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**Fostering Work Engagement in
Geographically-Dispersed and Asynchronous Virtual Teams**

By

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Purpose:

This paper explores the factors that enable work engagement to develop when asynchronous communication is used in virtual team (VT) projects.

Design/Methodology/Approach:

Using a qualitative approach, a longitudinal study of an eight-month long VT project was carried out. Data collected included an extensive email archive, project documentation, observation of team meetings and interviews with project members and leaders.

Findings:

The findings show that VT leaders can actively promote work engagement through the effective use of resources along with appropriate practices that foster its development. They can also sustain and nourish work engagement throughout the different phases of the VT lifecycle project.

Research limitations/Implications:

The study has examined work engagement in asynchronous mediated settings. Future work should involve studying the effect of synchronous communications on work engagement within VTs .

Social Implications:

It is posited that developing work engagement is not a one-off practice, but instead, requires ongoing effort that should be evident and supported across the different phases of the VT lifecycle.

Practical Implications:

Organizations that are interested in promoting effective virtual work practices need to train VT managers on how to keep VT members engaged throughout the various phases of the VT project.

Originality:

The study extends theory on VT leadership in asynchronous settings, whilst it also carries forward an important debate on work engagement in alternative, non-permanent, work settings.

Introduction

The increasing popularity of freelance and independent workers (Barley et al., 2017) combined with a growing business interest to access talent on demand (Al Ariss *et al.*, 2014), has accelerated the need for organizations to manage dispersed, known as virtual, teams. These teams are attractive to organizations and individuals as they promote flexibility in terms of both work schedule and location (Jimenez *et al.*, 2017). Such work conditions mean that virtual team (VT) leaders are increasingly faced with challenges not just to do with the geographically distributed and often culturally diverse nature of their team membership, but also having to manage these whilst knowing that the individuals involved are only there on a temporary basis, they might have not worked for the organization before and/or may not be involved in any future organizational activity or project. The dispersed aspects of these teams also mean that these are primarily technology-mediated and that face-to-face communication is scarce, thereby adding to the challenge faced by VT leaders (Avolio *et al.*, 2014). We take the position in this paper that in order to overcome these challenges, and contribute to project success, organizations need to develop work engagement in the short time span of a VT lifecycle and in a technology-mediated environment.

The study is driven by an interest in examining how work engagement develops in geographically dispersed VTs, echoing Gilson *et al.* (2015), who have called for research on members' engagement within the virtual context. As work engagement is a motivational concept that draws on self-involvement, an understanding of VT members' engagement in the geographically dispersed setting will contribute towards improving VT effectiveness. Research has shown that new ways of doing work (i.e. flexible working in terms of schedule and location) have a positive impact on employees' daily engagement at work (ten

Brummelhuis *et al.*, 2012). Extant literature, however, has not taken into account that when employees work remotely, the types of technologies used to support their communication may vary. Some technologies involve collaborative and real-time meeting tools, whilst others comprise asynchronous communication, such as emails. Despite the increasing popularity of emerging technologies, empirical studies show that email continues to be the dominant means of communications (Jung and Lyytinen, 2014) even when organizations operate in the high-tech sector (Lee *et al.*, 2018). Based on this, our research question is: *How can VT leaders contribute to VT members' engagement when their work highly depends on asynchronous communication media?*

In this study, we draw on a qualitative longitudinal dataset that involved investigation into the factors that facilitated work engagement of the dispersed and temporary members of a VT, which communicated primarily using asynchronous means. Using this longitudinal case, we examine VT leaders' practices in developing VT members' engagement. In the following sections, literatures on VTs and work engagement are discussed. Subsequently, the details of our longitudinal qualitative case study approach and our findings are presented.

Virtual Teams, Membership and Leadership

Despite virtual work having been categorised in different ways ranging from simulation work (Bailey *et al.*, 2012) to crowdwork (Deng and Joshi, 2016), the primary focus still remains on VTs. Virtual or dispersed teams remain increasingly common within organizations owing to advancements in communication technologies (Jimenez *et al.*, 2017). Undeniably, an underlying assumption of VTs is that these are technology-mediated, with emerging technologies being highly collaborative and synchronous (Gilson *et al.*, 2015). Technologies,

both synchronous and asynchronous, enable organizations to gather dispersed talent regardless of location and distance. The opportunity that such technological capabilities provides is that VTs are not just responsive to organizational needs, for they can also bring creativity due to the unique skills and knowhow that is brought together to fulfil project requirements (Chamakiotis and Panteli, 2017). Further, owing to their project nature, VTs predominantly represent a temporary form of work arrangement, where members come together for a period of time or until project completion and then disassemble. Accordingly, VTs promise flexibility and responsiveness to organizations by shifting the work on an as-needed basis where knowledge and skills are.

Despite the opportunities they bring to both organizations and individuals, VTs are not without challenges. They have been linked to factors that contribute to limited cohesiveness, known in the literature as discontinuities (Chudoba *et al.*, 2005). Such discontinuities include differences in national and organizational cultures, language, technology and work backgrounds. In a working environment, where team members rely heavily on technology for their communications and interactions, with work being done with ‘strangers’, individuals may experience feelings of discomfort and anxiety stemming from poor team relationships (Lee-Kelley, 2006). Key challenges therefore that are derived from this type of temporary form of organization are those of integration and coordination (Sarker and Sahay, 2004), not only between the contingent, temporary workers and permanent employees, but also between the contingent workers themselves, who come with different work and organizational backgrounds. Added to these, there are challenges with trust building and conflict management that stem from having to rely on technology-mediated communication (Panteli and Duncan, 2004). Given team members’ dispersion, face-to-face communication is often not possible and

some VTs will never have collocated interactions (Bailey *et al.*, 2012). The lack of social presence, which is often associated with the virtual setting, can constrain the ability among the individuals involved to develop appropriate relationships and inter-dependencies (Sivunen and Nordback, 2015).

Within this context of varied discontinuities, VT leaders become pivotal. Extant literature has described them as boundary spanners, bridge makers and blenders (Zander *et al.*, 2012), as they play a key role in promoting motivation and commitment among their geographically dispersed members (Zander *et al.*, 2013). A popular topic in this field of research, is with regards to effective leadership practices (e.g. Avolio and Kahai, 2003; Cordery *et al.*, 2009; Liao, 2017). For example, Sivunen and Nordback, (2015) identified characteristics of effective VT leadership, positing that a successful VT leader adopts a wide range of behavioural repertoires ranging from mentoring and caring for members to clarity in communication and asserting authority. Similarly, other studies have emphasised the need to develop trust and cohesion as well as promoting coordination and collaboration in the dispersed and mediated environment (Liao, 2017).

Along this line of inquiry, some researchers have introduced VT lifecycle models (e.g. Zander *et al.*, 2013), which identify the different phases that VTs go through up until project completion. For each of the phases, practices are presented that are found to be suitable for meeting the needs and acknowledging the characteristics of the VT members. The practices that leaders should adopt during each phase are put forward in terms of facilitating interactions, developing synergies and improving the overall team performance (Zander *et al.*, 2013).

According to this literature, the core phases of the virtual project lifecycle often include the: welcoming, performing and wrapping up phases. In the welcoming phase, the general purpose or mission of the team is clarified, with resources and roles being allocated. Due to members' diversity and dispersion, it is important at this early phase to embark on a socialisation process so as to promote synergies and shared understanding of the goals of the team. During the performing phase, team members are expected to complete the tasks assigned, attend meetings, report back to the team and share their work in progress with other members. The performing phase also involves the team moving the goal forward and meeting deadlines. Once action is underway, the VT leader should provide the team with feedback about the task and its performance. Motivating the team should occur on a continual basis. Moreover, there should be an acknowledgement and communication of what has been completed towards reaching the team's goals during this phase. Finally, during the wrapping up phase the overall successes of the team are celebrated and members are prepared for redeployment to another team.

The extant literature has emphasised the role of the VT leader in all three phases of the VT lifecycle. For example, the ability to develop trust has been shown to be an essential characteristic of effective VT leaders (Liao, 2017; Panteli and Tucker, 2009; Germain and McGuire, 2014). What is lacking from these models is an understanding that VT membership is often dynamic, with members joining and exiting at different project phases, whilst it also comprises differing contractual arrangements. That is, while some members may be employed by the sponsoring organization on a permanent basis, others join as contingent workers on a temporary contract. Nevertheless, all dispersed members, regardless of the nature of their contract and role on the project, need to be 'on the same boat' in order to identify effectively with the project (Webster and Wong, 2008: 58). Further, in VTs, work has to progress fast and

coordination is needed to achieve project deadlines, thus cooperation among members and leader's support become necessary for task accomplishment (Liao, 2017). In this paper, we extend research in this area by examining how in an asynchronous mediated work setting, leaders can develop VT members' engagement. Fostering work engagement has previously been identified as a challenge in VT effectiveness due to the lack of face-to-face communication (Cordery and Soo, 2008). In what follows, the concept of work engagement is explored and its relevance to the VT context discussed.

Work Engagement

Work engagement is “a positive, fulfilling, work-related state of mind that is characterized by vigor, dedication and absorption” (Schaufeli *et al.*, 2002: 74). Vigor is related to high levels of energy and mental resilience while working. Dedication refers to strong involvement, and absorption refers to being fully concentrated on one's work. Hence, work engagement is characterised by a high level of energy and strong identification with one's work and it has been linked to important outcomes such as improved productivity, better performance and organizational success (Hopstaken *et al.*, 2015; Hopstaken *et al.*, 2016; Bakker *et al.*, 2014; Christian *et al.*, 2011).

Within the extant literature on work engagement, researchers have examined which job resources and characteristics contribute to the engagement of mostly full-time employees in large, well-established organizations (e.g. Bakker and Demerouti, 2008; Schaufeli and Salanova, 2007). These job-related factors are framed around the JD-R model, which explains how the interaction between job resources and demands impact on the engagement of employees (Bakker and Demerouti, 2017; 2008; Bakker *et al.*, 2014; Christian *et al.*, 2011;

Fairlie, 2011). In particular, the JD-R model is based on the conservation of resources theory (Hobfoll, 1989), which argues that individuals protect the resources they value the most and when these are threatened (or lost), they seek to replace them. Thus, engaged employees are more capable of dealing with the imbalance between resources and demands in their work (Hakanen and Roodt, 2010). Also, the employees who have job resources to help them to deal with the demands of their job are more likely to experience work engagement (Bakker and Demerouti, 2007; 2017; Rapti et al., 2017). Existing research has shown that job autonomy, feedback, job control and social support are key job resources that positively contribute to the engagement of employees in permanent work settings and organizations (e.g. Bakker *et al.*, 2004; Bakker and Demerouti, 2017; Breevaart *et al.*, 2014; Fairlie, 2011; Salanova and Schaufeli, 2008).

Our study draws upon the above literature in order to examine how work engagement develops within the temporary VT context, echoing Auer *et al.* (2014), who argued that there is a need to understand engagement in non-traditional organizational settings. By doing so, the study extends research in the area of work engagement, whilst it also contributes to the literature on VT leadership by showing how leaders enable the development of work engagement within the VT setting.

Research Site and Methods

For our study, the qualitative case study approach (Pan and Tan, 2011) was adopted, which involved carrying out a longitudinal investigation of a VT project, called here, for confidentiality reasons, TempD. Longitudinal research has been used in several studies on VTs

ranging from experimental studies involving university students (e.g. Cheng et al, 2016, 2017) to real life business settings (e.g. Chamakiotis and Panteli, 2017). We deployed the three main data collection methods in qualitative research, namely, interviews, participant observation and documentation analysis (Bryman, 1989). We examined the communications, which were predominantly asynchronous for the whole duration of the project. This involved a period of eight months of data collection and included the selection and recruitment of VT members as well as the final handover to the Client on completion of the project. TempD was one of many projects managed by Omikron.

Omikron is a project management company which is responsible for managing client projects remotely, mainly in the engineering industry. Omikron itself is led by two directors, the Managing Director (MD) and Executive Director (ED), these being the only permanent Omikron staff. All the other employees were project specific and therefore, had temporary contracts. The word 'employees' here is used to denote paid rather than permanent workers. As with other Omikron projects, bounded temporality, geographic dispersion, technology-mediated communication and independent contractors were the key characteristics of TempD. The project itself involved the development of an organization-wide data warehousing system and aimed to integrate systems and data that were traditionally disparate in different country-offices. The MD was keen to make the project successful, not least because she could see opportunities for additional contracts with the same Client that was a large engineering firm with international presence.

For the specific project, Omikron first recruited three VT coordinators whose role was to manage small groups of project members, one data quality coordinator and one systems quality coordinator. Next, drawing from its existing web-based skills database as well as advertisements, it selected individuals to join as project members. Despite some of the TempD members having previously worked for Omikron, none of them had worked together and hence, they did not know each other. All were independent contractors equipped and organized to work remotely, primarily from their home. As they all had access to email, this medium became their main means of communication. This should not be surprising, for as mentioned above, email remains the most dominant communication medium in business activities world-wide (Lee et al, 2018). Further to email, the contractors were expected to use the Omikron's online collaborative tool for accessing and uploading files. Omikron's MD served as the facilitator and the overall manager of TempD throughout its duration. In particular, she set up TempD by organizing the project's online platform, providing training, allocating the selected contingent employees into the sub-teams and assigning them with tasks. Omikron's ED was responsible for liaising with the TempD Client.

The authors were given access to all Omikron MD's emails regarding the project, including email exchanges with potential recruits and communications with team members as well as the VT coordinators. Collectively, email conversations amounted to more than 60,000 words, with the longest email having 830 words, being sent by the Omikron MD during the performing phase to provide directions about the steps required for one of the main TempD tasks. These email conversations provided sufficient representation of the experiences of the VT members during TempD as they covered communications throughout the duration of the project and included all project members. The dataset was complemented with two face-to-face project

team meetings, which gave the authors the opportunity to observe the team interactions in real time as well as record team members and VT coordinators' questions and discussions on the progress of the project. The meetings also enabled the authors to have informal conversations about the project experience with several team members. In addition, and in order to further triangulate the email dataset, seven semi-structured interviews took place with the MD, ED, task quality coordinator, a VT coordinator and three project team members. The interviews were representative of the different groups of TempD members and took place at the end of the project. As such, they had a reflective character, whereby the participants were asked to reflect on the project, their relationship with other members and to identify the factors that facilitated their team working in the virtual environment. Due to the geographical dispersion of the participants, the interviews took place by telephone, recordings of which were then transcribed. Two team members who were only contactable by email were sent a list of questions about their TempD experience, to which they replied by email. Despite their limited richness, these interviews provided useful information and interesting quotes on the participants' experiences during the project.

Analytical approach

The data analysis which relied on an iterative reading of the data collected (Yin, 2011), took place in two core stages contributing to identifying the phases of the VT lifecycle and related engagement themes respectively. In the initial stage of data analysis, open coding was carried out by one of the authors and an independent researcher, which led to the identification of 38 recurring codes. Further reading of the data by the first and second authors resulted in their being organized into phases according to the VT project lifecycle: Setting Up phase (month

1), the Working phase (months 2-7) and the Concluding phase (month 8). These phases are consistent with the literature on the VT lifecycle (e.g. Zander *et al.*, 2013). Following this, we positioned the initial 38 codes within the different phases. As a result, the Setting Up phase had 11 codes, including recruitment, project information, contract agreement, welcome messages and training. The Working phase had 23 codes, including task allocation, deadline reminders, encouragement, data management, specific and general feedback as well as withdrawal. The Concluding phase had four codes and covered: thanking contractors, completed project, overall feedback and future involvement. This categorisation of the emerging codes into the three phases contributed to the reassembling of the data (Yin, 2011).

Following this, we proceeded to the second stage of the analysis by examining patterns of work engagement in each of the phases of the VT lifecycle. This stage of the analysis was influenced by the driving question of the study and it was focused on identifying and understanding manifestations of work engagement within TempD. Our analysis at this stage was informed by the JD-R theory and sought to identify factors that might have contributed to work engagement in each of the above phases. JD-R provided a useful lens through which we could study work engagement as it provided indicators for possible drivers of engagement in the virtual asynchronous context of the project. Collectively, from this stage of the analysis, three work engagement-related themes emerged, namely, developing engagement, supporting engagement and nourishing engagement. These subsequently contributed to identifying strategies for VT leaders in supporting work engagement within the different phases of the VT lifecycle. Figure 1 shows our analysis process.

Insert Figure 1 about here.

Findings

We structure this section based on the three recurring themes that emerged from the analysis, each of which relates to the different VT lifecycle phases. In this section, we present the core practices that were adopted to support the engagement of the contracted employees recruited on the TempD project, with case study evidence. Given the characteristic of our setting, the MD's role was found to be particularly important, as this was the person the workers were in constant contact with for support whilst accessing resources and feedback.

Setting Up Phase: Developing VT Members' Engagement

The nature of Omikron's structure meant that TempD relied on contracted members. Therefore, during the setting-up phase potential TempD members were identified and contacted by the Omikron MD, who checked their availability to work for the project. The contractors were asked to state how many hours per week they could work on it. As one contractor explained: *"I never have 'all my eggs in one basket' and at any one time I am working for three to six companies..."* (Helen, project member - interview).

When each potential member's availability was agreed, a sample data file was sent to those contractors who were interested in joining TempD, so that they could understand the nature of the task before formally committing to the project. Providing clarity on the project requirements, notably nature and complexity of task and time demands, was important for the

MD who sought to recruit individuals who would give the time and effort required, as well as for the individuals involved:

“I personally have worked on a contingent basis for almost 20 years and am very used to working independently. I like to meet at least one manager before I start work on a project and it is very important to have access to someone via email or telephone, so that any questions can be asked and answered before time is wasted doing the wrong thing. It is important to have clear instructions for the work required” (Helen, project member- interview).

“[MD], got your email thanks. That’s great news and of course I’m keen to get started. Apart from anything else, this will be my first project working within Omikron and will expand my view of things I would be grateful if you could fill me in on how this will translate into work targets and of course how the finances will work out... Again, great news and I am looking forward to getting started” (Patrick, email).

These examples show that in addition to providing clarity on the project requirements, financial remuneration was vital for developing work engagement on this dispersed project. The MD herself made reference to pay as a way of promoting interest in and engagement with it: *“I think the secret is simply to think about the end, or the financial reward...”* (MD’s email).

Our findings identify two key job resources within this phase, namely, pay and job autonomy (as shown in the examples above) which were particularly suitable to individuals who had a preference for home-working and flexibility. Further, the TempD project members were found to have valued clarity on the project nature and requirements as well as clear communication mechanisms, before the contract was signed. Thus, during the Setting Up phase, our data

provided evidence of contractors' enthusiasm when being asked to participate in the project and their expression of interest in joining TempD. Following negotiations, 25 individuals were recruited to work on the project and a formal contract was signed. Three smaller groups were formed, each being led by a VT project coordinator (Henry, Patrick, Lindsay). Before moving to the Working phase, a face-to-face meeting, which most of the recruited members attended, was organized. During this meeting, the structure and organization of the project were explained and members had the opportunity to meet each other as well as finding out more about Omikron. Those who couldn't attend the meeting were briefed by email or a telephone call.

Working Phase: Supporting VT members' engagement

The Working phase lasted for six months, during which, TempD members worked towards the integration and completion of a global data-warehousing system by bringing together previously dispersed files hosted in different systems. Work files were distributed according to the country of origin, first, by the Client to Omikron and then, by the MD to the three VT coordinators, who subsequently disseminated them to their subgroup members, depending on their availability to work on them.

Early on in this phase, it became clear that the tasks involved were more ambiguous and time-consuming than anticipated by the contractors and managers alike. In particular, the task complexity varied and it was not consistent with the low complexity of the original sample file that had been distributed in the previous phase. In some cases, files were incomplete whilst product names and acronyms were not easily recognisable, thus making the data difficult to

sort and categorise appropriately. Consequently, the project members and managers started to realise that they needed more time than was initially expected to finish their assigned tasks:

“...Doubly infuriating when you think you've cracked one and after deciding on a meaning and using it for several records you finally find the phrase spelt out in full and it is different from your deduction, so you have to go back and change them all. ...” (Kate, quality coordinator, email).

Similarly, Patrick (VT coordinator, email), summarised the difficulties faced as follows:

“...The consensus at the moment is that these files are at least 50% more difficult than before. I suppose, given that, the larger files may add to the psychological burden. What I don't understand is why did we think they were going to be easier than the original files?”. The same VT coordinator acknowledged that meeting the deadline was impossible and mentioned that even a specific highly dedicated member in his group recognised that: *“...even the usually positive John [project member] admits that.”*

Despite these difficulties, the Client insisted that deadlines needed to be met as initially agreed, which resulted in the MD constantly sending reminders of the approaching deadlines:

“We are still hoping to meet our first target, so please do everything in your combined powers to speed up the process of delivery of completed files...” (MD, email).

“...Horrible I know, but if we don't deliver the goods on time then no matter how near perfect it might be, it doesn't count! Sorry I have to keep emphasising this, as there is nothing I would like better than the detective chase to find out what was really meant in the first place, but I'm afraid it is using valuable time ...” (MD, email).

Therefore, the pressure became high for all project participants. For the VT members, in particular, this led to further frustration as their payment depended on the number of files they completed and this situation ultimately contributed to the withdrawal of some:

“Can you please remove Becky Tans from your group mailing...She may join in again at a later date, but can't manage it just now and would rather be taken off the list in the short term” (MD's email to all TempD members).

Similarly, the following email by the MD was sent to all VT coordinators only a couple of weeks after the official commencement of the project, showing that a member had chosen to limit her time and responsibilities on it:

“Just a little note to say that Lin [technology quality coordinator], although she will remain on the mailing list, she is not to be considered 'available' for queries, in the way that the rest of you are!...” (MD's email to all TempD members).

Within this work environment of changing membership and tight deadlines, members' engagement in the project became even more critical for the effective completion of the project. With this in mind, three resources in the MD's communications with members are identified as having contributed to keeping work engagement going during the challenging Working phase, namely support, praise and pay, which are summarised in Table 1.

Insert Table 1

First, the MD supported her staff during the difficult task by showing empathy in the form of her own dissatisfaction with the complexity and poor quality of the Client files. In several of her communications to the TempD members, she openly acknowledged the difficulties experienced: *“Yes, these [files] are much more difficult than the earlier ones. The Client must be made very clearly aware of this. ...”*.

“... We will try to give you as much help and feedback as possible on these, as they do sound a bit tricky again. ... Anyone who is having difficulty, who hasn't spoken to us about it, be assured you are not alone” (MD's email).

“... if you think you are being flooded out with too many, or look like running out, send an email SOS to me ...” (MD's email).

Second, the MD continuously encouraged and praised contractors: *“Well done – your productivity is exemplary – thank you...”* (MD's email to all TempD members).

“... the Client is being alarmingly complimentary and understanding at the moment – so well done everyone. They are very pleased with how things are going and realise that they have been getting terrific value for money!” (MD's email to TempD VT coordinators).

“We have had the first reports back from the Client with the following comments: ‘We know that this is a difficult assignment. Thank you for your patience and support’. This is from a guy who does not throw compliments around lightly ... so, I think we can be reasonably encouraged! They have also told us that high command believes we're doing a really good job, which of course we are! So, thank you all very much, and keep up the good work!...” (MD's email to all TempD members)

Third, in her email communications, the MD reminded members of the financial rewards from continuing to work on the project:

“...Please do not to be despondent! There is light at the end of the tunnel, and it would not be my favourite occupation either, so the least one can say is that it is providing a bit of extra pre-summer income meantime...”

“...so, if you are keen to bump up your income before the end of this month, please let your VT coordinator know....”

Evidence of the vigor and dedication dimensions of work engagement were shown through the contractors’ energy, enthusiasm to work on the project, ensuring deadlines were met, asking for more work and seeking help when problems arose (Table 2). One pertinent example, was the case of Lindsay, a VT coordinator, who sent the following e-mail: *“... I’m always happy to share my experience for free (Maybe this is why I make such pathetic profits as a consultant?) So, if it looks useful, I’ll let everyone know...”*. The examples of the absorption dimension of work engagement are about attention to detail and meeting the deadlines, the details of which are also provided in Table 2.

Insert Table 2 about here

Various project members provided support to each other during this phase. For example, one VT coordinator, *Patrick*, emailed the MD: *“I know the deadline is tomorrow - but if we can help with any others please simply send them and I'll get them attended to”*. Furthermore, work engagement can be evident when one is involved in wider organizational matters (Rich et al., 2010). The case of Nancy, a project team member, who emailed the MD and Kate to make a recommendation on how to improve the work process, is an example of this type of involvement (Table 2). It follows that the Working phase of the project provided opportunities for work engagement to develop, which were primarily driven by the MD, but they were also reinforced by the members themselves through their own vigor and dedication in the project.

Concluding Phase: Nourishing VT Members' Engagement

During the Concluding phase and up until project completion, the MD continued to put efforts into keeping members engaged. For example, three weeks before the end of the project, she tried to re-energise the members with an email sent with the subject: *“‘A bit of fun!’*. *“You will find circulating a little bit of 'end-of-term' fun. Inspired by some Irish authors who compiled a book for charity by writing a chapter each ...and I thought it would be fun to see if a TempD story would run in a similar way. The rules are as below, from which you'll see that it's not to be a major opus - one short paragraph each will do - but you can let your imagination soar!! Have fun!! Be as creative as you like! We'll send everyone a copy of the completed version.”*

She also showed appreciation towards the engaged members, notably those who stayed with the project until the end. This is shown in the email with the subject: *“The end ..?”*, which the MD sent to all TempD members: *“Thank you all for your continuing endurance and*

performance! We are having a Project Management meeting [...] tomorrow... We will issue a summing up report (plus 'the Story' with a bit of luck!) early next week, to give you all a feel for how it has gone, and where we are going next, and when."

Following this, the very last email sent by the MD to all project members was:

"Well, well - the last file very nearly became the lost file, but did finally reach a conclusion!! ... So, very well done all - I certainly thoroughly enjoyed all your contributions... Anyway, enjoy, as I did - have a good summer, and hope that we'll be in touch again very soon".

The Concluding phase of the project, therefore, shows that contractors' engagement was not only acknowledged but also nourished. By keeping all members informed about the delivery of the last file as well as arranging a meeting to reflect on the project and to identify lessons learned, whilst also introducing 'a bit of fun', the MD was nourishing her members' engagement with a project that was more complex and demanding than anyone had anticipated. For Omikron itself, contractors' engagement needed to be sustained beyond the lifespan of TempD. It was within its interests as a project management company to recruit contingent workers for successfully managing its projects:

"... in the wider context, is establishing a credibility level for Omikron as a remote working company, which hopefully will be in all our interests for the future, and lead to a lot of the more interesting jobs being considered possible for remote working" (MD, email to all).

By using the aforementioned strategies and tactics, work engagement was able to develop in the VT project using predominantly asynchronous communication. Figure 2, summarises the

strategies and tactics adopted for each of the three engagement-related themes that emerged from the case study.

Insert Figure 2 about here

Discussion

With organizations increasingly relying on VTs, the aim of this paper has been to examine how their leaders can effectively foster work engagement among the often temporary and contingent workers that join VT projects. It is argued that without members' engagement, it would be difficult to meet project deadlines, thereby jeopardising project completion and success. Unlike collocated project teams, VTs interact in a technology-mediated environment with limited, if any, face-to-face communications. Add to these communication challenges, when asynchronous media are used, then it becomes even more challenging to maintain information richness and the high levels of responsiveness required when deadlines are tight.

In the VT context, the chosen communication media can potentially play a key role in fostering work engagement, as it is through them that information sharing, clarifications, and overall communication support takes place. Our study has shown that even in asynchronous mediated environments, it is possible to develop work engagement. Furthermore, in the VT context where the employees involved are on a temporary contract, such as in the case of TempD, engagement needs to be cultivated by both the independent contractor and VT leader. Both of these stakeholders have an interest in developing work engagement: first, contractors want to leave a good impression so that they are called back for future projects; even though in this

context work engagement appears to be project specific, it may have a long-lasting effect on the future relationships between the contractors and organization involved. Second, VT leaders need to have engaged members so that the project is successfully completed. Our findings show that work engagement takes a processual character and is cultivated during the various phases of the project lifecycle.

The study makes three contributions to the literature which are explained as follows.

The first contribution is that it adds to the literature on VTs by showing how work engagement is developed with predominantly asynchronous technologies. The findings show that developing work engagement is not a one-off practice. That is, because of members' dispersion and technology mediated communication, developing work engagement needs to be an ongoing effort that should be evident and supported across different phases. Appropriate information and financial provision as well as encouragement and feedback, are resources that are deemed imperative for the development of work engagement in the context of temporary virtual projects. The supportive behaviour of the VT leader has been found in our case to be a significant resource in fostering work engagement during the various phases of the project, especially during the Working phase, when pressure to complete the tasks was extremely high. With the VT leader's support, VT members were kept motivated, interested in and informed about the progress of the project. This is consistent with a study conducted in a telecommuting work setting by Madlock (2013), who found that the empathetic and motivating language used by supervisors influenced employee attitudes, including job satisfaction and organizational commitment. Further, our finding of the constant feedback in the form of direction giving and

showing empathy, reinforces the notion of there being a positive link between social support (i.e. support from supervisors and co-workers) and engagement (Bakker *et al.*, 2004; Fairlie, 2011; Nahrgang *et al.*, 2011; Albrecht, 2012). Effective VT leaders do not just develop engagement at the start of the project through the provision of financial resources, but also support it and keep it going during the challenging Working phase as well as nourishing it in the concluding one. This finding is consistent with earlier literature, which has suggested that during the last phase of wrapping up the project, VT leaders can play an important role in celebrating its completion and success as well as in reassigning their team members to new work (Zander *et al.*, 2013).

A second contribution of the study is in the field of work engagement. Earlier research has presented work engagement as one of the challenges that VTs experience (Cordery and Soo, 2008). Despite this, our study shows that work engagement can actually be developed in VTs extending in this way the JD-R model to the virtual work environment. In doing so, it identifies two core resources in a virtual work setting: pay and leader support. Both of these resources were prevalent throughout all phases of the VT lifecycle project. Further, our findings show that the three dimensions of work engagement, vigor, dedication and absorption, change at the different phases of the project lifecycle, which has not been shown in the literature before. In particular, in our case study, the vigor and dedication dimensions of work engagement continued throughout the lifecycle of the project. During the Setting Up phase, the individuals were eager, energetic and dedicated to becoming a project member, whilst in the Working and Concluding phases, the vigor and dedication were about completing the work as well as meeting the project deadlines. Moreover, the absorption dimension of work engagement was

observed during both the Setting Up and Working phases, whereby the individuals were highly focused on the details of their job and the project.

In addition, a third contribution of the study is on the role of technology in fostering the engagement of VT members. Due to the dispersed nature of the team, our case study showed that technology became pivotal in VT communications throughout the different phases of the project. As indicated, the primary means of communication was email. That is, despite its text based and asynchronous nature, email was the primary means through which the VT leader informed, updated and motivated the temporary members. This kept them engaged, despite the task complexities and uncertainties. The findings show that it is not the type of medium, but rather, how this is used that matters in dispersed teams and that even a simple medium, such as email, can be used for creating engaged employees. Nevertheless, future research should examine how VT leaders can use other technology-mediated communication tools for developing employee engagement among dispersed employees.

Implications for Practice

This study has several practical implications. Organizations that are interested in promoting effective virtual work practices need to train individuals, who will act as VT leaders to understand the importance of their role in keeping project members engaged throughout the various phases. Whilst this should be a requirement for all project managers, we posit that VT managers face an additional challenge when compared to traditional project leaders in that their interactions with members are technology mediated. That is, their choice of communication media could play a key role in maintaining frequent and quality communication among the

dispersed members. Virtual workers, including independent contractors, often work in isolation and thus, rely on effective communication from their dispersed team members and managers for effective performance. With the popularity of independent contractors in the gig economy, how organizations communicate with their new workforce would be a determinant not only of their successful relationship, but also productivity.

Furthermore, the outcomes of this study indicate that some practices that are important for building engagement in more traditional work settings remain important in the virtual environment. For instance, organizations can create an engaged workforce by offering their employees clearly outlined tasks linked to specific tangible outcomes the organizations want to achieve. Kahn (1990), in his study, found that clearly outlined tasks and autonomy create a greater sense of meaningfulness, which subsequently impacts on engagement. Last, organizations should reward their virtual workers and provide them with feedback, while the project lasts as well as at the end of. These resources will facilitate virtual workers in engaging in their work and hence, becoming strongly involved in it.

Conclusions and Implications for Further Research

In this paper, we have bridged some of the gap in the extant literature by showing how work engagement is promoted, supported and nourished throughout the different phases of a VT project. By so doing, our study carries forward an important debate on work engagement in alternative, non-permanent work settings whilst it also contributes to the literature on VT leadership by identifying relevant strategies that can be adopted in fostering work engagement within the temporary and asynchronous context of a VT project.

We readily acknowledge that the study is based on a single project, where whilst the inter-dependency between members and VT coordinators was high, the inter-dependency between members themselves was medium to low. Accordingly, with the recognition that some VT projects may be highly collaborative (Maynard and Gilson, 2014), future research should include the study of VT projects where task inter-dependencies among members are high. Furthermore, research should investigate the effect of synchronous communication on work engagement in the VT context as well as whether different VTs require different engagement strategies. Such teams might include those that are organized on an ad hoc and spontaneous basis as a way for providing fast response to emergency situations or VTs that consist of permanent staff employed in traditional, collocated organizations. Last but not least, it is also important to consider different types of contingent workers, such as knowledge and casual workers.

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Table 1. Leader Support

Drivers of Engagement	Explanation	Illustrations from MD:
Support	Availability of MD support to all TempD members	<i>“... if you think you are being flooded out with too many, or look like running out, send an email SOS to me ...”</i>
Praise	Acknowledgement of effort and hard work	<p data-bbox="823 1037 1390 1126"><i>“Well done – your productivity is exemplary – thank you...”</i></p> <p data-bbox="823 1346 1390 1485"><i>“...The Client is being alarmingly complimentary and understanding at the moment - so, well done everyone! ...”</i></p>
Pay	Use of financial rewards to encourage engagement	<i>“...so if you are keen to bump up your income before the end of this month, please let your project manager know”</i>

Table 2. Vigor-Dedication-Absorption Examples from TempD

Explanation	Examples
Desire to keep working, asking for more work	<p>John, project team member: <i>“I’ve run out of files. Can I have some more?”</i></p> <p>Tom, project team manager: <i>“... I will send some more to John on Sunday night which is when he has said he will run out.”</i></p>
Immediate attention to a problem	<p>Kate, quality manager: <i>“...is this an error or is it a straggler that's surfaced that you want done? If so I can have it attended to first thing. ...”</i></p> <p>MD: <i>“ ... Another point to be aware of ... but it seems better to get them [translated files] out quickly so people can use them as the files whizz (!) by rather than save them up until a moment which may be too late. ...”</i></p>
Enthusiasm to help with the project, and attention to the deadline	<p>Lindsay, project team manager: <i>“ ... I’m always happy to share my experience for free (Maybe this is why I make such pathetic profits as a consultant?) So, if it looks useful, I’ll let everyone know. ...”</i></p> <p>Patrick, project team manager: <i>“ ... I have uploaded the last of the 12 files in ones and twos as undernoted. I know the deadline is tomorrow - but if we can help with any others please simply send them and I’ll get them attended to. ..”</i></p> <p>MD: <i>“... As you have only effectively one editor to manage at the moment (I don’t count John [project member], as he marches on regardless!...”</i></p>

Make suggestions for improving processes

Nancy, project team member: *“Hi all, I would like to make a suggestion and would welcome any comments. It seems to me that it would be a good idea that when someone makes a query about a translation, the answer to that query is sent to everyone on the list...”*

Figure 1: The Analysis Process

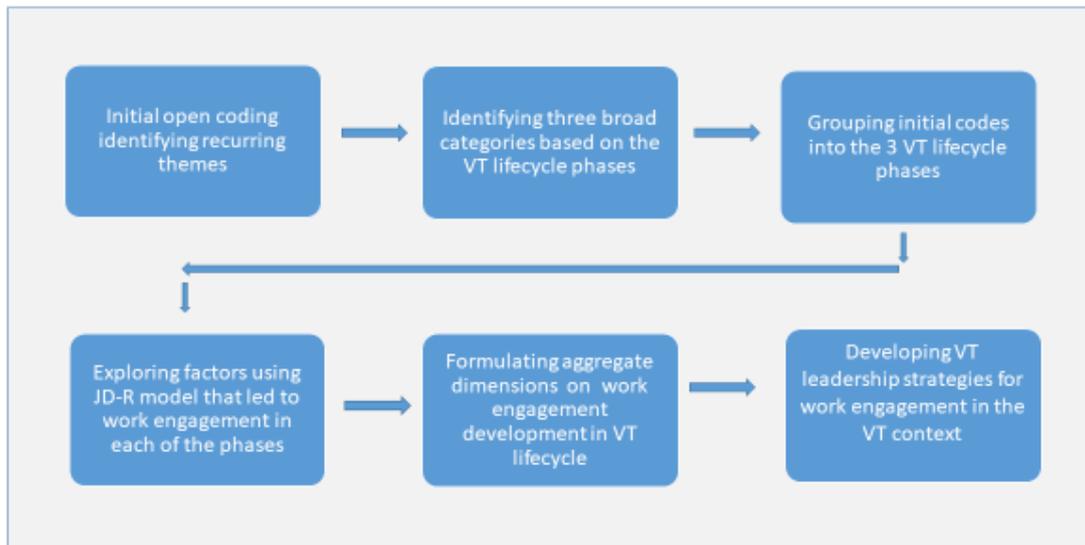


Figure 2: Strategies and Tactics