Using a Blended Online Program to Teach Professional Innovation Skills and Promote Peer Interaction

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Promoting Peer Interaction through Live Virtual Webinars in Blended Online Program

Abstract

Teaching innovative and creative skills has challenged educators across multiple industries, and teaching these skills in an online format has often seemed exceedingly difficult. This paper, describes a unique collaboration between Stanford's Innovation and Entrepreneurship Certificate program, and a large multi-national company to deliver a blended program to over 700 of its global talent pool of high potential managers. The program was designed to enhance innovative and creative skills, and was delivered through face to face, online, and live virtual educational experiences.

One of the key components of the program, was a series of live virtual events, delivered by Stanford instructors and company executives, and designed to achieve a few objectives: review the content of each online course completed by participants, demonstrate ways to apply the content to the company's work environment, and promote peer discussion and group feedback on the content application. The paper will share some key characteristics and design principles that informed the development and delivery of these live virtual events, some best practices that were gleaned from conducting 56 live virtual events of this sort for the program, and some examples of how the peer and team interaction proved vital to the success of these learning experiences focusing on teaching innovative and creative practices.
Introduction

When asked to develop a leadership program for its high potential managers, the learning and development team of Hewlett Packard, a large technology multi-national, focused on some of the elements that were most important for their high potential managers and leaders to develop. In the rapidly changing environment, and in considering the increasing rate of technological innovation and disruption, managers had to be skilled at understanding this new environment, generating ideas for new products and processes, and effectively scaling these efforts and leading change across their organizations. These skills had to be taught quickly to a large group of high potential managers across the company’s different regions (EMEA, APJ, and AMS), in a scalable and cost effective way. When considering different options and programs the team identified the Stanford Innovation & Entrepreneurship Certificate program as one that could address their needs.

After in depth development and design efforts, the HP team and the Stanford Innovation & Entrepreneurship Certificate team designed a program that consisted of five elements/modalities:

- A three day face to face event in which the participants had a chance to meet each other, network, and cover some leadership content, as well as review some strategic directions and activities the company was focused on.
- Four online courses, part of the Stanford Innovation & Entrepreneurship Certificate. Each course contained 8-12 hours of videos, readings, activities and exercises, and lasted seven weeks (with three additional weeks of access to the materials to complete any remaining tasks or assignments). The courses focused on the following topics: “Empathize and Prototype: A Dive into Design Thinking”; “Building Business Models”; “Scaling Excellence”; and “Power of Stories to Fuel Innovation”
- Four live virtual events, one at the end of each online course. Prior to each live virtual event pre-work was completed by the participants, individually and in small teams. Each event lasted 90 minutes, was led by a Stanford university instructor or faculty member and a company executive, and included live participation from select participants.
- A capstone business challenge, assigned to the participants by the company, which the participants worked on for six weeks.
- A face to face commencement event to conclude this comprehensive 10 month program.

Over a period of 26 months (May 2013 to July 2015) the program was delivered to 14 cohorts of 50-60 participants, and in total to over 700 leaders. Each cohort included participants from one of the three regions (EMEA, APJ, and AMS).

One of the biggest challenges in designing and implementing the program was the concern that a self-paced online environment may not be an ideal one to achieve a learning objective focused on creativity, innovation, disruption, and the ability to scale these attitudes throughout the organization. Research has shown that there is a heightened level of creativity and risk taking when working in groups.¹

courses offer flexibility in time and location as well as cost efficiencies to the company, but students work alone with limited ability to interact or collaborate with other participants, and are prone to procrastination when confronted with challenging tasks. Conversely, learning conducted in groups or teams creates social pressure for participation and risk taking. Furthermore, when teaching such concepts to a group of professionals that are part of the same company in the hopes of creating behavioral change within the company, it is crucial to create a critical mass of leaders who have been exposed to the content, and who know there are others within the organization they can turn to in order to drive change together.

In light of these challenges, it was apparent that the design and implementation of the live virtual events was crucial to the success of the program as a whole. This paper will review the key design principles the informed the design of the webinars, and some best practices that were gleaned from conducting 56 live virtual events of this sort for the program.

**Methodology**

The live virtual events were run at the end of each course. Each event lasted 90 minutes, and was facilitated by a Stanford university instructor or faculty member, who was joined by a company executive, selected by the learning and development team. For half of the courses (course #2 and course #3) the live virtual event was taught and facilitated by the faculty member who taught the online course. For half of the courses (course #1 and course #4) the live virtual event was taught and facilitated by an instructor who was well versed in the course materials, but was not the one who taught the online course. This was determined based on faculty availability and interest to participate in the live virtual events.

**Preparation for event**

Prior to each live virtual event, a detailed worksheet was shared with the course participants. The instructions and assignments varied between live virtual events, but the overarching principles were the following:

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1. **Individual assignment:** Participants had to complete an individual assignment that included practicing one or more of the main concepts of the course within their company context. For example, in the “Empathize and Prototype” course they were asked to conduct an empathy interview using the principles they learned in the course with an internal or external customer. In the “Building Business Models” course they were asked to outline the business model for a new product or process that they would like to develop (or are already working on) within their company. The business model outline was to follow the organizing principles that were discussed and taught in the online course.

2. **Peer interaction prior to live virtual event:** After completing the individual assignment, participants were asked to schedule a time to talk to a peer participant or group of participants from their cohort, assigned to them by the program management team. In this conversation they were asked to share their individual assignment and receive feedback or input from their peers. The template for sharing the feedback or providing input was provided as part of the live virtual event assignment (see Appendix 1 for example).

3. **Assignment submission:** Assignments were submitted by participants 7-10 days prior to the live virtual event. They were collected by the program management team and reviewed by the instructor facilitating the live virtual event.

4. **Assignment selection:** After reviewing the assignments, the live virtual event instructor would select 5-10 assignments that would serve as good examples or learning points that would be shared and discussed at the live virtual event.

5. **Participants notified:** The program management team would contact the participants who would be asked to share their assignments to let them know they should be ready to speak at the webinar and share their activity.

In addition to the preparation related to the pre-event assignment, the instructor leading the live virtual event would also have a preparation meeting with the company executive who would be joining the event. During this meeting they would discuss the role each of them would play at the event, and the executive would be given some instructions on the type of stories and examples he/she should share at the event. The primary role of the company executive at the event was typically to provide company specific examples, stories, or situations in which the course content was applicable and can be used. In addition, they provided additional input or feedback to the participants who presented their pre-work assignments, when relevant.

**Running the event**

The events were run using a Webex event center platform. Present in the room were the university program manager, the university instructor, and a technical support member. The company executive, and company’s program managers were dialed in as panelists. Participants were dialed in and set to listen-only mode, and pre-selected presenters were unmuted at the appropriate times. Participants used the chat function, viewable to instructors as well as participants, for ongoing questions, comments and discussions items.
Collecting data and debriefing

At the end of each event a short survey appeared on webex platform containing questions about the quality, relevance, and satisfaction with the webinar’s content and the company executive and university instructor. The data was collected and informed structured debriefing activities that were done at the conclusion of each course.

The results of the evaluations for each of the courses, and the webinar associated with it are presented below. The questions that were asked are categorized into three categories used by the company to assess its training and development programs: satisfaction, relevance, and quality. The results presented are averages on a 1-5 point scale, 5 being the highest score representing high level of satisfaction/relevance/quality. Following these debriefs and in light of the quantitative and qualitative data collected improvements were made on an ongoing basis.

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<thead>
<tr>
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<th>Course #1: Empathize and Prototype</th>
<th>Course #2: Building Business Models</th>
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Live Virtual Event Design Principles and Lessons Learned

Maximize Peer Interaction

One of the main objectives of the live virtual event was to provide an opportunity for the cohort of participants to engage with each other, provide and receive feedback from their peers, and establish a network of colleagues who are exposed to the same ideas and can collaborate to promote change in the company.

The online courses included a private forum where participants could post their thoughts, comments, and reactions to the materials, as well as some of the outcome of their work on the online course (e.g. pictures of the prototypes they built as part of the “Empathize and Prototype” course, stories they wrote as part of the “Power of Stories” course, etc.). Many of the online courses also included specific prompts for the participants to post such elements onto the forum. While moderately successful, this did not prove as a highly effective avenue for such interaction. This is exemplified in some of the feedback received from participants: “Besides one team activity [prior to the live virtual event], there was not much interaction with the members of my class.” This outcome is in line with existing research conducted on student participation in MOOCs: “… in the absence of teams, basic social features such as discussion boards, messaging, and chat are insufficient for driving engagement. The benefit of team-based learning comes when students feel part of a community. The resulting felt accountability is a powerful motivator”. This outcome is an interesting one, especially in light of the fact that unlike in MOOCs and other online courses where participants have no interaction or acquaintance outside of the online course, the participants in these cohorts have spent 3 days together in a face to face setting, and some had prior work relationships. And yet, even in this situation the course forum proved to be an insufficient tool to develop peer collaboration.

In order to achieve more meaningful team and peer collaboration, a peer interaction element played a central role in the pre-work for each of the live virtual events. As mentioned above, the peer component consisted of a group discussion to review the participants’ individual work, or feedback given by one peer to another. Thus, participants could actively practice the course concepts and gain feedback from their peers on their understanding of the material and potentially gain insight into other possible applications: “learners ... actively create knowledge and meaning through experimentation, exploration, and the manipulation and testing of ideas in reality. Interaction and feedback from other assist in determining the accuracy and applications of ideas. Collaboration, shared goals, and teamwork are powerful forces in the learning process. Learners interact with knowledge, with the learning environment, and with other learners.” The program managers provided some structure for these

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activities in the form of specific worksheets and assignments, deadlines for submission, and assigning team members and a team lead who was responsible for scheduling the conversation. However, the fact that the team meetings were scheduled by the participants and self-managed were a way to start shifting the responsibility for learning to the learners, and enable them to establish meaningful relationships with their peers, which hopefully would be sustained even after the program’s completion.

Maximize Interaction of Participants in Live Virtual Event

During the live virtual events themselves, a conscious effort was made to maximize the presence and role of the participants, so as to shift the roles of faculty and students: in the online courses, although designed to include a variety of exercises and activities, roughly 50-60% of the time was spent with participants passively observing lectures by faculty. The live virtual events were an opportunity to flip this dynamic and have the instructor serve more as a facilitator, while the participants presented their learnings, findings, and insights. Thus, the goal was for a more learner-centered learning process to occur during these live virtual events. This was done in a few different ways:

- **Report outs**: As indicated earlier, roughly 60% of each live virtual event consisted of report outs and presentations by 5-10 participants who were pre-selected based on their submissions. This served as a way for the participants to share their activities and learnings, and for the instructor to highlight some additional learning points.

- **Chat**: Although not all participants were selected to report out, there was a conscious effort to achieve active participation by the majority of participants who attended the event. The main way to achieve this was by inviting and prompting participants to use the chat function of the webex platform in order to comment on what was said or ask questions. Over time, the program management team prompted more discussion and the participants were more aware of what the chat enabled. When comparing the first live virtual events to those that were run later in the program there was a noticeable increase in the amount of chat and the level of discussion and conversation using this function.

- **Pictures of participants**: Finally, in order to make the presence of the participants who were presenting their work more tangible, and since the participants were only using audio when they joined the events, the program management team included images of the participants who were presenting alongside the slide with their outcomes and pre-work activities.

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8 “Weimer (2002) notes that in order for this form of teaching and learning to occur, the balance of power between teacher and student needs to change. Instructors will retain the responsibility for teaching but the decisions involved in learning really belong to the students. By empowering students to take charge of their learning process, learner-centered, constructivist teaching can emerge” Palloff, R. M., & Pratt, K. (2007). Building online learning communities: Effective strategies for the virtual classroom. John Wiley & Sons, p. 16.
Faculty presence

Research suggests that learner satisfaction with online learning courses is directly related to the social or virtual presence of their faculty member.9 In the online courses, faculty presence and interaction was restricted to the material that was captured in the course videos. The live virtual events provided a way to create an added level of interaction between the participants and the instructors, where they could directly engage in a conversation and dialogue about the participants’ submissions and pre-work assignments. In addition, this provided an opportunity for participants to submit questions that arose when reviewing the course material, and receive the faculty’s input and response.

Maximize Company Specific Context

It is generally accepted that learning is more successful and information is better retained when learners receive ample opportunities to apply the content to their own context. The online courses leading up to the live virtual event provided opportunities for this type of application using a variety of activities and exercises where participants were asked to answer questions related to the course material, and these often had an element of application (e.g. in a course on “Scaling Excellence” participants are taught the notion of “hot causes and cool solutions” and are then asked to identify some “hot causes” or challenging issues within their own organization, and suggest some solutions to these challenges using the tools covered in the course). These exercises were submitted using the course’s learning management system, and a handful of exercises and assignments received feedback from the teaching team. However, since the online courses were designed for a wide audience of participants who freely enroll in the online classes, they were therefore fairly broad and there was not specific mention of HP, the company who these high potential managers belonged to.

As such, the live virtual events provided an excellent opportunity to provide focused attention to the way the course content can be applied to the company’s reality and context. This was done in a number of ways:

- **Incorporation of company executive**: A company executive was selected to join the faculty member leading each live virtual event. The executive’s primary role was to share some of their own leadership experience as it relates to the course content, and to provide some company-specific examples of how the content was applicable to the company. In addition, while the faculty member provided participants with feedback related to the course content, the executive was able to offer feedback and input on the quality of the presentation as it related to the company’s realities. A preparation meeting between the faculty member and company executive who would be co-leading the webinar was also a useful way for the two to align their plans, better understand their respective roles, and for the faculty member to be further educated about some of the specific challenges facing the company. Over time, the faculty members became much more attuned to the specific dynamics of challenges facing the company and could address these more clearly.

An interesting things to note was that as the program took place over two years, during the second year, it was possible to ask some of the participants who had completed the program in an early cohort to join the live virtual event of a later cohort as an executive leader. These alumni executives proved to be very effective, as they had a thorough understanding of the company, as well as of the course content.

- **Company specific assignments and examples**: The live-virtual event pre-work requested that participants use company specific topics, work with real customers, and review real company products. Thus creating a focused discussion on areas that were highly relevant for the participants. In addition, the live virtual event instructors dedicated time to review topics that were relevant to the company and were not necessarily reviewed thoroughly in the course. As time went by the instructors became highly versed in the company specific challenges and examples as raised by both the company executives and the participants in their pre-work assignments. The ability to focus on these tailored and customized topics was well received by participants.
Defined Pacing to Drive Progress and Minimize Procrastination

One of the challenges of learning in a self-paced and flexible online environment is that it can create procrastination and lax participation. In order to address this, and in line with research best practices, the program team provided pacing guidelines to the cohort with information on which parts of the module should be completed by when.

In addition to the pacing guidelines the live virtual events also served as a driver for course completion and assisted with establishing inflexible deadlines by which activities needed to be completed. As one of the participants noted: “The webinar is a useful immovable event in the program to help keep on track”. In other words, since this was a live event, it helped solidify the pacing guidelines and create a greater sense of urgency. In addition, since participants were committed to other group members, there was a shared sense of responsibility that drove to action and completion.

An important best practice that the program management team evolved and refined over time was very active monitoring of course progress, pre-work submission, and live virtual event attendance. Any laggards were contacted by the program management team and encouraged to make progress and complete the course. This required quite a bit of back-end reporting, but proved essential in driving participants to gain the full advantage from the courses and to completing them.

Conclusion

In summary, the live virtual events proved to be an essential part of this leadership development program. By blending the modalities of self-paced and live virtual online activities and incorporating a robust element of peer interaction we observed significant benefits to learning experience and learning outcomes.

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11 Boettcher, J. V., & Conrad, R. (2010). The online teaching survival guide: Simple and practical pedagogical tips. San Francisco: Jossey-Bass, p. 8. “Content resources are now increasingly mobile, accessible on smartphones, iPods, and other small, mobile, hand-held devices. This means that learners have many more options than in the past as to when, where, and with whom they work on course goals. Too much flexibility can encourage lax participation, so establishing a weekly rhythm and regular milestones is essential”