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**Global Entrepreneurial Talent Management
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Impactful Learning: Exploring the Value of Informal Learning Experiences to Improve the Learning Potential of International Research Projects

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This paper explores how an analysis of secondees' informal learning experiences can highlight opportunities for increasing individual and collective learning capacity of an international partnership and the achievement of project objectives. A thematic analysis method (Miles and Huberman, 1994) was applied to 19 secondee's individual learning reports. The main findings discuss three themes which were elicited through secondees' informal learning, including a) living in a host country; b) working in a host country; and c) developing an academic career. The paper outlines practice, policy, and research implications for improving the learning potential of international research projects.

Key Words: informal learning, international research projects, international secondments, collaborative learning

Introduction

Traditional models of learning are inadequate in explaining the complexity and permeability of learning required to support the development of professional practice (Manuti et al., 2015), particularly when this crosses sectoral boundaries e.g. between universities and business (Yusuf, 2008), and cross cultural domains (Gopal, 2011). This paper will review the learning of project staff participating in the delivery of an EU funded international research project. EU Research Innovation and Staff Exchange (RISE) funding supports international mobility of staff through a 30-day defined period of stay i.e. secondment in a partner country. For the Global Entrepreneurial Talent Management 3 (GETM3) project the partners are based in UK, Poland, Slovenia, and Republics of Ireland and South Korea. The main aim of the project is to enhance the individual and collective research capacity to enable them to collaborate internationally and develop impactful research with their stakeholders to benefit the wider EU community.

Little attention has been paid to learning patterns in such interdisciplinary research projects. The specificity of such learning is widely described in the literature, but often in their distinctive

fields i.e. psychology, education, computer-supported learning, and many others (Hmelo-Silver, Chinn, Chan & O'Donnell, 2013). Importantly, mere taking part and co-operating in projects must be distinguished from impactful peer learning i.e. peer tutoring, co-operative learning, and collaborative learning (Damon & Phelps, 1989). This encourages us to widen our understanding of the different forms of learning that might contribute to the success of international research projects (Marsick & Watkins, 2015).

Lifelong learning is something that humans do constantly and holistically to engage in connected, effective, and meaningful lives. It is a socio-personal process directed by our capacities, intentions, contexts, and support. As Billet (2010, pp. 401) explains

> learning is not wholly dependent on external sources, it occurs all the time as we engage in activities and interactions in our homes, with our families, with our friends and acquaintances, in our work, in our workplaces, in our community engagements, in the everyday tasks in which we engage, and when we are alone.

Thereby, learning through work informs our expansive intersubjective lifeworld and vice versa (Houlbrook, 2010).

This paper is informed by workplace learning theory (Billett, 2002; Eraut, 2011; Illeris, 2016; Poell, 2013), where 'work' is not situated in a physical 'place' (Felstead et al., 2005) but in the 'process' of interactions with others engaged in shared activities (Jacobs & Park, 2009). Formal planned structured learning experiences e.g. workshops have been designed into the project to share and develop knowledge and research expertise (Eraut, 2000). However, working on the project facilitates processes of informal and incidental learning "wherever people have the need, motivation, and opportunity for learning" (Kerosuo, 2001, pp. 28). Participants plan for specific project and professional outcomes before undertaking an international secondment. However, the purpose of this study is to explore the most impactful and unplanned learning experiences gained by project participants during their international mobility secondment, which provide opportunities for both personal and professional development. This analysis will inform recommendations for designing 'learning rich' international collaborative projects.

In this paper we present an exploratory initial analysis of the learning experiences of participants involved in the first two years of a four-year EU funded project on Global Entrepreneurial Talent Management (GETM3), funded from Horizon 2020. The paper is structured as follows. In the first section we provide brief details of the GETM3 project and the learning infrastructure constructed to support, capture and evidence learning from participation in the project. The next section will provide a critical review of literature on workplace learning to provide a theoretical framing for the investigation. This is followed by an outline of the research design and methods deployed to collect, analyse and present a subset of the full project data on the learning platform available at this stage. In the tradition of presenting qualitative data the findings will be then be analysed and presented as part of the discussion framed by the literature, which will logically inform a set of conclusions. The final section will consider the research, policy and practice implications for enhancing individual and collective learning in international collaborative research projects.

Context: GETM3 project structure

The focus of the GETM3 project is to understand how universities, companies and students perceive talent and entrepreneurship and identify key stakeholders needs and requirements

(Northumbria University, 2019). Importantly, EU Research Innovation and Exchange (RISE) funding is for the direct purpose of developing and enabling the growth of individual, institutional, and international research capacity through a programme of international secondments between partners in the project. A key requirement, therefore, is evidencing the impact of the multi-level research capacity building achieved through the project.

Within the GETM3 project there is a package of work activity led by an international and interdisciplinary team skilled in learning and innovation processes, research and project evaluation. The project manages to maximize impact by driving researcher development, networking, knowledge transfer, and dissemination internally as well as externally. The GETM3 team promotes continuous process review in order to shape collaboration with partners and stakeholders and to enable data collection, analysis, and evaluation for research purposes. Project engagement is delivered through quarterly networking events called 'Sandpits', social media, and dissemination strategy. The team advise on direct and indirect learning and support activities to facilitate and evidence researcher development.

The purpose of this paper is to explore how secondees' informal learning experiences during international secondments highlight opportunities for increasing individual and collective learning to enhance the learning capacity of this international partnership and achievement of project objectives

GETM3 learning architecture

The team developed a learning architecture to frame and support individual, institutional, and international collaborative learning throughout the duration of the project. This included the development of a learning platform and personal and professional development framework, through which evidence of learning is captured using an individual research development record (IRDR). This is complemented by planned activities supporting networking, knowledge exchange and stakeholder engagement, communication and dissemination, which facilitate opportunities for collaborative and interdisciplinary learning in five host partner countries.

Learning platform

A learning platform provides an online collaborative learning environment for consortium members and researchers. All learning resources from activities undertaken within the GETM3 project are stored on the GETM3 365 SharePoint site, hosted by Northumbria University. The repository of learning resources is accessible to all members and supports remote and continuing professional development throughout the duration of the GETM3 project. The site is dynamic, so that new resources and materials are added throughout the lifetime of the project, particularly from the quarterly networking 'Sandpits'. In addition to delivering online materials, the site is used to actively promote communities of practice/interest among participants and stakeholders. Importantly the platform provides opportunities for relevant qualitative and quantitative data collection and analysis of research and researcher development, progress and achievement over the life of the project to meet project objectives.

Personal and professional development framework

All secondees have been provided with a subscription to the VITAE researcher development website (https://www.vitae.ac.uk/) to access learning resources to support their professional

development. Vitae is the UK member of EURAXESS — https://euraxess.ec.europa.eu/ Researchers in Motion is a unique pan-European initiative delivering information and support services to professional researchers. The project uses the Vitae Researcher Development Framework (RDF) (University Of Birmingham, CRAC, & Hampton, 2014) to evaluate project participants' knowledge, behaviours and attitudes. The RDF consists of four domains: (1) knowledge and intellectual abilities, (2) personal effectiveness, (3) Research governance and organization, (4) Engagement, influence and impact. The RDF outlines the 'characteristics' of excellent researchers' and provides a clear structure to inform, develop, and record 'learning' gained by individual members through their participation in the project. All project members provide a self-assessment using the Vitae RDF at the beginning and at the end of the project, to inform a quantitative and qualitative analysis of researcher development through participation in the project.

Individual researcher development record

All project members undertaking secondments are required to complete an online individual researcher development record (IRDR) for each secondment. This requires the production of an individual personal development plan, informed by their RDF self-assessment and project deliverables. They will complete their IRDR before, during and after completing their secondment, to encourage anticipatory and reflective learning (Senge & Fulmer, 1993). There is a structured set of questions to prompt a reflective account of their learning. Once completed individuals receive a certificate of participation in the project from the EU.

Networking, knowledge exchange and stakeholder engagement

A key objective of the project is to maximize impact by internal and external networking, knowledge exchange, and dissemination. Key networking activities are facilitated through the quarterly 'sandpits', which are hosted in each partner country. The sandpits are a means of facilitating 'intra-project' learning and dissemination between partners and stakeholders involved in different aspects of the project (Kotnour, 2000). The project has completed seven sandpits to date, with sandpits aligned to the key stages and deliverables of the GETM3 project. They facilitate networking activities with stakeholders in the project including our employer partners, employees, young students, and entrepreneurs. Wherever possible, international secondments are scheduled to enable a critical mass of researchers and stakeholders to network and engage in knowledge production during the sandpits. Academic careers are often contingent upon contextual factors e.g. institutional and cultural that frame the constraints and opportunities for professional development (Zacher, Rudolph, Todorovic & Ammann, 2018). Therefore, sandpits are a key process for facilitating learning through social networking, knowledge and skills development workshops, peer learning, stakeholder engagement, and collaborative learning throughout the project activities.

Communication and dissemination

This section outlines elements of the learning architecture, which structures and supports the development of formal and informal individual and collaborative learning through participation in the project. Overall, the GETM3 project facilitates a rich learning environment with opportunities to support both interdisciplinary and international learning. For example, during 2017-19, partners in GETM3 project have organized 14 conferences, 27 workshops and four

exhibitions. In addition, project colleagues have participated in 30 conferences, 54 workshops, and three training events. These activities provide an excellent range of diverse opportunities to facilitate individual and collaborative learning. Networking and conference attendance are particularly important in developing academic professional identity (Gardener & Willey, 2018). Furthermore, this infrastructure enables the collection, analysis and presentation of evidence to support the achievement of the project outputs on building interdisciplinary international research capacity to the EU funding provider. This rich learning environment provides the context for this investigation.

Workplace learning

A review learning theory can usefully inform our understanding of the processes and impact of learning on participants and stakeholders in international research projects. Existing learning theory suggests that both projects and the workplace environment support similar methods of learning: formal (such as seminars, conferences, courses) and non-formal (informal and incidental) (Albrecht, Burandt & Schaltegger, 2007). These diverse sources of learning can facilitate the development of the individual and collective capability of research team members.

The process of learning not only increases learners knowledge, abilities, and skills but can also change their values, attitudes, beliefs, and behaviours (Jarvis, Holford & Griffin, 2003). According to Illeris (2008), it depends on both the person and his or her learning abilities (elaboration and acquisition of knowledge) and on the learning conditions (internal and external, interaction with the environment) in which learning process takes place. Learning is initiated by external or internal incentives, however, it is widely acknowledged that impactful learning requires engagement of both the affective and cognitive domains (Kolb, 1984; Illeris, 2016).

In the context of learning in the workplace, there is often a foregrounding of the organization learning processes as distinguishable from the development of individual practice. Argyris and Schön (1978) use systems thinking to understand the role of organizations' norms, policies, and behaviours to enhance decision making. Engestrom's (2001) focus is on the social and organizational context rather than on individual learning. He uses concepts of horizontal learning, often involving 'boundary crossing' (Kerosuo, 2001) to explain how problem solving occurs through interactions among peers, mediated by tools and signs without resorting to orthodox knowledge. However, other scholars foreground how people learn through experience and their interactions with others in the workplace. Models of peer learning, coaching and more recently 'reverse mentoring' (Rogawski & Rogawski, 2018), are increasingly evident in the literature. Boud (1999) argues that peer learning is particularly relevant for academic staff development, and many institutions have formal policies of peer learning. Schon (1983) built on Dewey's work (1916) to focus on the value of critically reflecting on personal practice to engage in a process of continual learning. The term 'communities of practice' (Lave & Wenger, 1991) has emerged to connect concepts of learning and knowing within a collaborative space where "groups of people [are] informally bound together by shared expertise and a passion for a joint enterprise" (Wenger & Snyder, 1999, pp. 139). Boud and Middleton (2003) outline the form and processes of informal learning though interaction with others at work. There is increasing focus on the potential of technology enhanced collaborative learning and the use of learning platforms to facilitate digital connectivity, where online interaction motivates learners to interact with others, be more attentive, learn among peers, and exchange knowledge (Molinillo, Aguilar-Illescas, Anaya-Sánchez & Vallespín-Arán, 2018).

Learning may occur both in formal and informal situations. Formal learning is a planned, deliberate process that is delivered in structured educational settings i.e. in classes, during conferences, seminars, trainings etc.. Non-formal learning might be organized by an employer or by an employee, however the employee is responsible for the learning process (Table 1) (Marsick & Watkins, 2015).

Type of learning	Who set objectives	Who organizes the means
Formal learning		
Planned and organized by the employee	Employer/Organization	Employer/Organization
Informal learning	Employer/Organization	Employee
For the needs of organization		
Non-Formal learning		
Organized outside formal education, parallel to formal education system	Employee	Employer/Organization
Incidental learning	Never planned	Never planned
Byproduct of other activity		

Table 1: Forms of learning
Source: Developed based on Marsick & Watkins, 2015; Mocker & Spear, 1982.

It is speculated that only 17% of formal learning is controlled by the organization. Employees are responsible for the remaining 83%. They learn informally and incidentally. However, the outputs may not match the employer's needs. Therefore, informal and incidental learning should be considered by organizations while planning employees' development (Marsick & Watkins, 2015), and scholars, including Boud (1999), have demonstrated its value for developing academic careers.

In collaborative projects, both learning from peers and sharing knowledge are very important (Kotnour, 2000). International projects provide an opportunity for organizations to secure new knowledge and share complementary knowledge that project partners would and may never share if not participating in a joint undertaking. However, this requires respect and trust, transparent communication channels, and mutual commitment and shared gains (Ryoo & Kim, 2015). Well-organized information exchange channels, employees networking, compatible communication systems, and devices influence better knowledge exchange and inhibit political manoeuvrings (Sense & Antoni, 2003).

Cooperation and learning in joint university-business projects can be mutually beneficial (Cohen, 2012). However, Steinmo and Rasmussen (2018) highlight some initial barriers which can be overcome by building social capital through reciprocal social networks. Over time, networking creates new collaborative partnerships, which encourages the development of shared understandings and build trust (Al-Tabbaa & Ankrah, 2016). University-business collaboration enables knowledge productivity but only when everyone is involved in learning networks (Powell, Koput & Smith-Doerr, 2006). Steinmo and Rasmussen (2018) investigated fifteen innovation collaborative projects in university-business networks and recommend that partners

must organize and manage social relationships in order to benefit from learning outcomes that may take place in collaborative networks.

The reviewed literature above reveals that focusing on informal and incidental learning can illuminate how participation in international secondments could create opportunities for impactful learning through unplanned experiences. The evidence on international projects and specifically university-industry partnerships suggests that efficient learning would depend upon an individual and collective commitment to develop social capital through investing in inter-relational processes and activities for mutual gain e.g. networking. Therefore, this paper will explore what kinds of learning are enhanced through informal and incidental opportunities by secondees on an international secondment as part of an international research project.

Methodology

The main purpose of this research is to explore 'how' and 'what' knowledge individuals acquire through in-formal learning in the context of a large scale of EU-funded project. To discover inside and detailed information, we adapted a combination of 'primary archive data (PAD)' and 'thematic' research method (Bernard, 2012; Bryman, 2004). The key benefit of using archive data is that it is easy to trace the already collected data and examine them repeatedly to answer the research questions. When assessing the value of primary archive data, Guba and Lincoln (1981) and Bryman (2004) suggested that researchers must be aware of these questions: what is the history; who produced the document; what are the authors trying to accomplish; to what extent were the writers likely to tell the truth; is the meaning of the document clear? We have clearly considered these questions when evaluating the document data for this research.

The archive data we utilized was primarily and specifically produced for the four-year GETM3 international research project. This large scale project involves nine HE institutions across five countries, including UK, Poland, Slovenia, Republics of Ireland and South Korea. Project secondees (those who undertook a 30-day international secondment) completed an individual report as part of their secondment in one of these five countries. The report reflects on professional and individual learning at three stages: before the secondment, during the secondment, and post secondment. The archive data produced by secondees provides ideal data for analysing and understanding individuals' formal and informal learning.

We accessed these reports with the authority of the individual (ethically they agreed that the data belongs to the project and can be used for the purpose of the project related research). By adapting the thematic analysis method (Miles & Huberman, 1994), we selected 19 reports, read them repeatedly and extracted the quotes from these reports to build hierarchies of themes (called codebooks). Our main themes and sub-themes come from both priori theoretical understanding of professional informal learning and the primary archive data from the online reflective learning platform. Dey (1993, pp. 34) calls the themes developed from existing literature 'priori themes'. Using the priori themes (Maxwell, 2005) and developed by the five researchers together in a research meeting, another two researchers created hierarchical themes; selected quotes from the reports and shared the emerged themes and sub-themes with the other three researchers, the themes were revised accordingly.

Record Number	Nationality	Gender	Researcher Category	ID
1	Korea (Republic of)	Female	ER	KR1
2	Hellenic	Female	ER	H1
3	UK	Female	ER	UK1
4	UK	Male	ESR	UK2
5	UK	Female	MNG	UK3
6	UK	Female	ER	UK4
7	Mexico	Male	ESR	M1
8	Polish	Female	ER	P1
9	China	Female	ESR	C1
10	UK	Female	TECH	UK5
11	UK	Male	ESR	UK6
12	Lithuania	Female	ESR	L1
13	Polish	Female	ER	P2
14	Polish	Female	ER	P3
15	Polish	Female	ER	P4
16	Polish	Male	ER	P5
17	UK	Female	ADM	UK7
18	Polish	Female	ER	P6
19	Polish	Female	ER	P7

Table 2: List of participant details

The findings represent data submitted by secondees from four of the host country partners including United Kingdom, Republic of Ireland, Poland and Slovenia. The data extracted for analysis was drawn from the individual research development records of 19 secondees in response to the following question:

> You may experience significant informal learning that was not planned or expected. It is important that you reflect, record, and evaluate the details of the three most significant unplanned learnings that you have gained from the secondment.

The data was analysed using thematic coding (Guest, MacQueen & Namey, 2011). The research team identified three first level priori codes to organize the data, based on the literature and their collective experiences participating in the project. The first theme 'personal' sought to collect any reflections on the secondees' personal experiences of living in a host country environment. The second level codes identified included: communication, building new relationships, and interpersonal competence. The latter was organized into two further third level codes including personal and professional to reflect their everyday living experiences and secondly their relational connections with their professional country hosts. The next first level code captured the secondees' experiences of working with a host country institution. There were three, second level codes that emerged within this data. The first code reflected their relationship with their partner host university and particularly the organizational norms and behaviours, the second included planning their research, particularly access to research participants and ethics, and the final code focused on approaches and practices in doing the

research. The final first level code focused on the secondees' academic career. There were three second level codes identified in this data. The first code identified a theme of networking and communication, the second reflected evidence of developing their academic practice, and the final code identified a reflective approach to the development of their wider professional practice. The table below outlines a summary of the codes, which emerged in the data analysis.

First level codes	Second level codes	Third level codes
Living in a host country	Communication	
	Interpersonal Competence	Professional Personal
	Building New Relationships	
Working with a Host University	Norms, Behaviours and Practices	
	Planning Research	Ethics Access to Research Participants
	Doing Research	Research Approaches Research Methods
Developing an Academic Career	Networking and Communication	
	Academic Practice	
	Reflective Professional Practice	

Table 3: Summary of the codes

Findings and Discussion

This section will provide an exploration of the themes emerged through the data analysis, with direct quotes to illustrate key insights, framed within the context of the literature, which will consequently inform a set of conclusions. As discussed in the previous section, the main three themes that emerged from our analysis are; living in a host country, working with a host university, and academic career. Therefore, the following sections will explore and discuss these themes further.

Living in a host country

One of the primary goals of the GETM3 project is to build an international collaborative research 'community of practice' (Wenger & Snyder, 1999). Although key members of the project steering group had collaborated on previous projects and visited each other's countries and institutions, this experience was not typical for the majority of secondees. Many of the secondees would be visiting unfamiliar places and institutions, and staying for one week to one month, exceptionally up to three months, on any one occasion.

While some support could be expected from the host institution e.g. in finding suitable accommodation, often in student residences. Nevertheless, secondees were expected to live independently, find their way around the city, and organize their own food shopping and social outings. Therefore, for many secondees living 'independently' in a host country was an insightful

experience, which motivates further learning, "how to improve my communication skills with foreigners need to be improved in the next secondment" [UK1].

For many secondees, the opportunity for an international extended stay was unusual but promoted personal confidence in international travel for work. One secondee asserted:

> When I have travelled with work in previous roles … I have never really travelled around the location on my own. This has either been due to the fact that I was travelling in a large group, or that the locations have not been safe enough to do so as a lone female. By the end of the week in Ljubljana, I felt safe and confident enough to walk in an unfamiliar city on my own, do some sightseeing and shopping, before taking public transport back to my accommodation [UK7].

However, there was still a feeling of uncertainty,

> despite feeling safe to do this, I did encounter some unwanted attention which made me a little wary — I am not sure if this will affect my future travels and walking alone, this is something I will have to monitor" [UK7].

Therefore, there is an undertone of potential anxiety expressed when undertaking this experience as a lone female, even in the friendliest of cities. However, many secondees reported that living in the host environment had a positive experience on their interpersonal relations with their host country and new international colleagues.

The interaction with the host country nationals enabled secondees' to reflect on their own personal perspectives.

> The interviews with PhD students and young entrepreneurs were very interesting for me. It allowed me to gain not only scientific experience but also to meet interesting, inspiring people and think about changing my approach to life and entrepreneurship [P2].

A planned encounter that elicited unplanned reflections on their own professional and everyday life.

The secondment experience facilitated the building of new international relationships. There was an appreciation of partners' efforts to support the relationship and work together despite diverse interests. One secondee comments by saying:

> I could see, despite cultural differences and the wider context of geo-political uncertainty (e.g. Brexit), a real commitment from project partners to ensure the project relationships were strong and to making the project a success [UK5].

This is consistent with Wenger (1999) who argues that social participation supports informal learning and commitment to shared goals. Learning through the 'process' of interactions with others engaged in shared activities is consistent with Jacobs and Park (2009), view of impactful learning through work. An experienced academic colleague commented on the support they received from younger colleagues, "I have found that young people are very proficient at using different methods of communication and dissemination, and they are very open and eager to help experienced scientists" [UK5]. This supports the value of peer learning and potentially 'reverse mentoring' when secondees use their own expertise to enhance the development of their colleagues (Rogawski & Rogawski, 2018).

Working with a host university

This theme reflected the research purpose of the secondment, to work with colleagues in the host institution to contribute to the achievement of planned research outputs for the GETM3 project. Three areas emerged in exploring this aspect of the findings. Firstly, relating to the norms and practices of the hosts and the host institution, secondly planning, and finally undertaking the research.

There were many examples of how informal learning was developed through engagement in the relationships and practices of the host workplace for secondees within the project (Wenger & Snyder, 1999). There were often very different expectations of how meetings and presentations were conducted. As one secondee commented:

> We were in a company presentation and the host colleagues just talked between themselves throughout, they didn't even sit politely and pretend to listen [UK4].

Long meetings frequently overextended. However, there were different approaches to deal with this situation:

> I learned that not everyone thinks it's necessary to offer a visitor some refreshments (or at least offer a break for refreshments) during a four-hour meeting, which will make me even more aware of offering this hospitality in future meetings that I host! [UK5].

In addition, the opportunity to experience different ways of working and interacting was insightful as confirmed by one secondee:

> Observing professionals from a different country in their 'natural habitat': learning different ways of organizing work, distributing responsibility by assigning tasks in different way, culturally unique ways of communicating (building argumentation, manner of speaking). All this is accessible in hands-on experience only and observation; no way to read that in a book [P6].

The reference to "culturally unique" ways of communicating, would suggest that discussions were culturally patterned and insightful leaving a visceral impact of this experience, "no way to read that in a book". Others used visual means of bridging the communication barrier. "I really enjoyed seeing how they focused on the questions based on the imagery and bringing their own experience. How universities work in different places" [M1]. This illustrates Engestrom's (2001) concept of learning where an acceptable outcome is achieved by the re-creation of activities and tools to support the learning process.

Professions are often assumed to share consistent practices, irrespective of where they are performed internationally. However, in reality they may reflect issues of 'boundary crossing' between institutional and cultural domains (Kerosuo, 2001). A fundamental issue within the research process is ethical practice, which provides rigour and transparency to the process and integrity and confidence in its results to an academic and wider audience. However, early discussions within the project identified diverse ethical approaches. A secondee commented: "It had never crossed my mind that there would be such different approaches and institutional practices to ethics, and particularly evidencing individual informed consent" [UK4]. Understanding organizational processes is an area often navigated by informal learning, however the 'who' and 'how' are often influenced by contextual factors, including access to documentary sources or informal contacts (Boud & Middleton, 2003). Negotiating access to research data and participants can often be a challenging aspect of conducting international research, "It is very

hard work. Without strong and direct support from the host's side it is impossible to conduct research in foreign environment" [P2], problematic access to partner's networks in collaborative projects is consistent with Sense and Antoni (2003). However, overall there is evidence of good support from colleagues in the host institution:

> I was delighted to participate in the preparation and conducting interviews and focus groups in the K Company [P4].

Another participant commented

> I was delighted to visit one of the enterprise incubators in the Ljubljana, and conduct interview in the "real environment" of some of the young entrepreneurs … and learn how PhD students and young entrepreneurs from Slovenia develop their scientific career and set up their companies [P4].

However, the practice was not always consistent and sometimes this had a negative impact on the experience and relations between secondees. In some cases, poor communication between the various secondees and the host country meant that any planned activities were not fully realized as a participant reported that

> I found that I did not really get much help from the team of [another university] as his team from the University of X had already arranged data collection by themselves. I thought this was quite bad coordination. If we shared our schedule and data collection plans before we got to Korea, it would have been so much better and lead us to another collaboration [KR1].

This lack of co-operation is consistent with some of the limitations of communities of practice identified by Pemberton, Mavin and Stalker (2007). Sometimes, secondees may have made assumptions, not checked the quality of the access to various companies, and if these companies were appropriate for the focus of their investigation. Lack of preparation and asking the right questions did prove a learning experience for some, which they will carry forward: "Also, I learned what can go wrong and this can prove useful in the future … when planning research visits" [P7].

Informal learning is often not recognized as learning within organizations with Boud and Middleton (2003, pp. 195) stating that "It is typically regarded as being "part of the job" or a mechanism for "doing the job properly" and is thus rendered invisible as "learning". Secondees were expected to collect research data in their host country. This encouraged colleagues to explore and see the value created in different research approaches to their own. A researcher experienced in using qualitative approaches commented:

> Quantitative research allows you to reach a larger data set and it is more practical in your effort to gather and collect data. Working in teams with other fellow researchers in the same project is more efficient and effective because you can share experiences, you can share data sets and you can share the effort you need to put in the research and the writing of any academic articles [H1].

Secondees were often conducting interviews not in their first language, and without a colleague from the host institution. Developing interview skills was frequently reflected upon in their learning accounts, particularly time management. For others it was about developing appropriate interpersonal skills in an international context as illustrated by the following comment:

> I learned how to build relationships with people. I tried to get my participants settled in and make them comfortable to talk. During the interviews, I tried to observe the behaviour of the participants

and I learned to use appropriate techniques, e.g. rephrasing — it helped to motivate the participants to speak more, explain, provide developed expression, — requesting for examples to get richer information [P1].

The examples of reflecting on regular academic practice demonstrated by the secondees supports Boud and Middleton (2003, pp. 195) assertion that "there is value in rendering [informal] learning visible so that it can be consciously deployed in enhancing work". Overcoming the challenges faced in working with the host institutions and finding constructive solutions to communication barriers, proved to be an essential tool for many secondees to progress and further develop in their academic career as we will discuss in the next section.

Developing an academic career

The last theme identified in the analysis was a focus on developing an academic career. There were three sub-themes, which emerged including, communicating and networking, academic practice and reflective practice.

One of the benefits of the secondment experience is the opportunity to establish a network of international colleagues with whom to collaborate beyond the lifetime of the project. If a partner was hosting a relevant international conference it would be included in, the Sandpit schedule were possible. Gardner and Willey (2018, pp. 234) found that conference participation was an "important contributor to progression of the intellectual and networking strands of identity-trajectory for researchers at all stages of development, although for different reasons". This aspect of the secondment was often positively reflected in the secondees' comments: "I have participated in a top HRM conference. No conference in Poland offers the chance to meet so many researchers with similar challenges and the best research works" [P2].This supported the development of academic knowledge relevant to the GETM3 project and enabled secondees to establish new contacts outside of the project, "My aims of networking, subject knowledge, and gaining experience were definitely achieved during this secondment, the sandpit participation and the HRIC conference" [P7]. Colleagues gained insights into how colleagues from other institutions developed their academic careers:

I have found that researchers from the University of Ljubljana co-operate with many prestige universities in the world … how they develop their scientific career and with which universities and other researchers they co-operate [P4].

Similarly to many professions, the digital landscape has had an increasing impact on the academic ecosystem. Increasingly, academics are strongly encouraged by their institutions, funding bodies and research partners, to promote themselves and their academic endeavours through digital channels and platforms (Molinillo et al., 2018). Even the most reticent have been encouraged and supported by their colleagues as illustrated in the following comment: "I have learned effective ways of using social media as a public relation platform for the research projects ... and highly interactive platforms of communication and networking" [P2]. This is a good illustration of how the expertise of colleagues can act as a learning resource for others (Boud & Middleton, 2003).

Academic careers are often contingent upon contextual factors e.g. institutional and cultural that frame the constraints and opportunities for professional development (Zacher et al., 2018). The international secondment to a host university provided opportunities for people to develop

their academic practice, "I was invited to deliver a guest lecture, as well as an entrepreneurship seminar for both home and international students at KNU [Korea], it was a wonderful teaching experience" [UK1]. For others it encouraged them to do things differently:

> I never expected that the visual map I prepared was so efficient, I had three major barriers, the language, the technical jargon and the culture. By doodling my research and main ideas, I created a platform that invited them to collaborate with their thoughts, it was one of the main side learnings I had [M1].

It enabled some to develop skills in managing research projects in a multinational context, "planning tasks, communication, sharing knowledge, using different tools for work, being aware of different methodologies and approaches popular in different countries" [P6].

Finally, the secondment experience facilitated a reflective approach to the researchers' own practice (Schon, 1983). For some this provided an opportunity to gain inspiration from their research encounters, "I learned from them some attitudes: e.g. enthusiasm, passion and confidence, proactivity. They gave me a good motivation for seeking ways to improve my performance and for research excellence" [P2]. Consistent with Boud and Middleton (2003), learning from others' experience was integral to secondees transferring the learning to their own context and practice, "Participation in this conference gave me the opportunity to take time out for reflection on strategies to help my university department in organizing such big events" [P2]. For some colleagues they reflected on their changed perceptions of colleagues through working together in the project:

> As I have only previously worked within programme quality support and partnerships linked to programme development, it was a surprise to see academic staff working on subjects that they were clearly engaged in and passionate about. It gave me a new perspective on academic colleagues, even those I have known for a number of years [UK7].

This section discussed the three main themes identified in the analysis and framed in the context of the literature, which have informed conclusions in the next section.

Conclusions

This paper has discussed how informal learning can generate learning opportunities that enhance both individual and collective learning capacity in the context of an international collaborative research project. All of these interactions are institutionally and culturally patterned which leave a lasting impression on secondees and frames their future encounters with their international partners.

The secondment experience enhanced individuals' confidence and competence in undertaking extended independent stays in host countries. Secondees learned that the formal research work of the project was contingent upon informal practices. This included their own preparation beforehand in eliciting support from their institutional partners e.g. to access participants, which required understanding of their host institution's ethical practices. Establishing and sustaining international networks was dependant on engaging in informal social activities, which developed research relationships and collective research capacities. The final main theme identified in the analysis is a focus on developing an academic career through a formal self-reflective approach (e.g. using the projects learning platform). There was clear evidence that participation in the

project had elicited a reflective approach to understanding and reimagining their own careers. Networking with colleagues and stakeholders, encouraged secondees to reflect upon their own current and aspirational careers. Many took the opportunity to develop new professional skills beyond research and transfer learning back to their own institutions.

Implications for practice, policy and research

The implications for practice include ensuring that secondees are more effectively supported in preparing for their visit. In any international project, the value of planning cannot be underestimated. Therefore, given that secondments are normally scheduled around sandpits, then the host should be able to facilitate closer communication among secondees prior to the visit to ensure an effective strategy for data access and collection and that the secondees have undertaken due diligence in their preparation. Given the rich experiences of cross-cultural working on international projects, it would be useful to set up workshops during the sandpits to share experiences and outline shared best practices that could be implemented to improve partnership working in the next two years of the project. In order to enhance any project social media strategy, it would be useful to include an early workshop on effective strategies for digital engagement for individuals, and encourage reverse mentoring from more technology capable colleagues to less confident ones.

Planning sandpit events around relevant international conferences gives access to leading international experts and opportunities to extend professional networks outside the project. Host institutions should be encouraged to consider ways of enhancing secondees professional development e.g. to lead on seminars and present research papers. Finally, to facilitate equitable access to the research process. Priority should be given to visual methods of communication in knowledge exchange activities with fellow researchers and stakeholders and project communications including the dissemination of research outputs.

The policy implications should discourage less experienced lone researchers to undertake secondments without robust 'in country' support including an assigned host 'buddy'. The sandpits are a great success, repeated secondments build 'social capital' and 'research capacity' between international colleagues and should be planned into any international projects.

Due to the nature of the qualitative research, we recognize several limitations. First, the research findings are derived from 19 secondees from across five countries. When implementing our findings, other researchers or practitioners must be cautious about the context of this EU funded research project (e.g. large, complex covering international institutions and countries). Second, our findings mainly focused on the contents of written reflective reports, individuals' country of origin and destination have not been taken into consideration when designing and analysing this research. A more in-depth exploration of 'informal learning' patterns amongst different countries, researchers at different stages of their careers, could be considered in future research. For instance, individual informal learning style may be influenced by embedded 'national culture' and other behavioural differences in relation to individuals' identity of 'country of origin'.

The GETM3 international research project is at the mid-point stage and has 15 months until completion. This paper set out to investigate how an analysis of secondees' informal learning from undertaking international secondments could highlight areas in which the secondees learning could be enhanced in the remainder of the project and wider projects. After an initial

analysis of secondees learning records at this midpoint stage, several suggestions were outlined to improve policy guidelines and practice activities to ensure that the project achieved its objective of developing individual and collective research capacity among the international research collaborators and their institutions.

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