



LEARNING ENTREPRENEURSHIP THROUGH VIRTUAL MULTICULTURAL TEAMWORK

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ABSTRACT

Aim/Purpose	This paper explores the benefits and challenges of experiencing virtual multicultural teamwork in order to learn entrepreneurship.
Background	Entrepreneurial eco-system usually requires working in international, virtual multi-cultural diverse teams. Higher education institutes are trying to educate future generation of entrepreneurs, coping with challenges derived from the virtual work and cultural diversity. Prior research shows that traditional learning is not effective for entrepreneurial education.
Methodology	An explorative study was conducted based on the BIPA project, a Bavarian (German)-Israeli Partnership Accelerator, which was held four times between 2015 and 2017. The project aims to experience entrepreneurial virtual multicultural teamwork via co-creation of tailored-solutions for challenges of German or Israeli corporates. Retrospective interviews with participants were held after finishing their mission, and analyzed.
Contribution	This research contributes to the body of knowledge about multicultural diverse participants in virtual entrepreneurial environments, in order to work together. This situation raises new challenges, due to the combination of multicultural teamwork and the use of virtual communication.
Findings	The multicultural teamwork was a trigger to participate, specifically in the context of entrepreneurship studies with those two cultures, German and Israeli, which were found by participants as complementary, stimulating and fruitful, although challenging. Through experience, participants improved their entrepreneurial skills and mindset. The major teamwork challenges that were found included conflicts concerning free-riding, as well as communication challenges, due to virtual, language and cultural communication competencies.

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Recommendations for Practitioners	At a practical level, results can be useful for global companies, showing the benefits of virtual teamwork of employees in different locations, both in terms of reducing expenses and improving innovation. Moreover, managers can motivate employees by highlighting personal benefits, such as cultural awareness and improving their entrepreneurial skills and mindset. In addition, faculty may use this kind of experience to enhance entrepreneurial learning skills and mindset.
Recommendations for Researchers	At the theoretical level, this research advances the body of knowledge of entrepreneurial multicultural teamwork in a virtual environment. In this research, the teams worked for a short time together (14 weeks) and had a week of face-to-face interaction with their team members. It is recommended to examine long-term teamwork, and how it affects teamwork challenges, as well as entrepreneurial learning. This research found the combination of German-Israeli cultures as stimulating entrepreneurial teamwork. It is recommended to examine other cultural combinations in teams, in order to be able to generalize findings.
Impact on Society	Understanding the needs, benefits, and challenges of entrepreneurial multicultural teams working in a virtual environment can be useful to current global entrepreneurial eco-system, which is commonly using this kind of teamwork.
Future Research	This study included teams from two cultures: German and Israeli. Research must be expanded to different cultures and to groups compounded from more than two cultures. Moreover, the combination of virtual communication and face-to-face meetings in different milestones during the timeline of the teamwork must be further examined, especially in longer projects.
Keywords	entrepreneurship, entrepreneurial learning, multicultural, virtual, global teamwork

INTRODUCTION

The entrepreneurial ecosystem enables individuals, enterprises, and society to combine effectively for the cause of generating economic wealth and prosperity (Albornoz & Rocco, 2009; Prahalad, 2005; Suresh & Ramraj, 2012). Entrepreneurial ecosystems act as catalysts in speeding up the economic progress of stable economies. The cultural impact on developing entrepreneurial ecosystems cannot be ignored, as the individual's personality and behavior, political and legal system, and social norms are intertwined with their national culture (Lee & Peterson 2000).

Opportunity recognition has been defined as the ability to identify a good idea and transform it into a business concept that adds value and generates revenues (Lumpkin & Lichtenstein, 2005). A. Shane and Venkataraman (2000) define the field of entrepreneurship as the scholarly examination of how, by whom, and with what effects, opportunities to create future goods and services are discovered, evaluated, and exploited. Contrary to a "market research" view, where the environment is the source of opportunities, opportunities come from the "mind" of the entrepreneurs, where the entrepreneurs not only introduces the new product or service, but also creates or changes the market conditions of the product or service (DeTienne & Chandler, 2004).

Today's global entrepreneurial ecosystem involves working in international, multicultural teams, communicating virtually to share knowledge (Duus & Cooray, 2014; Klitmøller & Luring, 2013). Research shows that cultural diversity in entrepreneurial teams creates challenges during teamwork process (Lans, Gulikers, & Batterink, 2010), generating differences across national and regional boundaries (Mueller & Thomas, 2001). Thus, if participants' 'diversity perspective' is that multiculturalism in their teamwork is a learning resource, it enhances the adaptation for changes and redefining goals, which are perceived as entrepreneurial learning skills and mindset (Ely & Thomas, 2001; Moberg et al., 2014). Cultural Intelligence (CQ), a person's knowledge of how cultures are similar and

different, enhances the likelihood that individuals, on international assignments, will actively engage in experiential learning (Ng, Van Dyne, & Ang, 2009).

Research commonly refers to entrepreneurial learning as learning how to discover, evaluate, and exploit opportunities (Albornoz & Rocco, 2009; Lumpkin & Lichtenstein, 2005; Politis, 2005; Rae, 2005; S. A. Shane, 2003; S. Shane & Venkataraman, 2000). Opportunity identification is a competency that can be developed, and the entrepreneurship education is an appropriate venue for developing the skills necessary to improve the ability to identify opportunities (DeTienne & Chandler, 2004). Higher education institutes are trying to educate future generation of entrepreneurs to the global entrepreneurial ecosystem. Research of entrepreneurial learning shows that traditional teaching methods contribute only to a limited extent to student learning for entrepreneurship, and an experiential learning model is more effective (Allen & Van der Velden, 2009; Gibb, 2002; Rae, 2005).

Following prior research, this paper aims to examine higher-education entrepreneurial learning in the context of entrepreneurial multicultural virtual teamwork, as perceived by the team members, participants of a learning experience, conducted on BIPA, a German-Israeli academia-industry cooperation. The rest of the paper contains a review of relevant theoretical background, introduction to the BIPA project, the research questions and the methodology used. Further, the results and discussion are presented.

THEORETICAL BACKGROUND

ENTREPRENEURIAL LEARNING

The ASTEE consortium (Moberg et al., 2014), a European funded project, defined entrepreneurial learning as “*content, methods and activities supporting the creation and development of knowledge, competences and experiences that make it desirable and feasible for students to initiate and participate in entrepreneurial value creating process.*” Opportunity recognition refers to the heart of entrepreneurship. It is defined as the ability to identify a good idea, which can be transformed into a business concept that adds value and generates revenues (Lumpkin & Lichtenstein, 2005; S. Shane & Venkataraman, 2000).

Research of entrepreneurial learning shows that traditional teaching methods contribute only to a limited extent to student learning for entrepreneurship (Allen & Van der Velden, 2009; Gibb 2002), and should be taught through experiential learning. Based on Kolb’s 4 stages cycle (1984) of experiential learning (experience, reflection, conceptualization, test), Rae (2003) has developed an experiential learning model for entrepreneurship, suggesting the use of an opportunity-centered learning theory. Opportunity identification is a competency that can be developed, and the entrepreneurship education is an appropriate venue for developing the skills necessary to improve the ability to identify opportunities (DeTienne & Chandler, 2004). Cultural Intelligence (CQ), a person’s knowledge of how cultures are similar and different, enhances the likelihood that individuals, on international assignments, will actively engage in experiential learning (Ng et al., 2009).

Rae (2003) encompasses four interconnected learning processes: (1) exploring the opportunity; (2) relating the opportunity to personal goals; (3) planning to realize the opportunity; and (4) acting to make the opportunity happen. The writing of a business plan is one possible outcome of this process. In order to conceptualize an entrepreneurial learning model, Rae (2005) suggests a triadic model, consisting of three major factors:

- (1) personal and social emergence - self-perception as an entrepreneur, including life and family experience, education and career formation, and social relationship
- (2) contextual learning - use knowledge of industry or community to recognize innovative opportunities
- (3) negotiated enterprise - engaging with other people to exchange ideas and strategies.

The ASTEE consortium report (Moberg et al., 2014) composed and validated a comprehensive tool in order to measure the influence of entrepreneurship learning. The suggested tool includes five dimensions of entrepreneurial learning: (1) entrepreneurial skills, (2) entrepreneurial mindset, (3) entrepreneurial knowledge, (4) connectedness to education, and (5) connectedness to future career. The entrepreneurial skills dimension covers both cognitive and non-cognitive skills. It can be defined as the ability to create something new with value by devoting the necessary time and effort, assuming the accompanying financial, psychic and social risks, and receiving the resulting rewards of monetary and personal satisfaction and independence (Hisrich, Peters, & Shepherd, 2002). Therefore, the entrepreneurial skills dimension includes creativity, planning, financial literacy, marshalling of resources, managing ambiguity and teamwork. The entrepreneurial mindset dimension, which includes entrepreneurial attitudes, is described as the ability to sense, act, and mobilize under uncertain conditions (Haynie, Shepherd, MosaKowski, & Earley, 2010; Ireland, Hitt, & Sirmon, 2003). The entrepreneurial mindset dimension is measured by the validated core self-evaluation factors of mindset towards finding a solution to a problem, self-evaluation in terms of success and attitude towards starting a business, which together capture the individual's core sense of being able to perform challenging tasks.

NATIONAL CULTURE CHARACTERISTICS

According to Hofstede's definition (1980) culture is "the collective programming of the mind, which distinguishes the members of one human group from another...the interactive aggregate of common characteristics that influence a human group's response to its environment". Hofstede's research (1984) explores the level of cultural "values" form a national culture level (the society), and not the individual. He identified four dimensions (later broadened to five) of culture: power distance, individualism, masculinity, uncertainty avoidance and long-term orientation (Hofstede, 1984, 2001). Studies on individualism (the individualist-collectivist dimension) have focused on group-work related attitudes and behaviors (Hofstede, 1993; Trompenaars, 1994). Hofstede (1993) stated that some differences between individualist and collectivist cultures are related to attitudes toward group work.

Hall and Reed Hall (1990) identify three primary dimensions of cultural diversity: Context, Space, and Time. In high Context cultures such as Japanese, Arab, and Mediterranean people rely on extensive information networks in close personal relationships with high context. In contrast, in low Context cultures such as American, Swiss, German, and Scandinavian people compartmentalize personal relationships and work. Communication addresses strongly work-related and goal-related issues in business. Thereby, communication between people from different contextual backgrounds might suffer from misunderstanding. Moreover, Space deals with visible physical boundaries of territoriality and personal space. American and northern European people define their territory largely and label objects as their properties. Additionally, they keep personal distance and rely strongly on auditory screening and silence. For example, order, rules, distinctly defined tasks and precisely defined schedules are dominant themes in Germany. Southern European, Arab, African, and Mediterranean people, who enjoy intimate conversation and perceive space by all senses, are quite the reverse. Monochromic Time contains behavior paying attention to, and working only on one thing at a time. Northern European and American people treat time in a linear way and tend to structure procedures into scheduled segments. At the opposite end of the spectrum, polychromic cultures such as Mediterranean and Arab people place emphasis on completing human transactions and work within simultaneous occurrences of many issues combined with a great involvement with people.

MULTICULTURAL TEAMWORK CHALLENGES

Cultural diversity in student teams can be defined (Marquardt & Horvath, 2001) as:

- (1) a collaboration of two or more individuals from different cultural or national backgrounds,
- (2) who have been assigned to interdependent tasks and are jointly responsible for the final results,
- (3) who see themselves, and are seen by others, as a collective unit embedded in an academic environment,

(4) who manage their relationships within a certain educational environment

Research of multicultural teams shows both negative and positive effect of cultural diversity on team in three potentially opposing ways (Mannix & Neale, 2005, Stahl, Mäkelä, Zander, & Maznevski, 2010). These negative effect relates social theories, which show that people are attracted to working with and cooperating with those they find similar in terms of values, beliefs, and attitudes, and that they tend to categorize themselves into specific groups and others as outsiders, and they treat members of their own group with favoritism, and may judge “others” according to group stereotypes. People coming from different cultural value systems may attribute different meanings to the same managerial approach and react to it in different ways, which may hamper entrepreneurship, and impact team-members’ willingness to cooperate (Cox, 1993; Dzionek-Kozłowska & Rehman, 2017; Erez & Early 1993; Mannix & Neale, 2005; Mueller & Thomas, 2001; Stahl et al., 2010). The positive effect suggests that diversity brings different contributions and benefits to teams. A diverse team covers a broader territory of information, taps into a broader range of networks and perspectives, and can have enhanced problem-solving, creativity, innovation, and adaptability. (Behfar, Kern & Brett, 2006; Bouncken, 2004; Bunderson & Sutcliffe, 2002; Ely & Thomas, 2001). Moreover, research shows that multicultural experience benefits both individual-level creativity, and collective creativity (Tadmor, Satterstrom, Jang, & Polzer, 2012).

Ely and Thomas (2001) suggest that the impact of cultural diversity on group functioning is influenced by the group’s “diversity perspective”: group member’s normative beliefs and expectations about the cultural diversity and its role in their work group. The characteristics of diversity perspectives include the rationale that guides people’s efforts, normative beliefs about the value of cultural identity at work, and beliefs about what constitutes progress toward the ideal multicultural work group. A diversity perspective can be both explicit, as in verbal or written statements or policies, and implicit, as in the unstated assumptions that underline the way a person manages his or her subordinates or the way a group structures its work. Ely and Thomas (2001) argue that diversity perspectives are classifiable into three types: (1) integration and learning, (2) access and legitimacy, and (3) discrimination and fairness. They found that only the integration and learning perspective provided the rationale and guidance needed to achieve sustained benefits from diversity. They conclude that if the team’s diversity is seen as a learning resource for the team, it enhances adaptation of change and re-defining goals, markets and products. In relation to entrepreneurial multicultural teams,

Bouncken’s (2004) research of diversity in new venture teams reflects on Hall and Reed Hall’s typology (1990), and concludes that multicultural teams take advantage of, but also suffer from cultural diversity. He found that cultural diversity enhances communication in teams, as it seems to be related to creativity. In relation to multicultural teamwork process, Bouncken’s (2004) core findings were that:

- (1) Monochromic, low-context, and high-space entrepreneurs prefer strongly structure tasks and tend to deny positive effects of cultural diversity
- (2) Polychromic, high-context, and low space entrepreneurs tend to supply external contacts to team and have propensity to stimulate communication procedures

The research of Popov et al. (2012) explored challenges that are inherent in multicultural student group work in higher education, and found differences between students from different cultural background, in their perception of those challenges. Specifically, students with more collectivist values tend to emphasize culture-related group-challenges, whereas students with more individualist values tend to emphasize general group-level challenges (‘cross-cutting challenges’). Lans, Oganisjana, Täks, and Popov (2013) summarized the experiences of interdisciplinary, intercultural student groups at a European Summer School for developing entrepreneurial competence. By analyzing student reflection, from an individual learner perspective, they identified the following entrepreneurial learning outcomes as critical: knowledge on entrepreneurship (e.g. business economics), entrepreneurial behavior and skills (e.g. proactive behavior, entrepreneurial self-efficacy), and increased entrepreneurial

intentions. They identified five main factors, which play a role in working in heterogeneous student groups:

- (1) Embracing member's knowledge, experience and skills - refer to the management of differences within the group. The knowledge, experiences and skills, which students bring to the group, allow them to create something new by interacting across traditional disciplinary boundaries. Differences can benefit entrepreneurial outcomes by providing a wide range of prior knowledge and a rich source of entrepreneurial opportunities. In addition, students with no entrepreneurial experience or nascent entrepreneurial intentions can learn from those who already have an entrepreneurial background. However, if differences rise and are not managed adequately, they can lead to group problems, lack of mutual understanding, decentralized thinking and divergence in the collaborative learning process and activities.
- (2) Communication – allows reaching full comprehension among all group members, as well as collecting and disseminating necessary information related to the product of group work. Communication challenges arise from mainly uneven levels of common language (e.g. English) proficiency but also culturally conflicting communication styles, for example more direct versus indirect manners of communicating (Behfar et al., 2006). Larkey (1996) contends that cultural markers can also be found through dialects of languages, which others may or may not recognize as culturally linked.
- (3) Problem solving and decision-making – entrepreneurial projects are essentially about problem solving and decision making in largely open-ended tasks of a substantial size and with considerable complexity (Nab, Pilot, Brinkkemper, & Ten Berge, 2009). Students from different cultures can differ in their perspectives on group work and their procedural knowledge, i.e., assumptions about how to collaborate and learn together. Students from groups composed of people from collectivist cultural traditions would display more cooperative behavior than groups composed of people from individualist cultural traditions (Behfar et al., 2006; Cox, Lobel, & McLeod, 1991).
- (4) Conflict management – Entrepreneurship is about taking risks, experimenting and pushing boundaries, but at the same time, working towards mutual goals and resilience, all of which can create tension and conflict. Further, from a diversity perspective, what is seen and felt as conflict can differ considerably among the members of a group. For some students, conflict may be a natural source for learning, while for others it is an impediment and therefore something to be avoided at all times (Popov et al., 2012). Jehn (1995) defined two kinds of conflicts: relationship related conflict and task related conflict. Cultural differences add complexity to relationship conflicts (Ren & Gray, 2009), which could be mitigated if multicultural teams develop a global identity (Harush, Lisak, & Glikson, 2018). Relationship related conflict may arise due to attitudinal problems such as dislike, mistrust and lack of cohesion, and task related conflicts might occur because of a clash of opinions with respect to the tasks, such as adhering to timelines or different attitudes towards deadlines. In groups performing non-routine tasks, disagreements about the tasks may be beneficial, but contrary to expectations, norms encouraging open-discussion of conflict are not always advantageous. Free-riding, or social loafing, is “a decrease in individual effort due to the social presence of the other persons” (Latané, Williams, & Harkins, 1979), and is connected with a reward structure, stating that students' performance and preferences depend, among other things, on group criterion reward structures (Johnson, Johnson, & Stanne, 2000)
- (5) Leadership – The global context demands that multicultural leaders have unique characteristics that enable them to influence follower's perceptions and emerge as masters of the global environment. A multicultural team leader should display confidence in the complex global environment, in order to adjust communication within the entire team, and help to create shared understanding and trust among team members. Entrepreneurial leadership requires someone who is engaging, proactive, willing to take risks, and has the achievement motivation to pursue ideas with passion. Watching for such inspiring individuals while forming groups appears to be the key for

facilitators (Lans et al., 2013). Research suggests that individuals who scored high in all three individual global characteristics: cultural intelligence (CQ), global identity and openness to cultural diversity, are more likely to emerge as global leaders (Earley & Ang, 2003; Lisak & Erez, 2015; Shokef & Erez, 2006).

Stahl et al. (2010) argue that team member's satisfaction from multicultural teamwork process, may be derived from the facing and successful handling of the inevitably demanding challenges that are inherent in multicultural teams.

INTERCULTURAL COMMUNICATION COMPETENCIES

A large body of literature exists on differences in communication styles across cultures (Baker, 2015; Gudykunst, Ting-Toomey, & Chua, 1988; Gudykunst, Ting-Toomey & Nishida, 1996; Hall, 1990; Spencer-Oatey & Stadler, 2009). Hall (1990) contends that cultures based on elaborative, low context communication styles, prefer explicit rules and short-term interpersonal connections, while cultures that use a more personal and high-context communication, prefer less verbally explicit messages and act based on an overall situation. They are usually prone to providing less written and formal information, and decisions are taken on personal relationships (Behfar et al., 2006; Hall, 1990). Moreover, as English is the lingua franca for almost all multicultural groups, limited comprehension between group members occurs due to different English proficiencies and great variation in accents, can be challenging (Davidson & Ward, 1999).

Chen and Starosta (2000) define "intercultural communication competence" as the ability to effectively and appropriately execute communication behaviors that negotiate each other's cultural identity or identities in a culturally diverse environment. The Global People Competency Framework (GPCF) (Spencer-Oatey & Stadler, 2009) is a research based set of competencies derived from actual authentic intercultural situations in professional contexts. It was developed out of the experiences of staff at British and Chinese universities working on collaborative projects, and the purpose was to draw out learning from their experiences that could be useful for people embarking on future international collaborations. Their research identifies and illustrates additional four clusters of competencies, most notably for handling communication and relationships: (1) language adjustment and stylistic flexibility; (2) building of shared knowledge; (3) active listening and learning to be open; and (4) structuring and highlighting information. In regards to building of shared knowledge, early research, Adler (1997) and Cox, et al. (1991) specify that collaborative partners with different cultural backgrounds may not benefit from sharing of "culturally divergent knowledge" because of lack of shared understanding of discourse rules and norms and underestimation of the role of clarity. Specifically to multicultural student teams, Briguglio (2006) adds that, while students are equipped with knowledge on cultural and linguistic matters, they may not have the necessary intercultural communication skills to enable them to work effectively in multinational teams. More recent approach towards intercultural communication (Baker, 2015; Brighton & Rudenko, 2016), involves a move away from cross-cultural comparisons, where cultures are treated as discrete entities that can be compared with each other, and focus on the "inter-" or "trans-" cultural dimension, where there is no clear language-culture-nation correlation, particularly in global uses of English. Intercultural communication should be expanded beyond its everyday usage, to include knowledge, skills, and attitudes and to be used as a more holistic alternative to intercultural competence. Specifically for teamwork projects that involve innovation, establishing effective internal communication and shared vision for innovation is challenging when team-members represent different nations, as national diversity created different expectations for communication practices (Gibson & Vermeulen, 2003) and reduces identification with the team as a whole (Gibb, 2002).

VIRTUAL TEAMWORK

Research of virtual teams use various definitions. Most studies (Gibson & Gibbs, 2006; Hertel, Geister, & Konradt, 2005) focus on 4 characteristics: (1) geographic dispersion, where at least one of

the team members works at a different location, or at a different time zone; (2) communication is based on an electronic technology (email, fax, phone, video conference, etc.); (3) structural dynamism; (4) national diversity. Each hinders innovation through unique mechanisms, many of which can be overcome by creating a psychologically safe communication climate. Kirkman and Mathieu (2005) suggest a different focus and define the degree of team's virtual connection in three dimensions: (1) the extent to which team members use virtual tools to coordinate and execute team processes; (2) the amount of informational value provided by such tools; and (3) the synchronicity of team member virtual interaction. Schweitzer and Duxbury (2010) found that although the three dimensions were not highly inter-correlated, they are significantly correlated to variables that have been previously linked to virtual team's effectiveness. This indicates that higher degrees of virtuality are associated with perceived decreases in the quality of team interactions and performance.

Technology enables the communication between the team members, and allows monitoring the performance (Hertel et al., 2005). However, other research found that technology either impairs, disrupts, or damages teams' performance (Schweitzer & Duxbury, 2010; Van der Kleij, Schraagen, Werkhoven, & De Dreu, 2009) or has no effect on virtual teams' performance (Han, Hiltz, Fjermestad, & Wang, 2011). Moreover, electronic communication technology was found to cause lags in information exchange, a greater occurrence of misunderstandings, a reduction in information seeking attempts, and incoherent messages (Andres, 2002)

Shachaf (2008) found that cultural diversity had a positive influence on decision-making and a negative influence on communication. He suggested that the communication technology mitigates the negative impact of cultural diversity and enables its positive impact, helping team-members bridge space and time differences, and e-mails enable members to overcome differences in verbal and non-verbal communication. Although research on virtual technologies show that it may be effective in overcoming geographic and time barriers, they do not necessarily make cultural and social conflicts disappear (Cho & Lee, 2008; Espinosa, Delone & Lee, 2006). Moreover, research comparing virtual teams and face-to-face teams found that individuals in virtual teams had lower average performance, less cohesion and satisfaction, more time spent on the task, and more free riders than in face-to-face teams (Pillis & Furumo, 2007). Krumm, Kanthak, Hartmann, and Hertel (2016) compared characteristics of virtual and traditional business teams. They found that leading and deciding (initiating actions, taking responsibility, setting goals, etc.), and analyzing and interpreting (analytical thinking, taking on new technology quickly, effectively communicating in writing), are more important in virtual teams.

THE BIPA PROJECT

The selected research field was the BIPA project, a Bavarian (German)-Israeli Partnership Accelerator, a unique cooperation between the entrepreneurship hub of Munich University of Applied Materials and the entrepreneurship hub of The Academic College of Tel-Aviv Yaffo. The BIPA project enabled participants to experience entrepreneurial multicultural teamwork via co-creation of tailored-solutions for innovation challenges raised by German or Israeli corporates ("customers"). The challenges were in the fields of Industry 4.0, The Internet of Things, Automotive/Smart Mobility, Healthcare/MedTech, and IT-Security. Overall, the project was designed to enable and foster entrepreneurial learning of participants, through experiencing a virtual multicultural teamwork process. The mission of virtual multicultural teams was to ideate, conceptualize, and market-validate entrepreneurial tailored-solutions for the proposed challenges.

Aspiring entrepreneurs, high education students, and recent graduates from academic institutions in Bavaria-Germany and Israel, were selected to take part in the BIPA project. BIPA academic mentors and project managers identified candidates for participation by publishing material about the BIPA project and a call for participation, in various academic institutes, referring them to the BIPA Website for more information (<http://www.sce.de/en/netzwerken/international/bip-accelerator.html>). Participants were selected by BIPA academic mentors, using the following criteria: speciality (computer

science/information system/business management), entrepreneurial orientation (entrepreneurial experience was considered an advantage), availability to the 15 weeks project, including travel to the other country, sufficient English level, good inter-personal and teamwork abilities, where experience in cross-cultural teams was considered an advantage.

BIPA project was held four times between 2015 and 2017 (4 sessions), each starting with a one-week face-to-face workshop for all the participants, which was held in Munich or Tel Aviv, in a traditional learning setting. This training consisted of lectures about entrepreneurial ideation process and cultural awareness and visits to customers' offices. Following, the participants were split into heterogeneous multicultural groups for 14 weeks of a virtual acceleration, ending with a final online presentation to the customer. In each session, there were four to six groups of four participants. During the workshop phase, participants were asked to rank their preference of team-members and corporate challenge, but the final decision was of mentors and project managers, using the following criteria: both cultures in each team, gender equality in teams (as much as possible), and combination of different disciplines (technical and business).

RESEARCH QUESTIONS

This research aims to explore the effect of multicultural teamwork process on teams-member's perspective of their individual entrepreneurial learning, in consequence of their participation in the BIPA project. The research questions will be analyzed in three levels: individual level, team level and combination. Lee, Kwon, Shin, Kim, and Park (2018) suggested that team level challenges influence individual level challenges and the behaviors and attitudes of the team's members. While individual level challenge refers to the individual's recognition of challenge experienced from firsthand interpersonal interactions with a specific team member, team level challenge refers to the team members' recognition of challenge existing in the team as a whole, regardless of the focal individual's involvement. In addition, while individual-level challenge is affected by interpersonal characteristics team-level challenge is influenced by team characteristics.

Personal level -

RQ1: What factors did participants from German and Israeli cultures perceive they have added to their personal entrepreneurial learning, in the context of multicultural entrepreneurial teamwork?

RQ2: How differently did the participants from each culture perceive their personal entrepreneurial learning factors?

Team level -

RQ3: Which team level challenges were perceived by participants as specific to the context of entrepreneurial learning in multicultural teams?

RQ4: Which teamwork challenges were perceived as inherent to virtual teamwork?

Combination level -

RQ5: How did participants perceive the combination of German and Israeli cultures in a team, as contributing to their entrepreneurial learning?

METHODOLOGY

This research is an explorative case study of German-Israeli entrepreneurial teams, participating in the BIPA project, aiming to explore the effect of multicultural virtual teamwork process on team-members' perceived entrepreneurial learning. BIPA was not a traditional teacher-student setting, but a practical learning through multicultural entrepreneurial teamwork, focusing on process and learning from each other's experience.

This research focused on the teamwork processes aimed to understand the factors that affect perceptions of participants, from different cultural backgrounds, on their entrepreneurial learning, through

experience in multicultural open innovation teams. As this is an explorative study, a qualitative research method was selected.

Accordingly, the research is based on:

- The ASTEE measuring tool (Moberg et al., 2014), which was used for analyzing personal entrepreneurial learning outcomes, by two of the five dimensions proposed in the report, which are relevant to this study: entrepreneurial skills and entrepreneurial mindset.
- The importance of teamwork challenges for each culture was analyzed using Lans et al.'s (2013) factors. The five main factors which play a role when working in heterogeneous student groups were used in order to analyze entrepreneurial learning challenges: (1) embracing member's knowledge, experience and skills; (2) communication; (3) problem solving and decision making; (4) conflict management; and (5) leadership.
- Differences in perceptions between cultures were analyzed using Hall and Reed-Hall's (1990) three primary dimensions of cultural diversity: Context, Space, and Time. According to Hofstede (2001), individual versus collectivist scale ranges from 0-100, with 50 as a mid-point. A country with the score under 50 is labeled as "Collectivist" and above 50 as "Individualist". (2018). Hofstede's score (Hofstede, 1984) of individualism of the two participating cultures are Germany – 67 and Israel -54, so the difference is not significant. Therefore, the discussion regarding stereotypical cultural behavior was analyzed according to Hall and Reed Hall (1990).

This research and analysis focused only on the virtual multicultural teamwork phase. A 'psychologically safe communication climate' (Gibson & Gibbs, 2006) was created, using a support of online mentoring for each team and suggested online collaboration tools. The 'psychologically safe communication climate' was created to help mitigate negative effects of national diversity, raise innovation of team, and foster an open safe environment in which team-members felt comfortable to ask questions, admit to a lack of understanding, and voice opinions.

Retrospective semi-open interviews with 21 participants, 12 German and 9 Israeli team-members were held, after finishing their mission, focusing on their perceptions of their personal entrepreneurial learning experienced while participating in the cross-cultural entrepreneurial teams, working mostly virtually. Interviews were semi-open, with guided open-ended questions (Hsieh & Shannon, 2005) about their current job, motivation to participate, teamwork challenges that were related to cultural differences and virtual working, and benefit to their entrepreneurial learning. Some interviews were held face-to-face in Munich or Tel Aviv. However, the majority were held by Skype. Interviews were recorded, transcribed, and proof-edited.

The analysis of the collected data was performed by qualitative techniques such as repetitions (topics that occur and reoccur), word lists, word counting, key words in context, word meanings, of grounded theory guided data analysis (Ryan & Bernard, 2003; Strauss & Corbin, 1990). Coding was done using conventional content analysis, meaning that codes were derived from data and were defined during data analysis process. This research aims to describe an entrepreneurial learning process through experience in a virtual multicultural team. Preliminary themes were identified during the first phase of the content analysis, through two parallel techniques, inductive and deductive thematic analysis using the Narralyzer qualitative data analysis software (Shkedi & Shkedi, 2005), a qualitative data analysis software program, that is used by researchers to generate and develop categories (Shpigelman, Weiss, & Reiter, 2009). Finally, a more in-depth thematic analysis, following the four analysis phases, i.e., open coding, axial coding, selective coding and conditional matrix, was conducted on the participants' responses to the semi-open interviews. For example, the question – "what did you gain from participating in BIPA program" – was coded, in the first phase, into a theme of "entrepreneurial learning outcomes." In the next phases, it was deducted into sub-themes such as "entrepreneurial mindset and entrepreneurial skills", and later to sub-themes such as: "Culture related teamwork

skills”, “positive attitude towards starting a business/project “, as elaborated in Table 2 (Shpigelman et al., 2009).

RESULTS

A total of 21 semi-open interviews were performed, 12 with German participants, and 9 with Israeli participants. The age group of the participants ranged from 20-45 years. There were 11 interviewed male participants and 10 female. Results show that participants from both cultures valued this experience of multicultural teamwork process as contributing to their entrepreneurial learning, which was also their main motivation to participate.

Remark: In order to keep anonymity, in all students’ citations below, mentioned names were changed to GGGG for German names and IIII for Israeli names.

ENTREPRENEURIAL LEARNING

Almost all participants, 20 of 21, said that their motivation to participate was to learn aspects of entrepreneurship, mainly entrepreneurial mindset and skills, and expressed a positive perspective towards multicultural teamwork as a resource for entrepreneurial learning and personal growth. Table 1 summarizes the answers of the participants for their motivation to participate in the project.

“... it sounded very interesting and challenging, working with people having a different culture, with a different mindset, I saw it as a challenge.” (participant_14, Israeli, row 32)

“...to see how will it develop if you put these two cultures together. This was my main motivation”. (participant_13, German, row 24)

Table 1 - Motivation to participate

Entrepreneurial learning		German Participants									Israeli Participants											
Dimensions		1	2	4	5	6	7	1	1	1	1	1	1	3	8	9	1	1	1	1	2	2
skills	marshalling of resources						+					+		+	+	+	+	+	+	+		
mindset	entrepreneurial mindset (General self-efficacy • Locus of control • Self-esteem * attitude)		+	+	+	+	+	+	+			+	+								+	+

+ means the participant mention the dimension once
 ++ means the participant mentioned the dimension several times

There was also a common aspect of entrepreneurial learning that was valued by each culture as their main motivation to participate. Most of German participants (9 of 12) expressed their desire to gain entrepreneurial mindset, mainly referring to gaining the mindset of striving to find a solution to a problem, and to gain a positive attitude starting a project or a business:

“To learn out of an international and innovative program how people try to find solutions...I wanted to learn something for my personal skills”. (participant_2, German, row 41)

“My motivation was to gain experience in a real life challenge and to be a real entrepreneur in this way, in starting a project. To be an entrepreneur, act like an entrepreneur and just be an entrepreneur. That was my motivation”. (participant_15, German, row 39)

In contrast, almost all Israeli participants (8 of 9) expressed their desire to gain marshalling resources skills, mainly referring to network, new contacts and forming the right team.

“To develop connections, to get acquainted with working in an international team. Working in English, presenting in English, more of a business interaction”. (participant_11, Israeli, row 16)

“I think the first one is getting to know the entrepreneurship world, and different methods, and second, connections, extending my network, in Germany especially”. (participant_12, Israeli, rows 20-24)

All participants, 21 of 21, said that they have gained entrepreneurial skills and mindset, with some differences in perceptions of each culture, as summarized in Table 2.

Table 2 - Entrepreneurial learning outcomes

Entrepreneurial learning		German participants											Israeli participants									
Dimensions	Detailed factors	1	2	4	5	6	7	1	1	1	1	1	1	3	8	9	1	1	1	1	2	2
skills	marshalling of resources	+	+	+		+	+							+	+	+	+	+	+	+	+	+
	Culture related teamwork skills	+	+	+	+	+		+	+					+	+	+	+	+		+	+	+
mindset	find solutions to a problem	+	+	+	+	+	+	+	+	+	+	+							+			
	positive attitude towards starting a business / project	+	+		+	+	+		+	+	+	+	+	+						+		+

+ means the participant mention the dimension once

++ means the participant mentioned the dimension several times

The entrepreneurial mindset of finding solutions to problems, or suggesting and communicating an idea, was perceived by almost all Germans (11 of 12) and only by some Israelis (4 of 9) as an entrepreneurial mindset factor they have gained. This was also a main motivation to participate mostly to Germans, who described Israel as the “Start-up Nation”:

“In BIPA it’s more entrepreneur, in the sense that we had to do our own ideas, and you had to bring it together to the team”. (participant_7, German, row 279)

“I think in the first line it’s the entrepreneurial style, because it’s not that you have every morning from like nine to ten, you have to be flexible, you have to bring in yourself, your ideas, your motivation, and your energy”. (participant_6, German, rows 298, 292)

“One big reason was that I heard a lot about the Israeli startup scene and entrepreneurship spirit there, and I had read the ‘Startup Nation’ book, so I was really fascinated by that, and I wanted to go to Israel and experience this first hand”. (participant_4, German, row 101)

“I gained knowledge about how taking the project from an idea to a proper solution. What are the obstacles that I have to take in mind during this process and really understand that failure is not an option, like, always think about how can I win this obstacle and not how I avoid failing into this obstacle...”. (participant_12, Israeli, row 100).

The proficiency of how to start a business or new project was perceived by most German participants (9 of 12) as an added value, although not mentioned as their motivation to participate. They also said that teamwork process contributed to their positive attitude towards starting a business. Only a few Israeli participants (3 of 9) mentioned this factor as a personal benefit.

“I think for me, going forward, maybe changing jobs, doing different projects, it gives me a positive attitude towards more free and risky projects”. (participant_6, German, row 73)

“What I gained from BIPA was a great experience on how to start things; how to think about things even though you have no idea in this kind of topic. Then we started creating and doing something. It was a great experience”. (participant_15, German, row 47)

“I think BIPA strengthen the wish to create something really on my own”. (participant_18, German, row 191).

Marshalling resources, mainly networking and establishing new contacts, was perceived as an entrepreneurial skill they gained from BIPA by all Israelis (9 of 9) and a majority of the Germans (8 of 12).

“I think that the experience in BIPA gave me another point of view, another perspective about how things work, about how you build connections, about how you sell or go to market”. (participant_10, Israeli, row 94)

“My confidence in my ability to work in English rose significantly. Also in relation to connections. These are things that you only see later on, not immediately after the project is finished”. (participant_11, Israeli, row 24)

“Connections, for sure! Experience, a very positive experience, we had a great team, the complete BIPA team was great and also the smaller team” (participant_6, German, row 57)

In general, teamwork skills that are related to culture, were perceived by all participants, Germans (12 of 12) and Israelis (9 of 9), as an added value from BIPA. They recognized it as an important factor of entrepreneurial skills and it was one of their main motivation to participate.

“...it was more about discipline and teamwork and that’s obviously something that is an essential part of what an entrepreneur should have in terms of skillset”. (participant_4, German, row 33)

“...how to work in a team... Usually, you do not have the stage of how to get to know a different culture”. (participant_8, Israeli, row 110)

MULTICULTURAL TEAMWORK CHALLENGES

Participants from both cultures emphasized different challenges of multicultural teamwork and referred to the importance of all five multicultural teamwork challenges, as identified by Lans et al. (2013), but there are some cultural differences in their perception of those challenges. Table 3 summarizes the answers of the participants about their challenges working in a multicultural team.

Member’s experience and skills was perceived by almost all participants (18 of 21) as a factor that contributed to their teamwork process, as they have learned from each other. German participants were appreciated by both cultures for their professional skills, such as deep research, and presentation skills, and the Israeli participants were appreciated by both cultures for their experience as entrepreneurs, mainly regarding their ideation process. Participants said that those differences bring up more creativity, more ideas and a wider range of knowledge, skills, and business connections.

“...working with them was great, because of their experience that gives a different view than my own; there were four people in our group with mostly four different opinions, which I think was good”. (participant_1, German, row 117)

“GGGG always pay attention on how the presentation should look like, and which logo we had, what’s the name we had, and how it’s presented to the other side...For me, the idea was more important, what are we offering, what is the value we offer than how it is presented. Both are important”. (participant_8, Israeli, row 145)

“I would say that we are thinking open- minded and ‘out of the box’ and help the Germans be ‘out of the box’ as well. The Germans like to focus us to get into details, and sometimes more academic or business wise. We did not have this perspective”. (participant_20, Israeli, row 80)

The majority of participants (13 of 21) addressed the “free-riding” challenge, where one of the team members did not contribute to the group work according to his or her full potential, or tended to

“loaf” from his/her responsibilities in the team. Most of them connected the “free-riding” situation with “virtual communication”, saying that it intensified the effect.

“I feel that if you don’t meet face to face, the connection is not so strong, and the “free-riding” problem gets bigger and communicating is more difficult”. (participant_7, German, row 235)

“They had less commitment in online meetings, and most of the times they were laughing, lots of wasted time by talking things that are not productive. When we met in the workshop, we got lots of progress together, and the communication was much better”. (participant_20, Israeli, row 96)

Table 3 – Multicultural teamwork challenges

Teamwork challenges		German participants									Israeli participants											
Dimensions		1	2	4	5	6	7	1	1	1	1	1	1	3	8	9	1	1	1	1	2	2
Member’s experience and skills	Learn from each other	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	Entrepreneurial leadership		+		+			+											+	+	+	
Leadership	Different levels of motivation		+	+											+		+	+	+	+	+	+
	Virtual communication	+		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Communication	Insufficient English level skills	+	+	+				+		+	+	+	+	+	+	+	+	+	+	+	+	+
	Cultural different styles of verbal communication	+		+	+	+	+		+	+	+		+	+		+	+	+	+	+	+	+
Problem solving and decision making	Culturally different ways of decision making and problem solving		+	+	+	+	+	+	+	+	+				+	+	+		+		+	+
	Free-riding during online work		+	+			+	+		+	+	+	+		+			+	+	+	+	+
Group conflicts	Task-related conflict (different attitudes towards deadlines)	+		+		+	+	+	+	+	+	+	+					+	+			
	Relationship-related conflict (lack of cohesion)											+			+		+	+	+	+	+	+

+ means the participant mention the dimension once
 ++ means the participant mentioned the dimension several times

Most Israelis (7 of 9) connected “free-riding” with “low level of motivation”, stating that team-members had different levels of motivation to participate and it resulted in “social loafing” during teamwork process.

“The big issue here is that one member has lots of time to spend and a lot of desire, willing to change and being involved, while the other do whatever I tell him to do and that’s it”. (participant_12, Israeli, row 172)

“I thought that all the other participants will be entrepreneurs like me, with the same motivation, and maybe I was disappointed to discover that it’s not like that, but that’s people... maybe in our session there was less motivation”. (participant_10, Israeli, row 366)

Participants differed by culture in how they perceive leadership in their teamwork process. Israelis tried to take a proactive lead, to “take control”, whereas Germans saw this more as an administrative task, splitting assignments and roles and keeping protocols and deadlines.

“GGGG was very typical: you needed to give him accurate instructions, and he would follow them, not thinking big, really schematic, which is very typical to Germans, as I heard from the other teams”. (participant_11, Israeli, row 45)

“I think I spent lots of energy, more of my energy for “pushing the ship”, instead of being concentrated in the project... the Germans, they did the research and everything but ...you have to tell them what to do”. (participant_12, Israeli, rows 258, 262)

“We said this is IIII’s role because as the leader, she should focus on the organizational stuff”. (participant_13, German, row 162)

“There’s something different between management of the team and leading a team. So, I tried to do both, but I tried at the end to manage the task and organize everything.” (participant_2, German, row 153)

Different aspects of communication were perceived as important, sometimes critical, factors by all participants. Specifically, participants referred to verbal communication (tone; direct vs. indirect), virtual communication (technology and skills), and English language skills (English as their common language during teamwork process). Regarding verbal communication, both Germans and Israelis (17 of 21) indicated that cultures have different attitudes towards verbal communication and verbal interaction. Israelis are louder, direct, and pushy, interrupt in the middle of someone else’s presentation or speech, whereas Germans are politer and restrained and prefer formal written documentation of communication (protocols). Participants said that sometimes those differences created clashes and misunderstandings during teamwork process.

“Israelis are loud and very direct... I think verbal communication, is very different from the German side which is a bit more restrained compared to Israel?”. (participant_1, German, rows 98, 153)

“... He asked us: ‘do you want to do it the Israeli way or the German way?’ We always decided the Israeli way. It means he will interrupt us in the presentation, he will discuss with us topics during the presentation and he will maybe say that everything is nonsense or not relevant”. (participant_17, German, row 40)

“GGGG wrote all the protocols, she all the time followed the structure of what we have talked about and what we need to do...” (participant_12, Israeli, row 197)

Participants also referred to a positive influence of different verbal interaction styles, as stimulated the sharing of knowledge during teamwork process. They also said that the cultural background tips they received from mentors during the face-to-face workshop, helped them mitigate these challenges.

“GGGG was more conservative and strict and said: ‘hey! wait, I didn’t finish my sentence’, and we had to think about that, but that was quite helpful” (participant_6, German, row 110)

“The Israelis are more direct and rude, the Germans are more structured and formal, but I think that BIPA’s project manager gave us a good background and introduction before we started working together, so we did know what to expect...” (participant_21, Israeli, row 52)

Regarding virtual communication, almost all participants (21 of 22), both German and Israeli, said the virtual communication was challenging, not only because of technical issues, but also because of cultural different styles of communication, time-zone coordination, and tendency to “loaf”. The participants were introduced to some technical communication tools in order to work virtually. Each group decided about the tools to be used, the way to collaborate, using synchronic or/and a-synchronic tools and the frequency of online meetings. Most of the groups used both synchronic and a-synchronic tools. The synchronous tools, like Skype, WhatsApp, Google Hangout, were used to virtually meet and discuss issues. These meetings were scheduled beforehand. However, some cultural and commitment problems were encountered. Moreover, although these tools support videoconferences, the communication bandwidth and other technical problems avoided the use of video, and the participants were limited to audio connections, where the sound was not always perfect. Therefore, they hold very short and quick meetings. In order to share documents and outcomes, the

participants used a-synchronous tools like e-mails and Google Drive. Sometimes, because of technical connection problems, the meetings were executed on a-synchronous tools.

“How was it working online? Bad, really bad. It is much harder actually to do that than to speak, it is really, really difficult. Besides the connection problem, you do not always have the time to do that. It is not obligatory, as a meet up with the person face to face. Less commitment and the conversation is much less productive than face to face.” (participant_8, Israeli, rows 227, 231)

“...of course it's more challenging.... On the virtual phase - you need to coordinate Skype conversations - time zones, being late, etc.” (participant_11, Israeli, row 79)

“The online part was much difficult. Starting with the communication, that was not all the time working, because of the Wi-Fi and technical problems. Sometimes I was standing in the hall for hours, just because of connection was going on and off all the time. So it was hard, and we felt that we needed to be very into it.” (participant_10, Israeli, row 180)

“Virtual communication is a big challenge if you don't meet in person.” (participant_4, German, row 145)

“If you are remote, you have to try harder in communication” (participant_6, German, rows 82)

“You can't have a meeting in a room. It's something we had to manage with technology; we were meeting virtually. We were only able to meet for like an hour or so, to discuss the topics and deal with things within the team.” (participant_15, German, row 242)

Israeli participants specifically referred to the geographic dispersion factor, saying that virtual communication challenges might have been mitigated if they had more social face-to-face interaction to learn about the other culture and to know each other better. The more you interact socially face-to-face, the better contribution to virtual communications, teamwork innovation process, and outcomes.

“I think that if we would get more time for physically get together, we could do better, we could get to know each other, really know each other, not just in a hello and what are your hobbies...I think it would add to the outcomes The online meetings were definitely different. We sometimes were missing the cultural part, which I think is the best part of the communication with the other side...” (participant_10, Israeli, rows 248, 260)

“There is no substitute to face to face, even online. You need to sit with the person for hours and from there come the ideas.” (participant_8, Israeli, row 255)

As English language was the common language for teams, the majority of participants (8 of 12 Germans, and 9 of 9 Israelis) referred to the importance of overcoming language barriers. Participants referred to the importance of a minimal level of English and awareness to different cultural attitudes towards insufficient English level.

“Language was a big trouble...because the skills of the people are very different in English and therefore it's very hard. For example, some people are very shy if they need to speak in English and maybe they have many good approaches and things in the mind. They would never say because of the language barrier. For example, my teammate from Germany always tried to say to me some things in German and otherwise he said only okay.” (participant_2, German, rows 113, 117)

“Maybe language was the most challenging...throughout all the process, there were language gaps, and of course if your vocabulary is less rich, then your way of expressing what you think is limited.” (participant_11, Israeli, row 96)

Participants, Germans and Israelis, also referred to the tendency to sub-communications, usually informal, in mother-tongue language with team-members or customers from the same culture. Nevertheless, while talking with the customer in the local language was perceived as strengthening trust, sub-talks between team-members from same culture during team's scheduled virtual talks, was perceived as interfering team communication.

“German or Hebrew was used in non-formal communication, and that had a lot of impact. This sub-current does not appear in the program. You don’t see those, so all the water-cooler talks and the one-on-one phone calls and discussions in the parking lot, all those were done in the local language, and they were building some kind of a sub-layer of communication, that supported in building trust, especially when the companies that were brought in, were all based on personal relationships.” (participant_13, German, row 109)

“If we didn’t have GGGG or someone that is German, who understand and can get a connection, we would have done the research, we would have got names, but it would have taken us twice the time, or even 3 times... I don’t think that if I would talk to him (German customer) in English, he would talk to me as GGGG talk to him in German.” (participant_9, Israeli, row 128)

All Israelis mentioned the communication in English language as one of their main motivation to participate and an added value they gain from BIPA. Most of them expressed the feeling that German participants had better English.

“I think that most of the Germans speak English better than us. In some way, for some people to do this project, English was a barrier”. (participant_8, Israeli, row 244)

“GGGG, had almost a perfect English... I guess in Hebrew I could communicate my messages a bit better, but I still managed to do it.” (participant_21, Israeli, rows 164, 168)

“I did get to work on my English, my confidence in my ability to work in English rose significantly” (participant_11, Israeli, row 24)

Most participants (14 of 21) identified cultural different styles of problem solving and decision making, such as Israelis tend to assent “satisfying decisions”, are more agile, and push to move forward to a pilot stage, whereas Germans strive for an “optimal decision”, based on calculation and deep research, even if it takes more time and effort.

“Israelis see a problem and solve it...Germans see a problem and make a plan to solve it and it never happens, so it’s a slight difference...Germans try to solve it deeply as well, not a major difference. Israeli’s are more like ‘fix and go’ and the Germans are more on the problem... I would say: start on the Israeli way and finish on the German way” (participant_5, German, rows 145, 153, 157, 169)

“GGGG and me, in the last two-three weeks, we worked a lot. We wanted to present something really good for the manager, for the customer. Because it is BIPA and these are our names. ... The difference is with the perfection. The two Israeli girls - for them it was okay to be satisfied with what they had. GGGG and me, we were, in the end, stressed to bring more, and it has to be really good...” (participant_13, German, row 85)

“The Germans wanted to be very calculated, and to take time to think about things, and build up metrics and charts of every advantage and disadvantage. We, as Israelis, pushed for a ‘pilot’. So, it’s a kind of culture difference” (participant_10, Israeli, row 151).

“I think the Israelis are very creative and really want to do all fast, like in the agile style, and I think that Germans build the infrastructure.” (participant_9, Israeli, row 156)

Regarding conflict management, German and Israeli participants differ in their perception. Most German participants (9 of 12) referred to task-related conflicts that were stemmed from adhering to timelines or from different attitudes towards deadlines and holidays. Germans participants referred to ‘scheduling’ as a culture-related clash, saying that Israelis, in contrary to Germans, tend not to be on time, delay deadlines, and are absolutely not available on Israeli holidays.

“When I compare German to Israeli guys, the Israelis are not always on-time. The Israelis are very strict with their holiday and vacation. If they are on vacation or Shabbat, they don’t work.” (participant_15, German, row 167)

“Scheduling meetings - it’s different ... for example if we wanted to plan a Skype call on Monday, six in the evening, I put it on my calendar and I am going to be available at the time, I just don’t schedule anything for that time. Then, one of the Israeli’s will say: ‘I cannot tell you one week ahead if I am going to be free, I am

going to tell you that day if I am going to be free or not'. For me it does not make sense “(participant_7, German, rows 102, 106)

“The punctuality was one main thing. Each week we had an appointment, and we had not one week without either skipping it or delaying it, because of the Israeli girls. They just said five minutes before “Oh I’m too late...” or “today I cannot”. If we could not come to a session, we told it a lot before. This was one cultural difference.” (participant_13, German, row 37)

Most Israeli participants (6 of 9) talk about relationship-related conflicts, saying that there was a lack of cohesion between team-members that may have been resulted from different motivations or cultural attitudes regarding conflicts or misunderstandings.

“I think they don’t know to take criticism about the work without taking it personally, and when it happens, they immediately try to defend themselves, that was the most severe thing that happened. We didn’t have any yelling and stuff.” (participant_14, Israeli, row 104)

“They were not synced, for example, we can discuss that I am responsible for the task, and they will do it - so we are doing twice the job.” (participant_20, Israeli, row 84)

GERMAN-ISRAELI COMBINATION OF NATIONAL CULTURE

All German and Israeli participants (22 of 22) thought that working in the multicultural teams was a good experience, as the differences in cultures were challenging but also stimulating and therefore beneficial for entrepreneurial learning. They indicated that German-Israeli teams, in particular, are a good combination for entrepreneurial learning. Most participants said that the combination of German and Israeli is beneficial for problem solving, as it required them to see the “big idea” and thus keep the context of the overall business model and feasibility of idea in mind, and they assigned those roles while exploiting cultural differences. They perceived stereotypical behaviors of both cultures as completing each other, in a way that stimulates teamwork process and the learning outcomes.

“I think that we, as Israelis, benefit from the Germans a lot, and also the Germans benefit from us a lot. For example, the German tried to teach us how they think, and we took, some time to think about it more, and to build like a big chart and see where the advantages and where the disadvantages of things are, before we go to a pilot. I felt that the time that we were spending on planning was sometimes useful, because we needed it. Then the Germans benefit from us, because they had to decide eventually and could not take more days for thinking. So, the Germans learn.” (participant_10, Israeli, row 164)

“I think that’s great when people come from different backgrounds. Working with IIII, who had a very different background to mine, it was very helpful, because I could learn from him and he learned too... I think that is very enriching for a team, and can help teams solve problems in a better way than if everyone was just the same” (participant_4, German, rows 92-93)

“The midway between fast and creative style and building a good infrastructure. is a good combination.” (participant_9, Israeli, row 156)

“The connection between the Israeli way of thinking and German way of thinking is a great, great, great solution...they are very different and then if one of them say six the other one will say one minus six, which complete to one.” (participant_10, Israeli, row 86)

Although they all agreed that German-Israeli teams are a good cultural combination, they portrayed their stereotypical behaviors and the other’s stereotypical behaviors differently, usually referring to their own cultural characteristics in a more positive approach. Germans usually characterized their own teamwork culture as very organized, thorough and professional. They are goal-oriented, plan in advance and stick to plan matrix.

“I feel like I have a very German kind of perspective on how to organize work...I always have the feeling when I work with people from other countries that they do things a bit unprofessional. I guess it’s not unprofessional in a sense, it’s just that it’s different ...” (participant_7, German, row 102)

“Germans see a goal and try to go very straight to the goal, they don’t look left and don’t look right as the other ones” (participant_2, German, row 105)

Israelis usually portrayed the German culture teamwork characteristics as a strict, not flexible regarding their original plan and follow instructions.

“They have metrics for every survey or everything they search for, and they actually go according to that in every single time they need to solve a problem.” (participant_10, Israeli, row 66)

“When we gave the Germans assignments, they did it. It was better than when they had to think. They followed instructions.” (participant_11, Israeli, row 53)

“German guys, they are not as adaptive as us... They are not so flexible with the schedule” (participant_12, Israeli, rows 60, 67)

Israelis described their own behavior as spontaneous and even courageous, that are active in improvising and initiating ideas, creative, look more at the “big picture” and not the small details, and always looking for shortcuts.

“You can see that as an Israeli, you have some skills that others don’t, like courage, like survival, natural survivor personality and some rudeness that is sometimes good in business.” (participant_3, Israeli, row 58)

“The Israelis are very creative and really want to do all things fast, like in agile style” (participant_9, Israeli, row 156)

Germans portrayed the Israeli behavior as much more “hands-on”, creative, and open-minded, but also push for a fast solution, even if it is not the optimal one, or even not in a very professional way and usually at the last minute.

“The Israeli participants are much more hands on, like let’s get this done. They were not as hesitant as we were, and I think that good mix is a good choice so it was definitely inspiring to work with Israeli people.” (participant_4, German, rows 37-41)

“A big problem was to have a clear picture of the solution at the end. Some people were already satisfied with, let us say, a simple solution, but I guess this is an attitude that can be a personal attitude. Because some people say ‘this is enough’, we have delivered and that was fine for the company, but somebody else in the project also say ‘we want to provide the perfect or the best solution for the company’. Some try to make the best solution with the lowest effort”. (participant_2, German, row 129)

DISCUSSION

This research aims to explore the entrepreneurial learning factors, as perceived by participants of a multicultural virtual teamwork project. In an effort for better understanding the perceived entrepreneurial learning factors, as detailed in the research questions, this study explores perceptions of German-Israeli team-members, who participated in the BIPA project. The analysis was performed in three-levels: in a personal level of entrepreneurial learning, using the ASTEE report measurement tool (Moberg et al., 2014), in a group-level, using Hall and Reed Hall (1990) and Lans et al. (2013) multicultural teamwork challenges, and in a cultural combination level.

PERSONAL LEVEL ANALYSIS

The results of the personal level analysis of entrepreneurial learning factors in a multi-cultural context (RQ1: the factors which participants have added to their personal entrepreneurial learning, and RQ2: the differences between the cultures), show that all participants, German and Israeli, perceived they have learned entrepreneurial skills. German participants also perceived they have gained entrepreneurial mindset and attitudes. These entrepreneurial learning outcomes, which were identified in the results, are dimensions of the ASTEE report (Moberg et al., 2014). Results show that participants valued their virtual multicultural teamwork process, as contributing to their entrepreneurial learning.

One of their main motivations to participate was to learn entrepreneurship from experiencing virtual multicultural entrepreneurial teamwork, as Lans et al. (2010) argue that entrepreneurial learning programs should operationalize, approach and, aim to stimulate entrepreneurial behavior.

Regarding RQ1, the factors of entrepreneurial learning that participants perceived they have learned through their virtual multicultural teamwork process included networking and business connections skills ('marshalling resources'), multicultural teamwork skills, an entrepreneurial mindset towards finding solutions to a problem, and, in addition, a positive attitude towards starting a business or project. These entrepreneurial learning outcomes also consistent with Rae's (2005) three major factors of entrepreneurial learning (personal and social emergence, contextual learning, and negotiated enterprise).

Regarding RQ2, Rae's (2005) personal and social emergence factor, meaning self-perception as an entrepreneur, was found as a learning outcome by German participants, referring to entrepreneurial mindset of striving for a solution to a problem and a more positive approach to starting a business, whereas it was not viewed by the Israeli participants as their own personal entrepreneurial learning outcome. These different approaches are consistent with Erez and Early (1993), who argue that cultural values are represented in the "self".

The negotiated enterprise factor (Rae, 2005), meaning engaging with other people to exchange ideas and strategies, was found as a learning outcome by all participants, Germans and Israelis, as it was their entrepreneurial teamwork mission. Following the German participants' perception of Israel as the "Start-up Nation", they also perceived the Israeli participants in their teams as having entrepreneurial mindset and attitudes, and said they behavior in the team was according to this stereotype: bringing up new ideas and thinking out of the box. This finding is aligned with Ng et al.'s (2009) capabilities model of Cultural Intelligence (CQ), where the cognition, person's knowledge of how cultures are similar and different, affects their entrepreneurial learning perception.

TEAM LEVEL ANALYSIS

The results of the team-level analysis in relation to RQ3 (multicultural team level challenges) showed that all five multicultural group-level challenges (embracing members' knowledge, experience and skills; communication; problem solving and decision making; conflict management; and leadership), appeared to be relevant to the context of entrepreneurial learning (Lans et al., 2013). Participants characterized team-member's experience and skills as stereotypical to culture. German participants' professional skills, such as deep research, and presentation skills, and Israeli participants' experience, mainly regarding ideation, were appreciated as contributing to teamwork process. This perspective is consistent with Rae's (2005) negotiated enterprise factor, where engaging with other people to exchange ideas and strategies is perceived as an entrepreneurial learning process. As in any team, communication was perceived by participants as an important challenge that influenced teamwork process and their entrepreneurial learning. Participants addressed the challenges in regards to English language skills, and cultural communication styles. This is consistent with Larkey's theory (1996), that cultural markers of teams can be seen by participants through communication style, rules, shared meaning, and even the level of English language. As English language was the common language for the teams, but not the primary language for any of them, participants referred to the importance of overcoming language difficulties that create miscommunication due to lack of accuracy, lack of cultural awareness in the context of language skills, and insufficient level of English skills. Participants referred to the tendency of team-members or customers from the same culture to sub-communications, usually informal, in mother tongue. However, while talking with the customer in local language was perceived as strengthening trust efficiency, the sub-talks between team-members from same culture during team's scheduled virtual talks was perceived as interfering with team communication and innovation process learning. This is consistent with literature, where limited comprehension occurred between group members due to different English proficiencies and great variation in accents (Davidson & Ward, 1999, Shachaf, 2008). Learning how to communicate better in English

language and practicing English language was a common motivation for all Israelis and was not a motivation for German participants. In addition, this was perceived by Israelis as one of the learning outcomes of participation, as they had to communicate via Skype and not only via e-mail or written material. Some felt that German participants generally speak better English. This is consistent with literature, and specifically with Ely and Thomas's (2001) 'integration and learning approach', where a motivation to learn, in this case English, leads to sustained benefits from diversity. Recent research breaks the clear language-culture-nation correlation, particularly in global uses of English, and expands intercultural communication beyond its everyday usage to include knowledge, skills, and attitudes and to be used as a more holistic alternative (Baker, 2015; Brighton & Rudenko, 2016). All participants indicated that miscommunications occurred, not only because of different English language skills, but also because of different cultural communication styles and practices (Gibson & Vermeulen, 2003): Israelis were louder and direct, informal and personal (interrupt in the middle of someone else's presentation or speech), succinct (referring to online presentation and pitch), and instrumental (goal oriented). Germans were politer and more restrained and indirect in their comments, elaborative in their Skype talks and presentations, preferred formal written documentation of communication (protocols) and were very process oriented. Those differences are consistent with the findings of Behfar et al. (2006), where clashes occurred when group members with preference for more 'aggressive' communication styles worked with members with a preference for more 'consensus building' in expressing their point of view.

Participants from both cultures identified cultural different styles of problem solving and decision making, as creating another layer of challenge (Cox et al., 1991). For example, Israelis consent 'satisfying decisions', they worked in an agile mode, and pushed to move forward to a pilot stage, whereas Germans strive for an 'optimal decision', based on calculations and deep research, even if taking more time and effort. Specifically, as their entrepreneurial problem solving required them to see the 'bigger picture' or 'big idea' and thus keep the context of the overall business model in mind.

Conflicts are inherent to entrepreneurial teamwork, as it involves taking-risks but at the same time working towards mutual goals and resilience management. In this research most Germans, and almost only German participants, emphasized task-related conflicts that were stemmed from adhering to timelines or different attitudes towards deadlines and holidays. German participants referred to 'scheduling' as a culture-related clash, saying that Israelis, as opposed to Germans, tend to delay deadlines, to be late for Skype meetings, and to be unavailable in Israeli holidays. Israeli participants, and almost only Israelis, emphasized relationship-related conflicts, stressing the lack of cohesion between team members that may have resulted from different motivations. Participants from each culture highlighted a different aspect of conflict, as defined by Jehn (1995), the aspect that seems more coherent with their cultural stereotypical behavior, as analyzed by Hall and Reed Hall (1990) typology.

The majority of participants addressed the 'free-riding' challenge, as a major conflict, usually using the definition given by Latané et al. (1979), that refers to one of the team-members that did not contribute to the group efforts according to his or her full potential, or tended to 'loaf' from his/her responsibilities in the team. As BIPA project had no external reward structure, the participants had to find their own intrinsic motivation, and 'free-riding' is connected with a reward structure (Johnson et al., 2000), it may explain the significance of this conflict

German and Israeli participants had different perceptions of leadership, in the context of teamwork process. Most Germans saw it as an administrative task, splitting assignments and roles, and keeping protocols and deadlines, Israelis saw it as a more 'charismatic' role, and tried to take a proactive lead, 'take control', including trying to motivate team-members. Lans et al. (2013) argue that entrepreneurial leadership requires someone who is engaged, proactive, willing to take risks, and is motivated to pursue ideas with passion. Findings show that those characteristics and skills were perceived by participants as stereotypical to Israelis.

Team level analysis in relation to RQ4 (challenges that were inherent to virtual teamwork), show that all participants perceived the virtual working as an important challenge, that intensified communication challenges. Findings show that participants perceived all four characteristics identified by Gibson and Gibbs (2006): geographic dispersion, electronic dependence, structural dynamism, and national diversity. Although literature suggests no interrelation between the four characteristics, participants tied them together. For example, when referring to scheduling meetings, they talked about geographic dispersion, in the context of different time zones and tendency to ‘loaf’, in the context of national diversity, referring to Israelis who do not work in holidays, and in the context of technology dependence on online tools, that was disrupted by disconnections. Israeli participants specifically referred to geographic dispersion as a main obstacle for communication, reinforcing research findings, that having more face-to-face social interaction would have helped them know each other better and could have mitigated the virtual communication challenge, according to Pillis and Furumo (2007). Moreover, they stated that ‘free-riding’ and team members ‘loafing’ from commitment and responsibilities, were intensified in the virtual teamwork, as found in the leading and deciding challenges in Krumm et al.’s (2016) research. The finding stressing the face-to-face social interaction is also consistent with literature findings that communication technologies may be effective in overcoming geographic and time barriers, but they do not necessarily make a cultural and social conflicts disappear (Cho & Lee, 2008; Espinosa et al., 2006).

In regards to communication technologies, most of the groups used both synchronic tools (Skype, WhatsApp, and Google Hangout) and a-synchronic tools (e-mails and Google Drive). Most challenges were perceived using the synchronous tools, to virtually meet and discuss issues. Although e-meetings were scheduled beforehand, team members encountered cultural and commitment challenges, as well as technical challenges that forced them to shorten those e-meetings, avoiding the use of video, and limiting to audio connections, where the sound was not always perfect. This is consistent with literature that suggests that although technology enables communication between the team members, and allows monitoring the performance (Hertel et al., 2005), it creates challenges that either damage, disrupt, or impair teams’ performance (Schweitzer & Duxbury, 2010; Van der Kleij et al., 2009). It is also consistent with the focus of Kirkman and Mathieu (2005), on the degree of team’s virtual work, especially the extent to which team members use virtual tools to coordinate and execute team processes, and the amount of informational value provided by such tools, and the synchronicity of team member virtual interaction.

COMBINATION OF ISRAELI AND GERMAN CULTURES IN A TEAM

According to the cultural diversity dimensions (Bouncken, 2004; Hall & Reed Hall, 1990), the German and Israeli cultures can be defined as stated in Table 4.

Table 4 – German and Israeli Cultures according to the cultural diversity dimensions

German culture	Israeli culture
Low-context (compartmentalize personal relationships and work)	High-context (personal)
High-space (clear boundaries, personal distance)	Low-space (human transactions within work)
Monochromic (linear structure, schedule)	Polychromic (work-life integration)

The participants perceived the combination of German and Israeli cultures in the entrepreneurial team (RQ5) challenging but contributing to their entrepreneurship learning and stimulating entrepreneurial teamwork process. The differences in stereotypical behavior was perceived by both German and Israeli participants as stimulating their teamwork process, encouraging the entrepreneurship learning, and leveraging their team performance, as their cultural skills and behavior complemented

in a synergic manner. Participants perceived that their participation in a cultural awareness class during BIPA face-to-face workshop phase, helped them embrace the sharing of knowledge during teamwork process, and learning capabilities as global leaders (Earley & Ang, 2003; Lisak & Erez, 2015; Ng et al., & Ang, 2009; Shokef & Erez, 2006). This is also consistent with Ely and Thomas' (2001) learning and integration approach that if team's diversity is perceived as a learning resource for the team, it enhances adaptation of change and redefining goals, markets and products, and therefore, innovating. Although all agreed that German-Israeli teams are a good cultural combination for entrepreneurial learning, they portrayed the stereotypical behaviors differently, usually referring to their own cultural characteristics in a positive or more defensive approach. This is also consistent with literature, where cultural identities stem from membership in groups that are socio-culturally distinct (Cox, 1993), and people coming from different value systems may attribute different meanings to the same managerial approach and react to it in different ways (Erez & Early, 1993). Although attitudes towards stereotypical behaviors of own culture and the other's culture were different, all participants perceived cultural stereotypical behaviors and their implementations in their teamwork process in the same manner. Germans were characterized as organized, formal, thorough and professional, plan in advance and stick to plan matrix. Israelis were characterized as "hands-on", creative and open-minded, but also push for a fast satisfying solution, even if not optimal, or not professional. Applying Hall and Reed Hall's (1991) typology and Bouncken's (2004) research, in analyzing participant's perspectives shows coherence to their typology. In more details, regarding Context, Israelis (high-context) appreciated the social interaction and the external contacts more than the Germans, and preferred to combine it with teamwork. Regarding Space, Germans (low-context) were stricter about scheduling, setting rules, structuring tasks, and distributing assignments. Regarding Time, Germans tended to work linear (monochromic), and stick to the original plan, where Israelis tended to work on several things simultaneously.

As for multicultural teamwork challenges, participants specifically identified the different communication styles and problem solving styles, as contributing to the good combination of Germans and Israelis in teams. Israelis were perceived by Germans as stimulating in communication procedures, simply by their loud and direct verbal communication. Their tendency to stimulate communications, also explains the Israelis preference of social face-to-face interaction, where they could use their social communication skills. This is consistent with literature (Hall, 1990), where low-context Western European cultures, like German, usually act based on certain explicit rules and have short-term interpersonal connections, while high-context Mediterranean cultures, like Israel, prefer less verbally explicit messages, written and formal information, and act based on an overall situation, making decisions based on personal relationships. The Israeli and German culture stereotypical characteristics specifically helped stimulating their opportunity-centered learning, which is the essence of entrepreneurial teams, while exploiting the difference in problem solving styles. Starting working "the Israeli way" and finishing "the German way", helped them walk-through all opportunity centered stages (Rae, 2003). They started from the identification phase, which requires Israeli stereotypical characteristics, such as creativity, thinking out of the box, and followed by the planning phase, which requires German stereotypical characteristics, such as research and development of the opportunity and its business model, presented in a pitch. Although participants experienced clashes, it seemed that during teamwork process, they have developed a shared common global work culture, beyond their different national cultures (Earley & Gibson, 2002). Moreover, it seems that team member's satisfaction from their German-Israeli teamwork process, may be derived from the facing and successful handling of the inevitably demanding challenges that they experienced and are inherent in multicultural teams. (Stahl et al., 2010)

CONCLUSION

This study focused on entrepreneurial learning through virtual multicultural teamwork, exploring the different perceptions of participants from German and Israeli cultures, in regards to their entrepreneurial learning outcomes and teamwork challenges. The personal level analysis supported the fact

that all participants perceived they have learned entrepreneurial skills. German participants also perceived they have gained entrepreneurial mindset and attitudes, while Israeli participants perceived they had these skills beforehand. The team-level analysis showed that all five group-level challenges [(1) embracing member's knowledge, experience and skills; (2) communication; (3) problem solving and decision-making; (4) conflict management; and (5) leadership] appeared to be relevant to the context of entrepreneurial learning. Particularly the communication styles and problem solving styles showed importance and difficulties because of the virtual aspect of the teamwork. Participants referred to all four characteristics of virtual work (geographic dispersion, electronic dependence, structural dynamism, and national diversity) without specification.

An interesting insight from the study is the successful combination of German and Israeli cultures in an entrepreneurial team, which, on the one hand was challenging, but on the other hand, it contributed to their entrepreneurship learning, and stimulated the opportunity-centered process, as part of the entrepreneurial teamwork. Israeli-German entrepreneurial teams complemented each other, in the way that their combined cultural stereotypical behavior stimulated the entrepreneurial learning process and outcome, in the context of multicultural teamwork.

This study focused the virtual communication aspect as part of the multicultural teamwork communication challenges. Virtual communication was perceived as an important challenge: first, because of the dependence on electronic technology, and second, because of the cultural different styles of communication. 'Analyzing and interpreting' competencies and 'leading and deciding' competencies are more important in virtual teamwork than in face-to-face teamwork.

THEORETICAL AND PRACTICAL CONTRIBUTIONS

This study makes theoretical and practical contributions. This research contributes to the body of knowledge about multicultural diverse participants in virtual environments, in order to work together. This situation raises new challenges, due to the combination of multicultural teamwork and the use of virtual communication.

At a practical level, results can be useful for global companies, showing the benefits of virtual teamwork of employees in different locations, both in terms of reducing expenses and improving innovation. Moreover, managers can motivate employees by raising their awareness to personal benefits, such as cultural awareness and improving their entrepreneurial skills and mindset. In addition, faculty may use this kind of experience to enhance entrepreneurial learning skills and mindset.

At the theoretical level, this research advances the body of knowledge of entrepreneurial multicultural teamwork in a virtual environment. In this research, the teams worked for a short time together (14 weeks), and had a week of face-to-face interaction with their team members. It is recommended to examine long-term teamwork, and how it affects teamwork challenges, as well as entrepreneurial learning. This research found the combination of German-Israeli cultures as stimulating entrepreneurial teamwork. It is recommended to examine other cultural combinations in teams, in order to be able to generalize findings.

LIMITATIONS AND FURTHER RESEARCH

This research was based on a German-Israeli project, most of which (14 out of 15 weeks) was conducted virtually. The research was limited to entrepreneurial ad-hoc teams, which were put together in a higher education environment. Following the findings of this research, further research should examine whether other multicultural teams, and also teams with more than two different cultures, that combine opposite stereotypical behaviors are also beneficial for entrepreneurial learning. Moreover, long-term projects and shared activities of multicultural virtual teams must be studied, in order to understand the effect of time over the cooperation of the participants, in the context of entrepreneurship. In addition, this research was limited to the national culture aspect or diversity. Further research is needed to understand the effect of participants' diverse disciplines, gender, and age, on en-

trepreneurial learning. Additional research is needed to further explore the effect of virtual communication on multicultural teamwork, including the specific effect of technology and technological tools, as well as the culturally different competencies required for effective virtual communication. Furthermore, the combination of virtual communication and face-to-face meetings in different milestones during the teamwork process should be examined.

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