializing due to the differences in culture and language. Moreover, they contracted Chickenpox on the very first day of college. Hence, they couldn't join the campus for the first three weeks due to quarantine at home. During this period, their situation was somewhat similar to the freshers of 2020, as they could socialize exclusively through online means. It made it difficult for the author to socialize, and they also recall taking significantly longer to acclimatize to the institute's culture.

Author-1 also felt a severe disconnect from their batch-mates after the college came under lock-down. They struggled to maintain a connection with their batch-mates after the interaction got limited to online modes. Hence, both the authors had felt the impact of socialization on their college-experience through first-hand experiences. It led them to develop a personal stake in carrying out the current research study.

While conducting the interviews, both the authors received (an unexpectedly) pronounced cooperation from the participants. The participants were informed that the interview would last around 35 minutes, however, most of them were willing to have a conversation for 40-75 minutes. The reason was that most participants were actively looking forward to the interaction (where they could have a long conversation with their college-peer over an audio/video call.) They took it as an opportunity to socialize (twelve of the sixteen participants confessed to volunteer because they were looking to interact with someone from their college.) The participants stated that they had hoped for such interactions with their batch-mates, but it had not been possible in the online-mode of functioning. Their readiness facilitated our subsequent conversation, as the participants were actively seeking a close bond with a college peer and would proceed to talk intimately without hesitation.

IV. FINDINGS

In this section, we explore how freshers at IIIT-B are socializing in the wake of the Covid-19 pandemic. We look at its effects across two perpendicular aspects, (1) academic context and (2) non-academic context. To this end, we look at both peer-to-peer interaction and student-faculty interaction. Moreover, we analyze the emergent inter-personal relations between students and the effect of demographic characteristics in CMC based socialization.

A. Academic Interactions

Academic interactions were of paramount importance for establishing the first contact in both peer-to-peer and student-faculty interaction. Individuals felt more comfortable in approaching others in context to work. Literature accounts that motif-driven socialization shows similar characteristics in both face-to-face and CMC settings [51] [52] [53]. The emergent patterns for peer-to-peer exchange and student-faculty exchange are discussed in the following sub-sections.

1) Peer-to-Peer Interaction:

Academics formed the basis of initiating contact in peer-to-peer interaction, whether the exchange was one-to-one (direct messages on WhatsApp, Discord, Instagram, etc.), or many-to-many (WhatsApp group-chats, posts on Discord channels, etc.) The group members in the latter were either batch-mates or shared a particular course. The activity would involve posting doubts/solutions, academic reminders (when an assignment/project, etc., was due), announcements (upcoming quizzes, changes in schedule, etc.)

Group Chats
Increased activity(in an academic context) in group-chats emerged as a means of being noticed by their fellow batch-mates. Individuals used it to solidify their candidature; for class-representative (for undergraduate students) or membership in Student Activity Council (for graduate students). Participant-1, which took part in the SAC elections as a voter, said: *"We did not know anyone personally and had to rely on limited information. Hence, we judged the candidates on how active they were on the group-chats, how vocal they were to raise a collective concern, etc."* Participant-15 (an undergraduate student) said: *"A few students were very active on group-chats, and through their friends, we knew they are doing so in the hope of becoming class-representatives... When the class-representative got selected at random, these students retaliated by reducing their activity on group-chats for the next few days."*

Group Projects
Another facet regarding academics was to deal with group projects. Nine of the sixteen participants had group projects in at least one course, where they had to form groups

themselves. All of these participants were graduate students. Formation of groups took place through two major patterns:

- Google/Microsoft forms were used, where the questions were targeted on understanding the prior experience, knowledge, and interest of others, in the context of the project topic. The forms were circulated through group-chats.
- Participants cold-texted people (usually from a similar previous institute, same demographic/social background, etc.) proposing to group up.

Six of the nine participants resorted to the second strategy. Seven of the nine participants believed that due to the first strategy coming into play, the groups formed clubbed experienced and in-experienced individuals separately. It made it harder for groups with in-experienced members. Participants also noted that it was harder for students to form groups if they were both inexperienced and did not share a demographic/social background with their batch-mates. Participant-13 had enrolled in a course where the groups were formed at random by the course instructor. To this, she noted: *"It was better than forming groups on our own, as in the online scenario, it has become a tedious hassle on its own."*

However, having formed the groups, group-interaction served as an opening towards more informal communication between the group-mates. Communication within the group involved Google/Zoom meetings, or Discord calls for working together (in synchronous fashion), and WhatsApp groups were used for asynchronous updates. Participant-6 said: *"When the three of us were supposed to meet, but only two had joined, at such times the conversations would often take an informal note. Also, after we have finished our discussions, we would stick around for a small while to talk about other things (i.e., things other than the project)."* Moreover, seven of the nine participants said that they were close to at least one of the members who were/are their group-mates.

Student's Morale
Research literature elucidates the paramount importance of socialization on the academic performance of college students while also demonstrating CMC based interactions to be inferior to offline interactions. These factors were brought out in the current study, where participants claimed to be facing hardship in getting through the semester, citing "the lack of offline interaction with peers" as the reason. Interestingly, participants faced two (seemingly distinct) issues:

- Eleven of the sixteen participants felt that the work-load was too immense to handle, and there wasn't enough motivation.
- Three of the sixteen participants felt that there wasn't enough work-load and not being around peers had made them complacent, with no motivation to do about the bare minimum.

Both the groups claimed that in an offline environment,

witnessing their peers dealing with similar circumstances would have helped them stay more motivated. Prior research has also noted the impact of high-quality socialization on students' motivation (in the context of academics) [54] [55] [56] [57].

2) Student-Faculty Interaction:

Student-faculty interaction took place on Email platforms, Learning Management Systems, and during online-classes. Participants felt that this interaction was extremely restricted. The faculty members would often instruct to contact Teaching Assistants before contacting them (via Emails). During classes, the participants could interact through their micro-phones or in the group-chat. However, a few faculties would restrict this access, except for a few 'breaks' during class (due to difficulties in managing students when the class strength is more.) Five of the seven participants felt that this restricted access did not provide them enough time to interact. Moreover, people who identified as shy did not feel comfortable interacting openly during these slots. Participants often felt a need to have a 'smart doubt/question/comment' or else they would rather not speak up.

The student-faculty interaction that did take place got strictly confined to academics. Three of the sixteen participants felt that they weren't able to receive guidance and mentor-ship from professors (outside of academic context.) They also believed that it would be very different in an environment where they could just 'walk-in' the professor's rooms. Literature shows the positive impact of student-faculty interaction (outside of classrooms) on the student's overall development [58]. Participant-13 said: *"If we were in college, we could ask professors' about their research-work, help them with organizing events, etc., and this would in-turn help our personalities grow. This facet had become completely inaccessible in the current (online) setting."*

B. Non-Academic Interactions

We sub-divide this into formal activities (taking part in the Student Affairs Council (SAC), student clubs, organizing events, etc.) and informal activities (group study sessions, multi-player gaming sessions, watching movies/TV-shows together, etc.) Furthermore, we also analyze the role institute played to facilitate non-academic interactions.

1) Formal Activities:

SAC Elections
The SAC elections were the most prominent formal activity that took place in the duration of our study. Eight of the sixteen participants (all graduate students) took part as either prospective SAC member candidates or voters. The candidates used group-chats (as mentioned earlier) to build a strong presence among their peers. They also organized

informal events (like group video-calls within the batch) to be noticed. As part of the formal campaign, candidates used Google-Meet and Zoom meetings for group voice/video calls. All the participants (voters) said that they cast votes based on how active they perceived the candidate to be.

Student Clubs
The next important facet was participation in student clubs. Nine of the sixteen participants had the opportunity to participate in clubs (as undergraduate freshers cannot join clubs). Out of this, only one participant (Participant-13) had taken part in clubs. The rest of the participants claimed to be interested in club activities but were facing resistance due to the online-mode of interaction. Four of the nine participants felt it was difficult to explore the clubs, where seven participants mentioned it was difficult to contribute and manage the additional work-load. All the participants noted the inability to witness their peers in a similar environment as the reason for this resistance. Participant-2 said: *"I like to be present in the environment, where we can get together and work on something. Unless I am physically present, the work seems overwhelming. If we could all sit together and work, it would appear doable."*

2) Informal Activities:

Group-Activities
A student-club had been set-up solely to organize and manage interaction sessions/activities for undergraduate freshers. By the time we interviewed the participants, the club had organized a group-activity (which was an online quiz based on TV-series, comics, games, and movies.) The activity received heavy participation from juniors. Freshers were to form groups (amongst other freshers), followed by participating in the quiz (conducted over group voice-chat). Seven of the sixteen participants (all undergraduates) in the study took part in the activity. Most undergraduates are strangers to all their batch-mates, as they often come from a more diverse background compared to their graduate counterparts. Hence, the primary strategy for forming groups was through cold-texts (on WhatsApp, Facebook Messenger, or Instagram). Interestingly, all seven participants claim to be close to their group-mates from the activity.

Discord Channels
Discord channels were set up to help connect people with similar interests, varying from particular sports, online games, cooking, reading, etc. The servers were used extensively by undergraduate students. Participant-12 said: *"All our batch-mates login to the servers at around 9:00 pm-10:30 pm, just so we can chill. We play multiplayer games, talk about random stuff...., basically it's a time where we get together and do something apart from academics."* Since the undergraduate freshers have a lot less demanding schedule (in terms of placements, assignments, quizzes, etc.), it is understandable why they benefit from it the most. This phenomenon has been mentioned in their

work by Cosden [28].

Birthday Celebration

Seven of the sixteen participants (all graduate students pursuing a Masters in Technology) formed a ritual of video-calling the entire batch whenever there was a birthday of one of the batch-mates. Such video-calls served as a platform was conscious informal interaction. Participant-3 said: *"Such video-calls are a lot of fun. Some people sing, some dance or play some instrument, and in all, everyone has fun. Earlier the number of people who joined the call used to be more than 100 but, with the increasing work-load of the semester, this number has come down to two-digits. Not everyone can attend all the video-calls since it is usually once every two weeks, but people do attend every alternate or so."*

3) Role of the Institute:

The institute set-up a club to organize and manage interaction sessions/activities for undergraduate freshers. Besides, they also have a mentorship program where 4th-year and 5th-year (Integrated Masters) students are assigned mentees (5-15 undergraduate freshers, each) to help them adjust to the shift of environment from school/coaching institute to college. Author-2 is a part of the mentorship program, and it involves both (1) group-calls with the mentees and (2) one-to-one conversations regarding their academic/non-academic concerns/queries. However, all the graduate participants claimed that the institute took no measures to facilitate their non-academic interaction in college.

C. Inter-Personal Relations

Inter-personal relations with peers are of paramount importance for the overall college-experience of an individual [18] [3] [4]. Literature has shown that forming close bonds is often a demanding task in a completely online setting. The participants in our study are self-aware of this aspect. Fifteen of the sixteen participants claim that they felt their peers were more like, 'strangers off the internet' rather than college-mates. They noted it was exigent to form personal connections with someone they haven't met in person. Nine participants claimed that it was outright impossible, where two went on to say that they were unwilling to change it either.

Besides, there was a significant difference in the number of peers that the participants were acquainted with depending on whether they were graduate students or undergraduate students. The graduate students claimed to know around 50-60 of their batch-mates, whereas the figure was only about 15-20 for undergraduates. Graduate students also claimed to be close to 20-25 batch-mates, whereas undergraduates only felt connected to 6-8 batch-mates.

In this sub-section, we look at the various adaptation strategies developed by students to bond with peers. We also look to analyze the effects and the significant road-blocks in this process.

1) Adaptations:

Surprisingly, most participants (fourteen of sixteen) also claimed to be investing heavily in socializing, recognizing that the circumstances are grim, hence, making attempts to compensate for it. Participants claimed to devote 1-2 hours/day (minimum) to 3-4 hours/day (maximum) solely to socializing. The attempts involved cold-texting peers, sending relatable memes on Instagram, reacting to someone's post (especially Instagram stories), etc., as a means to establish informal communication. Four participants self-identified themselves as introverts, and three of them felt they had made immense changes in their behavior to interact. Participant-1 said: *"During the first weeks, I did not put a lot of effort towards interacting, but by the end of September, most of us realized that this is how it is going to be (i.e., the pandemic and the lockdown is not going away.) Hence, after that, I started consciously reaching out to people, being more approachable, as I felt this might be the only way we get to interact with our peers."* Moreover, twelve participants stated to have taken part in this study, as they saw it as an opportunity for peer-to-peer interaction. The participants took to creative strategies and made significant changes in behavior to adapt to the college-environment. Literature shows such adaptation strategies are characteristic of college-freshers [59].

2) Importance of First-and-Online Impressions:

The importance of "first-impression" is paramount in CMC. Where literature does argue that CMC-based bonds can become comparable to offline-based relations, the vital element required for it is time. When a first impression is poor in CMC-based interaction, it is unlikely for the individuals to be willing for further interchange [60]. Thus, taking the element of time out of consideration.

It is consistent with the findings of our study, where seven of the sixteen participants claimed to be unwilling of further interaction if the first interaction is unsatisfactory. Participant-6 said: *"We are not around one another, and hence, it makes it harder to empathize with them. Sometimes we tend to make assumptions about others that can be far from true, based on limited interaction. Like someone accidentally not picking up a phone call or not responding to your message can come off very differently....., while they might be genuinely busy. I think the pre-mature formation of impressions is a big issue in online communication."* Moreover, this also made the participants conscious of the first impression they make, which did not allow them to communicate freely.

Participants also reported being anxious regarding meeting their peers in person after only seeing each-other through their Instagram profiles. Participant-13 said: *"I am very*

different in person, to who I appear to be through my Instagram profile. So when we meet each other in person, with our perceptions based on social-media profiles... it is going to be... I don't know... it would be kind of weird."

D. Role of demographic Factors

Various demographic factors also played a significant role in affecting the socialization patterns of freshers.

1) Home-state and Language:

While deciding who to cold-text (whether for forming groups for projects or as a means of informal socialization), participants took the demographic background of their peers into account. The culture is not foreign to the existing one of IIIT-B, where demography plays a significant role in how groups (formal and informal) form during offline interaction. However, research literature shows it to be increasingly prominent in CMC. Due to limited non-verbal cues, individuals tend to over-emphasize the available ones (such as demographic characteristics.) Participant-14 said: *"While cold-texting, I look at the names of other people and try to figure their background. If it appears that they belong from Andhra, I contact them."* It is also prominent as students attempt to find others who speak the same language. Where a few just attributed this trend to convenience, Participant-4 said: *"These are trying times. Things are hard at home, and we are struggling in college with the course-work, placements, etc. In such times, you want someone who can understand you in your mother-tongue."*

The language difference also becomes a barrier in group-interactions as individuals are often not conscious of others attempting to take part in the conversation. It again is a butterfly effect of lack of non-verbal cues, as they cannot 'see' others around them. Participant-3 said: *"We often tend to switch to Hindi, not realizing that we are making the conversation inaccessible to others. Sometimes, this gets perceived as a conscious move from our end, so people from other language groups will then begin talking in their mother-tongues, causing the conversation to be inaccessible to us."* Participant-12 said: *"Me and 6-7 of my friends get on Discord to group study. Usually one of the members shares their screen with the slides or book, and all of us will discuss and study... similar to group studies in an offline setting. But a very good school friend of mine (he also joined this college) is not a part of this group as the group is primarily Hindi-speaking."* Hence, the language poses a significant barrier in both (1) establishing contact with peers and (2) maintaining contact with peers. It is especially prominent in group-interactions.

2) Gender:

Gender differences also play a significant role in socialization and interaction patterns. Research literature suggests that females often do not feel free in CMC-based interactions, especially when their anonymity isn't intact [61] [62]. Moreover, they are often are at the receiving end of aggressive harassment tactics from their male counterparts [63] [64] [65] [66]. Such issues lead to females being hesitant in accepting CMC-based interactions.

Half of the female participants said that they only cold-text other females. Participant-14 said: *"I do not prefer starting a conversation with a guy, as it might give out the wrong idea... like I am interested in him."* Hence, females are often conscious of how they come-across while interacting with a male.

Moreover, even in contemporary society, the majority of household chores are often earmarked to women [67] [68], even more so in Indian households [69]. Hence, it becomes harder for females to socialize (or sometimes even manage their work) while staying at home. Four of the six female participants felt that they couldn't participate in socialization activities as freely as their male counterparts. They cited being overburdened by household chores as the reason. Participant-2 said: *"Since this is the festival season, my family expects me to help them with household chores. It is hard enough for me to take time out for my semester... they still seem to understand when I am working. But say, if I am just on a video-call with my friends, or I am texting, etc., they feel I should prioritize household chores over that."*

3) Other Factors:

Other factors such as internet connectivity at their location, financial background, number of family members also impacted the socialization patterns. Participants living in joint families found it hard as they struggled to find private space. Moreover, their daily routine was expected to align with that of others in the family. Thus, they couldn't stay up for video calls at midnight (ex: for someone's birthday.), play online-games late at night, etc. Participant-4 (who shared one room with his mother, father, and brother) said: *"The entire family is confined to that room. It is very difficult to manage official calls in the first place. I could be on a call, and my family would be audible in the background. In such a scenario, I cannot imagine having video calls with my batch-mates."* Three of the sixteen participants also noted that they are unwilling to join the video-calls or online gaming sessions, as the additional data expense is a financial burden. Not having proper connectivity at home also discouraged participants from interacting freely. Seven of the sixteen participants did not have a reliable internet connection in their bedrooms. Hence, if there is a video-call late at night, they are unable to take part.

V. Discussion

Our findings highlight the various emerging patterns adopted by Freshers of 2020 as they attempt to socialize exclusively through CMC-based interactions. Most of the findings are consistent with what we can learn from the literature about freshers' socialization patterns in college, combined with socialization through CMC. In our study,

we demonstrate the various strategies adopted by freshers to facilitate socialization, and the barriers that they face. Moreover, we also analyze the affects it has on their college-experience. Building upon the findings, we discuss a few prominent themes below.

A. Professional Peers, Not College Friends

College students tend to form close bonds amongst their peers, and this process begins when they are freshers [70] [71]. The bonds formed have a profound impact on their overall college experience. In the present scenario, most participants struggled to establish a personal connection with their peers. Their peers seemed unapproachable when there was no work. While interactions initiated for work (such as video calls for group projects, asking doubts through one-to-one texts, etc.) did tend to give way to more informal conversations, the students were uncomfortable initiating interaction explicitly for informal communication. Hence, the social dynamics were closer to that of professional peers rather than college-friends. As implications, half of the total participants felt that they did not have a personal connection with anyone in the college. Ten of the sixteen participants also said that they had no one to contact when they felt low. Interestingly, even amidst the pandemic, fourteen of the sixteen participants claimed they would get back to the institute the first chance they could, to have a "normal" social life in college. Hence, the participants were conscious of and heavily weighted the negative effects of the exclusively CMC-based socialization

B. Over-reliance on Available Cues

Our findings here mirrored the research literature in the domain of CMC-based socialization. Due to limited cues available in online-interactions, the students were excessively relying on available cues such as demographic information, similar projects, similar groups, etc. Where this is not uncommon even for offline social interactions, the results here were significantly more prominent. Fourteen of the sixteen participants claimed to be close to peers with who they worked in a group. Such group-projects, whether academic or non-academic, positively impacted the bonding between members. Other cues that had a similar effect were demographic.

While the latter cannot be changed, the institute can play a vital role in helping students socialize through the prior. Students can be encouraged to form groups with new members to improve interaction amongst those who would otherwise remain mutually anonymous. However, the students might be uncomfortable with it, for groups made in an academic context (for group projects, group assignments, etc.) Here, the institute can organize more informal group activities. It shall provide students a platform to work with different people, along-with a context to support free interaction. The institute had already made provisions along similar lines, but with limited access to undergraduate freshers.

C. Return to Offline-Mode

Through prior literature and our findings, it is apparent that the online-mode of socialization is interior to its offline counterpart. Individuals struggle with the following: initiating interaction, connecting on a personal level, empathizing with their peers, and with the feeling of belongingness. An interesting aspect here would be to analyze the change in dynamics if-and-when they return to campus. In the present study, one of the participants (Participant-4) had returned to campus before their interview. At the time of the interview, he had spent three days in the hostel alongside 4 of his batch-mates. Participant-4 said: *"There was a significant change after I came back to college. I was only friends with Telugu speaking folks before, but here, I can bond with all my batch-mates... and it has only been a couple of days! A few of them have Hindi as their mother-tongue. We do not care the language that they speak... in fact, we are having a fun time teaching others curse-words in our mother tongue."* It suggests that changes brought through online-mode of socialization are only temporary until students get back to campus. The "online-barrier" has made it difficult for students to identify as belonging to the same batch/institute. It seems likely to change rather rapidly once they are back on campus, thus, fostering higher quality relations amongst peers.

VI. LIMITATIONS

The study was the first qualitative research study for both authors. Here, we discuss the possible limitations of the same.

- **Sampling Method:** The adopted sampling method was convenience sampling, and hence, may not accurately represent the actual diversity.
- **Pseudo-Transcribing:** Recorded data was not available for any of the interviews. Hence, the data-transcribing was done based on field-notes and the interviewer's memory (hence the term pseudo-transcribing). It could have potentially introduced slight inaccuracies in the transcribes.
- **Aim to be Ideal Interviewees:** Two of the participants voiced their concerns regarding trying to be an ideal interviewee (i.e., they wanted the data obtained through their interviews to be useful.) It might have lead to conscious responses on their end.
- **Power Dynamics:** One of the authors was a Teaching Assistant for a course taken by seven of sixteen participants. It could also lead to interviewees being conscious of their responses to questions regarding that course.
- **Conscious Exclusion:** The students back at the campus(except one) were consciously excluded from the sample. A few participants (initially included in the sample) expected returns in the form of an unauthorized increase in grade (by the author that was also a teaching assistant for one of their courses) for volunteering in the project. They were excluded from the set of participants sampled for the interview process.

VII. Conclusion

We presented a qualitative study of the socialization patterns of freshers at IIIT-B in the wake of the Covid-19 pandemic. The pandemic had put the college under a lockdown, which had limited the freshers' socialization to CMC-based interaction. We interviewed 16 participants (all from freshers-2020 at IIIT-B) to understand their socialization habits and how it affects them. We studied the various patterns and adaptations that emerged to tackle the change in circumstances. We analyzed the emergent patterns concerning both (1) academic context and (2) non-academic context. Besides, we also examined how demographic factors influenced these patterns. Most of our findings are consistent with previous literature on college-fresher interaction and CMC-based socialization. Our study further elucidates the importance of socialization in an individual's college-experience. We also highlight the different complications that arise due to the shift to exclusively CMC-based methods of socialization for college freshers.

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