Tracking the Birth and Growth of an Online Collaborative Research Team during COVID-19: A Narrative Inquiry of Eight Female Academics in Malta

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Abstract: The world is currently experiencing the unimaginable impact of a pandemic. From one day to the other, academics at the University of Malta were forced to shift to working remotely as the COVID-19 pandemic hit the Maltese islands. This paper uncovers the lived shared experiences of eight female academics (authors of this paper) who, despite the perceived challenges, considered it also as an opportunity to explore how to conduct research together through online collaboration. This paper thus presents a qualitative study grounded in a narrative inquiry of this collective experience. The collaborative work is informed by: social learning theories influenced by Vygostky; elements from feminist thinking; and literature on collaborative research, online collaboration and academic identity. Our recorded views, as participant-researchers and part of the narrative inquiry, focus on the birth and growth of what we now refer to as the '*Early Childhood and Primary Education (ECPE) research team'*. A thematic analysis of the accounts on our experiences have led to the development of a six-tier framework, the 'SKRIPT' framework, for collaborative work in academia. The progressive six concepts identified refer to trust, philosophy, identity, relationships, knowledge and skills. They underpin the inception and course of our online collaborative research experience. The shared stories from which the framework emerged, aim to inspire and encourage other academics to be part of research teams and share their 'SKRIPT' of collaborative experiences within online spaces and beyond. Implications for future research are discussed.

Keywords: online collaboration; collaborative research; academic identity; narrative inquiry; COVID-19

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Introduction

Our research team comprises of eight female academics, all members of the Department of Early Childhood and Primary Education (DECPE), at the University of Malta. Our areas of expertise vary with respect to our different subject areas of specialisation from science education to language learning in the early years and primary education. As a team we are also in different stages of our academic careers, this ranging from young researchers to seasoned professors. This diversity characterises our team. Following the school and university closure in Malta, in March 2020, two members of the research team felt the need to do something to react to the challenges being faced. They worked to achieve online collaborative research work as they (i) felt the need to get closer to their colleagues, while maintaining physical distance, and (ii) identified an urgent need to fill in a gap in local research on COVID-19 and early and primary education in Malta. This led to the inception of the Early Childhood and Primary Education (ECPE) research team. Together, the eight members embarked on a research project through online collaboration, and five months later, the team decided to write the first joint paper to share their experience so far.

As a team, we agreed that we should document and track the birth and growth of this remote research group as a self-reflective exercise for all of us and, hopefully, to be an inspirational read to other academics. As members of the ECPE research team we willingly participated in writing our stories in an attempt to answer the research question: *What can we, as a group of eight female academics, learn from our shared lived experiences of the birth and growth of the ECPE online collaborative research team during the COVID-19 pandemic?* It is worth noting that the team members belong to similar academic and educational fields, mainly early years and primary education, even if from different perspectives. Fundamentally, we are all intrigued by similar quests into the nature of human behaviour and development that constitutes, impacts or is influenced through education and learning. Each participant had already been previously engaged in multiple research projects, either individually, or with other researchers, on a smaller scale. However, the decision to form and be part of a larger research team was new, and was motivated, to varying degrees, by the notion that, as academics and researchers, we value and uphold knowledge-building, new learning and a sense of collegiality that often results from a collaborative research project.

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This paper thus seeks to expose the significance of the co-construction of social knowledge situated in the context and culture within which we worked as researchers and academics.

Theoretical Framework:

This paper in underpinned by elements from the social learning theory perspective, merged with strands from feminist thinking. Social learning theory is built on the premise that learning is socially situated within a shared domain of human enterprise (Lave & Wenger, 1991; Wenger, 1998). From the inception of our research team, a concerted effort to embark on a research project worthy of investigation and a willingness to establish a community of research practice was in place. We thus felt that the formation and development of this research team could be placed under the analytic lens of narrative inquiry as it provided a fertile platform for collective learning to happen (Lave & Wenger, 1991). The collaborative nature of this research team, whose main focus was to understand, explore and analyse educational phenomena, was reflected in every action and decision taken in the research process. This social learning experience further enabled the conjoint efforts made in synergy by various members of the team towards shared research goals, and became an authentic reflection of the social nature of human learning.

This paper emerged from the reflections made by the members of the research team who realised the emancipatory and liberating nature of this joint venture. It involved a group of female researchers and academics joining forces to create multiple research opportunities for members of their department, and to increase the opportunities to publish collaboratively as they generated educational knowledge. Recognising the place of gender in the organisation of the social world, this inquiry embraces feminist elements in that it takes account of the experiences of female researchers and academics (Brayton 1997; Cohen et al., 2011). The feminist stance is also felt when each member of the team becomes a participant whose voice is given a space to be heard and whose story and experience is documented in ways that tell the story of the collaborative research team (Usher, 1996; Webb et al., 2004). In this manner, the participants are regarded and valued as experts and authorities of their own experiences. Moreover, in this research study, the researchers are also research subjects. In such instances, issues of power and inequality are addressed a priori, through the removal of hierarchy in the

relationships between researchers and study participants (Harding, 1987; Webb et al., 2004).

Literature Review

Three main concepts framed this study, namely: collaborative research teams; online collaboration; and academic identity.

Collaborative Research Teams

Research funding agencies are striving towards achieving collaborative research within the academic world (Cheruvelil et al., 2014; Fox, et al., 2017; McGinn, 2005). It is estimated that collaborative research teams are on the rise (National Science Board, 2012), and it is likely that such joint endeavours produce highly cited papers (Wutchy et al., 2007). Research teams provide opportunities for deep professional learning amongst academics (Beaver 2006; Christie et al., 2007; Kezar, 2005; Stanlik, 2007; Smith et al., 2014) and enrich quality in research output (Kahn et al., 2012; Kezar, 2005). Yet, as much as it is desired, collaborative academic research is also challenging and complex (Sullivan et al., 2010), often resulting in 50% failure of collaborative research teams in higher education (Kezar, 2005).

On the one hand, through the lens of social learning theory, scholars have defined functioning research groups as 'communities of practice' where individuals learn from each other (Lave & Wenger, 1991; Wenger, 1998) or 'communities of enquiry' which focus on research aimed at creating new knowledge (Christie et al., 2007). Research indicates that successful collaborative research teams are 'synergetic' (Gendron, 2008) and embrace emotional engagement, social sensitivity and diversity (Bennett et al., 2012; Cheruvelil et al., 2014; Parker & Hackett, 2012; Pentland, 2012; Ritchie & Rigano, 2007; Stokols, et al., 2008; Woolley et al., 2010), creating a 'caring environment' (Tynan & Garbett, 2007). Junior academics benefit from taking on the role of collaborators within a research team as they partner and build mentoring relationships with senior scholars to evolve as they strengthen their abilities in research and to publish in peer-reviewed journals (Khatri et al., 2012). Leibowitz et al. (2014, p. 1267) suggest that the leader of the research team should give attention to how participants learn "...*via structured inputs in which expertise is shared, via doing, and via supportive interventions such as scaffolding or peer critique*." There is the need for the integration of team-building exercises to improve the interpersonal skills of each member if teams

are to maintain high-performance throughout the life of a project (Parker & Hackett, 2012). We view the identified characteristics and benefits within collaborative research as both an inspiration and a trigger to this study.

On the other hand, members of research teams do not always experience collaborative work positively. The experience can create complex dynamics pertaining to relationships, participation, design and publication processes (Dance, 2012; Borenstein & Shamoo, 2015). The process of establishing a shared understanding and rules within a research group needs attention as it takes time to generate (Kezar, 2005). There is the need to take into account the complexity of sustaining relationships, and the strengths and weaknesses of each member in the team (Blumer et al., 2007). Ongoing team assessment is necessary to establish what is working and what needs fine-tuning (Smith & Imbrie, 2007). That said, transparency and attention are key to collaborative partnership (Groen & Hyland-Russell, 2016). It is documented that smooth and positive functioning within the team addresses complex problems that collaborators may come across (Leibowitz et al., 2014; McGinn et al., 2005), among them mainly issues related to authorship. Indeed, research teams need to negotiate authorship before they start collaborative writing tasks to maintain trust and respectful relationships (McGinn et al., 2005; Spiegel & Keith-Spiegel, 1970; Thompson, 1994). In light of this claim, we argue that the complex dynamics created within collaborative research teams should not be viewed by academics as a barrier to initiating group research projects. Rather this paper is living proof of our emerging argument. In doing so, it contributes to the literature above by documenting lessons learned from the successes and challenges of our experience as a research team collaborating through an online environment.

Online Collaboration

The concepts of online collaboration and collaborative research are underpinned by social learning theory (Lave & Wenger, 1991) and social constructivism (Vygotsky, 1978). This means that learning is viewed as a process of interacting with others, and therefore a social and collaborative activity, where meaning is constructed through communication. In this context, Siemen's (2004) concept of 'connectivism', provides a valuable contemporary theory of learning that acknowledges the influence of technology on civil society and knowledge creation. He portrays the co-construction of knowledge within communities and networks as connectedness through interaction and dialogue between the self, participants

in a group, and technology. As specified in the work of Brindley et al. (2009, p. 4), a framework developed by Siemens (2002) portrays how interactions between learners in an e-learning course may be viewed in a continuum of 4 levels:

1. Communication: People, 'talking' discussing;
2. Collaboration: People sharing ideas and working together (occasionally sharing resources) in a loose environment;
3. Cooperation: People doing things together, but each with his or her own purpose; and
4. Community: People striving towards one common purpose.

These levels provide a '*useful framework for thinking about scaffolding with learners through progressively more complex interaction skills leading to the creation of an effective working group*' (Brindley et al., 2009, p. 4). Level 4 in this framework (Siemens, 2002) represents the highest level of complexity in interaction skills. As a team, we believe that this framework may assist individuals in gaining a deeper understanding of online collaboration and provide them with an overview of why it does not always lead to the successful creation and sustaining of a community of practice (i.e., level 4). In his innovative work, Siemens (2004) points out that when research teams work toward one common objective, they help create a strong sense of connectedness that encourages life-long learning, at both the group and personal level. He specifically highlights this link to life-long learning in one of his principles of 'Connectivism': "nurturing and maintaining connections is needed to facilitate continual learning" (Siemens, 2004, p. 4). This paper fits this purpose as it shows how, as a team, we positioned our experience of online collaboration within this framework, following the analysis procedure of our narratives.

Studies exploring online collaboration have revealed positive outcomes, including increased learner achievement and enjoyment within a collaborative environment (Godwin-Jones, 2003; Haythornthwaite, 2006; Lahti et al., 2004). Emerging online discussions contribute to meaningful collaborative learning as participants share their thoughts, ideas and resources, ask questions, and justify their opinions (Li et al., 2009). These discussions promote knowledge elaboration (Gleaves & Walker, 2013), knowledge creation (Phelps et al., 2012; Siemens, 2004), and knowledge acquisition and retention (Stegmann, et al., 2012; Zheng et al., 2015). Within these online collaborative spaces, knowledge does not pertain to one member;

rather it is sought, shared and co-constructed among members in the group, thus facilitating higher-order thinking skills and the creation of new knowledge through shared goals, via meaning-making processes (Palloff & Pratt, 2005). In online collaboration, individuals take on the role of creative collaborators via online interactions with each other and the exploration of new ways of thinking and conducting new research together (Hong, 2013). Takahashi et al. (2018) found that the relationships that are activated through the structure of networks within working groups are the key factors of how knowledge transfer leads to innovation. This eliminates to a large degree the challenges of online collaboration. Rather, the quality and quantity of interactions among collaborators impact the effectiveness and output of the dynamics of the team (Swan, 2001). The training of how to work successfully with others, within an online environment, is therefore essential for all members to enable them to scaffold their learning in this area (Kearsley, 2000).

The use of collaborative technology can be of "significant value" beyond the walls of educational institutions (Larusson & Alterman, 2009, p. 397). This study reveals how we used several online technological tools (e.g., web-based video conferencing tool; cloud-based storage system, etc.) to carry out research and the ways in which this helped us create better communication and collaboration. The next section focuses on our emerging interest to uncover how our academic identities developed as we experienced online collaboration.

Academic Identity

While some researchers have attempted to gain a deeper insight into the identity formation and change among academic staff members (Becher & Trowler, 2001; Harris, 2005; Henkel, 2000; Neumann, 2001; Trigwell et al., 2005), the construction of individual identities may not always be on the focus of academics (Knight & Trowler, 2001). In this paper, identity is understood as socially constructed, negotiated and reshaped through diverse contexts and over time (Mead, 1977). Wenger (1998, p. 74) portrays the development of identity as a "learning trajectory", where the past and the future are negotiated in the present. In other words, the personal history, background and future professional life of an academic intertwine to make meaning from the present, resulting in the development of a new academic identity. However, identity is not just shaped by the individual; it is also influenced and reshaped by how the individual experiences academic life (Leibowitz et

al., 2014; Taylor, 1999). In fact, academic identity is formed by a myriad of forces including academic dispositions and individual expectations as they emerge within one's political, social, cultural and economic pasts and experiences (Maritz & Prinsloo, 2015). Therefore, academic identity is a complex construct and hard to define. Illustrating this point further, Quigley (2011) states that:

> ...an explanation of academic identity is sought that attempts to unpick notions of academic ontology (how academics come to be) so as to help form an understanding of how academics might form epistemologies (how academic come to know)... At best one can describe academic identity as a constantly shifting target, which differs for each individual academic... (p. 21)

Academics construct their identities by forming part of different communities (e.g., departments, research teams, committees, special interest groups, etc.) within higher education institutions (Malcolm & Zukas, 2009). This leads to a "self-reflexive endeavour" (MacLure, 1993, p. 314) which often results in a "community of communities" (Brown & Duguid, 2000, p. 53). Of special interest here is a study by Leibowitz et al. (2014), conducted with 18 academics who investigate their perceptions of participation in a higher education research project and conclude that academic identity requires joint attention as it is key to the successes of collaborative research work. Within the context of a research group, participation and self-reflection translate into a process where academics negotiate and re-negotiate their identity to relate to the common goals, purposes and the joint mission established by all team members (Kezar, 2005). In addition, there are instances where changes in the composition of the research team may spark the awareness of identity construction, and possibly, changes the individual and all the group members (Wenger, 1998). The awareness of these interrelationships uncover the moving constructions and disruption of identities in collaborative work, supporting all members as they juggle through processes of becoming and "unbecoming" (Colley & James, 2005, p. 1).

Taking the above into consideration, this paper will explore the impact of online collaboration on the construction of our identities as eight female academics as we embarked on our first research project. Such stories "offer academics a means to come to terms with, and orient themselves amidst, a variety of changes taking place in their work environment and higher education in general." (Ylijoki & Ursin, 2013, pp. 1137-1138). In doing so, this paper makes a contribution to the literature by answering the overarching

research question: *What can we, as a group of eight female academics, learn from our shared lived experiences of the birth and growth of an online collaborative research team during the COVID-19 pandemic?* The next section provides a rationale for our joint decision to employ narrative inquiry methodology.

Methodology

This paper draws on the experiences, beliefs and reflections of eight female academics belonging to one research team (ECPE), that was set up during the first wave of COVID-19 pandemic in response to the urge to connect and work collaboratively. It was also driven by a pressing need to examine, and make sense of, the ways in which education was being enacted and honoured within the shores of the Maltese islands, in the midst of an emergency situation that was as novel as it was exigent.

A qualitative approach to inquiry through individual narratives was adopted to present the lived experiences of the team members. Narrative research serves the purpose of capturing the detailed stories of an individual or a group (Creswell, 2013; Reismann, 2008). It is used by researchers who opt for a more subjective stance in the research process so that roles between researchers and participants become blurred, and the relationship moves centre-stage in the study (Clandinin & Connelly, 2000). Narrative inquiry therefore collects stories of individual experiences, reflections and relationships, which are then analysed to create holistic understanding of what participants do (Clandinin & Connelly, 2000). Consequently, it gives access to an interpretative world that allows for an interlocking of perspectives and understandings. It provides insight into the lived experiences that are meaningful to the participants (Clandinin & Connelly, 2000). In this inquiry, narrative is used as a way to study experiences and "focus on experience and to follow where it leads" (Clandinin & Connelly, 2000, p.188). This approach to qualitative research is grounded in the notion of 'lived experience' that provide diverse and fresh ways of seeing and living the process by engaging in collaborative research (Huber, et al., 2013).

In this paper, the stories narrate the experiences of a group of eight female researchers in their collaborative bid to work and research remotely, using digital technologies. Specifically, reflective accounts written by each participant were the main source of data used for this paper. These reflections were penned in response to the research team's attempt to document and

share the experiences of the collaborative research process. These reflective accounts reconstruct the events and experiences that occurred between end of April 2020 (when the research team was formed) and September 2020 (when this narrative inquiry was conducted). Other data referred to in the construction of these narratives include documented records produced by or shared amongst the members during the same period, such as meeting minutes, emails, recorded meetings, documents developed during the process and the development of research tools. Notions of 'time' and 'place' are reinforced through the narratives. The situational and contextual factors surrounding the period when the inquiry took place impinged directly on the set up and the unfolding of the collaborative research experience. Thematic analysis (Braune & Clark, 2006) is used, whereby the narratives told by participant-researchers are analysed for patterns and themes that emerge as they shed light on the collaborative experience of the members.

Ethical considerations include consensual anonymity. Confidentiality is maintained via the use of pseudonyms despite the fact that they were collectively identified as members of the ECPE research team, and also as belonging to the Department of Early Childhood and Primary Education. Nevertheless, the identity of the eight participants is not disclosed. Ethical issues in relation to the respect for the public and private domain of each participant-researcher were also addressed by ensuring that, in accordance with our ECPE research team protocol, all members of the team were consulted at different stages of the research. This included the reviewing of the paper and the approval of each participant prior to publication.

Key findings and discussion

This section presents the five themes as they emerged from the data analysis. The five themes are largely linked to the three concepts that underpin this paper: collaborative research teams, online collaboration and academic identity. Rooted within these emergent key strands, this work further proposes a framework built on the six core concepts that characterise the birth and growth of the ECPE research team during the COVID-19 pandemic. The discovery of this framework during the data analysis of this study led us to better answer our chosen research question.

In view of the above, this section is divided in two: (i) a discussion on the data emerging from the five key strands, and (ii) a presentation of how these key strands developed into the proposed framework:

(i)   The five key strands

Strand 1
"The rainbow after the storm": Blossoming and breaking barriers through the COVID-19 challenge

Our narratives tell the story of how the COVID-19 challenge was turned into an opportunity by us during the physical closure of the University of Malta. This transformation resonates with our stories as we shared our experiences and unexpected challenges, the way the research team was formed, and how we recognised key factors that helped us see what Jade refers to as "the rainbow after the storm":

From a Challenge*:*

> *Covid-19 has brought with it many uncertainties and challenges in my personal and professional life (Jodie)*

> *Working from home did not let me get to know my new colleagues at University or interact with students in lecture rooms and on-campus (Katia)*

To an Opportunity:

> *Yes, yes… let's tap on this unprecedented experience and embark on a national research study to explore the impact of Covid-19 lockdown on Early and Primary Education. "Let's do this TOGETHER" proposed... two colleagues of mine who spearheaded this initiative... (Jade)*

> *Women who are turning a difficulty created by a pandemic into an opportunity... It truly felt like the start of something exciting and extraordinary (Mireille)*

This opportunity was also personified by Jodie as a *"a breath of fresh air"* amidst her experience of academic life as a lonely journey. Similarly, most members expressed the long-overdue need to address stereotypical socially

constructed barriers that tend to manifest academic life as synonymous with loneliness within the local context:

> *I have been working in the Department of Early Childhood and Primary Education for the past twenty-four years, and collaborative research has not been a common practice... My wish, to collaborate with my colleagues on one common research project was finally coming true (Jade)*

> *Academics are sometimes known for their competitive and individualistic tendencies as well as for their 'larger than life' ego (Mireille)*

In trying to change a longstanding pattern of isolation, which seems to be reminiscent of the rise in the individualistic rather than collectivist cultures within societies (Santos et al., 2017), our claims revealed a willingness to embark on this joint venture work and endure all the bumps and bruises that come across:

> *We are as yet in the first months of the project, but, in my view, all of us seem to be very adamant to make it work... Our aim is for each one of us to grow and succeed through a collaborative endeavour (Katrina)*

> *... here is a will by all members, to ensure that we work well together (Keira)*

Strand 1 uncovers the formation of a 'community of practice' (Lave & Wenger, 1991) grounded in the sense of trust in ourselves and each other as we moved ahead with the support of our collective 'possibility thinking'. Maxwell (2019, p. 1) defined "possibility thinking" as "... the willingness to see possibilities everywhere instead of limitation." Maxwell further explains that cultures need people who take action and inspire others to pry into the future and break down the barriers. This argument captures our joint intent to *create* new pathways for collaborative research practice within our context. The concept of creativity is the core of possibility thinking. Indeed, the term 'possibility thinking' was coined by Anna Craft (2001) in her mission to promote the democratic ideology of creativity in education systems (Chappell & Cremin, 2014). This ideology underlines the work we do and our professional role as educational researchers.

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Strand 2

"Explore new horizons": Building learning power through collaborative research work

Strand 2 shows how a positive attitude, openness to learn from others and rekindled motivation featured as the learning power triad of our collaborative research trajectory. Successful learning starts with a positive attitude (Syukur, 2016). In our stories, this was evident in claims such as, *"My thoughts and feelings about this project are positive (Rebecca)"* and *"... collaborative work is always positive as all members of the team benefit... outcome and end product of collaborative teamwork is always greater than the sum of the individual parts... (Keira)."* This sense of positivity linked to an evident degree of 'openness' in our write-ups. 'Openness' is one of the big five personality theory (Digman, 1990; Goldberg, 1993). The identified five dimensions are universally used to describe personality: Openness, Conscientiousness, Extraversion, Agreeableness and Neuroticism. 'Openness' is made of six sub traits: imagination, liberalism, artistic interest, intellect, emotionality and adventurousness. According to this theory, individuals who possess a high level of 'openness' are more susceptible to embracing new situations and experiences (Digman, 1990; Goldberg, 1993). As revealed in the participants' responses below, our claims revealed a relationship between an 'openness' to learn from each other as a 'community of practice' (Digman, 1990; Goldberg, 1993; Lave & Wenger, 1991) and readiness to contribute and share new knowledge (Christie et al., 2007):

> *I am also learning about myself; mainly how to collaborate in a research group, and to be open to learn from others while appreciating my expertise (Katrina)*

> *I was keen to participate with my colleagues: to work together, to learn from each other and to encourage each other to grow academically (Jodie)*

Being open to learning stems from the belief of having an ability to discover new learning (Bandura, 1986). In the latter claims, Katrina and Jodie, reveal a sense of self-efficacy which often leads to higher levels of motivation, action, sustained effort, commitment and focus on set goals (Bandura, 1986; Cervone & Peake, 1986). As indicated by Kartina and Jodie, self-efficacy seems to have played a key role in regenerating our motivation to build learning power as we continued to "explore new horizons" within our collaborative trajectory:

This sense of collaboration is very encouraging; it is motivating me to work harder and explore new horizons (Katrina)

I also believe that working as a team we will be in a position to tease out the strengths of all members while at the same time supporting each other through areas of growth... (Jodie)

These comments further reveal energy created from interacting with each other, and this links to 'extraversion', another trait from the big five personality theory (Digman, 1990; Goldberg, 1993).

In this strand, the identified triad brings to light our shared values and commitment to lifelong learning as academics and how these psycho-social personality traits reawakened our motivation, amidst a pandemic, to keep building learning power albeit being physically distanced.

Strand 3
The "Blessing": Online Collaboration during University's physical closure

Online collaboration served as the bridge for all members to connect and embark on a new venture by forming and functioning a collaborative research team during the COVID-19 pandemic. This is particularly evident in the claims below:

Digital technology has proven to be a blessing, even for those of us who usually shy away from the newer technologies. With the help of one particular platform, we have managed this venture in new, surprisingly creative ways (Mireille)

Digital remote collaboration with the members of the ECPE team was my light at the end of the tunnel during University's physical closure (Katia)

The following are some of the advantages of working remotely as perceived through our academic lens in a Maltese context. The concept of time in relation to our hectic academic life featured repetitively:

I cannot stop thinking of how this virtual learning space: acted as the third teacher with its capacity to invite us to participate, be active... allowed us to enjoy our human rights... provided an opportunity for us to creatively express ourselves by using our hundred languages of learning... served as our

play space to co-create, co-innovate and co-research through multiple possibilities... is synonymous with a stimulating learning invitation that contributes to the personal and professional growth... (Katia)

I can use my time efficiently as I don't waste time and energy commuting to University and parking (Jodie)

If we could build a case that online research meetings are as effective as in-person meetings, they stand to save us money and the planet's resources by reducing our need to travel. This sounds appealing as it saves researchers' time and money and gives them the freedom to pursue other interests (Bea)

Having time to allocate for meetings through an online cloud platform resulted in new ways for us to interact, connect, and sustain group research work as a 'community of practice' (Lave & Wenger, 1991). 'Connectivism' theory (Siemens, 2004) highlights the notion of knowledge being co-constructed through interactions and dialogue occurring between technology, team members and the self and how this leads to effective teamwork. The following claims show how the trajectory of our online collaboration is positioned within some of the levels of Siemens' (2002) four-levelled continuum of different types of interactions that learners may experience within an online space (with level 4 representing the highest level of complexity in interaction skills resulting in effective teamwork):

Level 1: Communication
    People, 'talking' discussing

    ... allow a lot of space for everybody's opinion and space to express ideas and give out input according to their expertise (Keira)

Level 2: Collaboration
    People sharing ideas and working together (occasionally sharing resources) in a loose environment

    The close collaboration, albeit physically far from each other, created a warm virtual space that made me feel comfortable to participate and share my views actively (Katia)

Level 4: Community

People striving towards one common purpose

... the importance of having shared goals, rigour and scientific integrity through our work, and the need to contribute equally albeit in different ways were also outlined (Katrina)

... knowing that researching and writing with others would allow me to team up with colleagues and work together towards a shared goal (Mireille)

It enabled us to engage in innovative ways of getting together to conduct research (Bea)

According to the framework above (Siemens, 2002), our collaborative research experience seems to have established the highest level of complexity in terms of interaction skills within an online environment, which is key to effective teamwork and supporting lifelong learning both on a personal and a community of practice level (Siemens, 2002, 2004). Indeed, engaging in this process of collective learning in a shared endeavour as a 'community of practice' (Lave & Wegner, 1991) seems to have broadened our perspectives of 'technology' as we added value to its purpose and functionality as indicated below:

... I have learned to value it (technology) as an advantageous and quite versatile tool that may in actual fact prove to be an answer to many of our past issues that used to make such an endeavour difficult to initiate, let alone establish as an ongoing and lasting collective venture (Mireille)

Strand 4
"Fine-tuning" our online collaboration with "courage"

Online collaboration brought about new challenges for us as we needed to *"learn to navigate this new territory cautiously yet with courage (Mireille)"*. The morning mantra of Professor Brown (2012) reminds us that great learners need to allow themselves to be vulnerable, accept their beginner state, to get the courage needed to be brave and take action even when they might be afraid to do so. Such vulnerability coupled with a balance of a positive mindset is evident within the narratives of Katrina and Jade:

Initially, I was sceptical that such a collaboration would work out. My past experiences of working in a group, were not always positive (Katrina)

Initially I must admit I felt apprehensive but as I was introduced to co-planning and co-reflection, I started to recognise the value of working with my colleagues which in turn brought an increase in the level of innovation and enthusiasm (Jade)

According to Bandura and Wood (1980s), when individuals expect and learn from mistakes in the beginning of learning experience, it results in better outcomes. Our accounts also show how our skill of courage developed as we tried to tackle the identified challenges of online collaboration by "fine-tuning" our remote communicative and collaborative skills:

The challenges:

We did not always face smooth sailing... I identified the following as some of the challenges we encountered along the way: learning how to effectively communicate and collaborate at team level during online meetings - such as striking the right balance between members' willingness to talk and ability to listen and having equal interaction among all members; finding common dates for all members to be present during meetings; deadlines during busy periods of the academic year; time management; accountability; group decision-making (Katia)

... when trying to agree on issues or to stay on task during meetings. Sometimes it can be a bit frustrating when time is running out and we need to conclude (Jodie)

I soon realised that collaborative work requires a lot of time and planning (Jade)

... it is also true that the many Zoom meetings can be tiresome... we can be more clinical and take decisions quicker and more efficiently if we are more straight forward and not too sensitive to each other as we understand that this group is mainly a working relationship and that conflict is professional and not personal... (Keira)

Our "fine-tuning" to make it work, not only in terms of the functioning and productive aspects of the team but also the establishment of supportive, respectful relationships between members of the ECPE team:

> *If a member does not agree, it is said loud and clear, and there are no personal feelings held against the person raising issues (Keira)*

> *One particular conversation that I recall having and that has left an imprint in my mind was a long discussion we had during one meeting about the need to make sure that we are there for each other and that when things become too difficult or hectic rather than giving up and leaving the venture we need to talk with the rest of the team and perhaps take a step back for a while... (Mireille)*

> *Whenever we discuss things, even when we disagree, and there were/are times when we disagree/d vehemently, we make sure to negotiate, to listen to each other, to respect each other, to accept different opinions, to brainstorm, to research and identify possible solutions (Katrina)*

> *Some of these challenges were tackled by acting in ethical and sensitive ways as we fine-tuned our remote communicative and collaborative skills. These reciprocal relationships helped us care for each other, develop stronger communication and interpersonal skills during online Zoom meetings as well as build our capacities as collaborative academic researchers; values, knowledge and skills that are impossible to experience working independently (Katia)*

The claims above further support Brown's (2012) mantra and how as a group, we were being vulnerable as we shared our experiences, and this helped us to move on with courage and possibility thinking rather than limited thinking. Maxwell (2019, p. 1) argues that "possibility thinking... adds value to everything" and "creates options... because they allow us to move forward in life with hope. And as we move forward, we discover that others are inspired to move forward too - it's what leadership is all about." In fact, a sense of distributed leadership was pointed out in our acts of "fine-tuning" to function effectively in a virtual space. This thread of possibility thinking linked to our exploration of leadership skills within a new territory was weaved with other principles we stand up for within our narratives, including democracy, fairness and transparency. These fundamental values are also embedded within a protocol we collaboratively created and agreed upon:

There is a sense of ownership when a particular task is given to us – we usually work in smaller groups within the team. Every time, we select one person to lead the group, mostly in terms of keeping the momentum going and ensuring that things are done... Knowing what is expected of us and the boundaries by which the team functions can help us feel more comfortable and safe in the group as well as help us to sort out any conflicts that may arise along the journey (Mireille)

... we are trying to find a balance between having official rules and working based on the 'old fashioned' concept of integrity and respect for each other... To me the team is fair and there is a strong element of transparency among the members (Keira)

One of the issues we were concerned about was the issue of authorship. How can the input of each one of us be acknowledged in a fair way? As a result, we saw the need to develop a Research Team Protocol that is agreed upon by all. Highlighting our aims and guiding values as well as procedures when doing research, the protocol also includes the need to recognise and abide by a set of identified rules that apply to ethical publishing and authorship (Katrina)

It is our understanding that as we attempt to continue making meaning out of this online research collaboration, we are also reshaping our identities as academics and broadening our perspectives of how knowledge can also be created with the use of technology.

Strand 5
"Female academics who empower", "support" and "mentor" other women: Negotiating our academic identities in an online collaborative space

Academic identity in itself is a complex notion, one that is developed and negotiated over space and time (Mead, 1977; Wenger,1998). Multiple forces impinge on its formation, including the historical, political, economic and cultural milieu surrounding academia (Maritz & Prinsloo, 2015). One can say that at a macro-level, these factors play a direct or indirect role in identity-building. However, other more personal, individualistic yet equally significant dynamics influence identity construction at the micro-level. Each participant refers to her role as an academic in relation to herself and/ or to others. Keira refers to herself as "... one of the elderly members of the group" whilst Mireille mentions that she views herself to be "a relatively young

academic and researcher" and writes about her "more experienced colleagues." The perception of being either a novice or an experienced academic seems to influence both the decision to partake in the collaborative research endeavour and the role/s each individual assumes within the research team. For example, Keira reported that as one of the more experienced members:

> *... it is a pleasure to work with colleagues who are younger and willing to work hard, to learn and grow as academics. It is partly also an exercise in mentoring younger academics, an aspect which I enjoy very much (Keira)*

This reflection draws attention to the notion that academics construct and re-construct their identities not in isolation, but through the interactions, connections and experiences they seek or create as they experience academic life (Liebowitz et al., 2014). There was also a feeling that despite a substantial number of years of experience in academia (five years or more), some participants still regarded this venture as an opportunity for professional growth and learning. As participants reflected on their past and their future as members of academia, they were, in more ways than one, negotiating their identities in the present moment as they engaged, consciously or unconsciously, in the process of identity shaping and reshaping (Wenger, 1998). Jodie mentioned the sense of frustration experienced:

> *... in the last few years heavy workloads have kept me busy with the day-to-day work with little time to dedicate to research (Jodie)*

Katrina related how this new venture is giving her both an opportunity to share her expertise and knowledge with others, while proving to be:

> *... a humbling process, a realisation and an acceptance that there is so much to learn in the academic world and that learning from others is inevitable (Katrina)*

Jade and Jodie, both of whom have extensive experience in terms of their academic and lecturing portfolio but have possibly had fewer opportunities in terms of research, appreciated how forming part of the ECPE research team has opened up new avenues for a revival or shift in their academic identity. In the following excerpt, Jodie related to how forming:

... part of this collaborative research group has given me renewed motivation and inspiration to work more to advance my academic identity as a 'real' academic with a research portfolio and not only a lecturer, dissertation supervisor and TP examiner (Jodie)

Referring to the research team's protocol, Jade also reflected that through the collaborative research team, she hoped to "... increasingly focus on developing my research and publication profile" as she navigated through what she regarded to be her "next stage in my professional self-improving journey".

This leads to another important notion that emerged from the narratives. Although there is a general understanding and eagerness to learn from others and develop professionally and academically to move further towards becoming a fully-fledged or, in Jodie's words, 'real' academic, there is also a perceived need for more 'distributed' or 'rotational' leadership where each member of the research team accepts that at some stage she would need to step up and take the lead in some aspect/s of the project. Rather than establishing fixed roles based on experience and expertise with more experienced academics and researchers continually adopting leadership roles, mentoring others and steering the proverbial ship, Keira maintained that for equal collaboration and increased research output, she felt the team needed:

... to learn how to be better at taking turns with respect to responsibility, and for all the members of the group to accept that at times, we all need to take leadership roles. This is what rotational leadership is, and it keeps the group energised as some members rest while the others are keeping the tempo of the group going (Keira)

Jade shared her understanding that individuals have "multiple identities which are used contingently depending on what they are doing, who they are with and the setting in which they find themselves." She goes on to profess her own identity/ies "as a woman, an academic, a daughter, a sister, a Catholic, a born and bred Maltese, a global citizen and so forth." The feminine identity is prevalent throughout the narratives of the eight academics who refer to the construct of their gender identity in different ways, acknowledging the place of gender in the formation, development and experiences of the research team (Cohen et al. 2011). Katia related how a conversation between two colleagues about the need to conduct local research

into the ways children in Maltese schools are being impacted by the COVID-19 pandemic:

> *... flourished into a group of eight female academics who meet online regularly and work wholeheartedly towards one joint endeavour (Katia)*

In this way, the emancipatory and liberating nature of working collaboratively with other female academics and researchers is highlighted. Mireille ascribed meaning to the collegial and collaborative ways the female academics forming part of the ECPE team are:

> *... working towards excellence, aiming to develop our research and writing skills to the highest levels possible. Female academics who empower other women. Women who support other women. Women who learn from each other. Women who reflect and are aware of their strengths and their talents and are willing to contribute to the advancement of knowledge and to the betterment education and society at large. Women who are turning a difficulty created by a pandemic into an opportunity (Mireille)*

Katrina focused on the identity of the team as a 'learning society' and an 'educated society' that developed through a democratic process where power and hierarchy were replaced by conscious efforts for all members to be equally valued and heard. This reflects feminist approaches to research where participants and researchers are given a voice, allowing them to tell their 'story', thus recognising their validity as experts and authorities of their own experiences (Usher, 1996; Webb et al., 2004). Katrina referred to the ECPE Research Team Protocol, a document co-constructed by the team, which in itself places the research team:

> *... within a learning society concept, which, as an educated society, is committed towards active citizenship, liberal democracy, inclusion and equal opportunities; characteristics which were all listed in our protocol and put into practice during our meetings (Katrina)*

Mireille described the research team as a community of practice and alluded to the meaning-making processes that result from the collaborative venture, as personal and professional identities are forged with the help of remote digital technologies. Perceiving the research team as a 'community of practice' or a 'learning society' places the collaborative venture within the social learning theoretical position where knowledge-building and the

advancement of new knowledge are situated socially within shared domains of human activity (Lave & Wenger, 1991; Wenger, 1998).

(ii)   The 'SKRIPT' framework

For the purpose of this paper, we propose a framework ('SKRIPT'), which emerged from the five key themes presented above. The acronym 'SKRIPT' stands for the six core concepts that underpin the birth and growth of our online collaborative research team: Skills, Knowledge, Relationships, Identity, Philosophy and Trust. The 'SKRIPT' framework captures an overall summary of the members' online collaborative experience in six core concepts.

It is our understanding that this framework may be of assistance to other researchers who are inspired to gain deeper understanding of how online collaboration can create, support, and sustain research teams through the lived experience of others. The 'SKRIPT' framework is presented below (see Fig. 1) in the shape of a progressive six-tier pyramid characterising the six concepts that make up the *script* of our online collaboration:
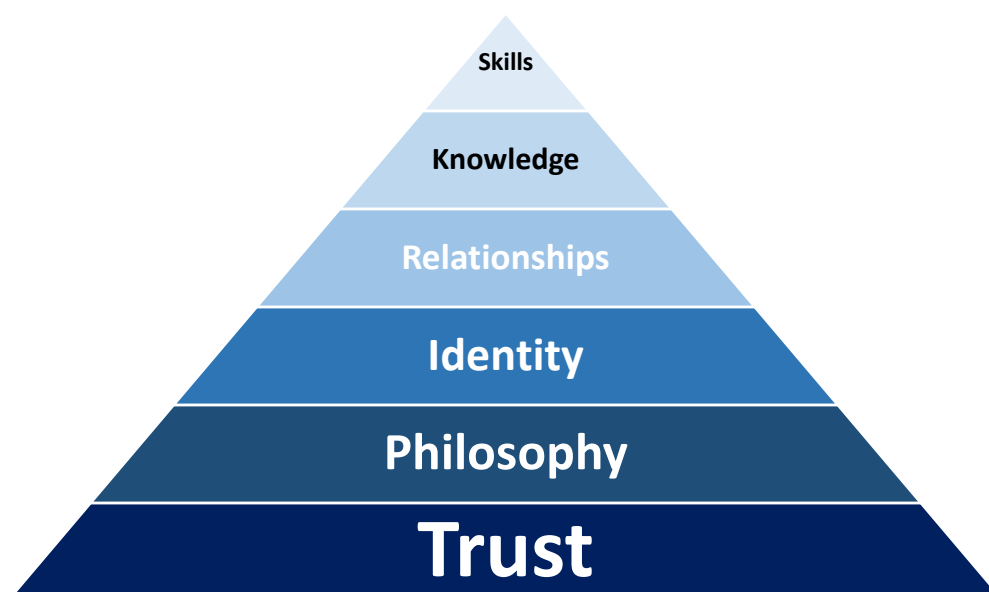

Figure 1: The 'SKRIPT' Framework

The foundation of the 'SKRIPT' framework is **Trust**. This fundamental tier represents our intimidating opening move, which needed just the right amount of trust to take that "leap of faith" (Katrina and Jodie) and embark on this collaborative endeavour. Our key findings show how trust within our

team was supported by 'possibility thinking' and learning power built on a triad of positivity, openness and motivation. Findings also surfaced a sense of trust in ourselves, "Women who reflect and are aware of their strengths and their talents (Mireille)" and others as well as the vision of who, where and what we want to be in the years to come:

> *For the purpose of this research project, I would like to harness the power of open individualism in a 'community fashion' so as to further build on our sense of trust, collegiality and to erode department and faculty status quo through our actions and the outcomes of our actions (Rebecca)*

The next tier **Philosophy** is tied to a recognised commitment to lifelong learning grounded in our shared values and beliefs of diversity, social justice, equity, ethics, democracy, participation, active listening, social constructivism, self-efficacy, respect, openness to learning, transparency, collaboration, collegiality and excellence:

> *... we embrace a number of important values to guide our work, built mainly on the notions of collaboration, collegiality and excellence... I also valued the diversity and richness of the individuals who showed up in terms of areas of interest and expertise, experience and personality (Mireille)*

> *Guided by values of justice, ethics and equity... as able to contribute, respected, listened and valued.... learning and participation is a right of everyone, not a privilege to a few, and, I believe, we have embraced this principle. (Katrina)*

> *I feel that my participation is being valued... (Jodie)*

In this research, the claims above also show how the philosophy underpinning our shared vision permeated our positioning as research subjects in this study. The work presented in this paper served as space for us to be heard and act as agents of our learning in this collaborative experience through narrative inquiry (Webb et al., 2004). Moreover, our shared values and beliefs allowed us to step up to the next tier in the 'SKRIPT' framework as we negotiated and reshaped our academic identities as well as strengthen our relationships within an online environment:

> *ECPE research team is a community of practice that is allowing me to shape and reshape my personal and professional identities as I make meaning*

through this remote collaborative research process... The online platform was allowing me to get to know my new colleagues and build stronger relationships with them (Katia)

In this way, over the past months... we have been able to forge new ties as a whole team... as well as creating strong bonds with like-minded individuals... and are gradually building a strong sense of identity as the ECPE research team (Mireille)

Identity and **Relationships** are at the core of the pyramid as we conclude that these were central to the effective functioning of remote collaborative research work. Our narrative inquiry revealed that our trust and shared values allowed us to be vulnerable – to give attention to the construction of our academic and gender identities and also the identity of our team. By constructing our identities through interactions with others, we gradually developed the courage skills needed to be able to fine-tune the challenges we come across and strengthen our bonds as we make meaning out of this experience. Further, our experience of the distinguished hybrid process between the concepts of identity and relationships opened the door to the top two tiers of the 'SKRIPT' pyramid framework - the view to our future of advancing knowledge and skill acquisition through collaborative research supported by online tools. This interpretation is grounded in our claims as our stories unfolded and portrayed the first four tiers of the 'SKRIPT' framework as the building blocks to the enhancement of our **Knowledge** and **Skills**:

I have learnt a lot about the background of my colleagues as well as where their expertise lies. I also became aware of research and documents published which are relevant to the areas that we are researching (Keira)

Working collaboratively will be key in helping me to find time to dedicate to writing and research, for the team and for myself (Jodie)

There were several instances during the meetings which took me back to theory,
envisioning all of us moving from our actual zone of development to the zone of proximal development to advance our learning (e.g., while asking questions, discussing and then collectively finding possible solutions and taking decisions to next steps) (Katia)

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Our collaborative research group and the project, is providing me and the other members, with continuous learning opportunities to keep on learning and meet the challenges of change (Katrina)

So yes I have learnt and I always want to keep on learning (Rebecca)

It was also interesting to explore that an attempt to integrate the aspect of team building to enhance interpersonal skills (Parker & Hackett, 2012) was mentioned and given importance:

... also has not stopped us from meeting up for a coffee or a lunch at times, though these are kept to the minimum right now (Mireille)

One way which I found useful to help me socialise and "talk shop" with my colleagues was to join them online on Friday to watch musicals (Jade)

This sub-section has shown how we are, all of us, females, colleagues, academics, facilitators, researchers, learners, leaders and writers trying to find the meaning of the scenes within our experience of online collaborative research. In this paper, we discovered, shared and explained the 'SKRIPT' framework, but our *scripts* are not fully written. So, we must stick together - as best team players do - to sustain our journey of *trust*, shared *philosophy*, reshaping and negotiating our *identities* and harvesting our *relationships*, as our advancement of *knowledge* and *skills* begets new knowledge:

May we all remember the founding of ECPE research team at the University of Malta as the COVID-19 challenge that blossomed into an opportunity for closer collaboration (Katia)

Summary and conclusions

This paper has presented a narrative inquiry that uncovers and creates new understandings on the development of our online collaborative research team. The lived experiences shared in this paper provided a lens through which eight female academics, working together towards a research goal during the COVID-19 crisis were turned into opportunities for new avenues of research. Adopting an interpretive perspective, we positioned ourselves as participants in research, narrators and listeners to gather, co-represent and co-interpret our women's stories. These stories unfolded with our interactions of the past and present, views and interests.

We conclude that both our successful and challenging moments within online spaces were largely supported by the identified six concepts in the 'SKRIPT' framework (see Fig. 1), which revolved around trust, philosophy, identity, relationships, knowledge and skills. Our 'SKRIPT' shows how the inception and development of our online collaborative research team were built on elements of trust, shared philosophy and an openness to negotiate and reshape our academic identities to strengthen our relationships. Our narratives further reveal that by allowing ourselves to be vulnerable and courageous, we were collaboratively promoting knowledge creation and elaboration as well as skill development and acquisition when working in online collaborative spaces.

Outcomes from this study support several theories and research concerning the concepts that frame this work: 'collaborative research teams', 'online collaboration' and 'academic identity' (Kezar, 2005; Palloff & Pratt, 2005; Phelps et al., 2012; Quigley, 2011; Siemens, 2004; Vygotsky, 1978). Scrutinising our shared lived experiences through the dual lens of social learning and elements from feminist thinking (Lave & Wenger, 1991; Webb et al., 2004), we further argue that if academics allow themselves to participate and make meaning out of research experiences within online collaboration, they may open a door that:

(i)   broadens their chances to possibility thinking;
(ii)   provides the space to rethink and reimagine their constructed assumptions and beliefs on collaborative research, learning and technology;
(iii)   extends their chances to learn from others;
(iv)   permeates innovation, co-creation and co-construction of new knowledge;
(v)   increases the focus on research practice;
(vi)   allows for writing with others and publishing more;
(vii)   provides space to interact and give attention to the construction of personal and professional identities;
(viii) supports a commitment to lifelong learning; and
(ix)   enhances remote communicative and collaborative skills.

Further research is necessary to create new understandings of the concept of online research collaboration among academics across different cultures and

contexts when it comes to sustaining the existence of research teams which may also experience fatigue.

Our stories helped develop the 'SKRIPT' framework as a six-tier pyramid that characterises the birth and growth of ECPE, an online collaborative research team of eight female academics within the Faculty of Education, at the University of Malta – our COVID-19 gift to the scientific community. Ultimately, we trust that this framework inspires other individuals to take that "leap of faith" (Katrina and Jodie) and trigger online collaborative research within their contexts; your script could end up in "leaving a legacy behind of your work and what you have built" (Keira).

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