

How virtuality impacts start-up employees performance through its influence on entrepreneurship passion

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Department of Human Resources and Organizational Behaviour

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Abstract

There is evidence that organizations have increased the use of virtual teams in recent years and combined with this there are many advantages. However, there is no certainty that these teams have a virtual positive effect on their performance. This study, through a questionnaire, examined how team's entrepreneurial passion mediated the relationship between Virtuality and Team Performance and how the Work Conflict moderated the Team's Entrepreneurial Passion effect on performance. A sample of 41 start-ups was analyzed using a moderate mediation model; and the results indicate that the Virtuality is positively related to Team Performance and that the Team's Entrepreneurial Passion also contributes to good performance. On the other hand, the relationship between Virtuality and Team Entrepreneurial Passion is less clear, and its positive impact depends on the informational value and the extent of use with which the team uses virtual tools to work. Practical implications of the results and possible questions for future research are discussed.

Keywords: virtuality, entrepreneurial passion, team performance, work conflict, start-up

Resumo

Há evidências de que as organizações têm aumentado o uso de equipas virtuais nos últimos anos e aliado a isso existem muitas vantagens. Ainda assim, não há certeza de que estas equipas tenham um efeito positivo da virtualidade na sua performance. O presente estudo, através de um questionário, examinou como é que a paixão empreendedora da equipa mediou a relação entre virtualidade e performance e como o conflito de trabalho moderou o efeito da paixão empreendedora da equipa na performance. Uma amostra de 41 start-ups foi analisada por meio de um modelo de mediação moderada; e os resultados indicam que a virtualidade está positivamente relacionada com a performance e que também a paixão empreendedora da equipa contribui para uma boa performance. Por outro lado, a relação entre virtualidade e paixão empreendedora da equipa é menos clara, sendo que o seu positivo impacto depende do valor informacional e do grau de utilização com que a equipa recorre a ferramentas virtuais para trabalhar. São discutidas implicações práticas dos resultados e levantadas possíveis perguntas para futuras pesquisas.

Palavras-chave: virtualidade, paixão empreendedora, performance de equipa, conflito de trabalho, start-up

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Introduction

It is common sense that technology continues to evolve and has implied changes in several aspects. One of the aspects are the organizations. No doubt technology has broadened the ability of organizations to create teams at distance, to communicate more quickly, to conduct work through the computer and that there is no need for teams to be collocated to work together and to have access to more and different information in a short period of time (Griffith, Neale & Sawyer, 2003). Due to this, many organizations started to adopt a decentralized and distributed structure- team-based structures- to accomplish work (DeSanctis & Jackson, 1994; Drucker, 1988). It is then possible to conclude that given the increase of technological advances and enthusiasm around organizational teams, virtual teams also continue to increase (Gilson, Maynard & Young, 2014). Although virtual teams are a current topic in the literature on global organizations, it has been a problem to define what virtual means across multiple contexts. A common definition is that to be virtual it has to include *distance*: the challenges people face to communicate, solve conflicts and maintain social interactions over time, space and organizational units (Chudoba, Lu, Watson-Manheim & Wynn, 2005). However, not all authors agree with this; collocated teams can also exhibit high levels of virtuality (Kirkman & Mathieu, 2005). For some authors, face-to-face work is still considered more suitable, since the use of virtual tools makes it more difficult to develop shared understanding (Chudoba et al., 2005) among group members (Armstrong & Cole, 2002), maintain trust (Jarvenpaa et al., 1998) and transfer an organization's culture to workers (Davenport & Pearlson, 1998). As Virtuality increases the loss of information between the two parties (issuer and receiver) and decreases the feeling of social presence (Bono & Purvanova, 2009), we intend to understand what impact Virtuality can have in Team Entrepreneurial Passion (TEP).

A new team-level concept- TEP- is thus introduced, representing the sharing of intense and positive feelings with the team identity that is high in identity-centrality for the new venture team (Cardon, Forster & Post, 2015) and similarly to virtual teams, TEP can also be transmitted virtually. It happens that the use of virtual tools brings some implications for teams, as mentioned above, and do not allow the individuals to capture emotions as they would if transmitted face-to-face. According with Cardon et al. (2017) high levels of TEP are likely to be related to better team processes and outcomes since shared emotions involve a collection of “*deep underlying assumptions, values, norms, and artifacts based exclusively on emotional content*” (Barsade & O'Neill, 2014, p. 583). Shared emotions like TEP usually provide a

perspective on how the team is feeling, the motivation of the members and the overall performance of the team (Frederickson, 1998). Considering the impact that TEP has on Team Performance we intend to understand what power Work Conflict, included in this “equation”, will have on team's final outcome, since it is also a preponderant factor for team effectiveness (Amason, Harrison, Hochwarter & Thompson, 1995).

Since Team Virtuality is increasing more and more (Solomon, 2001), it is very important to realize the impact it has on team processes. Given the relevance that Team Entrepreneurial Passion has on Team Performance, the current study aims to contribute to a better understanding of the relationship between Team Virtuality and Team Performance.

In the following sections the theoretical framework and relevant concepts are presented. Chapter I refers to the theoretical framework, where there is a deep study of the variables; chapter II includes the research method - participants in this study, procedure used to conduct the study and instruments used in data collection; chapter III presents the results; chapter IV refers to the discussion of the results, addressing practical contributions of this study, limitations and proposals for future research.

I. Literature Review

All academic and scientific research bases its hypotheses on research in a theoretical conceptual framework that allows to answer the starting question. This research on the Virtuality and the relationship between Performance and Team Entrepreneurial Passion doesn't escape the rule and guides its lines based on concepts and also in theoretical models, which give to the empirical data collected and treated a statistical significance.

Throughout this paper, four concepts considered structuring are going to be discussed for the theoretical framework: Virtuality, Team Entrepreneurial Passion (TEP), Team Performance and Work Conflict.

Virtuality

Over the past several years, organizations have explored and increased the use of work teams, which can be defined as groups of individuals working interdependently to achieve goals and solve problems with mutual responsibility (Guzzo & Dickson, 1996). With the development of technology over the last few years, its use has become frequent both in individuals' personal lives (social networks, communication channels, etc) and in organizations. With this, work teams and virtuality gathered and virtual teams emerged. There is no consensual definition for virtual teams, although some authors share a set of elements. For example, Townsend, DeMarie and Hendrickson (1998, p.17) stated that “[virtual teams are] groups of geographically and/or organizationally dispersed coworkers that are assembled using a combination of telecommunications and information technologies to accomplish a variety of critical tasks”, Guinea, Webster and Staples (2012, p.301) stated that “[virtualness] can be considered face-to-face (FtF) or computer-mediated (without physical interaction), but currently also includes the separation of members (distance), proportion of members who work virtually and the proportion of time that team members work apart”, Kirkman and Mathieu (2004, p.1) also define virtual teams “as groups of employees with unique skills, often situated in different locations, whose members must collaborate using technology across space and time to accomplish important organizational tasks”. According to some of the authors mentioned above, for a team to be virtual, it is required that the employees are non-located. Nevertheless, it is important to take into account that not only geographically distributed teams can use virtuality or can be considered virtual; in other words, co-located teams can be highly virtual in their daily work, thus becoming virtual (Kirkman & Mathieu, 2005).

Therefore, Kirkman and Mathieu (2005) see virtuality as a continuum. A continuum characterized by three factors: the extent of which team members use virtual tools to coordinate and execute team processes, the information value of the communication through those virtual tools and also the synchronicity with which members communicate among themselves. According to them, there are several levels of virtuality. A team that uses virtual tools only to access databases, for example, is less virtual than a team that uses virtual tools to communicate and solve problems. Both are virtual, only at different levels. It is important to take into consideration the definition of virtual tools, which are characterized by interactions between members of an organization in which they have to rely on virtuality (ex. videoconferencing) (Kirkman & Mathieu, 2005).

Regarding the three factors, the first one refers to the purpose with which teams use technology. Teams considered co-located may have already used virtual tools in the past to perform their work or communicate with colleagues, and teams considered virtual (which mainly use virtual tools) will also end up scheduling face-to-face meetings to communicate. These two examples can be described in terms of their virtuality since both in the past and in the future have used/ will use the virtuality for work or communication purposes. However, the level of virtuality is higher in teams that decide for virtual tools to communicate instead of face-to-face communication (Kirkman and Mathieu, 2005). The second factor is related to the value of the information that is exchanged between teams and that contributes to team effectiveness. There are multiple ways to transfer information inside a team, from videoconferencing, to e-mails, document sharing to consult specific information, etc. Each one of these virtual tools will differ from the others because while some allow both nonverbal and verbal communication, and with this greater approximation between the sender and the receiver, others allow only verbal communications. We can conclude that the higher the informational value shared within a team, the lower the level of virtuality used (Kirkman & Mathieu, 2005). Lastly, synchronicity. When we evaluate this factor, it can be in two ways: asynchronous, when the communication is not in real time or synchronous when it is in real time (Goel et al., 2003; Pinelle et al., 2003). According to Kirkman and Mathieu (2005), despite asynchronous communication has the disadvantage of degrading the quality of communication and sometimes not getting the message across as intended (Hightower, Sayeed & Warkentin, 1997), it is the only way that allows members to take the time to consider and reflect on the messages and the consequent responses, minimize time and location compel or even consult other sources in order to improve response. In contrast, synchronous communication allows a more direct and interpersonal

communication, where it is possible to experience something more human like tone of voice, body language or immediate feedback (Kirkman & Mathieu, 2005). Since communication is more direct in synchronous communication, it also happens more frequently, since it does not depend on virtual tools to be realized. Thus, it is possible to conclude that the more synchronous a team/organization is, the lower is its level of virtuality since the use of virtual tools will be much lower.

Team Entrepreneurial Passion (TEP)

As technologies have advanced and the increase of virtual teams has been felt, a new concept has also emerged over recent times: new ventures (NVs). A new venture is “a firm that is in its early stages of development and growth” (Bradley, Busenitz, Hmieleski & Klotz, 2013, p.227) and in general have the intention to bring a new service/product/idea to the market and form a business. Consequently, New Venture Teams (NVTs) emerge as a group of people responsible for developing and implementing the entire strategy around the NV (Kloz et. al., 2014) which are characterized by Team Entrepreneurial Passion (TEP), defined as “the level of shared intense positive feelings for a collective team identity that is high in identity-centrality for the new venture team” (Cardon, Post & Forster, 2017). Once TEP emerges from individuals within a team, it is important to understand and distinguish entrepreneurial passion in an individual-level and entrepreneurial passion in a team-level. According with Cardon, Wincent, Singh and Drnovsek (2009, p. 517), entrepreneurial passion (individual level) refers to “consciously accessible intense positive feelings experienced by engagement in entrepreneurial activities associated with roles that are meaningful and salient to the self-identity of the entrepreneur”. On the other hand, TEP is revealed by asking team members what *the team* is passionate about and to what extent (Chan, 1998). Here, more important than the individual, is the identity and emotions shared by the team. The shared identity of TEP in NVTs can be of two different types (Cardon, Post, & Forster, 2015): *mono-focal*: shared feelings for a single collective identity and *poly-focal*: shared feelings for multiple collective identities.

With TEP, the NVT is the referent point for feelings of passion and the identity-centrality of the object of those feelings (Cardon et al., 2017). Passion consists in positive intense feelings that result from engagement in entrepreneurial activities that are linked to functions that make sense to the entrepreneur (Cardon et al., 2009) and it is common for entrepreneurs to feel passion in their daily life, functioning as a boost in their activities and

motivation to perform their professional tasks. It is well known that organizations are used to regular changes such as change of managers, change of team members, change of tasks, downsizings, internal turnover, among others, and all these changes have an influence on individuals, teams and in the organization itself (Albert, Ashforth, & Dutton, 2000; Ashkanasy & Daus, 2002); and one of the consequences of these changes are alterations in the passion level of both new venture entrepreneurs and employees. Ensley, Hmieleski and Pearce (2006) believe that due to the fact that entrepreneurs and employees are always in direct contact, there is the possibility that entrepreneurs impact the motivations, behaviors and passion of employees. In order to understand how entrepreneurial passion impacts the commitment employees feel in ventures, Breugst et al. (2011) developed two possible mechanisms of explanation, combined with the entrepreneurial passion model of Cardon et al. (2009) and the theories of emotional contagion and goal setting.

When involved in activities, entrepreneurs demonstrate attitudes and emotions that will be transmitted to other colleagues. It is through the level of passion that they perform tasks that employees will be influenced (perceived passion). It's important to keep in mind that the way passion levels are transferred to employees is not the same in every way. Bono and Purvanova (2009) believe that when using technology-mediated communication (virtual tools) is expected to have an overall negative effect. The more a team uses virtual tools to communicate, the lower its TEP level will be since communication through virtual tools precludes factors such as tone of voice, touch, gestures and others from being taken into account. Interpersonal factors are relevant for TEP, which is characterized by an affective-emotional shared emotion. However, if these tools allow a greater approximation to interpersonal reality, a higher exchange of information between members (e.g. videoconferencing) and the possibility for members to communicate in real time with each other (synchronous technology), then the level of virtuality will be lower than in virtual tools that provide less valuable and real time information (e.g. e-mail) (Kirkman & Mathieu, 2005). Considering this, it is possible to hypothesize that:

H1a: Extent of use of virtual tools has a negative impact on TEP level.

H1b: Informational Value has a positive impact on TEP level.

H1c: Synchronicity has a positive impact on TEP level.

Believing that an entrepreneur can demonstrate several types of passion, Cardon, Wincent, Singh, and Drnovsek (2009) distinguish three different types of entrepreneurial

passion: passion for *inventing*- describes the entrepreneur's passion for activities related to identifying, inventing and exploring new opportunities, passion for *founding*- passion for activities responsible for establishing a venture to trade and seek new opportunities and passion for *developing*- reflects entrepreneur's passion for activities related to nurturing, growing and expanding the venture after its founding. These perceived passions will influence employees to have a positive affect at work (*emotional contagion theory*, Epstude & Mussweiler, 2009; Hatfield, Cacioppo, & Rapson, 1994; Platow et al., 2005) and a clear objective of their goal (*goal setting theory*, Colbert & Witt, 2009; Locke & Latham, 1990; Locke, Smith, Erez, Chah, & Schaffer, 1994). The first theory refers to the entrepreneur's ability to trigger consensual or discordant affective reactions in employees depending on social comparison processes (Epstude & Mussweiler, 2009, Platow et al., 2005) and the second theory explains that perceptions of entrepreneurial passion from entrepreneurs can enhance employees' goal clarity about their work; however, this impact of entrepreneurial passion depends on the extent to which employees and entrepreneurs share goals and values (Haslam & Platow, 2001; Klein & House, 1995). It is based on the model and theories presented above that is possible to consider that positive affect and goal clarity will influence the commitment of employees, and consequently, the outcome of their work. Thus, the second hypothesis of this study emerges:

H2: Team Entrepreneurial Passion positively influences Team Performance.

From what was said previously, Team Virtuality is expected to have a negative impact on Team Performance since the use of virtual tools prevents certain sensations and clarifications from being transmitted when the communication is performed face-to-face. This impediment leads the sharing of positive feelings with the team, which is high in identity-centrality, to lose its intensity and, consequently, to negatively impact the Team Performance. It is based on this logical thinking that it becomes possible to conclude that Team Virtuality, influencing TEP, will also end up influencing the Team Performance:

H3: TEP mediates the relationship between Team Virtuality and Team Performance.

Work Conflict

Teamwork in organizations has been a widely studied topic. While some authors argue that teamwork has helped to promote an organizational design that allows employees to increase their productivity, self-realization, well-being, initiative and control over their work, others argue that teamwork brings some implications (Gallie, Green, Felstead & Zhou, 2012). One of these implications is conflict, defined as the perception of incompatibilities of interests, beliefs or viewpoints followed by one or more team members (Jehn, 1995). Conflict can arise from different situations and since it is the team members themselves who contribute through social inputs or task inputs to its functioning, many authors assume that there are several types of conflict. It is important to understand that conflict is a fundamental part of the functioning of a team and its performance, and that is inevitable that there is conflict since it is part of humans managing their mutual interdependence (De Dreu, Gelfand, Keller & Leslie, 2012). However, to be effective, a team has to know and be able to manage conflicts and have the ability to understand that not all conflicts arise for the same reasons. Although a wide variety of conflict management strategies may be conceived, the conflict literature converges on a broad distinction between three styles of how to manage conflict: *cooperation*, *competition*, and *avoidance* (Chen, Liu, & Tjosvold, 2005; De Church & Marks, 2001; De Dreu & van Vianen, 2001; Rahim & Magner, 1995). *Cooperators* prefer to have a proactive approach and an easily engage in constructive negotiations and collaborative problem solving. *Competitors* are inclined to compete and dominate the conflict partner and seek victory. *Avoiders* tend to shy away from addressing conflict and go to great lengths to suppress the expression of conflict (De Dreu, Gelfand, Keller & Leslie, 2012).

Jehn (1995) believes in the existence of two types of conflict: relationship conflict and task conflict.

Relationship Conflict

Relationship conflict exists when there are interpersonal incompatibilities in the team/group and usually includes feelings of tension and annoyance among members (Jehn, 1995). When group members have interpersonal problems, they feel less comfortable and confident to perform and decrease their satisfaction with the working group (Argyris, 1962). Examples of relationship conflict are conflicts about personal taste, political preferences, values and interpersonal style (De Dreu, Weingart, 2003). According with Pelled (1995) there are three

ways in which the relationship conflict can affect group performance. First, the limited cognitive processing that results from the relationship conflict ends up reducing the ability of the group/team to access new information from other colleagues, since the focus is all on the conflict. Second, the interpersonal conflict makes members less receptive to ideas provided by other colleagues. And lastly, the time and energy that must be applied to the tasks that are proposed ends up being spent on discussing or resolving the conflict.

Task Conflict

On the other hand, task conflict exists when there are disagreements between group members about the content of the tasks that should be performed, such as presenting different viewpoints, ideas, opinions, among others (Jehn, 1995) and can also cause to employee feelings of frustration and tension. Gladstein (1984) suggested that the type of the task a group perform influences the relationship between conflict and performance - task type as a *moderator* of this relationship. If the group performs *routine tasks* (Hall, 1972), which are tasks with a high level of repetitiveness, their performance will be easier since the employees are already familiar with the resolution mechanism and have already predictable results (Thompson, 1967). Any other way, performing nonroutine tasks becomes more uncertain for the group since these tasks require a certain level of problem solving and fulfilling of certain procedures.

Over the last few years there has been a disposition in the literature to assume that and taking into account the two types of conflict defended by Jehn (1995), conflict influences the group performance. It is important to consider that group performance refers to the level where a product or service performed by a group meets the organization's standards (Jehn, 1995). The influence that conflict has on performance can be in different ways: while task conflict can be beneficial to the team performance, the relationship conflict ends up reducing the satisfaction of the team (Amason, 1996; Jehn, 1995; Simons & Peterson, 2000). Task conflict is constantly associated with a *quality of group decision* and *affective acceptance of group decisions* (Simons & Peterson, 2000). Groups that experience task conflict have the ability to make better decisions than those who never experienced, as task conflict facilitates critical evaluation that decreases the phenomenon of group thinking by increasing the ease of finding new solutions to tasks and levels of criticism (Janis, 1991). Contrarily, since it causes disagreements among members of the group, the relationship conflict is associated with negative effects when experienced by the group. In this sense, it is hypothesized that work conflict moderates the relationship of team entrepreneurial passion and team performance, thus appearing the last hypothesis of this study.

H4a: Task Conflict strengthens the positive relationship between TEP and Team Performance.

H4b: Relationship Conflict weakens the positive relationship between TEP and Team Performance.

Proposed Model

Considering the hypothesis mentioned, the following research model was proposed and tested-

Figure 1.

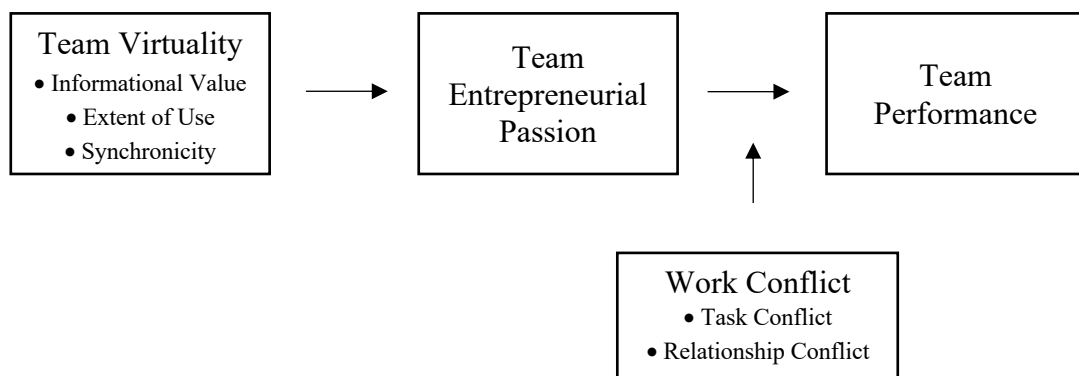


Figure 1

II. Methods

Participants

In this study, the sample consists in start-up workers (mostly Portuguese), with 3-4 answers from each start-up, for the truthfulness of the results. Originally the variables (Team Virtuality, Team Entrepreneurial Passion and Team Performance) would be applied to a team from each start-up, but since it was not possible to aggregate data by team, the analyses were done individually and only the individual perceptions of the team will be taken into account.

A total of 41 start-ups participated in this study, and 93 responses were collected. The sample consists of 57% male participants ($n= 53$), 36,6% female participants ($n= 34$), and 5,4% of the participants choose the option “Prefer not to answer” ($n=5$). The age of the participants oscillates between 20 and 67, and the most registered answer among the participants was 23 years (15,5%), followed by 26 years (14,1%) and 24 (12,7%). However, 20 participants preferred no to answer about their age. Participants were also asked about the age of the start-up where they currently work; 37,2% work in a start-up with more than 5 years old, 17,4% answered that the start-up age is between 1 and 2 years and 15,1% is between 4 and 5 years old. The participants in this study work in different areas, where the most common is Technology, which involves software development (9,9%) and videogames (5,4%).

Procedure

The questionnaire was sent with a link to access an online survey on Qualtrics to a member of each start-up and was asked to share in the same way with 3 co-workers. The survey took approximately 10 minutes to fill. Anonymity and confidentiality were assured to all the participants. To ensure that the answers were not biased because the participants were not comfortable with English, and since some of the start-ups were foreign, it was decided to take the questionnaire in English. Participants were asked, if they did not want to reveal the name of the start-up, to create a start-up code to pair responses. After a short introduction and an explanation of the purpose of the survey, the participants were asked to answer socio-demographic questions, questions about virtuality, work conflict, performance and team entrepreneurship passion.

It is also important to mention that this questionnaire was conducted during a pandemic period (COVID-19), when remote work became a reality. Five questions were added to the questionnaire in order to clarify in what situation the participants were when they were answering the questionnaire. Questions such as “Before social isolation due to COVID-19, how many members of your team worked in the same space/building?” or “At the moment, how many members of your teamwork in the same space/building from you?”. Anyway, none of these five questions were used in data analysis.

Instruments

Four variables were under study: Team Virtuality, evaluated through the scales of Extent of Use of Virtual tools, Synchronicity and Informational value; Team Entrepreneurial Passion, Team Performance and Work Conflict, composed by the scales of Task Conflict and Relationship Conflict.

1. Team Virtuality

In order to measure virtuality, a scale developed by Kirkman and Mathieu (2005) was used, including 27 items divided in three dimensions: extent of use of virtual tools, informational value and synchronicity. Each dimension was measured and analyzed separately, since each one could have different impacts on the others. All items are classified in a Likert 5-point scale, which ranges between 1= not at all to 5= very great extent.

1.1 Extent of use of virtual tools

The first dimension has ten items and all started with “To what extent does our team use virtual tools (e.g. email, video conferencing and work tools such as Google docs, Trello, calendar, etc), to:” and were followed by for example: “Seek timely feedback from stakeholders (e.g., customers, top management, other organizational units) about how well we are meeting our goals” and “Ensure that everyone on our team clearly understands out goals”. The value of chronbach's α was 0,86.

1.2 Informational value

“Understanding others through voice inflection, intonation, body language and/or facial and non-verbal expressions” and “Using physical, verbal and visual symbols for communicating (e.g. nodding, a touch in the shoulder, vocal tone, a smile)” are two examples of the seven items that constitute the second dimension which evaluates the information that is passed through the use of virtual tools. The statements started with “When our team uses virtual tools to interact, how often does the chosen virtual tool allow for:”. The value of chronbach's α was 0,83.

1.3 Synchronicity

Lastly, the last dimension consists of ten items and as an example: “The transmission of messages from multiple individuals simultaneously” and “Carefully crafting a message before transmission to ensure that its meaning is expressed precisely”. The value of chronbach's α was 0,91.

2. *Team Performance*

As it was said before, it was chosen to measure team performance based on the individual perception of the participants about the teams. Performance was measured by a scale Likert 10-point (ranging between 1= very poor to 10= superb) and the items are: “The amount of work the team produces”, “The quality of work the team produces” and “Your overall evaluation of the team’s effectiveness”. The Performance scale revealed a chronbach's $\alpha= 0,86$.

3. *Team Entrepreneurial Passion*

Team Entrepreneurial Passion was measured using a scale from Cardon, Gregoire, Stevens and Patel (2013) and includes thirteen items. The items were in the first-person plural for the individual to answer for the team in general and not just for him or her.

As an items-example: "We really like finding the right people to market our product/service to" and "For our team, nurturing a new business through its emerging success is enjoyable". All items were rated on a *Likert* 5-point scale (ranging from 1= stongly disagree to 5= totally agree).

The Team Entrepreneurial Passion scale showed a good internal consistency ($\alpha = 0,94$).

4. *Work Conflict*

An intragroup scale was developed by Jehn (1995) to measure the amount and type of conflict in organizations. Eight items measured the presence of conflict on a 5-point Likert scale ranging from 1= none and 5= a lot.

It was possible to distinguish two types of work conflict: relationship conflict and task conflict, both measured with four items each. “How much friction is there among members in your work unit?”, “How much are personality conflicts evident in your work unit?”, “How much tension is there among members of your work unit?” and “How much emotional conflict is there among members in your work unit?” are the items used to evaluate relationship conflict. “How often do people in your work unit disagree about opinions regarding the work being done?”, “How frequently are there conflicts about ideas in your work unit?”, “How much conflict about the work you do is there in your work unit?” and “To what extent are there differences of opinion in your work unit?” are the items used to evaluate task conflict. The work conflict scale revealed a cronbach's $\alpha = 0,93$.

III. Results

As previously mentioned, since it was not possible to collect three answers per team, data were treated and considered as the participants' perceptions about Team Virtuality, Team Entrepreneurial Passion, Team Performance and Work Conflict. Therefore, the answers were not aggregated to a team level (Bliese, Chen, Mathieu, 2005). All hypotheses were tested with the statistics software IBM SPSS Statistics (version 27).

Table 1 shows the means, standard deviations and correlations between some variables under study. It is possible to notice that some variables are positively correlated. For example, Informational Value is significantly related to all other variables, contrary to Task Conflict which is only significantly correlated with Information Value.

Table 1

Descriptive Statistics and Correlations of the Study Variables

	M	SD	1	2	3	4	5	6	7	8
1. Extent of use	3.9	.62								
2. Informational value	3.6	.66	.65**							
3. Synchronicity	3.9	.67	.59**	.62**						
4. Team Entrepreneurial Passion	3.9	.83	.25*	.22*	.14					
5. Performance	7.7	1.19	.34**	.36**	.27*	.33**				
6. Task Conflict	2.6	.83	-.86	-.26*	-.71	-.14	-.17			
7. Relationship Conflict	1.9	.87	-.22*	-.27**	-.18	-.15	-.14	.76**		
8. Age	28.3	9.05	.06	-.06	.01	.22	.09	.15	-.39	
9. Level of education	2.63	0.81	-.06	.09	-.18	.09	.28**	-.06	.04	.07

*. Correlation is significant at the 0.01 level. **. Correlation is significant at the 0.05 level

It can be concluded that Synchronicity is positively related with Extent of Use and Informational Value, 0.59 ($p < 0.05$) and 0.62 ($p < 0.05$), respectively. That is, as one variable increases the others also increase; whenever the synchronicity with which teams communicate increases, the information that is passed on and the purpose with which this communication

happens also increases. Also, Relationship Conflict and Task conflict, the two dimensions used to measure Work Conflict are positively related with one another ($r = .76, p < .05$); when Relationship Conflict increases, so does Task Conflict, which directly influences the Work Conflict increase. Interestingly, Task Conflict only has a significant negative relationship with Informational Value ($r = -.26, p < .01$) (excluding Relationship Conflict), which means that whenever Informational Value increases, the level of Task Conflict in the team decreases. The control variable Age, as can be seen, has no correlation with any other of the variables; while the Level of education has a positive correlation with performance ($r = .28, p < 0.05$), which means that the higher the level of education the higher the performance.

Hypotheses Testing

Results of Mediation Analysis

The PROCESS Macro for SPSS (version 27) (Hayes, 2017) was used to test the indirect effects in the relation between Team Virtuality, Team Entrepreneurial Passion and Team Performance (Model 4) as well as the moderation of Work Conflict in the relation of the last two variables (Model 1). PROCESS also calculates the coefficients of a model, the direct and indirect effects of simple and multiple mediator models and tests interactions in moderation models, using ordinary least square methods for all continuous outcomes.

Table 2

	b	SE	t (df)	p	LL 95% CI	UL 95% CI
Performance regressed on synchronicity (c path)	0.40	0.17	2.28 (89)	.025	0.05	0.75
TEP regressed on synchronicity (a path)	0.17	0.13	1.33 (90)	.188	-0.09	0.43
Performance regressed on TEP (b path)	0.42	0.14	2.99 (89)	.004	0.14	0.70
	Unstand. value	SE	LL95%CI	UL95%CI		

Bootstrap results for indirect effect	0.073	0.06	-0.03	0.21
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Note. LL= lower limit, UL= upper limit, CI= confidence interval.

Table 2 shows the results that test the hypothesis 1c and hypothesis 2, and also shows if Synchronicity affects Team Performance (c path) through the mediation of Team Entrepreneurial Passion (TEP). The a path refers to hypothesis 1c (b= 0.17, p= .188, 95%CI= -0.09; 0.43) and it is possible to conclude that Synchronicity doesn't have a positive effect on TEP, which doesn't prove the hypothesis. According to b path (b= 0.37, p= .012, 95%CI= 0.08; 0.65), TEP has a positive impact on Performance, which supports hypothesis 2.

For the indirect effect of Synchronicity on Team Performance (95%CI= -0.03; 0.21) it is possible to verify that it wasn't supported by the results, which means that Synchronicity doesn't influence Team Performance through TEP.

A direct effect (c path) between Synchronicity and Team Performance can be assumed (b= 0.40, p= .025, 95%CI= 0.05; 0.75). Thus, it's a conclusion that Synchronicity only influences Team Performance directly, without TEP.

Table 3

	b	SE	t (df)	p	LL 95% CI	UL 95% CI
Performance regressed on extent of use (c path)	0.54	0.19	2.86 (89)	.005	1.17	0.92
TEP regressed on extent of use (a path)	0.33	0.14	2.43 (90)	.017	0.06	0.60
Performance regressed on TEP (b path)	0.37	0.14	2.57 (89)	.012	0.08	0.65
	Unstand. value	SE	LL95%CI	UL95%CI		

Bootstrap results for indirect effect	0.121	0.07	0.01	0.28
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Note. LL= lower limit, UL= upper limit, CI= confidence interval.

According to a path ($b= 0.33$, $p= .017$, $95\%CI= 0.06; 0.60$), the Extent of use of virtual tools has a positive impact on Team Entrepreneurial Passion (TEP), which means it doesn't support hypothesis 1a.

Relatively to the indirect effect of the Extent of use of virtual tools on Team Performance through TEP ($95\%CI: 0.01; 0.28$) it was supported by results. So, it's possible to conclude that there is an indirect effect between these variables. It is also clear to conclude a direct effect between extent of use of virtual tools and Team Performance ($b= 0.54$, $p= .005$, $95\%CI= 1.17; 0.92$).

Table 4

	b	SE	t (df)	p	LL 95% CI	UL 95% CI
Performance regressed on information value (c path)	0.59	0.18	3.26 (89)	.002	0.23	0.95
TEP regressed on information value (a path)	0.28	0.13	2.10 (90)	.039	0.01	0.55
Performance regressed on TEP (b path)	0.37	0.14	2.65 (89)	.009	0.09	0.65
	Unstand. value	SE	LL95%CI	UL95%CI		
Bootstrap results for indirect effect	0.103	0.06	-0.01	0.24		

Note. LL= lower limit, UL= upper limit, CI= confidence interval.

Table 4 shows the results that test the hypothesis 1b and if Informational Value have a positive impact on Team Performance directly or indirectly (through TEP).

According with a path (hypothesis 1b) ($b=0.28$, $p= .039$, $95\%CI= 0.01; 0.55$), Informational Value has a positive impact on TEP, supporting the hypothesis.

Directly, Informational Value has a positive impact on Team Performance ($b= 0.59$, $p= .002$, $95\%CI= 0.23; 0.95$). But indirectly was not supported by results ($95\%CI= -0.01; 0.24$) which means that Informational Value doesn't impact Team Performance through TEP.

Results of Moderation Analysis (Hypothesis 3)

Table 5

Predictor Variable	b	SE	t (df)	p	LL95%CI	UL95%CI
TEP	1.43	0.46	3.10 (88)	.003	0.52	2.36
Task Conflict	1.45	0.74	1.97 (88)	.052	-0.01	2.91
Interaction	-0.41	0.18	-2.26 (88)	.026	-0.78	-0.05

Note. Results of the complementary moderation analysis of TEP and task conflict on performance LL= lower limit, UL= upper limit, CI= confidence interval.

Considering the interaction between TEP and task conflict on team performance, the moderation analysis resulted in a significant interaction ($95\%CI= -0.78; -0.05$). Figure 2 depicts this interaction. We see that, for high levels of task conflict, the relationship between TEP and performance remains the same; however, when task conflict levels are low, teams with higher TEP also report higher performance. Hypothesis H4a was, therefore, not supported by results.

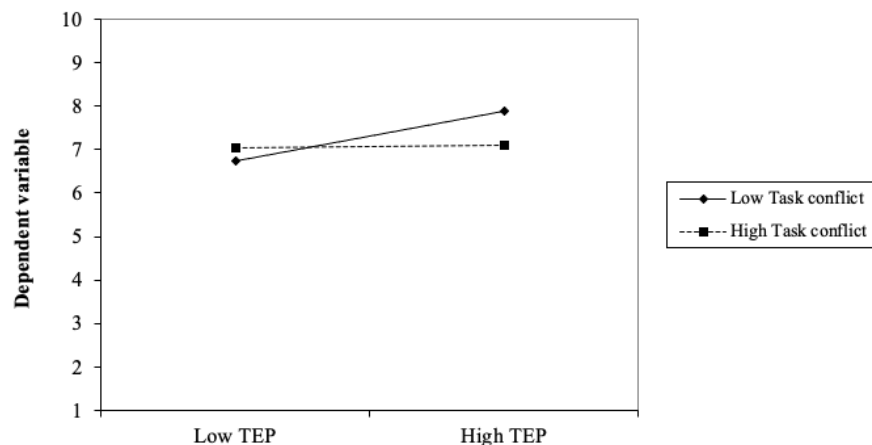


Figure 2

Table 6

Predictor Variable	b	SE	t (df)	p	LL95%CI	UL95%CI
TEP	0.79	1.38	3.55 (88)	.0006	2.15	7.63
Relationship Conflict	0.59	0.68	0.89 (88)	.376	-0.73	1.91
Interaction	-0.19	0.17	-1.12 (88)	.265	-0.27	0.15

Note. Results of the complementary moderation analysis of TEP and relationship conflict on performance. LL= lower limit, UL= upper limit, CI= confidence interval.

The H4b hypothesis argues that Relationship Conflict decreases the relationship between TEP and Performance. According to the results on table 6 (95%CI= -0.27; 0.15), the moderation by Relationship Conflict on the relationship of TEP and Team Performance wasn't supported (hypothesis H4b) since the interaction is not significant.

IV. Discussion

The main objectives of this study were to perceive the mediating role of Team Entrepreneurial Passion in the relationship between Team Virtuality and Team Performance and to test the moderating role of Work Conflict in the relationship between TEP and Team Performance.

Firstly, it was possible to perceive that the three dimensions of virtuality (Kirkman & Mathieu, 2005) influence the Team Performance directly. The extent of use, informational value and synchronicity with which teams use virtual tools have a significant and positive effect in Team Performance and therefore the performance of a team can depend on the level of these three dimensions. These results, however, do not meet what we expected. Initially we thought that the greater the synchrony of communication between team members and the informational value passed between them, the greater the performance; which in fact occurred. However, we also conclude that the greater the use of virtual tools, the greater the performance, which is something we thought that would happen, but in the opposite direction. We also found that as for the impact of Team Virtuality in TEP, the positive relation of extent of use of virtual tools and TEP was contrary to what was expected (H1a). It was hypothesized that the higher the degree of utilization of virtual tools, the lower the TEP level; as a result, it was obtained that the higher the extent of use of virtual tools, the higher the TEP level. A possible reason to explain this finding is the scale used in the questionnaire to measure the extent of use of virtual tools. The scale includes 10 items where participants were asked to think about how much their teams use virtual tools to engage in specific team processes. It can be confusing to participants to separate how much they actually engage on those processes and how much they use virtual tools to do so. We can wonder that what really matters is whether these processes are carried out and not if they do them through virtual tools or not. Virtually itself may not make so much difference on TEP, as long as those processes are present. It was also possible to conclude, and as expected, that the informational value that is transmitted through the virtual tools impacts the TEP level (H1b). Regarding the mediation of TEP between Team Virtuality and Team Performance, we can state that it is only significant with one dimension of virtuality: extent of use of virtual tools. It was already expected that mediation with synchronicity would not be significant since the synchrony with which colleagues communicate through virtual tools does not affect the TEP level directly. It can be seen that the informational value also does not influence performance in a relevant way through the TEP level. It turns out that although TEP is an affective-motivational construct, since it consists in sharing intense feelings among team

members (Cardon, Post, & Forster, 2017), it does not seem to depend so much on aspects of communication richness. Probably, and since the use of virtual tools is already quite common, people don't feel the need to transmit emotional aspects through traditional ways, finding another way to do it.

Concerning the moderating role of Work Conflict, the moderation was significant with only one of the two types. It was hypothesized that the Relationship Conflict in teams weakens the relationship between TEP and Team Performance (H4b), which would also end up affecting the team outcome due to the feelings of discomfort with which the members would be (Jehn, 1995). Relationship Conflict also tends to inhibit cognitive functioning when complex information needs to be processed (Staw, Sandelands & Dutton, 1981; Roseman, Wiest & Wiest, 1994). However, this has not been the case, and we can affirm according to the results that the Relationship Conflict does not significantly influence the relationship between TEP and Performance. A possible explanation for this result may be that the target of this study are start-ups. A start-up can be defined as an entity “which did not exist before during a given time period, which starts hiring at least one paid employee during the given time period, and which is neither a subsidiary nor a branch of an existing firm” (Luger & Koo, 2005, p. 19) and is seen by many authors as a source of job creation and technological innovation (Birch, 1981; Kirchkoff & Philips, 1988; Reynolds & Maki, 1990). Since these teams are composed by a low number of members and are considered young, they may end up being more motivated and therefore there is a lower propensity for Relationship Conflict among colleagues. On the other hand, Task Conflict influences the relationship between TEP and Team Performance, but not as it had been hypothesized. It was thought that Task Conflict, when present, would strengthen the relationship between TEP and Team Performance; this is, the higher the level of Task Conflict, the more TEP would influence team performance. However, what was concluded is that Task Conflict influences the relationship between TEP and Team Performance but only when it is low and not when is high. As we can see in figure 2, when the Task Conflict is high, regardless of a high or low TEP level, the performance will be the same. This is explained considering that TEP may already imply a lot of discussion of ideas and therefore a high Task Conflict does not add a significant conflict to team's functioning. Yet when Task Conflict is low: the higher the TEP level, the higher the performance too. Recent studies shown that high levels of Task Conflict can lead to lower satisfaction and commitment on the part of team members (Amason, 1996; Amason & Sapienza, 1997; Jehn, 1997; Jehn & Mannix, 1997; Schweiger, Sandberg, & Ragin, 1986). A possible explanation of this result is that low levels

of Task Conflict reflect a positive uniformity in the opinions and points of view of members, which leads to a higher, better and more synchronized performance because there is less disorder in the opinions of team members.

Implications

Practical Implications

Based on the results obtained, it is possible to extract some implications that can be applied. Analyzing the effect of Team Virtuality dimensions have on Team Performance, we can conclude that the communication between teams can be done through virtual tools and can be effective. The distinction between virtual teams and face-to-face teams is becoming unreal and artificial (Cohen & Gibson, 2003; Griffith & Neale, 2001) and therefore each team can be described through its level of virtuality. A team that mostly uses virtual tools to communicate does not necessarily have to get weaker team outcomes than teams that communicate face-to-face. However, teams must have an increased attention when choosing the virtual tools that they will use so that they have the greatest informational value transmitted.

Conflict is part of the environment and functioning of a team. Cohen and Bailey (1997) define team process as interactions like communication and conflict that occur between members of a group and external ones. But to get the best out of the conflict and actually be considered positive for the functioning of a team, it is necessary to manage the whole situation. Then arises the importance and relevance of the role of a good leader. There are many things a leader can do to ensure the proper functioning of a team and, in this case, manage task conflict level. One of the things we realized from this study is the importance of the communication channels used by the teams. It is of extreme importance to ensure that the communication channel chosen to transmit messages or information is the most appropriate one. Knowing how to combine virtual tools with face-to-face communication (if possible) is crucial to keep the team functioning well and ensure that all members are aligned with colleagues. We can see through table 2 the importance that the informational value of virtual tools has on the team's performance. When communication has to be through virtual tools, it is important to choose those that can pass more informational value such as videoconferencing.

Limitations and Future Research

Many studies have been conducted to understand how Team Virtuality impacts Team Performance. This study is interesting by including the mediating role of Team Entrepreneurial Passion, a variable rarely used in this context and with much a lot to discover; and also for considering the influence that Work Conflict may have as a moderator of the relationship between TEP and Team Performance. However, this study has some limitations that should be recognized and that can point towards future research directions.

A common limitation in team studies is the sample size. With a sample size of only 93 answers, it is challenging to achieve results that are reliable due to the low statistical power. Also, the fact that the data collection was launched during the Covid-19 pandemic brought more complications to the collection of responses. The participants may have been concerned about the new reality and ensuring that their work went as normally as possible, which led to a low response rate. Initially the objective was to collect answers by team, and questions with team scales were administered. By collecting responses per team, we wanted to have an overview of how the team worked and understand if the responses of each member went against the answers from other team members. However, it was not possible to collect so many answers per team, as a lot of individuals reached out didn't answer to the questionnaire on time. Therefore, data was collected and analyzed at an individual level, which brought some limitations to the study.

The aim of this study was to highlight Team Virtuality effect on Team Performance. Work Conflict was used to moderate the relationship between TEP and Team Performance, but no moderating variable was used to moderate Team Virtuality and TEP. It may be of interest to take into account that there are variables that probably impact the relationship between Team Virtuality and TEP. Affective-emotional variables, like Work Conflict, would be interesting to include in the model. In particular, Work Engagement, which is considered an important construct for the performance and well-being of employees (Halbesleben, 2010) that the more engaged they are, the higher their self-efficacy levels (Bakker, 2009) and organizational commitment (Demerouti, Bakker, De Jonge, Janssen, & Schaufeli, 2001) would be an interesting variable to analyze. Future studies could complement the findings of this research through also taking into account the follow-up of these teams. All data were collected at the same time and all are self-reporting, which allows us to conclude that the response a member gives today may not be the same in the future. It would be important and valuable to track these teams and understand if there are any differences in the answers. A suggestion would be to send

the same questionnaire again 6 months later to the same participants, understand if there are differences in the answers and analyze them.

It is important to understand the impact that something so modern and present has on team performance. Something like virtuality and frequency with which teams have used virtuality in recent years makes this study extremely relevant. The present research examined the relationship that exists between Team Virtuality and Team Performance through the influence of Team Entrepreneurial Passion, in start-ups. By exploring the different dimensions of virtuality it is possible to conclude that they all directly influence team's performance. We also concluded that the extent of use with which teams use virtual tools has a positive impact on performance, which can be explained by the positive effect this use has on TEP. We can also conclude that the relationship between TEP and Team Performance is positively impacted by low levels of task conflict.

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VI. Annexes

Annex A

The present questionnaire aims to collect data for two studies about Virtual Team Effectiveness. Due to the Social Isolation we are all facing now, as a consequence of COVID-19, it is of even major importance to analyse Virtual Team Effectiveness. Both are part of an investigation for a Master Thesis; therefore, your answer is very important to us.

Please select the answer that best suits you, as there are no right or wrong answers. Your sincere answers are crucial to guarantee the quality of the study. Your responses will be anonymous and kept confidential and will only be used for academic purposes. Your participation is voluntary. You have the right to withdraw at any time during the questionnaire, for any reason and without prejudice. However, we kindly remember you that your participation is extremely relevant to the success of the study. If you wish to contact the Researchers of the study to discuss this investigation, please send an e-mail to patricia_costa@iscte-iul.pt or mm.iscte@gmail.com.

Thank you very much for your participation!

Do you feel comfortable in answering to this questionnaire in English?

- Yes
- No



Name of the Start-Up

(If you do not wish to share with us the name of the Start-Up, please decide with your team a symbolic name and make sure you and your colleagues provide us the same name)

How many employees are there in the Start-Up?

How many members are there on your team?

0 5 10 15 20 25 30 35 40 45 50

Team Members



Before social isolation due to COVID-19, how many members of your team worked in the same space/building?

0 5 10 15 20 25 30 35 40 45 50

Co-Located Team Members



Before social isolation due to COVID-19, how many members of your team worked in a different space/building from you?

0 5 10 15 20 25 30 35 40 45 50

Not Co-Located Team Members



At the moment, how many members of your team work in the same space/building from you?

0 5 10 15 20 25 30 35 40 45 50

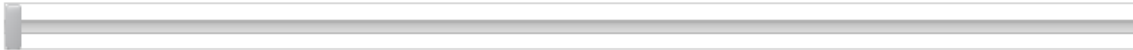
Not Co-Located Team Members



At the moment, how many members of your team work in a different space/building from you?

0 5 10 15 20 25 30 35 40 45 50

Co-Located Team Members



In your perception, how much did the way your team worked before social isolation has changed?

0 10 20 30 40 50 60 70 80 90 100

Team Work



PART I

This part of the questionnaire aims to analyze the extent to which you and your team members use virtual tools to coordinate and execute team processes. Please answer honestly and spontaneously and select only one option.

a) To what extent does our team use virtual tools (e.g. email, videoconferencing and work tools such as Google docs, Trello, calendar, etc), to:

	1 - not at all	2 - very little	3 - to some extent	4 - to a great extent	5 - to a very great extent
1. Identify the key challenges we expect to face	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. Ensure that everyone on our team clearly understands our goals	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. Develop an overall strategy to guide our team activities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. Seek timely feedback from stakeholders (e.g., customers, top management, other organizational units) about how well we are meeting our goals	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. Monitor important aspects of our work environment (e.g., inventories, equipment and process operations, information flows)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6. Assist each other when help is needed	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7. Coordinate our activities with one another	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8. Deal with personal conflicts in fair and equitable ways	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9. Encourage each other to perform our very best	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
10. Keep a good emotional balance in the team	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

b) When our team uses virtual tools to interact, how often does the chosen virtual tool allow for:

	1 - not at all	2 - very little	3 - to some extent	4 - to a great extent	5 - to a very great extent
11. Understanding others through voice inflection, intonation, body language and/or facial and non-verbal expressions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
12. Knowing immediately what others think about expressed ideas	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
13. Using physical, verbal and visual symbols for communicating (e.g. nodding, a touch in the shoulder, vocal tone, a smile)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
14. Using written or typed symbols for communicating	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
15. Conveying data that is important for team effectiveness	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
16. Conveying data that is important for team efficiency (e.g. expressing agreement is faster with a nod than with typing "I agree with you")	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
17. An efficient transmission of the message, because the tool matches the needs of the message (ex. showing a picture is more efficient than verbally describing a painting)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

c) When our team uses virtual tools to interact, how often does the chosen virtual tool allow for:

	1 - not at all	2 - very little	3 - to some extent	4 - to a great extent	5 - to a very great extent
18. The message to reach recipients as soon as it is sent	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
19. A fast response to the message	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
20. Quick feedback	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
21. The transmission of messages from multiple individuals simultaneously	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
22. The sender to rehearse or fine tune a message before sending	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
23. Carefully crafting a message before transmission to ensure that its meaning is expressed precisely	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
24. The sender to consider possible interpretations of the message beforehand	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
25. The revisiting of prior messages	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
26. Reexamining and consider previously sent content	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
27. Revisiting a discussion for developing understanding	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

PART III

This part of the questionnaire aims to analyze the extent to which the productive output of a team meets or exceeds the performance standards of those who review and/ or receive the output.

	1 - very poor	2	3	4	5	6	7	8	9	10 - superb
1. The amount of work the team produces.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. The quality of work the team produces.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. Your overall evaluation of the team's effectiveness.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please consider the next scale for the following statements.

	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
4. I wouldn't hesitate to continue working with this team.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. If it was possible, I would have changed teams.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6. If I had the opportunity, I would rather work with another team instead of this one.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7. This team could work really well in future projects.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

PART IV

This part of the questionnaire aims to analyze how passionate is the team for specific activities or roles within entrepreneurship, regardless of how any particular team member experiences his or her individual passion for such roles.

	1 - strongly disagree	2	3	4	5 - strongly agree
1. For us, it is exciting to figure out new ways to solve unmet market needs that can be commercialized.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. Searching for new ideas for products/services to offer is enjoyable to our team.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. We, as a team, are motivated to figure out how to make existing products/services better.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. Scanning the environment for new opportunities really excites my team.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. Inventing new solutions to problems is an important part of who we are as a team.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6. Establishing a new company excites us.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7. Owning our own company energizes my team.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8. For our team, nurturing a new business through its emerging success is enjoyable.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9. Being the founders of a business is an important part of who we are.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
10. We really like finding the right people to market our product/service to.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
11. Assembling the right people to work for our business is exciting.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
12. Pushing our employees and our team to make our company better motivates us.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
13. Nurturing and growing companies is an important part of who we are as a team.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

PART VI

This part of the questionnaire aims to measure how do you feel at work. Please answer honestly and spontaneously and select only one question.

	Never	Almost never	Rarely	Sometimes	Often	Very often	Always
1. At our work, we feel bursting with energy.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. At our job, we feel strong and vigorous.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. We are enthusiastic about our job.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. Our job inspires us.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. When we arrive at work in the morning, we feel like starting to work.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6. We feel happy when we are working intensely.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7. We are proud of the work that we do.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8. We are immersed in our work.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9. We get carried away when we are working.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

PART VII

This part of the questionnaire aims to measure conflict in your work unit. Please answer honestly and spontaneously and select only one option.

	1 - None	2	3	4	5 - A lot
1. How much friction is there among members in your work unit?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. How much are personality conflicts evident in your work unit?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. How much tension is there among members of your work unit?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. How much emotional conflict is there among members in your work unit?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. How often do people in your work unit disagree about opinions regarding the work being done?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6. How frequently are there conflicts about ideas in your work unit?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7. How much conflict about the work you do is there in your work unit?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8. To what extent are there differences of opinion in your work unit?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please provide us with this demographic information:

Industry

Start-Up Stage

- Stage 1: Formation - This stage can be characterized as turning a venture or idea into a business entity, getting the organization going, and building support in terms of financial backing to bolster products and business concepts.
- Stage 2: Early Growth - In this stage, the business establishes itself through strong positive growth with a commercially feasible product and/or marketing approach.
- Stage 3: Later Growth - In this stage, growth begins to slow.
- Stage 4: Stability - A small business at this stage is stable and operates much as a small bureaucracy.
- No information

Start-Up Age

- < 6 months
- [6 months – 1 year[
- [1 year – 2 years[
- [2 years - 3 years[
- [3 years - 4 years[
- [4 years - 5 years[
- > 5 years
- No information

Age (your age)

Sex

- Male
- Female
- Prefer not to answer

Level of Education

- High School
- Bachelor's Degree
- Master's Degree
- PhD
- Other