

DESIGNING COMPETITIVE DISCUSSIONS FOR EQUITY AND INCLUSION

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In this case, we focus on two innovations in the design of competitive discussions for a high stakes learning context. The designer created the intervention to provide learners first-hand discussion experiences despite large class sizes. It was a business communication course, and the large class sizes and group dynamics previously had inhibited constructive feedback and limited learner participation; however, the combination of a (1) time-constrained asynchronous CMC activity, along with (2) strategically selected smaller groups, created an interactive space that matched the designer's values of equity and inclusion that he wanted to bring to the design. The case chronicles a number of unforeseen consequences of logical design moves, and presents a multimodal re-conception of what it means to discuss in the context of modern business school.

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INTRODUCTION

Competitive Discussions is a redesign of discussion activities that take place regularly in Indian Business Schools. This redesign was developed iteratively over five years, and is presented here to share two specific innovations: (1) integrating a time-constrained asynchronous computer-mediated communication (CMC) application to enhance participation and learning in an otherwise difficult to facilitate small group discussion for a large class, and (2) a strategic way of creating groups for these small group discussions. The first author of this case, Craig, was not the designer; the second author, Anupam, was the designer. Craig encouraged him to be interviewed to document and share these two innovations that he had developed through his design and development of the unique instructional approach. Craig conducted a 90 minute interview with Anupam that took place via video conference in December of 2017; the interview followed the protocol developed and used in previous issues of IJDL (Howard, Staples, Dubreil, Yamagata-Lynch 2016; Howard 2011). The protocol appears in the appendix. Reflection notes about the process of creating a design case are used at critical points in the article to give the reader insight into the nuances of meaning the authors dealt with while creating this design case.

BACKGROUND

The Indian Institute of Management Kozhikode, and the course in which this activity took place, are both highly competitive. The course is a three-credit (i.e., 30 classroom hours) mandatory course, and is a part of the two year, fully residential, postgraduate program in Business Administration. Students who are admitted into the two year program are selected through a rigorous selection process, and, relative to other Indian colleges and universities, students pay high tuition and fees. Decisions to attend the graduate program are supported by students' understanding that degree holders from the program enjoy a high employment placement rate, often being recruited by multinational companies offering lucrative compensation. Thus, the post graduate program in business administration is highly competitive.

Consequently, a large number of young students, mostly engineering graduates, join the program in hopes of securing professional placement. Each year the Institute admits approximately 350-375 students.

The competitive discussions are tied to job placement. The two-year MBA program constitutes of six terms (i.e., three terms in each year) and each term is of three months. At the end of the third term the students intern for about two months in a company, and at the end of the two-year program (i.e., in term VI) the Institute assists graduating students in securing a job at select companies. For these purposes, the Institute invites companies to the campus for recruiting. This on-campus recruiting process played into this design because this particular course plays into the recruitment process for internships in semester IV. The on-campus recruitment process both for internship and final job placement goes on for over a week, and top companies are invited to the campus on the first half of that week. Learners accurately perceived that success in the learning of the skills taught in the intervention had direct consequences in job placement. Both the students and the recruiters confirm that effective communication plays a very important role in the recruitment process, and students who stand out in the competitive discussions have a higher possibility of being selected for sought after jobs.

Typically, the recruitment process involves three steps, and over 120 companies take part in the process. These companies are invited to the campus in the order of their market reputation and the nature of compensation, i.e., the companies that are highly reputed and offer handsome salaries are invited in the first three to four days, followed by the second order companies, and at the end, start-ups and smaller companies that are relatively new to the institution. The top performing 30-40% of the students are highly preferred by all the companies, and thus about 120-140 of a total of 350 students get placed in the first three to four days. The remaining half of the students struggle to find a company of their choice. The next 150-170 students get placed by the 6th or 7th day of the recruitment in second tier companies. The last 50-60 students must accept internships with lesser known companies and companies of smaller sizes. The middle and bottom third ranked students often get anxious of their professional future. To do their recruiting, each company conducts a *competitive group discussion* on a contemporary topic relevant either specifically to business or society in general; a process that directly mirrors the coursework. The topic of the discussion is generally shared a few minutes before the discussion begins; the competitive discussion lasts for about 10 minutes. Each discussion group has between eight and 12 shortlisted students. Finally, 3-8 students are selected for the final round of Personal Interview with the recruiters and approximately 40-50% of them get recruited. So the learner experience (Parrish, Wilson, & Dunlap 2011)

is high pressure, with a relative chance of success at being selected at about 35%.

The high stakes setting of this intervention made the development of equity and fairness in the pedagogical intervention all the more important. Anupam is an experienced teacher, a scholar of CMC, and brought an intuitive notion of the hallmarks of successful small group discussions to his design. Formal research in small group discussions has put forward two indicators that a small group discussion is successful in promoting learning. Coherent small group discussions that stay on topic and develop through stages have been shown to impact learning (Cohen 1994; Fahy, Crawford, & Ally 2001; Pena-Shaff, Martin & Gay 2001; Pena-Shaff & Nichols 2004). Anupam was intuitively drawn to incorporating a CMC application (*What's App*) because he was already aware of the media's tendency to promote coherent interactions when used in pedagogical settings (Herring, 1999). The second indicator of successful small group discussions are acts of *problematizing* (Rosean, Lundeborg, & Terpstra 2010). When learners draw distinctions, pinpoint differences, solicit opinions and encourage precision in thinking and insight, small group discussions are more fortuitous in addressing ill-structured problems (Barnes & Todd 1977; Cohen 1994; Gibson 2009; Ur 1981). Anupam was intuitively drawn to small group sizes and carefully selected ill-structured problems that would promote the kind of participation he hoped for, but the design innovation that we aim to show here is how those small groups were formed—though a combination of gender balancing and personality type diversity in the small groups. This design was five years in development. Two of those years the designer was simply teaching the content via a previous instructional design left behind by the previous instructor of the course. During that time, he was contemplating possible design moves.

DESIGN CONTEXT

The designer felt obligated to provide an activity that was not only fair, but accessible to all. The design challenge inherent in this redesign was to teach the skills of group communication, in the context of such a large class, equitably to learners from linguistically diverse backgrounds who are under pressure to learn. It is important to note that these students are mostly high performers, and very interested in their own performance as much rests on their scholastic success. Many have taken out loans to attend university, and others carry the social burden of their families' investment in them, possibly over their siblings. Student loans are formidable for these Indian students, (approx. USD \$28,316) for the two-year residential program. Over 95% of students take the loans, believing that they will manage to secure a well-paid corporate job and consequently be able to pay off the loan. Family and friends have very high expectations for the students as well. Learners who do well in the communications course get better job prospects, and often, because the



FIGURE 1. Learners at the Indian Inst of Management Kozhikode engaging in the random sampled face-to-face group discussion after their collaborative, synchronous, WhatsApp group chat. This image is taken from a video recording used in the design implementation itself. ©Anupam Das.

learners were often first-generation college graduate students, their families have staked much on their success.

The course, *Managerial Communication*, had four main parts. Those parts signified different types of communication to be learned: fundamentals of human communication, interpersonal communication, group communication and public speaking. This design belonged to the group communication part of the course. The course itself lasts 3 months, and is skills based. One of Anupam's desires was to incorporate a testing component that was also skills based instead of the typical recall of declarative knowledge type test that is more typical of larger lecture hall courses such as this one. See Figure 1 for a view of the classroom setting.

Students were graduate students, and 37% of the 377 students were female. These students were divided into six sections and each section maintained the overall gender ratio. In the first year (i.e., in the first three terms) the students of all the six sections attended only the mandatory courses. Only when they move to the final year are they allowed to attend the courses of their choice from the available list of elective courses. Going by the Institute's rule, no teacher can teach more than three sections of a course, so there are three sections of the course not taught by this designer. The other teacher of the course has not pursued this particular design and teaches this section of the course differently. Anupam had a teaching assistant who did not take part in the redesign of the activity.

In previous iterations of this group-task discussion, Anupam had witnessed students having difficulty participating and engaging with many other students who went off-task. Furthermore, certain sub-groups of students, namely introverted students and those from under privileged backgrounds, tended to be left out of discussions because other students tended to socialize with known peers or dominate discussion in an extroverted way. Often, these lesser-represented sub-groups were second language (L2) speakers of English, unlike the majority groups that tended to use English as their primary language. There was also little ability for the instructor to oversee so many small group discussions simultaneously in the context of such a large 60-65 student section in a lecture hall. (See Figure 1 for the lecture hall image.) The designer reasoned that assigning groups would make for a more authentic learning experience, offer more pedagogical control, and make inroads towards inclusivity.

Reflection Note #1: (Craig)

In crafting this design case, creating one voice was a challenge. The perspectives of the roles differed dramatically. For me, in the role of interviewer, and Anupam, as the designer, we saw the design so differently that even the descriptions of the tools changed based on our perspective. For example, the tool used to create the CMC discussion, was clearly a synchronous technology for Anupam, because as the designer he valued the ability to have all his learners discussing simultaneously. For me, attempting to document this design, I defined the tool purely on its mechanics, and the fact that it keeps a persistent record of the discussion made it appear to me as an asynchronous technology, no matter how it was used. Part of the challenge was translating Anupam's empathy for his learners into the language of design; it was precisely this empathy that brought him to approach his design with so much rigor (Baaki, Maddrell, & Stauffer 2017) while at the same time, making it hard to disentangle design decisions from pedagogical ones. Phenomena like this remind me that both perspectives are valid, and each contribute a different type of rigor in documenting a design.

THE DESIGN PROCESS

In his six years of teaching this content in this context, Anupam had modified the discussion design several times. These modifications can be loosely grouped into two iterations that preceded his design as it is now. The discussion design is more accessible through the lens of this development narrative because it was through this string of shortcomings (design failures) that lead to the design features we highlight in this article. Another reason we draw out certain components that were eventually removed from the final design is for their value as negative precedent, design moves that other designers might avoid given similar circumstances (Smith 2010). Table 1 offers an abridged summary of the design narrative over the iterations of development.

We are aware of the often-misunderstood meaning of design failures (Baaki, personal communication). We want to be clear here these early iterations failed to meet the aspirations of the designer, and we are not saying that the designs failed to provide learners the opportunity to learn. Equitably supporting skills acquisition was a goal of the design brought about by ambitions of the designer rather than external pressure or institutional mandate.

Iteration 1 (see Table 1) of the competitive discussion was rather more traditional in nature compared to the final design. It included an in-class introduction to the discussion topic by the instructor, and then the selection of 12 learners for a discussion to be viewed by the rest of the rather large lecture hall class. The discussion was video recorded for

ITERATION	DESCRIPTION	SHORTCOMINGS (<i>design failures</i>)
1	<ul style="list-style-type: none"> Discussion topic introduced by the instructor A single 12 learner discussion viewed by the rest of the class (60+ learners) Selection of groups were randomized Live discussion video recoded for later large class analysis 	<ul style="list-style-type: none"> Not enough live sessions for each learner to experience being in an actual supported/supervised discussion Randomized selection process left group chemistry up to chance and the probability of a lively discussion could not be insured Out of six possible live sessions, only three could be used for live discussion because of time needed for debriefing
2	<ul style="list-style-type: none"> Amended group selection process to include balancing group composition in gender, linguistic background, and fluency in English Increased number of groups to include all learners in simultaneous live discussions Individual learners were randomly chosen for a subsequent live discussion to be video recorded Onlookers to the live session of randomly selected members were asked to rate the live session participants 	<ul style="list-style-type: none"> Session was too noisy for teacher support, and reasonable student interaction So many simultaneous groups were too many to oversee and supervise Group size still too large to incorporate all voices, but smaller groups could not be formed given the space limitations of the physical classroom
FINAL	<ul style="list-style-type: none"> Group composition was further developed via the process presented in section 1 of this article, <i>group chemistry</i>, where it was amended further to include personality traits Group size was reduced via the inclusion of innovation 2, <i>the inclusion of a CMC tool to facilitate discussion</i> Final recorded sessions were held in isolation, with on-lookers removed The two features used together provided a better chance for all students to participate in smaller 4-6 person groups 	<ul style="list-style-type: none"> Occasional lack of student familiarity of the CMC tool, i.e. slow typing speed may have impacted the experience Occasional student remarks of the distraction of using a cell phone in the context of classroom learning Some student are still left out of the live competitive discussion and only experience the virtual one

TABLE 1. An overview of the iterative design process spanning five years that lead to the new features of group selection and CMC incorporation in the design of the competitive discussions.

further analyses of each student's skills (e.g., argumentation style, persuasion skills, people management, verbal and non-verbal communication etc.) However, since only six out of 24 live sessions could be devoted to this part of the course, not all students could be given a chance to participate in a live discussion. Many on-lookers only got a chance to analyze and debrief, which, the designer deemed, was not equitable. In fact, since 3 of the six sessions of the course module were reserved for analysis, effectively only three sessions could be given over to actual discussions in this early iteration and live discussion participation was limited. This previous design is still in use by other instructors of this core course.

Iteration 2 began by amending the group selection process. Anupam divided the entire class into 10-12 groups with 4-5 students in each group, but based these group compositions on gender, linguistic background, and the level of spoken fluency in the English language. This process of group formation was adopted to ensure a critical mass in each group that was intended to enhance collaborative discussions from more diverse perspectives. Previous designs had taken into consideration gender in the 10-12 person groups discussions, but only so far as to evenly distribute females among the larger discussion groups. The topic of the discussion was displayed on the screen through a projector at the very beginning of each face to face group discussion session. Subsequently, another face-to-face competitive group discussion on the same topic was conducted. The groups were informed that the instructor would randomly select one student from each group for the final face-to-face discussion which would be video-recorded for debriefing in the next class, not unlike a jigsaw grouping design. Many students appeared to be very engaged in the discussion with their respective group members not knowing who ultimately from each group will be called for the final discussion. However, with over 60 students in discussion on the topic simultaneously in a physical space, the classroom became extremely noisy. Furthermore, the instructor had very little scope for observing if all the students were actually actively engaged in the discussion. Moreover, since the discussions were in real time without any persistent record, the instructor was unable to evaluate either the collective outcomes of the discussion or the individual contributions to it. The competitive face-to-face discussion with each member from one group was done in the presence of the other students in the class. The onlookers were later asked to rate the participating students' performance independently.

In the final iteration (3), began with yet another modification of the group selection process, but also the inclusion of a CMC tool to host the discussions. The designer had noticed that lackluster discussions were the most common, and wondered if it might have something to do with the uniformity among personality types in the groups. To tackle the related problems of group size and noise in the room,

the designer called on his CMC knowledge and incorporated a CMC tool to be used synchronously, in class. Group size for the initial discussion was between 3 and 5 and for the final competitive discussion it remains the same as it was in iteration 2; 12 students, live yet alone instead of in front of the class.

In iteration 3, the collaborative discussion among the group members in each group was held online using *WhatsApp text chat* in real time, in each other's presence. In this iteration, every learner got a chance to participate in at least one discussion. Furthermore, the instructor had access to the discussion due to its persistent record that was shared with the instructor at the end of the discussion. Finally, a member from each of the 12 groups was randomly selected for the final round of competitive discussion which was video recorded in the absence of other students who were asked to step outside the classroom for this brief period. In the previous design, discussion groups comprised of 10-12 students were observed and rated by other learners, but here in the final design this was amended to have the competitive discussions in isolation. This reduced the live pressure, better simulated an interview context, and was both more equitable and closer to an authentic experience in the eyes of the designer. The following section digs into these two innovations in greater detail as the actual implementation of creating better chemistry groups included some unusual pedagogical tools, and there were logistical concerns with incorporating the CMC tool. These two design moves were inextricably linked and comprise the heart of the precedent we hope to offer other designers via this design case.

Innovation 1: Redesigning Group Chemistry Using A Five Factor Approach

The designer developed the grouping approach over all three iterations of the design. The first of five considerations was gender, and that dynamic was addressed in iteration 1. In iteration 2, group dynamic was further developed via considering linguistic background, an urban-rural distinction, and English language fluency. In the final iteration, personality traits were added as another component of the decision-making process of creating the small groups. Group size for initial live discussions simultaneously went through a similar process, going from 10-12 in the first iteration, to 4-5 in the second, then finally to 3-5.

Anupam reasoned that any group larger in number than 3-5 students would result in the failures mentioned earlier, and at the same time, a group size of 2 lacked a tie-breaker in case of disagreement. He had witnessed that in groups larger than 5, there was a high possibility of branching simultaneous discussions leading to a breakdown in the coherence of the group. This phenomenon is supported by other studies of small group discussions (Howard 2002). Additionally, 3-5 is a somewhat magical number for

friendships in Indian contexts; Bollywood movies show groups of friends in numbers of 3-5, possibly because of cultural perception that 2 is a couple and 6 is a crowd. Please note, these smaller group sizes seemed only possible with the incorporation of precedent #2, the inclusion of the CMC application to facilitate synchronous, but silent, small group work in the context of a large class.

After group size, Gender composition ranked significantly into group design. The designer noticed in previous iterations that if females were placed in a group with no other females, their participation would drop dramatically; while when they were in a more balanced group, with a minimum of 2 females, female participation was more balanced. So he decided that in the redesign, there would be no groups with lone females. Because of the gender break down of the class, the ideal small group gender dynamic was three males to two females, but some groups might have only males; No groups would have any females alone.

The designer also strategically designed the new small groups to include a range of similar and dissimilar personality types. From iterative developments of the activity, the designer had previously noticed that regardless of gender, groups comprised solely of similar personality types tended to result in discussions with few challenges or deep discussion. Instead, in such homogenous groups, assumptions were generally accepted as true, and there was little evidence of interactivity around the prescribed topic. The design of these small groups is the primary design innovation that brought the designer to want to share this design case. To accomplish a diversity of personality type in each group, students were given parts of two different personality self-tests. A personality profile was generated from Ganeshaspeaks.com. This site offers a Zodiac sign-based personality traits. Additionally, in an earlier session of the course, each student was asked to describe his/her positive and negative personality traits based on his/her own perception. Combining these two resources, the associate instructor created a personality trait profile for each student, and that profile was then shared with the respective students. Next, the students were asked to evaluate the personality trait profile on 10-point scale (0 being highest level of disagreement and 10 being the highest level of disagreement.) The students were informed about the source of their personality traits only after their evaluation, and the students were given an opportunity to reject the profile descriptions. This was done just in case any student had any sort of bias for or against such analyses of personality traits. However, over 95% of the students were in agreement with their personality profile. Based on all the available information, the instructor then identified four major personality types relative to a discussion role: Driver (i.e., Fact-Based Extrovert), Analytical Thinker (i.e., Fact-Based Introvert), Amiable Participant (i.e., Relationship Introvert),

and Expressive Participant (i.e., Relationship Extrovert). Each group was then designed to have at least two of these four major personality groups.

Reflection Note #2: (Craig)

In writing this case, cultural perspectives between Anupam and I became starkly obvious, but difficult to articulate. This design originated in an Indian context, but to write the case I needed to come to terms with the cultural assumptions behind design decisions, and behind potential interpretations of design decisions. The voice in my head was saying they are going to think he did this because of that, but that's not really true. Essentially, I was viewing the design from both the side of the reader and of the designer. It struck me that there were moments in the case where an understanding of Indian culture would greatly improve a reader's ability to understand the designers' rationale, so we made an effort to make that information explicit where we could find it. But other cases were less straightforward and more nuanced. For example, in the use of a CMC tool in school-based instruction, I wondered if American learners would react in the same way. Not having had first-hand experiences in India, I was guessing Indian learners might be more conservative about what is supposed to happen in schools and what is not. I came to think avoiding cultural comparisons is not entirely possible; rather, the goal should be to bring assumptions to the fore.

Linguistic background, a balance of urban and rural group members and, English language fluency were also considered in the make-up of the groups as background characteristics. In the end, a heuristic emerged to deal with these final group considerations. To logistically accomplish these group diversity compositions, the most common profiles were dispersed among groups of three. Remaining background profiles were then dispersed among groups. Finally, a checklist was followed for each group. In each group, care was taken that a dissimilar profile type was included, no group exceeded five members, each group contained a diversity of the background characteristics, no group contained a lone female who might be potentially drowned out of the discussion.

Innovation 2: The Inclusion of a CMC Tool

The implementation of the CMC tool in the final iteration of the design democratized participation, enabled the smaller groups, and facilitated the elaborate group selection process. Each group of 3-5 students created a chat group exclusively for its group members. The tool also allowed students to

share supplementary material via videos, links, and photos to validate their arguments. In some discussions, the experience was media-enriched. These were all benefits of the innovative design move.

However, introducing the CMC tool was not without its own complications. In reflecting on the design, the designer felt strongly that, while the overall improvements were valuable and worthwhile, there were still challenges that would ideally be overcome with additional development—although some of those modifications are still yet undetermined. We focus on tensions here for what value it might bring to other designers.

Some learners were not familiar with CMC conventions. In attempting to create equity and inclusion via fair access to the live discussions, the introduction of the new technology disadvantaged learners who were not used to CMC in general. The (*WhatsApp*) chat function for the initial discussion as the preparation of the final competitive group discussion was an unfamiliar pedagogical strategy (See Reflection Note 2). This required time to assimilate to the design. Students had never had such classroom experience before, so media features were sometimes considered distracting because the tool was envisioned as an entertainment device rather than a learning tool. To address this, the designer solicited input informally from learners to better understand their experience with these tools in class.

Through this solicitation, the designer learned that some learners questioned the appropriateness of CMC in a learning context. Learner expectations of what is and is not appropriate for formal learning introduced tensions between the tool and the context of the activity. While the use of the tool helped overcome the problem of information disparity among students, some learners responded that the tool was too informal for such a high stakes context. While the

tool helped engage a larger audience for a relatively longer period of time, learners felt it also disadvantaged learners with good oral/verbal communication skills and sound base knowledge but who yet lacked a familiarity with CMC applications. Thus, in the mind of the designer who saw CMC ability as essential human communication, that same value was not mirrored in student responses.

Other learners felt the use of the CMC tool could also have led to an over-emphasis on flair for writing rather than creating valid arguments as would be needed in a spoken interaction. The tool may have allowed for rhetorical tactics such as entering a discussion at a later stage without deliberating extensively and using a more convincing writing style. While the media, to some extent, democratized participation by allowing group members to formulate and post simultaneously, it also advantaged fast typists because slow typists could be busy typing out a point while that same insight was already being made by someone else, just faster. This dynamic would result in fast typists being elevated to positions of prominence while the discussion moves on without regard to the same insights in the minds of slower typists.

Lastly, the change in modality also represented a change in skill set, bringing the authenticity of the interaction in relation to the required performance into question. Actual discussions include non-verbal cues such as body language and facial expressions, but these were missing from the CMC discussion. At the same time, the subsequent evaluation of the video recorded live discussion would use those skills, and of course *real* live discussions include them as well. Including CMC in the creation of pedagogical discussions did offer learners the opportunity to retrace their steps and look back at older chats, but this affordance weighed against a reconceptualization of what it means to discuss which leaves no transcript and includes non-verbal cues.



FIGURE 2. Screen capture of a small group competitive discussion that took place over a period of 15 minutes, live, in-class, with other learners in the room. Shown is a subsection of a full discussion, representing the approximate relative contribution of only one learner in a group of 3-5.

In Figure 2, we have reproduced five screens from a small group discussion to illustrate the experience of the learner. The Figure evidences a larger amount of interaction than could be possible in previous designs, and a type of CMC authenticity unavailable without the tool. In reflecting on the design, and the experiences of the students as a whole, the tensions mentioned previously do not dissuade the designer from using the tool, but rather point towards future modifications of the task, and additional curricular developments to better support the teaching and learning of human communication in this teaching context.

The following description of the actual discussions loosely follows the guidelines for describing CMC as put forward by Herring (2007). Most groups had between 80-130 messages and spanned about 15 minutes of time. It was a one-to-many, non-anonymous synchronous chat, and each member of the group was active at the same time. No two members of the same group were allowed to be sitting next to one another; this prevented students from talking in person outside the CMC interface. The entire chat exercise was under the supervision of the instructor. Students aged between 24 and 30 years. Approximately 80 percent of the students in the class had urban backgrounds and English was their first language. L2 English learners were distributed evenly in almost every group. As observed by the instructors, all but a few had very high to high typing speed and appeared to be at ease completing the exercise. Synchronous chat was a collaborative group discussion as part of the preparation for the final competitive group discussion, which was held live, and face to face. These MBA students were aware that they were expected to be informed of the recent happenings in society, politics, and business, so the designer did not reason that to be an issue in the learners' ability to perform. The discussions were semi-public, non-anonymous via pseudonyms, recorded and accessible by the instructor. See Figure 3 for a visual orientation to the CMC interface.

A DESCRIPTION OF THE FULL DESIGN

Overview

In negotiating this case, we found that our different perspectives dramatically changed how one might describe the instructional design. One of the challenges of an instructional design case is presenting and dealing with the large amount of complexity inherent in creating pedagogical interventions (Howard 2011; Smith 2010). It often takes an appreciation of the full design to recognize precedent inherent in embedded design features, or the processes that created them. Therefore, we present the full design from two perspectives in Figure 4 because we found insight into the design via contrasting the two perspectives themselves. The perspective of the designer is on the left, and the interviewer's is on the right. The illustrations themselves depict differences in

foci as well, and we analyze key aspects of the design in the paragraphs that follow.

Reflection Note #3: (Craig)

The designers' perspective of the design is simplified and more coordinated. In listening to the case being explained as compared to the lived experience of creating it, I envisioned many different relationships among components. However, in the mind of the designer, all these relationships had clearer ranks of significance and greater simplicity, some relationships so minimal that they need not even be mentioned in the illustration. We each started our graphical representations of the whole design during the interview, and finished them thereafter at our convenience. While I listened to the recording of the interview twice, the simplicity and clarity of the design did not really emerge until we negotiated the draft of the case itself and discussed the images to clarify the design process and final design features, zeroing in on the two main innovations that eventually structured the case itself. The maps acted as scaffolds to bring key aspects of the design into the documentation of the case. Notice that the CMC tool figured into both maps, but the selection process did not. The selection process figured prominently only in the designers' visual rendition, while it did not figure prominently in the interviewers'. Reviewing the two maps allowed the case to be brought more closely in line with the designer's main intentions for wanting to tell the story of the case, and functioned as a check for the interviewer to capture the designer's perspective apart from just the answers to the interview protocol.

The Task Design

From the perspective of the designer, the topic selection process was a centerpiece of the design, even if it was not the main innovation to share. In the designer's graphical representation of the design (see Figure 3), topic selection takes center stage. The discussion topics and prompts were brainstormed with some of the alumnae of the Institute who took this course before and currently hold senior managerial posts. These alumnae are often part of the recruiting process for their respective company, and as such hold a curious stakeholder position. In these deliberations with alumnae, it was determined that social or contemporary business and economic topics work best. Deliberations led to a table of plausible questions that might work. The learners were tasked with unearthing the hidden factors within the discussion question. They were told that the competition was on how "in depth" the discussion could go and also to lead the discussion to an acceptable conclusion. The topic of the discussion was the same for every group. The group

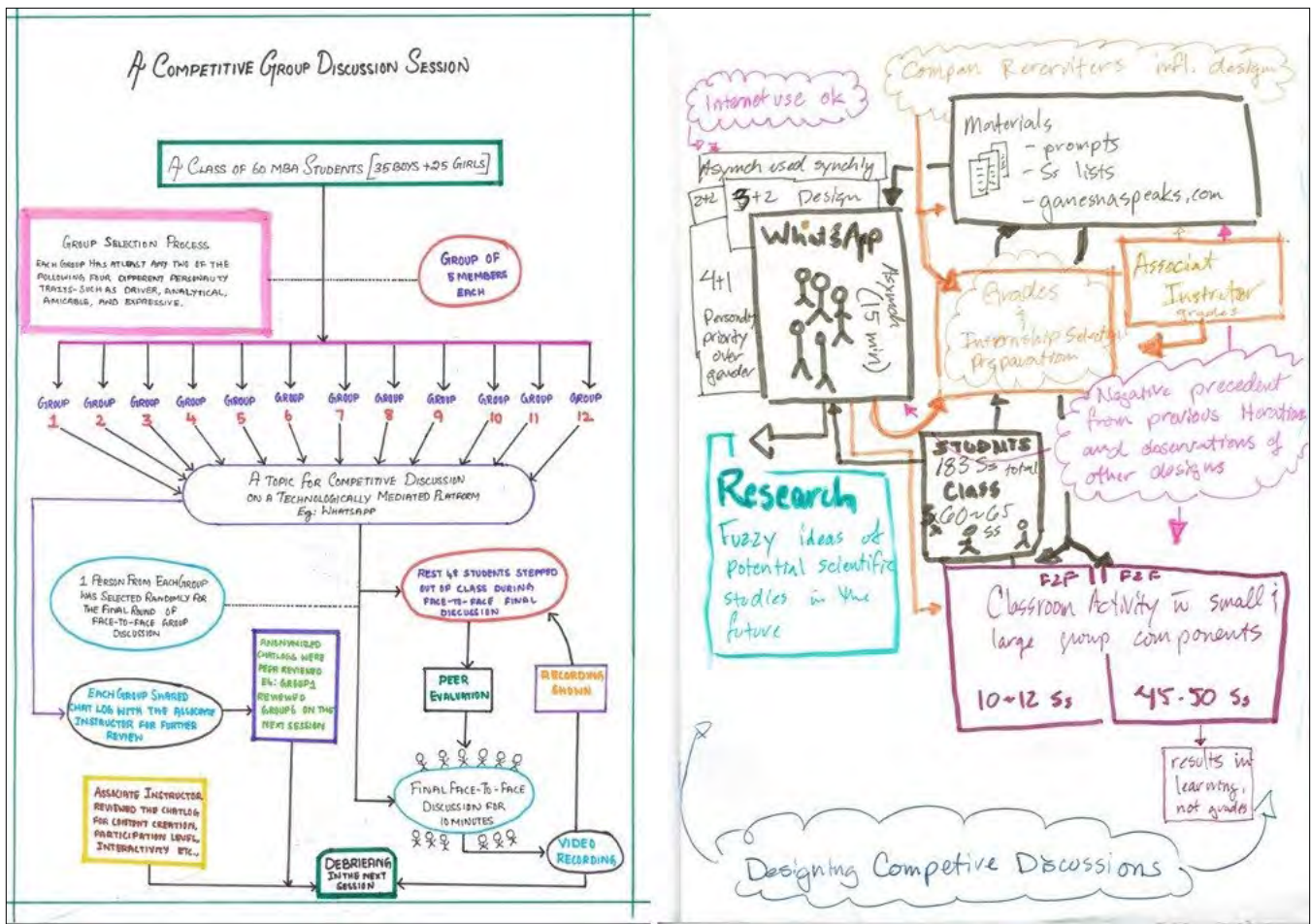


FIGURE 3. Juxtaposed maps of the instructional design. On left the perspective of the designer and to the right the perspective of the interviewer. Drawn simultaneously during the interview, off screen from the video conference. Both express complexity, but differ in foci and perspective.

members brainstormed via the CMC application while they sat in the same room. Care was taken not to select topics that would delve the learners into too much fact finding, but students were allowed to access the Internet for useful information to complete the discussion. The groups were instructed to share their final chat history with the instructor as part of the topic delivery itself.

Learner Performances

The performances we discuss here relate only to the final iteration of the design. A few members in each group were more active than others and posted approximately 30 messages whereas the less active members posted somewhere between 7 and 12 messages in the 15 minutes synchronous CMC discussion. These number are of course relative to the group numbers: 80-130 messages was the range with most groups in the 15 minutes tasks falling around 110 messages. The designer characterized this performance as moderately interactive, but really did not have a comparative benchmark. In the opening session of the chat (i.e., first 4-7 minutes) each member stated his/her

views on the topic without discussing if each one of them had similar understanding of the topic itself. In the later part of the discussion, only the highly active members became more interactive, reacting positively or negatively to others' posts. In fact, there were instances where some groups had no closure of the discussion. It is important to recognize that Figure 2, where the discussion is illustrated, is not an entire discussion, but rather selected screens from a larger discussion. Figure two is representative of an individual learners' posts because it shows 29 messages—close to the activity level of a highly active group member.

In the subsequent class session, the students were asked to count the number of posts by each student in a group and also asked who they thought influenced the final group decision the most. Learners made this judgment via a qualitative analytical evaluation of the posts. At the end of the peer evaluation the instructor randomly selected one anonymized chat log for whole class analysis.

This analysis procedure was part of learner performance. Anupam created a qualitative analysis procedure for learners

to follow that made use of the CMC acts (Herring, Das, & Penumarthy, 2005) and the analysis of adjacency pairs (Seedhouse 2004). CMC acts are a classification scheme that helps researchers identify what turn performs what kind of discursive purpose. The 16 acts in the CMC act taxonomy were inspired by the notion of speech acts in Linguistics (Bach, & Harnish, 1979). An adjacency pair is a unit of conversation that contains an exchange of one turn each by two speakers. An adjacency pair is composed of two utterances by two speakers, one after the other. The speaking of the first utterance (the first-pair part, or the first turn) provokes a responding utterance (the second-pair part, or the second turn). This analysis was incorporated to provide learners with a closer inspection of discussions. After completing the analysis sessions, some learners also partook in a live face to face discussion which was recorded, but these live performances were not graded and were therefore simply part of the learning experience and not part of learner performance.

Reflection Note #4: (Anupam)

Our 90-minute interaction [the interview that provided a large portion of the content for the case] forced me to reckon with external perspectives on my learning design. Autonomous teachers in positions like mine are not normally asked to do to perceptions of this aspect of their teaching. Through the mapping process, I better understood how the multi-dimensional case might be seen from a research perspective—or any other external perspective—as well as from my own instructor perspective. In the process of collaboratively writing this design case, I came to understand the value of being interviewed by an Instructional Design scholar to contextualize my instructional design among others, instead of merely those I had explored or experienced before.

The observed discussion experience

Once the CMC-based discussions had completed, one student from each of the 12 groups was randomly selected and asked to come forward in class. From these students a new group was formed for a live in-person discussion. This in-person discussion was on the same discussion topic they had just discussed in the CMC (What's APP) discussion and was video recorded without other students in the room. This new group was given a break after they finished the live discussion, and the students who were not selected for this live face to face discussion group re-entered the room for an analysis session. After the randomly selected students had their live discussion video-recorded, they left. This allowed the analysis to proceed without reticence.

When learners who had not done the live discussion returned, they were put in front of the video and asked

to answer the question, "If you were the recruiter, which students would you select and why?" In this process, these 45 students, those who were not selected for the model discussion, rated the performances of the students who had just left. Having the students who spoke in the model discussion leave is a design decision intended to support less biased ratings, so the raters did not feel social pressure when they made their ratings. These ratings followed criteria. For example, criteria included a judgment of which learners were impressive (i.e. one's ability to argue, persuade, negate, and thus influence the final decision) and which performed poorly (i.e., that the ones who looked nervous, did not make much sense, unable to articulate views and therefore unable to assert themselves in the discussion). The instructor explained the rating criteria prior to the practice session as well. Thus the students in the video would know the criteria on which they were being rated.

Grading procedure

While both the CMC and final live discussion in the physical space were evaluated, only the marks for the CMC discussion were included as part of the overall course grade. Anupam designed grading in this way because only a selected few got the opportunity to take part in the final live round, thus including all ratings for all performances by each learner would be logistically impossible. Also, the rating procedure needed to be practiced to be better learned; this both satisfied the course learning objectives, and acted as a means of creating more grading reliability. Ratings derived from the CMC based activity comprised 25% of the learners' grade for the course, and were completed after training on the video-recorded live discussion. The 25% course component was comprised partially of peer evaluations, and completing these peer evaluations were part of the learning experience.

The final live discussion was peer reviewed immediately after the event, but not included in the course grade. Rather, it served to prime learners' observations so that when they later rated the CMC interactions, they would hopefully be better raters. Essentially, the group session, rating the video recording, served as practice for when they would eventually grade peers' CMC interactions. Around 48 students, who were asked to step out of the class during the final discussion, were called back and asked to observe the recording of the discussion, and rate the participants without making any explicit public comments out loud. The teaching assistant and instructor lead this in-class learning activity. Even though this peer evaluating of the video-recorded live session was a secret ballot, the nature of the rating did not detract from the learning, as seen in the eyes of the designer. Instead, it reduced awkwardness for those who had done the live activity. These were, in effect, not actual grades because only the peer ratings of small group CMC factored into learners' grades. The peer evaluation of the chat logs (CMC) was done in the following class session because the

remaining minutes were not enough for both peer rating activities, live video + CMC.

A procedure was also developed to support the peer grades for the CMC activity. To create the grade for the CMC discussion, the chat logs of each groups' collaborative group discussion were first anonymized by the teaching assistant. After anonymization, these chat logs from each group were graded by the assistant instructor or the teacher, and by 1 other group. This was a 1-1 direct exchange, rather than a rotation or staggered exchange. All learners of the course subsequently received a teacher grade from either the teaching assistant or the main instructor, and also received a peer evaluation from the members of another group. Peer evaluation grades were then averaged, and this average counted for ½ of the subsection grade for the course component. This prevented any single student from dramatically impacting the grades of others, while retaining the peer evaluation component that acted as much as an analytical learning experience as a means by which to grade learners. The designer saw this design move as another innovation of the design: grading process was simultaneously part of the instruction and the curriculum. Learners applied the analysis procedure learned in class in order to create the ratings.

Reflection Note #5: (Anupam)

This reflective process of looking at the design of this instruction in this way, forced me to question decisions I had made that I did not know I was making in the moment I made those decisions. I realized that this case is not just about improving equitable learning experiences for all the students in my classroom environment. My creation of this learning activity was also about connecting with the students and understanding their intellectual needs even when they are unable to articulate those needs verbally themselves. Embedded in my design decisions were conclusions about the value of equity and inclusion in learning experiences. In this process, I faced how cultural nuances play important roles in how instruction becomes how it is. While I assumed that certain cultural factors may be self-explanatory, Craig's probing questions on such matters helped me realize that certain aspects of the way we teach are not matters of course, but intentionally designed, possibly by forces we may not have confronted in or around ourselves. These cultural issues need further clarification to make sense to others, and in very real ways, we need this articulation for a more concrete understanding of the values we bring to serving our learners.

We must make note here of the pivotal role of the teaching assistant to the total design. A benefit of grading the CMC

chat logs was that it reduced the instructor burden, as well as provided another source of review, lending more credibility to the final grade for the activity. The teaching assistant did much of this grading. The assistant was a graduate student in another department (criminology, not business nor communication). The assistant was paid by the university, male, and contracted for 2 years. There was no expectation that the assistant would acquire a permanent instructional role after the contract had completed. While the assistant did keep the teacher and designer of the activity informed about the progress and details of the activity, the assistant did not contribute to the design of the activity.

CONCLUSION

Recognizing failures is the most difficult part of documenting instructional designs via design cases because it requires the writer of the case to see the design in ways other than what brought them to want to write the case in the first place. In this case, as in all others we have encountered so far, there were two types of design failures: unintended consequences such as students questioning the appropriateness of CMC in school, and unforeseen obstacles, such as the discussions becoming too loud to be feasible in one room. In both cases, the failures of the design were not failures of the designer; rather, they were unavoidable consequences of development. At the same time, they were the most interesting parts of the design case (Howard, Boling, Rowland & Smith, 2012). In previous cases, unforeseen obstacles included media changing during the deployment of an intervention (Howard, et al., 2016), and unintended consequences included a design teaching something it was not initially intended to teach (Mulcahy 2011). Both of these mirrored this dynamic.

The design failures presented in Table 1 were in some cases process, and in other cases related to the intervention or the materials used, such as classroom failures leading to incorporating a CMC tool. In each of these cases, Anupam looked at failures as simply aspects of designing and development because in this instruction context, the design itself is expected to constantly evolve. This design will never be *done* in the same sense as a finished product finds a final design. The nature of the instructional context makes the idea of a design failure nebulous, because the failure itself can never be extracted from the development process. It's simply part of the process.

In Anupam's effort to create equity and inclusion, even though this design greatly improved over the last, he still felt more equity could somehow be achieved. He also recognized that some students in this context are advised to recreate such practice discussion events in their spare time on their own, and questioned the contextual validity of such requests. In our talks, Anupam had further aspirations to resolve issues around the entering and exiting of learners

from the learning space for the video recorded live sessions. His strategy is pragmatic and eclectic; he's looking for other design moves that might result in small innovations that accomplish his goals. Like most designs in this context, the story of this design is not over.

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APPENDIX A

The Interview Protocol Amended for *Designing Competitive Discussions*

To start the interview:

- Tell designers that we're recording AFTER the recorder starts, so you get their agreement on tape.
- Explain that a member check will go out to them prior to the article's submission for publication.
- Mention we have targeted 90 minutes and that the *markers and paper* are there for exploring, please use them when needed. If time begins to run short, it may be necessary to interrupt you in order to push ahead and complete a line of questioning.
- This meeting is about the instructional design, not necessarily about the other goals which you brought to the project, or the results of your instructional design. However, talking about the design itself may lead to important insights about how you envisioned the learning and the design decisions you made in creating learning opportunities for your students. Our goal is to be open to explore, but stay on topic.
- Most importantly, *thank you* for your participation in this process.

Situating the design context and process:

- What were changes in context which motivated the design? Something must have happened that brought this design about.
- Who was the design team and what were their influences? Can we assume that the different members of the design team had different goals? Was that discussed? How were those decisions made?
- Can you describe *the process* by which you came to the initial formulation of the design?
- As you reflect on how you created these learning opportunities, what were the pivotal moments *during the formulating of the instruction*, the ah-ha moments or innovations, that you would want to tell someone else, who might be considering doing something similar for their learners?

Describing the design:

- Can you map out all the parts, especially the invisible ones, which someone viewing this teaching intervention might not see from the game itself? **[Point to markers / pencils / paper]**
- What is *particularly interesting* about this instruction?
- If you were to name the instructional design, what would that name be?

Depicting the experience of the design:

- Can you describe the user experience? How was learning measured, or not?

Transparency:

- Can you tell me about any *unforeseen obstacles* or aspects of the design that needed revisions that you only found out about after decisions were made?
- Were there any *unintended consequences* of this design?
- Did you try anything out, or consider anything, that was deemed in the end to be a bad idea in retrospect?
- How has this instructional design created complexities or challenges in your teaching?
- Has the instructional design *failed* anyone, such as someone who needed to use the design after you?
- Have you skipped anything for simplicity's sake? This can often trip up a design case because often what was skipped may be rationale for design decisions.