

Implementation of Virtual Exchange at Goethe University Frankfurt

Applying Organizational, Pedagogical and Cultural
Aspects from Three Case Studies

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MASTER'S THESIS

October 2020 / Master of Business Administration in Educational Leadership

ABSTRACT

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Master's thesis 106 pages, appendices 5 pages
October 2020

By deploying a qualitative case study design the development project investigates the implementation of Virtual Exchange (VE) at three universities in Sweden, Germany and the United States in order to devise a VE implementation plan for Goethe University Frankfurt. VE is a complex collaborative online international learning and teaching format that requires different resources, structures and processes as well as the involvement of various stakeholders in order to expand across an institution. Based on a descriptive model suggested by Knoth and Kiy (2016) that was derived from a framework of internationalizing the curriculum, three success factors for VE implementation are the focus of this thesis. They pertain to organizational, pedagogical and cultural aspects. The study identifies best practices that relate to these success factors and discusses them in the context of previous research on VE.

Key findings of the development project entail that common structures and processes for implementation emerged from the case studies and previous research, the importance of top-down and bottom-up alignment for a functional implementation process, the relevance of comprehensive institutional and individual awareness of culture in international online learning environments, differences in the definition of VE learning outcomes brought about by divergent qualification frameworks and respective higher education systems, and a strong orientation towards employability in learning outcomes as a symptom of neoliberal understandings of global citizenship.

Key words: virtual exchange, collaborative online international learning, implementation, transversal skills, internationalizing the curriculum, online teaching, university policies, higher education systems

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1 INTRODUCTION

[I]t is essential for universities nowadays to educate, or more importantly, *transform*, to function effectively and comfortably in a world characterized by close multifaceted relationships and permeable borders. Students must possess a certain level of global competence to understand the world they live in and how they fit in this world. (Shadieff, Hwang & Huang 2015, 123; original emphasis)

This quote bespeaks eloquently the relevance and impact that globalization has had on both institutions of higher learning and their students in terms of what academic learning and education should entail. In response to the affordances of globalization there have emerged different educational formats which cater to international and intercultural learning and the development of global citizenship as alluded to by the above statement. One of them is Virtual Exchange (VE).

As an international collaborative online learning and teaching format VE is a multifaceted phenomenon that touches upon yet another global development: the ongoing expanse of digitalization for educational purposes (Castaneda & Selwyn, 2018). The establishment of VE on a broader scale at the institutional level casts complex questions that concern the social, cultural, political, structural and financial organization of an institution of higher learning as well as the higher education system it is situated in.

This development project is dedicated to an investigation of VE in three different institutional contexts in order to apply findings and insights to the implementation of VE at Goethe University Frankfurt. By deploying a case study design that entails a content analysis of semi-structured and open interviews, institutional websites and policies, I will seek an answer to the following research question: What is the most suitable structure and process for conducting Virtual Exchange at Goethe University and how can they be implemented? The objective of my development project is thus to devise an implementation plan for institution-wide Virtual Exchange projects at Goethe University. This involves a set of subsequent questions:

- Which internal and external resources, structures and stakeholders are necessary to successfully implement functional Virtual Exchange at Goethe University?

- How can those stakeholders be activated and mobilized?
- How can necessary structures and processes be aligned or built?
- Which good practices at other institutions are useful as a model for VE implementation?

In order to inspect these aspects, I selected a descriptive model for institutional VE implementation proposed by Knoth and Kiy (2016). This model will be introduced in the next chapter together with further theoretical notions that frame VE and the learning that takes place in these collaborative online international learning environments. In chapter 3 I will then present the research approach and methods of my study and also provide a first overview of the findings. Chapters 4 to 6 focus on three success factors of VE implementation that the model stipulates, i.e. organizational, pedagogical and cultural aspects. Throughout these chapters I will further explore the empirical findings on these three factors and discuss them in relation to previous research, compare them and extract essential components that are relevant for devising the VE implementation plan for Goethe University. Following this will be a short introduction to implementation as a concept in management and Goethe University as an institution in chapter 7. This provides the context for the actual implementation plan which I have compiled in the appendix to this thesis. Chapter 8 entails my conclusions which highlight the most important insights and findings of the development project and point to topics and questions on VE and its implementation for future research based on these results.

2 THEORETICAL FRAMING

Before further exploring structures and processes as well as stakeholders and resources for VE conduct from three case studies, in this chapter I will introduce and discuss conceptualizations of Virtual Exchange (VE), its formats, educational goals, and the forms of learning that take place in VE environments. Moreover, I will illustrate how VE is framed by two interlinked concepts of higher education internationalization. These entail the notions of Internationalization at Home (IaH) and Internationalizing the Curriculum (IoC). The latter is vital for delineating and understanding the institutional affordances that VE implementation requires which can be categorized into five dimensions. Three of them represent structural elements for my analysis and subsequently the following chapters of this thesis.

With the advent of the internet different forms and formats of VE in higher education have evolved in the past 30 years as a field of engagement between students, professors and institutions transnationally initially serving the purpose of foreign language acquisition and training and later expanding to diverse learning goals across different disciplines (O'Dowd 2018). The term virtual exchange serves as an umbrella concept that

involves the engagement of groups of learners in extended periods of online intercultural interaction and collaboration with partners from other cultural contexts or geographical locations as an integrated part of their educational programmes and under the guidance of educators and/or expert facilitators (O'Dowd 2018, 5).

This definition covers a wider array of articulations which have emerged as isolated bottom-up phenomena within different academic disciplines and traditions (ibid.). Two of these constitute Globally Networked Learning Environments (GNLE) and Collaborative Online International Learning (COIL). Both have been integrated into a broad variety of university courses and they have generated comprehensive interest as a topic for educational research. What is more, both models are characterized by curriculum integration and thus demand a high degree of cooperation between the involved academic teachers and institutions (O'Dowd 2018) as regards deciding the topic, the co-creation of content and teaching the

online course together. These features represent explicit goals for Goethe University as they significantly expand teachers' and students' intellectual and cultural horizons. As will be shown in chapter 7.2., these implications of VE resonate with the university's mission and policies. Globally-Networked Learning Environments and Collaborative Online International Learning also share similar educational goals, educational approaches and normative grounds as can be seen from their respective definitions.

With respect to GNLEs Starke-Meyerring and Wilson foreground them as learning environments which "represent new visions of globally networked learning" that "extend well beyond the confines of traditional local classrooms" (2008, 2). They continue to point out that GNLEs pursue innovative pedagogies which connect students to peers, instructors, and communities from diverse contexts thereby challenging them to "negotiate and build shared learning and knowledge cultures across diverse boundaries" and facilitating "new opportunities for civic engagement in a global context" (ibid.). This definition illustrates that these online learning environments are designed to bring about close cooperation and co-creation of knowledge among the group of participating students which expand beyond cultural, national, geographical and disciplinary boundaries. While the above framing captures student learning, it is similarly important to bear in mind that the existence and functionality of GNLEs hinges upon close relationships and collaboration between involved faculty and their institutions (Bégin-Caouette, Khoo and Afridi 2015). This has important implications for teaching staff development, an aspect I will turn to and discuss in detail in chapters 4 and 5.

The role of university teachers is underscored by Rubin in his framing of COIL as "based upon developing team-taught learning environments where teachers from two cultures work together to develop a shared syllabus, emphasizing experiential and collaborative student learning" (Rubin 2017, 34). In general terms, COIL constitutes a teaching and learning paradigm that promotes intercultural awareness and meaningful exchanges for teachers and students by using internet-based tools that connect university classes in geographically distant locations (Rubin & Guth 2015, 18). It represents a solution for universities to internationalize curricula, develop new global partnerships, and provide their students with global

competencies (Zhang and Pearlman 2018, 3). GNLEs and COIL therefore stipulate co-creation of content, knowledge, and learning as well as co-teaching in international online contexts which become integrated into the educational programs at each participating institution. They represent VE formats that are characterized by “shared syllabus approaches” which include the scrutiny of different cultural and national experiences or interpretations of subject content (O’Dowd 2018, 15). Moreover, the two paradigms aim at developing a certain set of skills in students which pertain to the ability to engage with different cultures in a positive manner and to working and living in a globalized world as responsible citizens. Given their similarity Rubin points out that “[O]ne of the problematics of this format is that it is called by so many different names, thereby making it harder for the practice to be more commonly understood and implemented” (Rubin 2016, 263). In order to avoid conceptual imprecision, throughout this thesis I will use Virtual Exchange (VE) as the overarching notion that includes both GNLEs and COIL and covers the above presented characteristics. The mentioned educational goals will be presented and defined in more detail in the next section.

Many scholars have discussed the forms of learning that take place in VE and the competences that students gain from engaging in these international online environments. Specifically, academic discourse unfolds around the concepts of experiential learning (Kolb 1984, Herrington 2010), global learning (Iuspa 2019, Landorf & Doscher 2015) and cross-cultural collaborative learning (Kumi-Yeboah 2018, Yamazaki and Kayes 2004) which set forth the development of particular areas of competency. These, in turn, have been allocated to different literacy frameworks like transversal skills (Beelen 2017, O’Dowd 2018) or global competence (Iuspa 2019, Jansen 2015). Moreover, they are enmeshed with the notion of global citizenship (Aktas et al. 2016). As a next step, I will introduce and scrutinize these concepts and frameworks of learning and competency development and put them in relation to each other before delineating and synthesizing the ones that the remainder of this thesis will be based on.

Experiential learning encompasses a “holistic integrative perspective on learning that combines experience, perception, cognition and behavior” through a dialectic process (Kolb 1984, 21 et seq.). Drawn from the different learning models suggested

by Dewey, Lewin and Piaget, experiential learning conceives of learning as a continuous process grounded in experience that epistemologically deviates from behaviorist notions of learning (ibid.). As a consequence, this understanding somewhat contrasts with traditional conceptions of learning in higher education settings which are focused on reaching particular pre-defined learning outcomes through a transmission-reception model stipulated, for instance, by behaviorism and cognitivism. Hence VE as an instance of experiential learning represents an opportunity for university students (and teachers) to actively engage with subject matter and with each other, and to be challenged by cultural differences, logistics and technology.

In particular, Herrington proposes that knowledge about global collaboration can only become real and comprehensible when it is struggled with in direct experience (2010, 522). Moreover, she posits learning in VE contexts as a social process which includes the negotiation of meaning in “virtual learning space that links them [students] across the cultures, time zones, and educational contexts of various countries and across multiple disciplines” (525). This nexus of experienced-based learning and global collaboration as socially constructed gives way to the notion of global learning introduced by Landorf and Doscher (2015). To them global learning entails “the process of diverse people collaboratively analyzing and addressing complex problems that transcend borders” (25). At the same time, the connection of experiential learning and global collaboration also sits neatly with the concept of cross-cultural collaborative learning which Yamazaki and Kayes (2004) have conceptualized based on five different dimensions that address interactions with other cultures: (1) building relationships, (2) valuing people, (3) listening and observing, (4) coping with ambiguity, and (5) translating complex information. These aspects already specify particular areas of activity and potentially competence development in intercultural learning contexts online and face-to-face. Whereas global learning as a concept focuses on general activities and the collaborative output that VE may afford, cross-cultural collaborative learning frames generic capabilities that students (and teachers) develop in these international online learning contexts. As a form of experiential learning it is the latter that I will base my discussions on within the frame of the development project.

In terms of competence and skills development Iuspa (2019) argues that VE as a pedagogical framework fosters holistic dispositions in students including social, cognitive and affective dimensions that can be encapsulated as global competence. Boix-Mansilla (2016) differentiates global competence along the three dimensions of understanding multiple perspectives, conducting respectful dialogue and taking responsible action. Therefore, global competence relates to cross-cultural collaborative learning since the three dimensions are closely connected with the five components that constitute cross-cultural collaborative learning while also adding agency in the form of taking responsible action to the skills set afforded by VE.

Another framework that is helpful and suitable to capture the development of competences in VE formats is the notion of transversal skills (Beelen 2017, O'Dowd 2018). Originally developed by UNESCO to define generic capabilities that encompass the four key pillars of learning to know, learning to do, learning to live together and learning to be (Chu et al. 2017), the concept has recently been rephrased/modified to denote critical and innovative thinking, inter-personal skills, intra-personal skills, and global citizenship (UNESCO 2015, 4). Each of these general competence areas entails more specific skills and capabilities. In particular, critical and innovative thinking includes creativity, resourcefulness, entrepreneurship, application skills, and reasoned decision-making. Moreover, inter-personal skills encompass components like presentation and communication skills, leadership, organizational skills or teamwork and collaboration whereas intra-personal skills concern aspects like self-discipline and -motivation, enthusiasm, perseverance or compassion. Finally, the category of global citizenship covers the dimensions of tolerance, openness, respect for diversity, intercultural skills, conflict resolution skills, civic engagement and respect for the environment (UNESCO 2015, 5). Aktas et al. (2016, 67) further define global citizenship as both a skill set and a mindset that can be categorized into the two approaches of neoliberal and critical global citizenship. Whereas neoliberal understandings emphasize the development of skills for employability in order for students to become competitive in the global marketplace, critical global citizenship focuses on self-reflection, awareness and action in the face of global power differentials and injustice (69). In consequence, the authors discuss these as bifurcated and mutually-exclusive positions. However,

I would claim that both approaches can and should be harmonized in educational thinking and programming as their combination strengthens individuals, global society as well as economic and environmental interests.

Similarly, the above introduced competence frameworks of global competence and transversal skills are rather closely interlinked than disparate in terms of what they are describing. However, since the UNESCO framework of transversal skills is more comprehensive than the concept of global competence, elaborations on and discussions about the learning in VE contexts will be placed within the UNESCO framework throughout this thesis. This includes the outlined understanding of global citizenship as embracing both neoliberal and critical approaches to the educational functions of VE and, by extension, of higher education in general. Moreover, I suggest to conceive of transversal skills as the outcome of the above delineated cross-cultural collaborative learning construct. In addition to transversal competences, Virtual Exchange also fosters a set of concrete skills that pertain to the medium of operation, i.e. information, communication and technology skills as well as digital literacies (O'Dowd 2018, 19). A more detailed presentation and discussion on the topic of skills development will follow in chapter 5.

From an institutional perspective, VE and its articulations are framed by two interconnected concepts of higher education internationalization: These constitute internationalization at home (IaH) and internationalization of the curriculum (IoC). Specifically, IaH can be conceived as “the purposeful integration of international and intercultural dimensions into the formal and informal curriculum for all students within domestic learning environments” (Beelen & Jones 2015, 69). Therefore, its main component is an internationalized curriculum which allows non-mobile students to acquire intercultural and international skills at home (Beelen 2007, 2). From a comparative standpoint, the definition of IaH is closely entangled with Leask’s conceptual phrasing of internationalization of the curriculum as “the incorporation of international, intercultural and/or global dimensions into the content of the curriculum (as well as the learning outcomes, assessment tasks, teaching methods, and support services of a program of study)” (2015, 9). In sum, both IaH and IoC center around the development of competences and skills in students

facilitated by international learning contents, contexts and environments at their home institution that are comparable with those potentially acquired during a study abroad experience. Whereas IoC focuses on different forms of curricula and how to internationalize them, IaH encompasses a broader spectrum of activities that go beyond academic notions of curriculum. In particular, both may encompass activities such as online collaborations with students abroad, comparison of literature or cases from different contexts, and presentations by international guest lecturers (Beelen 2017, 34). Moreover, engagements with local international and intercultural organizations, or learning from international incoming students constitute specific instruments of IaH (ibid.). It is important to emphasize that the two concepts are not entirely distinguishable from each other and may overlap depending on the underlying conception of curriculum. Curriculum can mean very different things in different educational settings which is already alluded to by the above distinction between formal and informal curriculum in Beelen and Jones' definition of IaH. From an epistemological perspective, IaH as a concept already emerged in the late 1990s at Malmö University in Sweden (Beelen 2007, de Wit 2020) and subsequently brought about further differentiations which were later encapsulated by IoC. Therefore, the notion of IoC is framed by theoretical understandings of IaH. Within the context of this development project, the concept of IoC represents the building block for a descriptive framework that emphasizes the interconnections between academic disciplines as determining the conditions of IoC and institutional factors that impact on a successful implementation and execution of concrete IoC formats like VE.

In particular, Leask and Bridge (2013) and Leask (2015) place knowledge in and across disciplines at the center of this framework and define different "layers of context" at the institutional, local, regional and national as well as the international level which interact with knowledge and practices in academic disciplines and with each other (Leask 2015, 27). As a result, they produce "a complex set of conditions influencing the design of an internationalized curriculum" (ibid.). Placing academic disciplines at the center of the framework is conceptually worthwhile since IaH (including IoC) is specific to each discipline: the development of transversal skills applies to all fields of study, however, achieving their development depends on the

discipline and each individual program of study (Beelen 2017, 33). Knoth and Kiy (2016) adapted and expanded this framework by adding five institutional factors for sustainable internationalization that particularly pertain to VE and other digital IoC models and formats (figure 1).

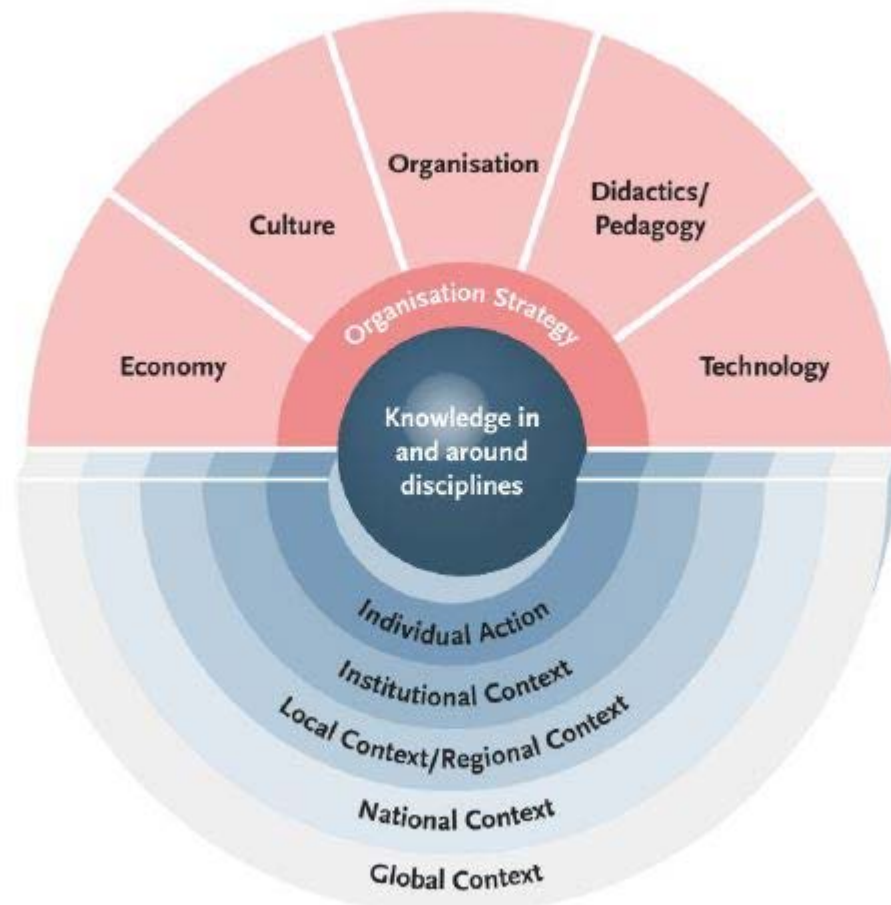


FIGURE 1. Descriptive Framework for IoC and VE (Knoth & Kiy 2016 adapted from Leask 2015)

These encompass economic, cultural, organizational, pedagogical and technological aspects that tie into an organization strategy for IoC. Moreover, Rubin and Guth (Rubin & Guth 2015, 21) and Jansen (2015, 47) confirmed these aspects as urgently needed forms of comprehensive institutional support for the set-up of VE formats. Within the scope of my development project, I will focus on three of

these five factors. It is the dimensions of organization, pedagogy and culture that I will consider in detail for the investigation at hand. I will provide a justification of this selection at the onset of chapter 4 and in my conclusion.

In conclusion, the notion of Virtual Exchange (VE) subsumes international online teaching and learning formats (COIL, GNLE) that are embedded in the curriculum, characterized by a high degree of collaboration and consequently develop a certain set of skills in students and university teachers. Specifically, through cross-cultural collaborative learning in VE environments students develop transversal skills which afford competencies pertaining to critical and innovative thinking, inter-personal skills, intra-personal skills, and global citizenship. In turn, global citizenship, and subsequently Virtual Exchange as a format that stipulates global citizenship skills, can be conceived as informed by both neoliberal and critical (i.e. humanistic) understandings and functions of higher education. From an institutional perspective, VE is embedded in the concepts of internationalization at home and internationalizing the curriculum with IoC historically emerging from the original notion of IaH. Due to their similarity and conceptual relatedness IaH and IoC significantly overlap when it comes to framing VE (and in general). The interrogation at hand is based on a IoC theoretical framework. Specifically, following Knoth and Kiy's adaption of Leask's descriptive approach to five dimensions for successful IoC and VE implementation, the below chapters will be structured according to organizational, pedagogical, and cultural aspects as delineated by these authors. Before detailing the empirical and secondary findings on the three dimensions, I will first elaborate on and discuss the research approach and methodology of my development project in the following chapter. What is more, since one of the main goals of this thesis is to design a VE implementation plan for Goethe University, I will take a closer look at and discuss the notion of implementation in institutional settings in chapter 7.1. Throughout the further course of this report, implementation will be understood as bringing decisions and ideas to life by interpreting, concretizing and settling them into structures, routines, and activities in organizational areas of practice (Rovik, Furu & Eilertsen (2014) in Padrao, Rocha & Sagvik (2018, 14).

The next chapter describes the research design and methodology. Also, I will present a first overview of the empirical findings from the three case studies.

3 RESEARCH APPROACH AND METHODOLOGY

Following the above introduced research question on the potential structure and process for conducting Virtual Exchange at Goethe University and how these can be implemented, the thesis represents a research-oriented development project that aims at outlining, developing and implementing a solution (Ojasalo, Moilanen and Ritalathi 2014). The investigation follows a twofold research process. First, I conducted three case studies in order to gain insights into good practice examples of Virtual Exchange implementation, structures, and processes at other universities. Specifically, the case studies included semi-structured interviews with experts and drivers of Virtual Exchange at the selected institutions as well as a scrutiny of institutional guidelines, policies and related websites. Secondly, the findings and results from the three case studies built the groundwork for devising a first draft of an implementation plan for Goethe University that was discussed with an expert at this institution. The additional insights, recommendations and discussion points that emerged from this interview I then applied to compiling a second and final draft of the plan which can be found as an appendix to this thesis.

The development project is thus underpinned by an exploration and investigation of what happens at other institutions as regards VE development, processes and structures, and what the perspectives and goals of different stakeholders are. Freeman (1984) defines stakeholders as any group or individual who can affect or is affected by the achievement of an organization's objective. For the case at hand, relevant stakeholders include faculty, students, university leadership and administrators as well as the international counterparts at the respective universities that are the partners for VE conduct. Moreover, I would argue that institutional implementations are specific to the organization, its culture, context and the involved stakeholders. Given these aspects a qualitative research frame was chosen which was materialized by deploying a case study approach including semi-structured interviews and document analysis as research methods.

Qualitative research approaches have been the predominant research paradigms in the field of international and comparative education (da Costa, Hall and Spear 2016). Moreover, Denzin and Lincoln (2005, 3) define qualitative research as a situated activity consisting of interpretive, material practices that make the world

visible and transform it into a series of representations like interviews, recordings, or photographs. Therefore, qualitative research involves interpretation and sense-making of social phenomena as well as an emphasis on “the qualities of entities and on processes and meanings that are not experimentally examined or measured [...] in terms of quantity, amount, intensity, or frequency” (8). Applied to the project at hand a qualitative research approach entails an in-depth investigation on how could be implemented rather than finding out general patterns of VE development and conduct across a larger number of institutions which would be a typical perspective of a quantitative approach. Specifically, the project encompasses the study of how VE is understood, conceived and realized by mobilizing different resources and engaging different stakeholders in each selected institutional context. This includes the provision of detailed accounts from the empirical sources about organizational, pedagogical and cultural aspects that pertain to VE. In general, research approach and choice of methods are determined by the research questions and ultimately the overarching goal of the project. From an ontological perspective, the presented thesis is framed by an understanding of the world and its diverse phenomena as socially-constructed rather than based on the belief in an objective and measurable reality as postulated by positivism and post-positivism (Ritchie et al. 2013).

Research Approach: Case Study

A case study design represents a very suitable operationalization of the research questions at hand for the reasons elaborated above. Also, case studies allow to generate suggestions for development and to undertake detailed investigations (Ojasalo, Moilanen and Ritalathi 2014, 17). But what exactly is a case study? Simmons conceives case studies as an “in-depth exploration from multiple perspectives of the complexity and uniqueness of a particular project, policy, institution, program or system in ‘real life’” (2009, 21). What is more, case study research is a heterogeneous activity that mobilizes different research techniques and addresses varying ranges and levels of analysis (Hartley 2004, 332). Also, the use of multiple sources of evidence is a key characteristic of case study research (Gillham 2000, 2) which may include interviews, documents, direct observation or physical artefacts (Yin 2003, 83 et seq.). Within the frame of my investigation, I have

undertaken three case studies on universities that have recently implemented or introduced Virtual Exchange across their institutions. Their selection was based on institutional similarities to Goethe University (comprehensive research university including Social, Natural and Life Sciences as well as Humanities), higher education context and system (comparison within the same and across different systems), availability of information and documents about Virtual Exchange implementation at the respective university, and access to institutional stakeholders of Virtual Exchange (for an interview). These aspects were determined via internet research and the screening of scholarly publications on the topic. The selected institutions are DePaul University (Chicago, USA), University of Potsdam (Germany), and Malmö University (Sweden). As will be shown below, this choice of institutions allows for a rich comparison and a transfer of ideas, concepts and processes as regards VE implementation within and across different higher education systems. Also, Malmö University presents an interesting case as the institutional engagement in VE represents a bottom-up phenomenon by an individual professor. This will render yet another angle for comparison since VE implementation at DePaul University and University of Potsdam represent a combined approach of bottom-up and top-down.

In addition, I identified key stakeholders at those institutions on their websites on Virtual Exchange and related links, and inquired these stakeholders via email about their participation in an interview. Specifically, the interviews were conducted with the Associate Provost for Global Engagement and Online Learning at DePaul University (Interview 1), the Advisor on Digitalization of Teaching and International Affairs at University of Potsdam (Interview 2), and an Associate Professor for Teacher Education and English at Malmö University who introduced VE to her institution (Interview 3). In addition, different written statements from institutional and related websites, guidelines and policies on Virtual Exchange were used to enrich the analysis of the three cases. With regards to research ethics, I render my interviewees anonymous to protect their identity (although the topic of the project is generally not socially sensitive, interviewees' candid statements could have implications if they are not presented in an anonymous manner, e.g. for informants'

career development). No other ethical issue was identified during the phase of designing the research approach.

The described case study design can be categorized as a descriptive case study (Yin 2003) or illustrative case study (Starman 2013) that sheds light on how and why Virtual Exchange has been implemented at the respective institutions. Overall, although the empirical investigation follows Leask's descriptive model of internationalizing the curriculum (cf. chapter 2 and the following chapters on empirical results) the development project is generally inductive in nature and does not seek to test or prove a theoretical construct. In accordance with good practice for case study research, data analysis within the scope of this thesis represents a process that entails the search for patterns in the data (Neuman 1997), the development of categories and their organization around certain topics (Hartley 2004) and finally the interpretation of meanings and drawing of conclusions from the findings (Patton and Applebaum 2003). This process reflects the treatment of data both generated from the individual interviews as well as the analysis of institutional documents, policies and related website contents.

Semi-structured Interviews and Content Analysis

As a major research method for the introduced case study approach I conducted three semi-structured interviews with the above-mentioned representatives of DePaul University, University of Potsdam and Malmö University. In addition, the interview with the institutional expert about the first draft of the VE implementation plan at Goethe University also followed the semi-structured approach. In contradistinction to structured and open interviews, semi-structured inquiries are characterized by a clear sequence of major questions which facilitate comparability between interviews, but at the same time allow for probing and altering (Fielding and Thomas 2004, 124). In this way, the interviewer can seek both clarification and elaboration on the answers provided by the interviewee (May 2003, 123). Prior to the execution of the interviews I designed an interview guide composed of different items on VE and VE implementation derived from the research questions. These items were tested for comprehensibility by doing two pilot interviews with colleagues in the field of international higher education.

TABLE 1. Overview of Interview Guide Questions for Case Studies

Item	Question
1	What were the rationales and goals to implement VE at your institution?
2	What processes and structures have been installed to realize VE institution-wide?
3	What resources are necessary? (for academic teachers, students, administrators)
4	Which stakeholders and university offices are relevant for/involved in the planning and conduct of VE? How did you get them onboard?
5	Was there institutional knowledge or expertise about VE upon VE implementation? Who had that knowledge/expertise?
6	Were there service and support structures in place which you could draw from for the implementation of VE? What are they?
7	Did policy play a role in implementing VE at your institution? What policies were/have been important for this?
8	How did you increase participation in VE by both academic teachers and students?
9	Are there measures for quality control/assurance in place? Are there governance measures in place?
10	From your experience, which factors and aspects play a role to make implementation successful?
11	How do you finance the structures and resources to plan and conduct VE?
12	What is important to consider in terms of pedagogy and didactics for the implementation of VE?
13	What needs to be done in order to prepare academic teachers for teaching in VE environments? What kinds of support does your institution provide for this?
14	Have you defined general learning outcomes for VE at your university? What are they?
15	Have there been challenges in the implementation and conduct of VE that can be attributed to culture? How did you go about them?
16	What kinds of information and communication technology have you been using for VE planning and conduct? What would you recommend?
17	What effects has the implementation had at your institution?
19	Based on your experience with implementing VE, what rationales/selling points can you think of to convince others of the value of VE?

The interview guide items are presented in Table 1. What is more, the interview with the institutional expert at Goethe University was guided by the structure of the first version of the compiled implementation supplemented by questions about the comprehensibility of the plan, applicability to the organizational context of Goethe University and missing aspects or dimensions from the interviewee’s perspective. Both case study interviews and the institutional expert interview lasted between one to two hours and were realized via video call. Upon interviewee consent I recorded the interviews and later undertook verbatim and selective transcriptions (Fielding and Thomas 2004, 135) in addition to writing up notes and re-watching the recordings which “assists the important analytic stage of becoming familiar with the data” (May 2003, 139). In order to guarantee transparency, thesis passages with indirect and direct quotes were later shared with the respective interviewees before the submission of the thesis.

The collected and transcribed data from both the case study interviews and the Goethe University institutional expert interview were analyzed by conducting content analysis in accordance with the above described process of case study analysis. Qualitative content analysis concerns any kind of recorded communication and thus is very often applied for scrutinizing qualitative or expert interviews (Kohlbacher 2006).

TABLE 2. DePaul University websites and documents

Source	Title/Content
Website	Global Learning Experience (GLE)
Website	Lead a Global Learning Experience (GLE)
Website	GLE Process
Document	Global Learning Experience (GLE) Program Application
Policy	Grounded in Mission: The Plan for DePaul 2024

TABLE 3. University of Potsdam websites and documents

Source	Title/Content
Website	Online International Learning at University of Potsdam
Website	Options: Pre-Oiling / Full-Oiling [sic.]
Website	Best Practice for International Collaborations
Website	Internationalization through E-Learning
Website	Winter School: International Online Teaching for Junior Researchers
Website	Call: Online Teaching Collaborations and Course Offers within the European Digital UniverCity Alliance
Document	Online International Learning: Potsdam's Model for Internationalization through E-Learning
Document	Course Handbook: Online International Learning
Policy	University of Potsdam Internationalization Strategy

TABLE 4. Malmö University websites and documents

Source	Title/Content
Website	Evidence-Based Online Learning through Virtual Exchange (EVOLVE)
Website	About Evolve
Website	Training in VE through Erasmus+ Virtual Exchange and EVOLVE
Policy	Malmö University Strategy

Specifically, it encompasses different analytical techniques which center around summarizing in order to reduce material and preserve essential content, explicating which involves, explaining, clarifying and commenting material, and structuring (ibid.). Following this interactive process leads to a step-by-step reduction of complexity and a filtering out of main points of analysis (ibid.). This method of analysis was not only deployed for scrutinizing the interviews, but also applied to

analyze documents and websites as part of the case studies investigation. Tables 2 to 4 provide an overview of the different websites, guidelines and policy documents for each case investigated in the context of this thesis. They are also listed in the reference section of this report (cf. chapter 9). The different sources generated data that brought to the fore various topics and categories about VE and VE implementation. These will be presented in the following subchapter.

Findings

The below figures present the main topics and categories that arose from the empirical data. I have grouped these according to institution and the three success factors of the descriptive model, i.e. organizational, pedagogical and cultural dimensions for VE implementation. Since the primary sources on cultural aspects have generated a lot of information, I have divided this dimension according to the two components of intercultural skills in faculty and in students which also reflects the structure of the chapter on cultural aspects below.

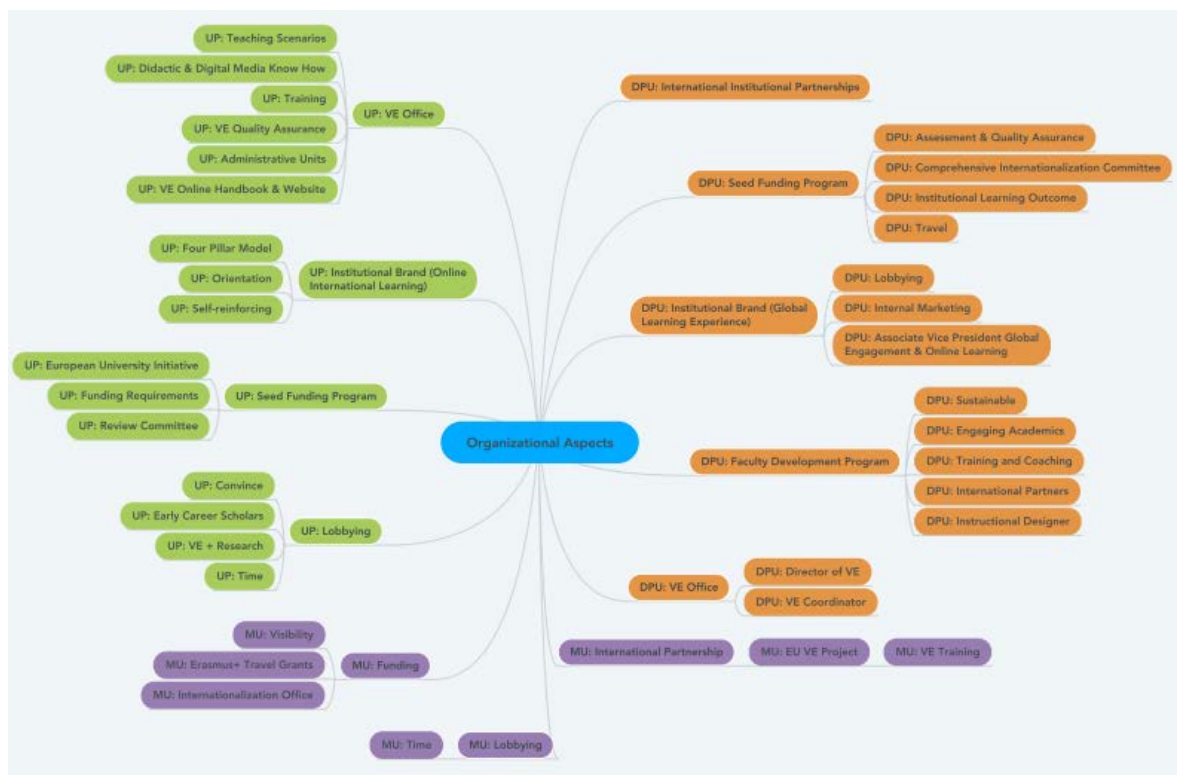


FIGURE 1. Topics and Categories associated with Organizational Aspects



FIGURE 2. Topics and Categories associated with Pedagogical Aspects



FIGURE 3. Topics and Categories associated with Intercultural Skills in Faculty

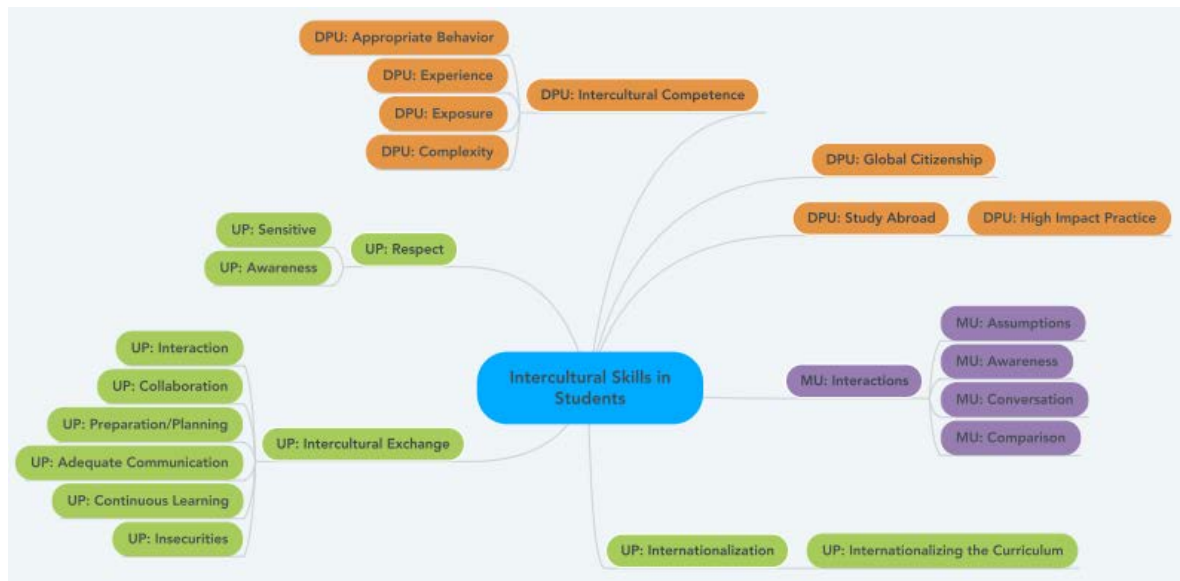


FIGURE 4. Topics and Categories associated with Intercultural Skills in Students

The topics and categories that emerged from the empirical data will be further described, compared and analyzed in the following three chapters. The next chapter deals with organizational aspects as a success of institutional VE implementation.

4 ORGANIZATIONAL ASPECTS

According to Knoth and Kiy a crucial success factor for the set-up of VE across an institution of higher learning is the organizational situation and environment as it represents the basis for analysis to develop a strategic implementation plan (2016, 10). Moreover, the authors state that such a plan is a component of the institutional internationalization process with key players and stakeholders for this process constituting university management, international offices and faculty (ibid.). In terms of placing VE in the context of top-down institutional policy goals for internationalizing curricula they further elaborate that such goals should be supported by financial resources and an organizational framework that faculty and staff can refer to (ibid.). In this way, there emerges a systematic interconnection of top-down policy and bottom-up conduct which enables a stable internationalization process (ibid.) and has been characterized as an important approach for VE implementation (Rubin 2017, 35). In sum, within the descriptive framework organization as a success factor for VE implementation encompasses the institutional environment which is made up of structures, stakeholders, policies and (access to) resources (primarily financial ones). However, this definition lacks acknowledging the relational dimension between these different entities. Specifically, I would claim that resources not only constitute the starting point to develop structures or policies, but that stakeholders and policies themselves can be understood as a form of resource. In this regard, resources can be described as any factor necessary to reach a goal or carry out an activity (Grantham University 2019). Seppänen and Mäkinen (2007) have suggested to categorize institutional resources into human, organizational, informational, physical, financial, legal as well as relational aspects (cf. Figure 5). Financial resources are at the heart of the success factor of economics that Knoth and Kiy (2016) have suggested in their model for VE implementation. I have not considered this dimension of their model for my development project since financial resources, I would argue, represent the basis to generate and foster many of the other resources necessary for institutional VE implementation. This statement is consistent with my empirical findings. The investigated primary sources only foreground financial resources in relation to other forms of resource (e.g. seed funding program for VE). Accordingly, I will touch upon

economics and financial resources in these respective contexts. What is more, the dimension of technology as a resource and success factor of the introduced model will be addressed in the same manner. This is because the empirical data did not yield substantial results that pertain to technology for VE. The aspects that arose only cover the dimension of information and communication technology (ICT) from the user perspective.

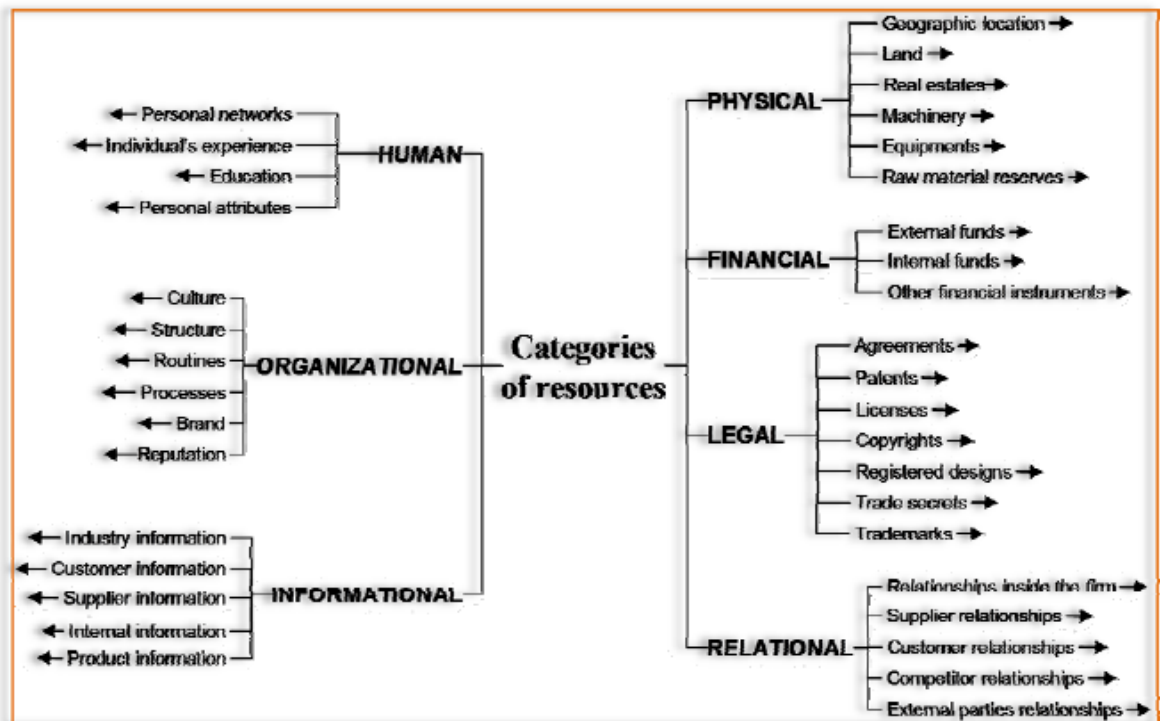


FIGURE 5. Classification of Resources (Seppänen & Mäkinen 2007)

In general, defining the set of resources for a specific enterprise or context constitutes a difficult activity (Seppänen 2009). However, given the above definition of organizational environment, Seppänen and Mäkinen's conception and categorization can be neatly applied to the implementation of VE at the university-level. Specifically, resources are at the heart of setting up structures and processes for VE as a form of organizational resource, activating and mobilizing stakeholders represents a form of human and relational resource, and aligning VE as an instrument and brand with institutional goals and policies both a form of

organizational and informational resource. Finally, the allocation of funds to support and promote VE can be framed as a form of financial resource. These categorizations of resources represent the groundwork for the following presentation of the organizational environments of the three cases. After the presentation, I will discuss the findings and draw conclusions in terms of transferring and applying organizational aspects and good practices to the implementation of VE at Goethe University.

4.1 DePaul University: Organizational Aspects

In general, there is the realization at DePaul University that the allocation of resources and set-up of institutional structures concerning VE are indispensable for continuity and sustainability of VE projects. The interviewee foregrounded this aspect by pondering upon international partners that do not provide institutional support for VE: “We work with some institutions where it is just the faculty members. There is no support, there is no institutional buy-in, there is no institutional memory, there is no continuity” (Interview 1). Although the institution does not strictly follow them, the interviewee refers to the recommendations given by the center for collaborative online international learning at the State University of New York system (SUNY) which advises to only collaborate with international institutions that explicitly provide support for VE as this would guarantee sustainability for VE cooperation (ibid., University of Florida International Center n.d.). Figure 6 displays the organizational aspects for VE implementation at DePaul University grouped according to their resource classification as deduced from the empirical data.

DePaul University: Organizational Aspects

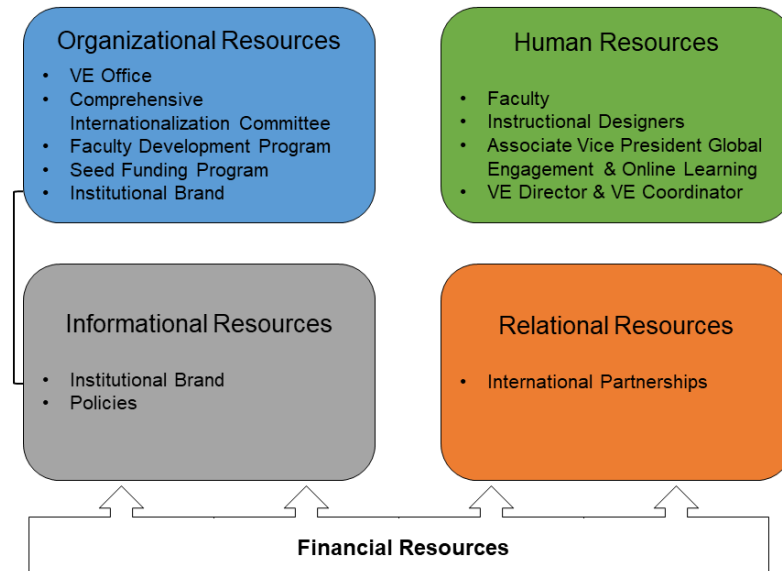


FIGURE 6. Organizational Aspects at DePaul University

Institutional Brand

As for the resources that DePaul University allocates to VE development and execution, the university has created an institutional brand for VE called Global Learning Experience (GLE) (DePaul University n.d.c) which can be framed as both organizational and informational resources as proposed by Seppänen and Mäkinen (2007). The university defines GLE to aim “at facilitating interactions between its student population and the student population of international partner institutions, through collaboration between respective faculty members” with the goal to “increase the number of valuable, transformative intercultural experiences to which students are exposed to through the use of web-based instructional technologies” (DePaul University n.d.c). The GLE brand contributes to communicating what VE encompasses, to engaging faculty in the program and to develop institutional coherence in terms of VE practices and contents.

Stakeholder Interaction and Lobbying

The institution-wide implementation of VE at DePaul University has evolved from interactions and cooperation with different internal stakeholders as well as

international partners. Besides the key stakeholders and human resource of faculty which are addressed by the below presented measures, the institution has activated and provides support for the mobilization of further stakeholders and actors which can be conceived as human and relational resources for VE implementation. One of them constitutes the Comprehensive Internationalization Committee (CIC) as a quality assurance and strategy alignment structure for VE (DePaul University n.d.a). Furthermore, the administrative positions of coordinator and director for VE as well as instructional designers supporting faculties' VE planning represent key human resources (DePaul University n.d.c, Interview1). The creation and allocation of these positions and functions have partially relied on internal networking and lobbying (Interview 1). Specifically, the interviewee in his function as Associate Vice President was able to win the Comprehensive Internationalization Committee to the cause as well as to add VE to the portfolio of the director and coordinator of online learning which "has been the result of a very long set of conversations" (ibid.). In the same vein, he underscored the importance of internal lobbying and marketing which pathed the way to constant institutional funding and to integrating VE into the institutional strategic plan (Interview 1). The interviewee's approach to reach these outcomes encompassed the creation of a network with stakeholders in leadership positions at important administrative units (e.g. learning center, IT department) through conveying the reasons to them why VE is important in a way that resonates with the ethos of the institution (ibid.). As a consequence, the interviewee himself represents an important stakeholder for the implementation of VE at DePaul University who was able to activate other stakeholders due to his knowledge about the institution and its values as well as his leadership position by utilizing informational and relational resources.

VE Office

As a center of operation and coordination of all structures and processes that pertain to VE DePaul university has established an office. The organizational unit hosts the positions of director of VE and online learning and the VE coordinator (DePaul University n.d.c, Interview 1).

Faculty Development Program

DePaul University has set up clear structures and processes for the preparation, realization and expansion of VE which can be conceived as a main organizational resource for VE. One core component for this endeavor is a structured faculty development program for the planning and conduct of VE teaching projects. The interviewee underscored that “[i]f you want to create a real stable sustainable system, faculty development is absolutely necessary, it is paramount” (Interview 1). Furthermore, for the initiation and further development of VE institutional efforts focus on providing support and training to faculty on best practices of how to do VE (ibid.). To the interviewee, a structured faculty training program also constitutes an important instrument to engage those academics that are outside the group of faculty members who already have an affinity for intercultural interactions or already know the ‘abc of intercultural communication’ (ibid.) In particular, the five week faculty training consists of three weeks asynchronous online work followed by two weeks of synchronous meetings (cf. pedagogy) (DePaul University n.d.a). In addition, the program is conducted in two training cycles per year (DePaul University n.d.c). As for its approach towards the target group of experienced faculty, the training program has been designed in a diplomatic and strategic way (Interview 1) in order to account for what I would call the academic habitus. Academic habitus encompasses forms of academic engagement and provides scholars with their sense of place and behaviors that they deem appropriate to fulfill their role (Lemmer 2012). Specifically, the program considers that many participants are “professors who have taught over 20 years, they are smart, intelligent people” and yet at the same time they may be exposed to some faculty learning contents for the first time. (Interview 1). These include aspects like cultural and linguistic differences, online teaching and instructional design (ibid.). Consequently, the program entails a hybrid model combining training and coaching in order to both acknowledge faculties’ comprehensive experience while also equip them with new skills and competencies needed to prepare and execute VE projects (ibid.). Besides its temporal structure, contents and its approach towards the target group of academic teachers, the program also represents a nexus for building relationships with international VE collaborators and further support for individual VE planning as two other structural

aspects. Specifically, faculties' international partners can participate with them in the VE training program (DePaul University n.d.c) and instructional designers get assigned to each faculty once they have completed the training program (Interview 1). The instructional designer assists in a variety of ways during the development and implementation phases of the respective VE project (DePaul University n.d.a, DePaul University n.d.c). In this way, the institution both aligns organizational, human and relational resources represented by the faculty training program, university teachers, their international collaborators and the instructional designer and to some degree exerts control over how faculty and their international colleagues plan and design VE modules.

Seed Funding Program

DePaul University has also established an internal funding program for VE which represents both a financial resource, but also an organizational one as it provides structure and process to VE planning and realization. Such programs appear to represent a good practice for VE implementation since they have been established at other institutions as well (Oberhelman & Dunn 2019). For faculty to receive funding for their VE projects, they have to fulfill certain requirements pertaining to the preparation of VE including their participation in the training program and having confirmed an international colleague to collaborate with for their project (Global Learning Experience Program Application 2019). What is more, besides asking faculty to detail how they will design their project with regards to student activities, mode of delivery, usage of technology or preparing for cultural differences as part of their funding applications, the institution requires them to demonstrate how learning outcomes will be assessed and how these align with strategic institutional goals for student learning (Interview 1; Global Learning Experience Program Application 2019, 3). In addition, faculty need to elaborate if their VE project could be repeated or integrated with a short-term study abroad program (Global Learning Experience Program Application 2019, 4). In general, the funding program stipulates that VE projects can only be implemented in courses that have been approved by the curricular approval process (Global Learning Experience Program Application 2019, 2). In this way, the university is able to align VE with policy goals, apply quality

control (Interview 1) and safeguards success for VE project implementation. Moreover, the funding program and the faculty development program are structurally interwoven through the application requirement for faculty to participate in the institutional VE training program. Also, the university stipulates VE project assessment as an obligation for faculty who receive VE seed funding (DePaul University n.d.a). This mechanism for quality assurance encompasses a student questionnaire and faculty feedback on project success through a survey or by attending a debriefing session conducted by the VE office (ibid.). In addition, the provision of seed funding through internal calls for application creates a “continuously fresh cadre of faculty members that come to the fore” to realize VE projects which contributes to the establishment of an ecosystem between institutions (Interview 1). The funding program promotes the growth of VE across the university and it connects financial incentives with structural and quality requirements as a strategy to align VE projects with institutional goals.

Advisory Board

Proposals for funding are submitted to the so-called Comprehensive Internationalization Committee (CIC) at DePaul University (DePaul University n.d.a). This board is composed of faculty members with representation of all colleges and schools (ibid.). Their function in the context of VE is to evaluate VE project proposals and to award financial support (DePaul University n.d.a, Interview 1). The committee is headed by the Associate Vice President for Global Engagement and Online Learning (interviewee) and has taken over the function of reviewing committee in addition to its task of advising university leadership on international affairs (Interview 1). Therefore, the university was able to draw from an existing structure and organizational resource in order to install and implement a quality control mechanism and to some degree a standardization of VE as regards the consideration of relevant design and content aspects for VE as well as aligning VE projects with strategic institutional goals. Rubin (2017, 37 et seq.) confirms that the overall approach of combining the described organizational, human and financial resources of structured faculty development paired with financial incentives and a committee for reviewing VE project proposals are highly suitable instruments

to stimulate VE development. At the same time, they provide sufficient freedom to faculty to come up with individualized and flexible course design (ibid.).

International Partnerships

Faculty who are interested in engaging in VE can be conceived as a form of human resource with their international contacts and networks as relational resources which they can use towards creating collaborations for VE. With respect to faculties' professional and personal international contacts there is a continuum ranging from long lasting research collaborations that are then expanded to VE on the one end, and no previous connection whatsoever on the other (Interview 1). For faculty with existing international networks the institution explicitly recommends to leverage these contacts for VE as this will maximize the success of VE projects (DePaul University n.d.c). Moreover, for those without this relational resource the university offers support to find international colleagues for VE collaboration by utilizing the existing network of international institutional partners through the office of global engagement (DePaul University n.d.a, DePaul University n.d.c). Therefore, DePaul University has set a frame for international partnerships dedicated to conduct VE based on relational resources by connecting the institutional resource of formal international partnerships with the key human resource of teaching faculty, and by mobilizing individual faculties' relational resources of professional and personal international contacts.

Policy Alignment and Integration

The alignment with institutional policies and strategic goals represents a further resource, namely an informational one that frames the implementation and execution of VE at DePaul University. For one, VE is explicitly mentioned in connection to the strategic goal of increasing "the use of high-impact practices in classes across programs" (DePaul University 2019, 10) which is shaped by a "collective effort on the success of a diverse community of students" including marginalized, low-income, first-generation and immigrant students (DePaul University 2019, 1) at an institution located in a "city that is a vital node in the global economic system and home to vibrant immigrant communities" (DePaul University

2019, 2). Accordingly, VE has been identified as an instrument to foster transferable skills at very low or no cost for students which is why it has been discussed as an alternative to traditional study abroad particularly for students with diverse backgrounds (Stärke 2019). The way DePaul University and the two other cases situate VE within overarching qualification frameworks like transferable or transversal skills will be further elucidated in the following main chapter on pedagogics. Secondly, the institution has articulated 10 overarching learning goals with one explicitly speaking to global understanding (Interview 1). In this policy, global understanding is defined as a combination of intercultural awareness and sustainability in the context of global citizenry (ibid.). VE at DePaul University aligns with this policy goal. Therefore, the implementation and realization of VE is based on these two policies as a form of informational resource.

Launching Process

With respect to the launching of resources for VE implementation at DePaul University the interviewee described a process that entailed the sequence of designing the faculty development program, setting up the GLE program websites, introducing the monetary incentive of the seed funding program for faculty, conducting two initial university-wide workshops with external VE experts with one of them addressing faculty and the other university leadership, the launching of GLE websites after the event, and providing faculty support for doing VE through the training program and identification of suitable international partners (Interview 1). The launching sequence may serve as a blueprint for establishing VE at other institutions including Goethe University. It also sheds light on the fact that DePaul University has followed a clear and thought-out process for implementing VE in a structured manner across the institution.

4.2 University of Potsdam: Organizational Aspects

Figure 7 summarizes the organizational aspects for VE implementation at University of Potsdam grouped according to their resource classification. These will be further discussed in the following.

University of Potsdam: Organizational Aspects

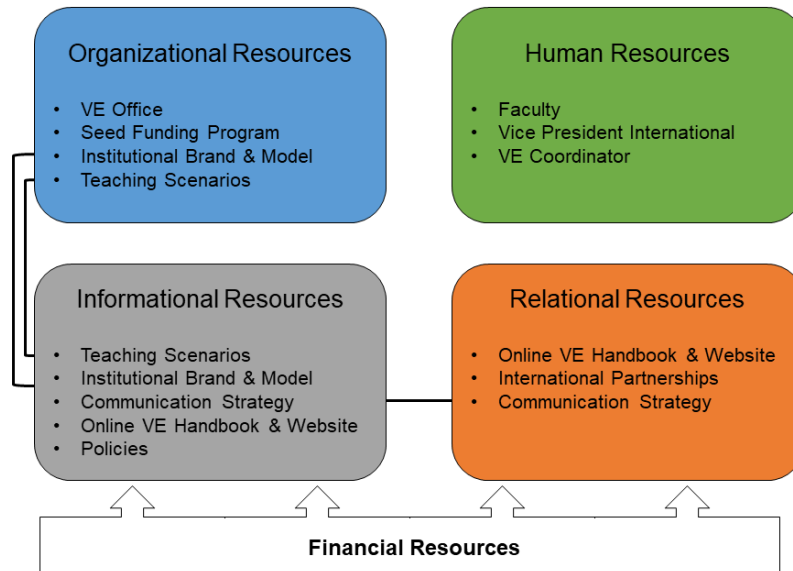


FIGURE 7. Organizational Aspects at University of Potsdam

Institutional Brand and Model

Initially the set-up of VE at University of Potsdam was developed along two areas of activities which encompassed the testing of teaching scenarios, and devising concepts for the launching and implementation of VE within the given institutional framework (Interview 2). As regards the former, the university adopted models and heuristics from an existing network of institutions with experience in the field, i.e. the Center for Collaborative Online Learning at the State University of New York system (SUNY) (ibid.). In 2015, University of Potsdam launched its institutional version of VE under the brand name of “OIL.UP” (online international learning) as a kick-off for internationalization through e-learning (Universität Potsdam n.d.). The university has defined the goal of VE as enriching teaching and learning content for courses, developing and expanding international collaborations and to internationalize teaching, in general (Universität Potsdam 2017a). On the structural level, VE is embedded in an institutional four pillar model with increasing degrees of utilizing e-learning techniques for international partnerships (Universität Potsdam n.d.). This model constitutes an approach to involve a large number of courses to build up and sustain international partnerships with (ibid.). Besides enveloping all forms of e-

learning the model stipulates two sub-structures pertaining to VE specifically which are called “pre-oiling” and “full oiling” (ibid., cf. chapter 5.3). These are characterized by varying degrees of intensity with respect to international collaboration between students and faculty and they render faculty an orientation and framework for their VE activities. Hence, University of Potsdam has implemented VE across the institution by developing a model framework as well as creating a catalogue of teaching formats and scenarios that are suitable for online international learning and cooperation. These represent organizational and informational resources as suggested by Seppänen and Mäkinen (2007). According to the interviewee, the internal VE brand has had a self-reinforcing effect which is why it is conceived as a hallmark for VE implementation at University of Potsdam (Interview 2).

Stakeholders and Lobbying

For the initiation of VE on a broad scale across the institution, University of Potsdam also mobilized different human and relational resources. For one, direct leadership support by the Vice President International led to the assignment of a coordinator for VE as well as establishing contacts and creating knowledge and best practice transfer with a center of VE expertise at the State University of New York system (SUNY) (Interview 2). In addition to leadership involvement the institution has put a strong focus on activating the key stakeholders of faculty. Initially, the institution engaged faculty who already have an affinity for e-learning and/or international teaching activities as well as those who have strong international research collaborations (ibid.). The interviewee pointed out that this process takes some effort in order to convince those faculty who have a strong focus on research as to why they should conduct VE. This was done by exploring ways to combine VE teaching with their research activities, e.g. by reflecting about VE experiences in journal publications (ibid.). A general doubt by faculty that the VE coordinator and university leadership had to dispel concerned the involvement in digital international teaching formats would mean a foreclosure of international travelling opportunities to meet partners or teach face to face (ibid.). The established administrative office in charge of VE proactively communicates that travelling to international collaborators can be

an essential component for VE preparation in order to prevent non-engagement due to this belief.

Another approach that was taken at University of Potsdam concerns the mobilization of early career scholars, i.e. doctoral candidates and early postdoc scholars. For this stakeholder subset the emphasis was put on communicating VE benefits in terms of creating their own professional networks independent of the research group or chair that they are affiliated with (Interview 2). This was consolidated by specific VE training measures for this group in the form of the aforementioned winter school for international online teaching (ibid.). I would suggest to conceive of these lobbying activities as a differentiated communication strategy which represents a cornerstone for launching and expanding VE across the institution (Interview 2). In general, the interviewee underscored that without leadership support and institutional structures like a seed funding or training program convincing individual faculty to engage in VE may take a long time (ibid.).

Virtual Exchange Office and Supporting Units

The above-mentioned model and institutional brand is promoted across the university by an office in charge of VE. This structure also offers support to faculty throughout the whole VE journey from a worldwide search for international partners to the realization of a collaborative VE session with didactic and technical knowhow (Universität Potsdam 2017a). This includes different teaching scenarios (Universität Potsdam 2017b, 3), advice on how to integrate digital media into VE teaching (Universität Potsdam 2017b, 9) and the sporadic organization training workshops like a winter school on international online teaching for junior researchers (Universität Potsdam 2017a). The pedagogical training components will be further presented and discussed in chapter 5.3. Also, the office takes care of quality assurance of VE teaching aspects by assisting in the development of rubrics for VE modules (Interview 2) and through collaborating with administrative units for quality assurance and e-learning, and the IT department for the development of teaching approaches and scenarios (ibid.). In general, other organizational units offer support for VE preparation and conduct as well, specifically the university center for audio/visual media, the moodle support office as well as the center for quality

development in teaching and learning (Universität Potsdam 2017a). In sum, University of Potsdam utilizes the existing institutional service structure alongside an office fully dedicated to VE in order to expand and enhance the realization of VE projects university-wide. Seen through the lens of resource utilization, the institution thus draws from existing organizational and human resources in order to foster VE across the whole university in addition to having allocated organizational resources fully dedicated to VE by establishing an office.

VE Online Handbook and Website

Key informational resources for VE implementation at University of Potsdam are an online handbook for international online learning and a website on VE which both convey various details about VE goals, preparation and realization (Universität Potsdam 2017a, Universität Potsdam 2017b). These two resources target and cater towards faculty by providing advice, highlighting institutional rationales and offices for support, delineating didactical tools, IT tools and differences of teaching VE in comparison to face to face classroom interactions, illustrating intercultural challenges and how to prepare and deal with them as part of the collaboration and the teaching, finding and leveraging international partnerships, and describing general organizational challenges that faculty need to consider (*ibid.*). Therefore, the university has instilled most of its knowledge about VE into these informational resources and aligned them with institutional strategies and structures. Moreover, the informational resources function as a mechanism to mobilize faculty as the central group of stakeholders for VE realization and an indispensable human resource for this international online collaborative teaching and learning format.

Seed Funding Program

A further structure that University of Potsdam initiated which represents both an organizational and financial resource for VE implementation is a funding program to support the preparation and conduct of VE projects. The program is oriented towards a geographic focus in terms of origin of international collaborators (Interview 2, Universität Potsdam 2020a). This is due to the fact that the funding sources prescribe an allocation in terms of focus on regions or on particular partner

universities. Initially, the internal funding program has been financed through the university internationalization budget (Interview 2). However, with securing a massive grant from the European University Initiative program University of Potsdam set up a complimentary seed funding structure for VE in 2020 (Universität Potsdam 2020a). Besides the provision of funding for individual VE project initiation (travel and assistantships), selected applications receive didactic support for professional course design, technical support for the production of high quality video and audio resources, translation services for teaching and learning materials, and support for finding suitable international partners (Universität Potsdam 2020a). The requirements for funding have structural implications for VE conduct at University of Potsdam. In particular, the program strengthens cooperation with researchers and teachers from the university consortium, it stipulates the production of international course contents or the internationalization of available course content for online courses in collaboration with international partners, the provision of an international learning experience to University of Potsdam students through online cooperation with students from the consortium, and to reach a broader scope of students and raising their interest in research through high quality online teaching and learning formats (Universität Potsdam 2020a). Similar to DePaul University an institutional committee reviews faculty applications in accordance with these criteria.

International Partnerships

In terms of establishing an international partnership between faculty as a form of relational resource University of Potsdam advises academics to look up international partnerships and programs of the university or the datasheet of VE partnerships that has been established at the institutional level (Universität Potsdam 2017b, 3). Specifically, the university has a broad range of contacts to international universities and teaching staff interested in conducting VE projects in the hard sciences and humanities (ibid.).

Policy Alignment and Integration

In addition to framing VE with an institutional brand name VE has also been embedded into the university internationalization plan as well as the information

technology strategy and the e-learning strategy at University of Potsdam (Interview 2). Therefore, following Seppänen and Mäkinen's resource categorization (2007) the establishment of VE across the institution also draws on the organizational and informational resource of policies. The interviewee elaborated that there are interconnections between these policies via fields of action that address VE (ibid.). Moreover, the integration of VE into policies at University of Potsdam had been executed as a relatively strong top-down approach with support from executive leadership (ibid). Therefore, in terms of resources, the human and relational resource of leadership support directly impacts upon the facilitation of policy integration as a form of organizational and informational resource.

With respect to policy contents, internationalization by digitalization represents a strategic field of action of the university with VE integrated into the internationalization plan (Universität Potsdam 2020b). On a general level, one of the strategic goals of University of Potsdam entails the further internationalization of teaching and learning in order to prepare students for a globalized society through study-related international experiences for all students (ibid.) which neatly frames VE as a suitable approach and instrument to attain this goal. Also, the plan explicitly carves out that VE has been integrated into the funding for the European University Initiative that University of Potsdam has received which represents a mechanism to expand VE across the institution and the project consortium (ibid.). What is more, the policy stipulates to leverage established VE networks (COIL¹, CONAHEC²) for an expansion of online international learning across the university (ibid.).

4.3 Malmö University: Organizational Aspects

The presence of VE at Malmö University has evolved as a bottom-up phenomenon initiated through a professor's in person contact at a conference which resulted in a successful EU grant proposal with colleagues (Interview 3). The EU project involvement has facilitated access to VE resources for Malmö University.

¹ Collaborative Online International Learning Network of the State University of New York (SUNY) system

² Consortium for North American Higher Education Collaboration

Specifically, academic teachers have the opportunity to participate in face to face and online VE training and also to engage in online partnering fairs which have been facilitated by the European grant project (EVOLVE 2020b) which will be further described and scrutinized in chapters 5.5 and 6.3. Therefore, Malmö University benefits from external structures and resources, but has not explicitly allocated any organizational, human, relational, informational or financial resources to the cause. However, the professor who brought VE to the institution, and who thus represents the main driver and stakeholder for VE at Malmö University, has made use of institutional resources in her immediate context. Her approach and perspective shed light on why central resource allocation is necessary for VE implementation and growth. Also, the bottom-up situation at Malmö confirms how institutional resources cannot be activated for VE if there is no presence and alignment with top-down initiatives and connection with central structures as suggested by Knoth and Kiy (2016) and Rubin (2017). These aspects will be further explored below. Figure 8 summarizes the organizational aspects for VE implementation at Malmö University grouped according to their resource classification as deduced from the empirical data.

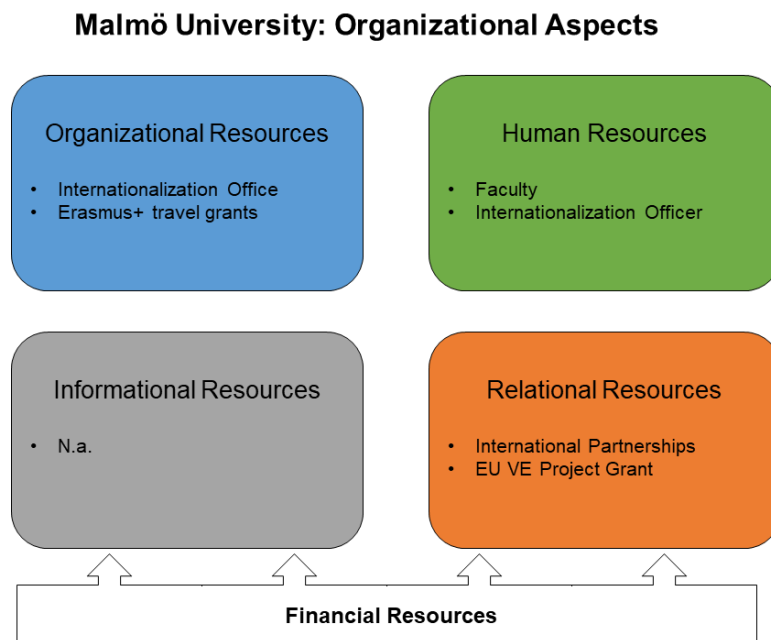


FIGURE 8. Organizational Aspects at Malmö University

Access to Structures and Processes

From the individual faculty perspective, the interviewee pointed out that she had difficulties in identifying institutional structures and processes that could render support for VE implementation (Interview 3). On this topic she stated: “The rules are in the walls, right? So these things [information about support structures] are not documented” (ibid.). Specifically, this observation addresses the identification of additional funding options that Malmö University could provide. The professor was eventually able to tackle this challenge by seeking support from the central internationalization office. Her account exemplifies that a lack of visibility of support structures and/or a lack of knowledge about support structures may hamper and delay individual faculty efforts to plan and conduct VE. In turn, any efforts undertaken at the central university level to implement VE need to consider the dissemination of information about support structures. In terms of resources, Malmö University would need to invest into growing organizational and informational resources as an avenue to increase the visibility of support for and subsequently the conduct of VE projects.

Stakeholders and Lobbying

As the interviewee elaborated, activating faculty to partake in VE planning and realization represents an important issue from a bottom-up perspective. This is because “[...] colleagues guard their time very carefully and don’t overcommit” in the face of very high faculty workloads (Interview 3). At the same time, however, the interviewee emphasized that

“[t]he time it takes is crucial, you need to invest in it, this is why it happens in little fits and starts, you rely on individual innovators who are willing or already capable of [...] this to do the extra work, and then maybe bring along colleagues who are also willing to take part in it” (Interview 3).

These two statements substantiate Rubin’s observation that one of the main inhibitors for teaching staff engagement in VE are time constraints (2017, 42). Therefore, I would argue that a larger scale involvement of faculty beyond the immediate context of one professor necessitates the set-up of structures that include faculty incentives as a further investment of resources. These can be both material

and immaterial resources in the form of seed funding for VE project initiation, the provision of pedagogical and technical support, as well as delivering clear arguments about the potential added benefit of VE for faculty (e.g. connecting VE to research). Such incentives have been created by the two other investigated universities. Also, scholarly accounts have highlighted these measures as good practice (Jansen 2015). In terms of resources, activating faculty as a human resource for VE thus specifically requires an allocation of financial, organizational and informational resources.

Administrative offices that can provide support for VE initiatives in their respective capacities represent further relevant organizational resources and stakeholders. In the case of Malmö University, the interviewee was able to connect with an administrator from the internationalization office (Interview 3). This professional relationship pathed the way to receive Erasmus+ travel grants for a group of faculty to participate in an international VE training week facilitated by the EU grant project. The interviewee emphasized that this support was essential to grow involvement from the faculty in her department. This example illustrates that relational resources inside the organization are vital to gain access to stakeholders and further organizational and financial resources. As a consequence, VE implementation across Malmö University and in general across universities calls initiators to build and leverage stakeholder relationships particularly with (other) faculty and key administrative units.

Seed Funding

As a key instrument and financial resource for the expansion of VE, both DePaul University and University of Potsdam provide seed funding to individual faculty. In the given case of Malmö University such a resource has been absent. However, the interviewee was able to mobilize financial support for travel in order to participate in VE training and meeting potential international faculty collaborators: “My university, by allowing us to use Erasmus money for training, allowed us to find the time and the motivation to use that to develop virtual exchanges” (Interview 3). I would reason that utilizing Erasmus+ staff mobility funding constitutes a low threshold for the provision of financial support to faculty. This is because the funding is readily

available for European institutions and their teaching and administrative staff (Beerkens & Vossensteyn 2011). This aspect will be taken into consideration for the implementation of VE at Goethe University.

International Partnerships

A relational resource for VE realization that the interviewee foregrounded concerns the working relationship with the respective international colleague (Interview 3). As with the two other cases, the professor advocates to work with colleagues that academic teachers have already collaborated with in research or who teach similar classes. This would guarantee a functioning working relationship for VE (ibid.). The international VE training week facilitated by the EU project included a partnering fair which the interview assessed to be a functional instrument for bringing interested faculty together (ibid). Besides this external resource, Malmö University does not offer any support or services for international VE partnership development and cultivation. Given their presence at other institutions that have implemented VE on a broad scale (Jager et a. 2019, Jansen 2015, Rubin 2017), such services and support can be categorized as important organizational and informational resources which will be taken into account for the designing of the VE implementation plan for Goethe University.

Policy Alignment and Integration

Consistent with the overall status quo of VE at Malmö University, the institution has no policies established that pertain to the development of VE or to the ways VE relates to overarching organizational goals or the mission and values of the university. At the same time, however, the institution has formulated overarching strategic goals for education and research with one of them creating “[S]trong, coherent and boundary-crossing international academic environments in which education, research and collaboration are integrated” (Malmö University 2017, 3). Furthermore, another objective entails offering “inspiring, creative and functional work [...] environments” that “contribute to the development of teaching and learning” and specifically develop “the digital work [...] environment to meet present and future requirements for digital skills” (Malmö University 2017, 8).

The policy equally stipulates the development of digital learning environments in order for students to become equipped with digital skills and their future requirements (Malmö University 2017, 8). Moreover, another strategic goal constitutes that students “develop their abilities to [...] address and handle complex societal issues” (7) and, on a more general level, there is the goal to integrate “internationalization and global engagement in education and research, resulting in co-created projects [...]” (Malmö University 2017, 8).

Although VE represents a very suitable vehicle to realize these goals, the institutional involvement in VE and its overall strategy remain unaligned. This is because the VE efforts at Malmö University have been undertaken as a bottom-up initiative with little or no involvement by central administration and university leadership, respectively.

4.4 Discussion

Organizational Aspects: Best Practices for VE Implementation

From the empirical data of the three cases have emerged different topics and categories that address institutional structures and processes relevant for VE implementation. These can be labelled as different forms of resources (organizational, human, informational and relational) that the institutions have allocated to the cause. They encompass the following structures:

- VE coordination office
- Faculty training program
- Seed funding program
- Selection committee / advisory board
- VE website
- Faculty handbook on VE pedagogy, didactics, and organization

Moreover, there are processes undertaken that involve different stakeholders and the aforementioned structures which have vital implications for VE implementation. These entail:

- Institutional leadership involvement

- VE brand development
- VE institutional policy alignment and integration
- Lobbying VE to different stakeholders
- Continuous support for faculty on instructional, pedagogical, intercultural and organizational (e.g. related to international partner selection) questions

The presented structures and processes represent mechanisms that support a sustainable development and conduct of VE across a university as confirmed by previous research. Rubin (2017), Zhang and Pearlman (2018) and Jager et al. (2019) emphasize that structured support through workshops and a training academy for teaching staff are key for institutional expansion, particularly in combination with financial incentives (Rubin & Guth 2015, Rubin 2017) like travel grants for partner visits (Bégin-Caouette, Khoo & Afridi 2015). The same author recommends the inclusion of VE in institutional policy plans and strategies since this facilitates administrative support and the formalization of VE targets and methods (Jansen 2015, Rubin 2017). Also, setting up a review committee for formal VE project proposals stimulates institutional VE development (Rubin 2017, Zhang & Pearlman 2018). Similarly, the scholars suggest to have assigned VE personnel (ibid.). The necessity to involve various institutional stakeholders is highlighted by Jager et al. (2019, 10) given that VE is a transversal activity which brings together areas that oftentimes are managed by different structures and offices. Finally, the establishment of a coordinating office with administrative staff managing the institutional support for VE planning and conduct have also been recommended in the literature on the topic (Jansen 2015, Rubin & Guth 2015).

With regards to institutional lobbying for VE, Wilson (2013) remarks that faculty perceptions are crucial in the process of engaging them for VE. Specifically, perceived personal benefits depend on a variety of personal, professional and political realities which are therefore organic and not strategically devised (Wilson 2013, 290). In addition, she foregrounds how new and emerging scholars can specifically benefit from VE teaching for their career development through joint publications, conference presentations, or working towards an institutional teaching award (2013, 296). The same approach of segmenting the key stakeholder group

of faculty has been done at University of Potsdam and I would argue that such approaches represent a good practice of conducting internal lobbying for VE.

Are Identified Best Practices Universal?

The coherence of my findings with previous research not only solidifies the above mentioned structures and processes as best practices for VE implementation, but also evokes the impression that there is a universal recipe of how to establish VE across an institution. However, Jager et al. (2019, 24) carve out that VE cannot be easily standardized which requires institutions to integrate VE strategically “in such a way that the uniqueness of character which is a key feature of any successful exchange does not get lost”. Put differently, institutional structures and processes need to create a framework that allows for individualized approaches to VE as an adaptive teaching and learning format (Rubin & Guth 2015, 18) on the faculty level while maintaining overall institutional goals (connected to VE). The presented structures and processes appear to be functional in various institutional settings when the aspect of what I would call “pockets of freedom” on the side of academic teachers has been integrated into the implementation. The structures and processes facilitate an alignment between bottom-up and top-down aspects of VE realization as recommended by Knoth and Kiy (2016) and Rubin (2017). My case study on Malmö substantiates this alignment. Efforts by individual faculty as a bottom-up initiative do not lead to an activation of required resources. Therefore, the initial point of initiation of VE at a university plays a determining role for the growth of VE both in terms of its rate and time as determined by an access to relevant resources. These considerations and good practices will be included in the VE implementation plan design for Goethe University.

In the following chapter I present and analyze the second success factor of pedagogy that Knoth and Kiy have suggested (2016) in their adaption of Leask’s descriptive model for Internationalizing the Curriculum. As illustrated in this chapter, organizational aspects already touch upon this success factor. However, given that VE is a learning and teaching format the authors have rightly highlighted the importance of pedagogy for institutional VE implementation.

5 PEDAGOGICAL ASPECTS

Pedagogy and didactics represent another dimension in Knoth and Kiy's (2016) adaption of Leask's model. In their description of this success factor, they explicitly emphasize the role of faculty as important stakeholders and change agents (2016: 7). The successful implementation of didactics and pedagogy for VE is safeguarded by providing training to academic teachers as well as administrative and technical support. According to Knoth and Kiy, the development of intercultural awareness and media competencies in faculty and students as well as the allocation of financial resources are crucial determining factors to accomplish this implementation goal (ibid.)

Based on this framing, there are three broad categories that can be deduced from their remarks which concern pedagogy and didactics as success factors for VE implementation. One addresses the development and strengthening pedagogical skills for VE teaching in faculty, the second component addresses the learning goals of students and how to reach these through didactic means. These two categories are interconnected with the first impacting and determining the second. What is more, these two aspects can also be categorized as resources. Applying Seppänen and Mäkinen's (2007) classification of resources frames didactic skills development in faculty and (the attainment of) learning goals for students as forms of human and organizational resources. Thirdly, the two components are dependent upon institutional financial, administrative and technical support which in terms of resources can be conceived of as organizational (e.g. administrative structures and offices for pedagogical support), physical (e.g. hard- and software for online teaching and learning) and financial (e.g. free provision of didactic and technical support, monetary incentives for faculty to enhance their teaching skills) resources (ibid.). I have discussed these resource dimensions in the previous chapter. In the following, I will thus present each case and the respective institutional approaches and structures towards the success factor of didactics and pedagogy by particularly focusing on the two components of faculty training and student learning. This will be followed by an overall comparison and discussion of the findings as the grounds to extract relevant structures, instruments and good practices for VE implementation

at Goethe University in regards to pedagogy and didactics while also considering important processes and stakeholders for this endeavor.

5.1 DePaul University: Pedagogical Skills

Facilitating and teaching VE requires particular skills from academic teachers and is demanding in nature. This statement is corroborated by Reo and Russell (2015, 63) who emphasize that for VE teaching faculty need to master three new and difficult pedagogical skill areas which entail team teaching, online course development and teaching, as well as international learning (ibid.). DePaul University therefore has established a two-step faculty development program in order to cater to these qualification needs. It entails a workshop series as well as individual support by an instructional designer assigned to each faculty who plans a VE project (Interview 1). It thus can be described as a “hybrid model combining training and coaching” (ibid.).

Faculty Training Program

DePaul University offers its faculty a training program to gain or further develop their didactic skills for VE teaching. Specifically, the program is composed of two consecutive components with three weeks of asynchronous online work in addition to two synchronous meetings (DePaul University n.d.a). The contents of the professional development online and face to face modules include VE examples, faculty presentations, intercultural components, language and technology resources, and “other essential pedagogical and technological aspects of virtual exchange” (ibid.). Moreover, the interviewee added that the course program also contains a module on English as lingua franca which focuses on global Englishes and language issues in order to sensitize native speakers to challenges in communication with non-native speakers of English (Interview 1).

Instructional Design Collaboration

As second step after completing the development workshop, faculty are paired up with instructional designers who “assist [...] in a variety of ways during the project development and implementation stages” (DePaul University n.d.a). The support by

instructional designers for the planning of VE can be highly beneficial when the relationship between academic teacher and designer is conceived as collaborative and characterized by trust (Reo & Russell 2015). During this stage the faculty's international collaborator is invited to join in with the instructional designer who facilitates an "initial meeting with the two faculty members in order to identify the scope, type, and duration of the shared interaction and suggest the best teaching strategies and technologies to support the objectives of the interaction" (DePaul University n.d.b). In this way, the working relationship and build-up of trust is extended to the international colleague which contributes to safeguarding each VE project. In this context, the institution emphasizes flexibility as regards the duration and intensity of collaboration for VE ranging from one shared assignment to an entire co-taught course.

Function of Faculty Development Program

The professional development program represents a core institutional structure and thus an organizational resource that stimulates a systematic and aligned development and conduct of VE across the university. It involves teaching faculty as one of the main stakeholders and human resource in the endeavor to realize VE projects. By enhancing their competencies for digital and intercultural teaching which constitutes a human resource expansion, the program represents an instrument to mobilize and direct this group of stakeholders towards engaging in VE as a format to foster specific skills in students. The faculty qualification goals can also be subsumed under the introduced qualification frame of transversal skills (UNESCO 2015). Therefore, VE not only facilitates cross-cultural collaborative learning (Yamazaki & Kayes 2004) that result in the (further) development of transversal skills in students but in academic teachers as well. I will further discuss this aspect in the final section of this chapter.

In sum, the university conceives of the training program as consisting of "carefully planned faculty development opportunities and specialized support to aid the design, development and growth of virtual exchange pedagogies" that allow for "maximum student exposure to transformative international opportunities" (DePaul University n.d.c). Furthermore, the professional development program and its

contents align with overarching university policies and goals. Specifically, the program contributes to preparing both students and faculty for a digital and globalized life (DePaul University 2019, 3). Faculty represent stakeholders and a human resource who use their teaching competencies to reach particular learning goals that have been defined by institutional policies. As the interviewee pointed out, “[I]t is the task of the faculty member to create learning outcomes that articulate to the existing institutional learning outcome” (Interview 1).

5.2 DePaul University: Student Learning

As mentioned above, pedagogical approaches to VE center around the development of specific new skills in students. Put differently, VE is a “technology-based learning experience” with “clear learning outcomes and deliverables” (DePaul University n.d.c). In particular, at DePaul university these skills encompass the ability to complete a task or project in a virtual global environment, being able to deal with time differences, cultural differences, language proficiency differences which all are a preparation for the world of work and were generally framed as global citizenship skills (Interview 1). The interviewee’s conceptualization of the learning outcomes attainable from VE generally resonate with website and policy content (DePaul University n.d.b, Global Learning Experience Program Application 2019). Specifically, DePaul University’s strategic plan has defined one of six priorities as excelling in “preparing students for global citizenship and success” (DePaul University 2019, 5) so that “graduates are prepared to work, [...] and contribute in a global community” (DePaul University 2019, 3). In the following chapter on the success factor of culture I will take a closer look at this learning dimension.

One sub goal for the institutional priority is to “ensure that all graduates demonstrate core competencies and transferable skills (e.g. cultural agility; technological, information, and data literacy; computational thinking; critical and systems thinking; effective communication; and ethical and moral reasoning)” (DePaul University 2019, 11). The institutional learning goals resonate with academic conceptualizations of student learning on VE projects. Zhang and Pearlman (2018, 2) point out that VE facilitates a qualification frame that prepares “students to be world citizens who possess holistic perspectives on diversity and inclusion” for the

global workplace and for civil engagement. With regards to preparing students for the global and new world of work VE specifically strengthens critical thinking and problem solving, collaboration across networks, leading by influence, agility and adaptability, initiative and entrepreneurialism, effective oral and written communication, accessing and analyzing information, and curiosity and imagination (Jansen 2015, 53). Hence the conceptualizations of student learning and learning goals at DePaul University are consistent with the introduced notion of VE as facilitating cross-cultural collaborative learning (Yamazaki & Kayes 2004) to develop transversal skills (UNESCO 2015), information and communication technology (ICT) skills and digital literacies (O'Dowd 2018). This alignment will be further contextualized in the discussion section of this chapter.

Pedagogical Methods

Apart from the set-up of support structures for the development of novel pedagogy and didactics for teaching in VE environments and aligning VE with defined institutional learning outcomes, DePaul University also delineates potential pedagogical implementation models for VE as examples of how to facilitate online intercultural learning. These include various teaching scenarios and methods like synchronous lectures jointly delivered with small group discussions, synchronous guest speakers with follow-up small group reflections or multimedia assignments and group presentations (DePaul University n.d.b). In addition, the institution advises academic teachers to make use of peer review of student work, group assignments that result in jointly prepared presentations (delivered synchronously or via multimedia) or case studies, and structured asynchronous discussions (online debates, student-led discussions on content) (ibid.). Finally, recorded short presentations by guest speakers can serve as a catalyst for asynchronous follow-up discussion in small groups. To summarize, DePaul University has identified a range of functional teaching scenarios and methods for VE facilitation that are disseminated to interested faculty via websites as a form of informational resource and embedded in a training program and instructional design support which constitute organizational resources. The teaching scenarios and methods suggested by DePaul University and the two other cases will be taken into account

for the implementation of VE at Goethe University (in particular as contents for a faculty training program).

5.3 University of Potsdam: Pedagogical Skills

University of Potsdam has introduced different measures to support the further development of teaching faculties' skills for international online teaching collaborations. These will be presented next.

Pedagogical Model as Structure

On the structural level, the university has launched VE with an institutionally branded acronym OIL (online international learning) as part of its internationalization efforts by providing a “framework to support teachers in creating international collaborative classes” (Universität Potsdam n.d.). In other words, the institution established an organizational resource by providing a pedagogical structure that supports the teaching expertise of faculty who represent a human resource for VE planning and realization. As briefly illustrated in chapter 4.2 the framework consists of two models for VE conduct and provides a pedagogical and logistical orientation for university teachers. The first model (“Pre-OILing”) constitutes a short-term format with individual collaborative elements that cover a specific topic (Universität Potsdam 2017b, 2). They are conducted as single independent sessions and in asynchronous teaching and learning mode (ibid.). This version of VE is introductory in nature with little commitment in terms of time and workload for both teachers and students. The second term-long collaborative teaching and learning model of VE has been coined as “Full OILing” and encompasses longer project work for teams of students from the two universities with a strong focus on international communication (Universität Potsdam 2017b, 3). The latter is envisioned to result in changes of perspective within the learning and teaching process. The selection of tools for this scenario is determined by the topics and tasks as well as the spatial and temporal conditions of collaborative elements (ibid.). This approach acknowledges that online collaboration tools have the potential to promote learners' sense of community, increase the flow of knowledge between students and facilitate participation in online environments (Hrastinski 2009).

Pedagogical Support by VE Office

The second source of support for the development and strengthening of didactic skills for VE teaching is the instalment of an office with staff directly supporting faculty in their efforts to design and develop VE. The support team organizes different workshops and events to inform about the possibilities of VE (Universität Potsdam 2017a). Moreover, the support team offers practical VE teaching scenarios based on social media, ICT and digital learning instruments (ibid.). The interviewee pointed out that their didactic support also includes coaching faculty in accordance with their individual needs and advising them how to prepare for VE, how to include digital components, onboarding and wrap-up in their VE modules, how to design learning and teaching materials and alternative tools for assessment, and how to stimulate exchange and discussion among students (Interview 2). Finally, the VE office has compiled and disseminated information about their portfolio of services, the university's two tier framework of VE (pre- and full OILing) and diverse aspects about didactics, teaching scenarios and tools on different institutional websites and in the form of the aforementioned digital "Course Handbook for Online International Learning" (Universität Potsdam, 2017b). Given the context of the German academic system which provides tenured faculty with a large degree of freedom (Enders 2001, Baker & Lenhardt 2008), the different forms of support, in particular the individualized aspects that provide consultations and coaching can also be conceived as lobbying for VE with a high teaching and learning quality since faculty could go about their preparation and conduct as they please (Interview 2). Put differently, all services and support outlined above are optional for faculty.

Faculty Skills: Pedagogical Planning and Flexibility

University of Potsdam delineates concrete skills as important for faculty to successfully design and teach VE. For one, academic teachers need to demonstrate a flexible and adaptable mindset as well as good planning and organizational skills for VE teaching. This is because VE is "[...] learning by doing for teachers and students. As a teacher you are always only one step ahead, you do not have a finished concept because you do not know how the respective collaborations

evolve” (Interview 2). In addition, faculty should not expect too much as this form of online collaboration needs time (Universität Potsdam 2017a). In order to be able to deal with unforeseen challenges and delays which impact on the options of delivering certain contents, the institution provides a concrete approach that faculty should embrace. Specifically, the institutional handbook on VE pedagogy and organization suggests that faculty define necessary and optional contents of the course that are not part of the VE collaboration (Universität Potsdam 2017b, 7). In case there arise unforeseen challenges and delays during the conduct of VE components, the optional contents can be omitted in order to make up for time. Such a thorough pre-structuring of contents allows for flexibility and prevents additional work later on (ibid). This suggestion is in line with Bégin-Caouette, Khoo and Afridi’s observation that pedagogical preparation can mitigate unexpected challenges during the instruction phase of VE (2015). This also applies to the planning for assessing students’ engagement in and their produced work during VE³. The (degree of) planning and preparing for VE on both the academic teachers’ and students’ side appear to be a culturally situated practice. This result emerged from the analysis of the different topics and categories associated with VE learning and teaching. I will discuss this aspect in more detail in the context of intercultural skills in the following chapter.

Faculty Skills: ICT, Social Media and Online Teaching

A further competence area that faculty who teach VE need to be skillful in concerns the usage of information and communication technology (ICT) and social media applications as well as online teaching in general. University of Potsdam conceives of VE as applying e-learning techniques to international collaborations (Universität Potsdam n.d.). Therefore, university teachers should be able to master all ICT applications that they intend to use for their VE teaching, choose those that are easy

³ University of Potsdam proposes to have students produce learning artefacts from international group work in order to intensify exchange and interaction (Universität Potsdam 2017a, Universität Potsdam 2017b, 8). Specifically, these artefacts encompass reports or scientific posters. As for individual formats of assessment the institution advises its faculty to have students compose final essays, blog entries or to conduct written exams (ibid.).

to use in order to create an enriching collaboration that both students and teachers benefit from (Universität Potsdam 2017a). In addition, the interviewee alerted to the fact that VE teaching requires media didactics and the consideration of competence orientation and student-centered learning (Interview 2). The latter two aspects determine how academic teachers approach the planning and selection of contents for VE modules. As a consequence, University of Potsdam stipulates that faculty have the ability to reflect and to be selective about suitable contents. The VE office and the institutional handbook provide orientation and support for such a learning design.

Faculty Skills: Content Selection and Reflection

As regards faculties' content selection skills, the institution also provides guidance via the online international learning course handbook. Specifically, University of Potsdam encourages faculty to think about which course contents are suitable to internationalize as part of a reflection process (Universität Potsdam 2017b, 2). The choice of thematic focus is relevant to safeguard a substantial and effective change of perspective among the group of students (Universität Potsdam 2017a) brought about by intercultural experiences with their peers and an exposure to novel academic approaches to course content through the international collaboration. Furthermore, faculty can use the international collaboration with an academic partner to expand the thematic scope of their own course through the course offered at the partner institution (Universität Potsdam 2017b, 4). Therefore, a key question for faculty when searching for a collaboration partner is to think about which cultural and geographic perspectives could enrich their teaching (Universität Potsdam 2017b, 3).

Faculty Skills: Partnering and Collaboration

With respect to collaborating internationally for the conduct of VE, different sources provided by University of Potsdam foreground that faculty need to apply and further develop their partnering skills as these determine the contents as well as the pedagogical and didactic quality of VE (co-)teaching. For one, faculty should manage expectations for the collaboration by defining content and goals with their

academic partner at the onset of working together (Universität Potsdam 2017a) and agreeing on learning outcomes and didactic and methodical aspects. This includes a balanced participation and representation of both sides (Universität Potsdam 2017b, 4). In addition, the co-creation of a syllabus between the international partners allows for an early identification and rectification of problems with respect to contents, technology and timing of the VE module (ibid.) As regards potential problems during the course of VE, University of Potsdam suggests that university teachers should define how to tackle them in case they arise and to conduct feedback with students early on as this helps detecting and addressing open questions and conflicts (Universität Potsdam 2017a).

In summary, University of Potsdam focuses on the provision of guidance and detailed information about pedagogical approaches, planning and teaching scenarios for VE conduct based on previous institutional experience with VE via institutional websites and documents. This approach coheres with VE development at other universities that share curriculum and successful teaching methods by early adopter faculty with all interested institutional stakeholders (Rubin 2017, 41). In terms of resources, the institution thus mobilizes organizational and informational resources (website contents, guidelines) to strengthen the development of the key stakeholder group and human resource of academic teachers.

5.4 University of Potsdam: Student Learning

University of Potsdam has defined three orientations with regards to student learning outcomes for VE. These encompass a research-orientation, project-based as well as interdisciplinary collaboration (Interview 2). In other words, learning on VE and learning design and outcomes for VE can be directed towards developing and strengthening students' research skills, their competences for conducting projects or comprehending contents and approaches from other disciplines in relation to a particular topic and their own academic background. In addition to these orientations, a successful VE collaboration increases students' reflection on subject matter and culture, and their foreign language competencies (Universität Potsdam 2017a). Moreover, University of Potsdam has delineated general learning goals that the empirical sources captured as teamworking skills, intercultural communication

skills and intercultural competencies, academic writing skills and the competency to organize international projects (Interview 2, Universität Potsdam n.d.) which can be aligned with and enveloped by the three learning outcome orientations. What is more, the student learning goals that University of Potsdam anticipates from VE engagement also cohere with the introduced concept of cross-cultural collaborative learning (Yamazaki & Kaynes 2004) that allow students to gain transversal skills (UNESCO 2015). Although the university highlights a broad spectrum of learning outcomes that VE facilitates, the mentioning of digital literacies and ICT skills could not be extracted from the empirical sources, i.e. the interview, different institutional websites on VE and university policies.

Pedagogical Methods

The interviewee pointed out that VE cannot be used as a format for students to learn everything (Interview 2). Consequently, faculty need to be selective and a clear definition of learning design and learning goals is crucial (ibid.; cf. above). In addition, the interviewee emphasized that the classic course logic of face to face teaching and learning does not apply to VE and that given the difference in setting, preparation and conduct is different as well (ibid.). Learning scenarios in which international students collaboratively work on projects and establish regular and intensive exchange represent the ideal case to foster the above introduced learning outcomes (Universität Potsdam 2017a). University of Potsdam also underscores the importance of conducting reflection sessions with students after collaborative meetings or collaborative elements of the VE course in order to support students' development of intercultural and their general reflection skills (ibid.).

The structure of three orientations for learning outcomes that University of Potsdam has set up represent an organizational resource which have been invested in addition to comprehensive informational resources materialized as guidelines and web content to strengthen particular learning outcomes in students which in turn represent an organizational resource for VE expansion. The relationship and process between these resources can be described as cyclical and mutually reinforcing: an investment in expanding knowledge about VE learning outcomes

leads to reaching learning outcome goals while at the same time the attainment of institutional learning outcomes reaffirms and strengthens resource allocation to disseminate and increase knowledge and capabilities that pertain to these outcomes.

5.5 Malmö University: Pedagogical Skills

Malmö University participates in a European project aiming to “mainstream Virtual Exchange (VE) as an innovative form of collaborative international learning” within different academic disciplines and at the institutional level (EVOLVE 2020a). The involvement in this multilateral project enables academic teachers of the institution to participate in different measures that address the development of pedagogical and didactic skills for VE. Therefore, the institution draws on an external resource in order to broaden faculty teaching competencies as a measure to further develop a key group of stakeholders and an essential human resource for VE implementation.

Faculty Training Program

As the interviewee underscored, one aspect of the European grant project is international faculty training for VE preparation both with regards to pedagogy as well as in terms of networking and meeting international fellow teachers to initiate VE collaborations with (Interview 3). Besides a one time face to face international training program, the project website has been offering an “Online Training Co-laboratory” which encompasses a training that “focuses on VE between educators and their foreign partners” guided by experienced VE trainers (EVOLVE 2020b). What is more, the online co-laboratory includes a broader training spectrum of “various aspects of VE design and delivery, including the pedagogy of VE, technology preparation and the handling and intercultural challenges” divided into five modules with a duration of five weeks (ibid.). In addition to this comprehensive training format, the project facilitates a more generic introductory self-paced online training course (ibid.). Through the institutional involvement in the project Malmö University benefits from these external resources for a potential development of VE. As for the face to face training, the university allocated Erasmus+ travel grants for faculty to participate in the international onsite training and networking sessions.

With regards to the contents of the training, the program provides access to tools for digital media didactics and teaching methods for critical digital literacies (Interview 3). Furthermore, the networking purpose of the training is paramount since establishing functional partnerships for VE can be challenging (ibid.). Therefore, the project training measures represent a framework in which interested faculty can get to know each other and find a suitable collaborator in terms of professional and personal goals as well as personal working styles. As with the faculty development measures at DePaul University and University of Potsdam, both the online and face to face training programs of the European project encapsulate aspects of transversal skills and also encompass ICT skills and digital literacies development in faculty. Thus the course contents and faculty development goals align with the concept of cross-cultural collaborative learning (Yamazaki & Kayes 2004) presented in the chapter on the theoretical framing of VE.

Pedagogical Methods

Another aspect that surfaced as a challenging tool for faculty as part of their teaching portfolio for VE is the method of pedagogical mentoring (Interview 3). In the given context, pedagogical mentoring can be defined as “the strategies and techniques that teachers use in their classes to support students’ learning during virtual exchange” (O’Dowd, Sauro and Spector-Cohen 2020, 147). The interviewee described pedagogical mentoring as an essential toolkit that she and others at Malmö University have been using for VE conduct. However, an instance where it did not function demonstrates the challenging aspects of pedagogical mentoring: “It [pedagogical mentoring] failed because we as teachers, due to a misunderstanding or maybe a fear of too much conflict, we actually didn’t dig deep enough into the source of a conflict that we were having and in the end they [the students] didn’t learn from that” (Interview 3). This quote illustrates that pedagogical mentoring calls for teachers’ ability to both undertake personal reflection about the collaboration with the colleague and in general as well as to have and apply appropriate communication skills to address conflicts. This skill set thus constitutes the grounds to facilitate functional learning experiences.

A second pedagogical method used at the institution encompasses individual student portfolios. As the interviewee elaborated:

We use a portfolio that students are supposed to complete a portion of after each task that they reflect on. They pull out excerpts and they have a final reflection, but they are asked to reflect specifically on some things that they learned or experienced and identify cultural factors (Interview 3).

This functions as an explicit awareness raising task during which students learn aspects about the other culture that they did not know or something new about their own context (ibid.). Malmö University's participation in the VE project allows faculty to (further) develop and expand their capabilities for pedagogical mentoring and facilitating portfolios as a toolkit for teaching in online international collaborative learning environments.

Policy Integration

Apart from the above-mentioned resources and the institutional involvement in the European project Malmö University has not established further structures or policies for the development of pedagogical and didactic skills needed for VE teaching. At the same time, however, the institution has formulated overarching strategic goals for education and research with one of them creating “[S]trong, coherent and boundary-crossing international academic environments in which education, research and collaboration are integrated” (Malmö University 2017, 3). Furthermore, another objective entails offering “inspiring, creative and functional work [...] environments” that “contribute to the development of teaching and learning” and specifically develop “the digital work [...] environment to meet present and future requirements for digital skills” (Malmö University 2017, 8). Although VE represents a very suitable vehicle to realize these goals, the institutional involvement in VE and its overall strategy remain unaligned. This is because the VE efforts at Malmö University have been undertaken as a bottom-up initiative with little or no involvement by central administration and university leadership, respectively.

5.6 Malmö University: Student Learning

Within the frame of the institution's participation in the multilateral project (and in general), VE is cast to function as an instrument to enrich intercultural learning and digitalization practices among students (Interview 3). With regards to the latter, there has been a lack of course goals that reflected the needs of digital competence which was highlighted during the interview: "Digitalization was something that we were supposed to add to the courses even though it was not necessarily assessed" (Interview 3). The integration of VE modules as part of the courses not only increases students' digital competence through practice, but also facilitates the development of learning outcomes that pertain to digital competencies (ibid.). The aspect of intercultural skills development in students will be further explored in the next chapter.

Policy Integration

Similar to developing and strengthening didactic skills in teaching faculty, the two broad learning outcomes of intercultural skills and digital competence neatly fit into the competence framework of transversal skills (UNESCO 2015) as well as the institutional strategy at Malmö University. This is because the policy stipulates the development of digital learning environments in order for students to become equipped with digital skills and their future requirements (Malmö University 2017, 8). Moreover, another strategic goal constitutes that students "develop their abilities to [...] address and handle complex societal issues" (7) and, on a more general level, there is the goal to integrate "internationalization and global engagement in education and research, resulting in co-created projects [...]" (Malmö University 2017, 8). Although VE represents a suitable instrument to contribute to these goals, University of Malmö has not framed VE and its learning outcomes by strategic considerations as presented in the overarching policy paper. This again indicates that central administration and university leadership have drawn little attention to VE.

5.7 Discussion

From the above presented descriptions about the VE success factor of pedagogy there emerge common topics and categories from the three cases. In the following, I will discuss the most prominent topics and categories by comparing them to previous research findings and excerpting best practices that can be integrated into the design of the VE implementation plan for Goethe University.

Faculty Skills

With respect to the topic of faculty skills development for VE conduct, MacLeod, Yang and Xu point to the fact that there is a “general lack of strategies for teachers to improve their implementation of cross-cultural online collaborative learning” (2016, 107). Similarly, Wang (2011) identifies a deficiency in instructional strategies to implement VE. What is more, scholars have carved out that university teachers have to understand the cultures of diverse learners with different cultural backgrounds for efficient VE course design (Ahn, Yoon & Cha 2015, Gu, Wang & Mason 2017), know how to connect with their partner and to set up a VE module, have the skills to internationalize learning outcomes and assess a virtual collaboration, to coach virtual teams, know about collaboration tools, and about assessing and grading with an international partner (Rubin 2017, 36). The knowledge and competence areas that have been identified by research for facilitating functional VE, i.e. VE that fosters the anticipated skills in students, are generally consistent with those highlighted by the three investigated universities. Besides didactic and pedagogical skills, they can be placed into the qualification frame that combines transversal skills, ICT skills and digital literacies (see Table 5). In particular, the theme of skills development in faculty represents a qualification envelope at each of the three institutions which includes knowledge about VE examples, VE teaching scenarios and instructional design aspects as well as intercultural aspects, skills pertaining to technology (ICT skills, social media usage and e-learning tools), partnering skills and reflection skills. These core competence areas have surfaced from the empirical materials of all three cases presented above. In contrast to the two European cases, DePaul University as being located in an English-speaking country has additionally identified the competence area of

dealing with Global Englishes which has been integrated into its faculty training program (Interview 1). Table 5 summarizes the skill dimensions integrated into the faculty training programs and learning materials at each university.

In addition, faculty learning for VE teaching and facilitation takes place in different contexts. Besides the aforementioned training programs and pedagogical information materials, Bégin-Caouette, Khoo and Afridi (2015) have found that university teachers improve their knowledge about their educational practice for VE through interactions with students, partners, technicians and administrators which has led to increased capacities to use new technologies, incorporate the international dimension into their curriculum, use new teaching methods and maneuver administrative challenges. Their finding sheds light on the fact that faculty development for VE teaching represents an instance of experiential learning for faculty which can or should draw from different sources.

TABLE 5. Overview of Faculty Training and Learning Materials Contents per Case

Content	DePaul University	University of Potsdam	Malmö University
Instructional Design & Media Didactics	X	X	X
VE Examples & Teaching Scenarios	X	X	X
Technology Resources & Skills ⁴	X	X	X
Intercultural Aspects	X	X	X
Language Issues	X		
Partnering Skills & Networking	X	X	X
Reflection Skills ⁵		X	X
Change of Perspective, Transformation	X	X	
Flexibility	X	X	

⁴ These encompass both social media and e-learning tools as well as ICT skills and generally aspects of digital literacies.

⁵ This skill dimension addresses the relationship and communication with the international partner, preventing and dealing with conflicts, and the selection of suitable contents for VE from the course that the VE module is integrated into.

Skills for VE teaching and facilitation can be placed on a continuum ranging from the application of concrete didactical and technical tools to cognitive and emotional capabilities (e.g. dealing with difference, being able to adapt to situations or reflecting on potential conflicts). The scope of skills and capabilities extracted from the empirical data on the three cases illustrates that VE teaching and facilitation is a demanding task. It is noteworthy that the data on the EU project training program utilized at Malmö University do not address the capabilities of changing perspective and flexibility. These generic capabilities may represent more personal traits, however, they align with and are integrated into VE training goals as well as overarching institutional self-definitions in the cases of University of Potsdam and DePaul University. Accordingly, DePaul University states that “[...] for us as educators, we [...] must evolve as scholars, makers, mentors, and teachers as technology and the science of learning transform our work” (2019, 2) which bespeaks the necessity for faculty to adapt and change to arising novel contexts both as regards VE planning and conduct as well as in general. The non-alignment of the training program at Malmö University with general faculty development goals hints at the fact that VE training is embedded as an external resource and a bottom-up initiative with little involvement from central university administration or leadership. This status quo may hamper institutional leverage to engage a larger number of academic teachers in VE and thus a further VE implementation process at this institution.

As a consequence of the complexity that VE teaching and facilitation entails for academic teachers, all three institutions have put a strong focus on either providing regular faculty training for VE (DePaul University, Malmö University) or communicating VE related pedagogical and didactic measures to faculty via various websites (University of Potsdam) as an avenue to educate this group of vital stakeholders. With regards to implementing VE at Goethe University, the different skill dimensions and capabilities need to be taken into consideration for the preparation of teaching faculty by devising and realizing suitable training measures. Moreover, aligning the training components and faculty development outcomes with institutional policy and plans constitutes another important aspect for VE implementation. This should be applied to the implementation at Goethe University

in order to increase institutional leverage of VE by utilizing these informational and organizational resources.

Student Skills

Table 6 provides an overview of student skills associated with VE participation derived from the empirical materials of each case. These skills encompass those that students may develop and enhance during VE engagement in addition to content-related academic knowledge and skills of the respective VE module. The data includes both individual skills as well as two qualification frameworks with one of them being “future skills” in the case of University of Potsdam. According to Ehlers (2020, 107) future skills can be defined as “competences that allow individuals to be (successfully) self-organized, capable of acting in highly emergent organizational and practical contexts”. The concept has been incorporated into higher education discussions around employability and a shift towards skills development in general versus academic knowledge incorporation by students in higher education (ibid.). Ehlers has conducted comprehensive research on the skill dimensions associated with future skills and put forth an inventory of those placed into this qualification frame (2020, 118). These are highlighted in blue in Table 6 in order to demonstrate their conceptual affiliation with the qualification framework. The qualification framework of transversal skills that this thesis is grounded in intersects in many skill dimensions with the notion of future skills. A second qualification framework as regards student skills development from VE participation was put forth by DePaul University. The institutional strategic plan refers to “transferable skills” in regards to VE conduct as one of its anticipated high impact practices for student learning (cf. above). The notion of transferable skills is rather broad and has been used to denote “generic capabilities which allow people to succeed in a wide range of different tasks and jobs (Bridges citing Training Agency 1993, 46). Since this concept has been around for a long time, there is a whole body of research and literature to be found. For the purpose at hand, however, it suffices to note that transferable skills are also characterized by a strong orientation towards employability (Bridges 1993) and that all the specific skill dimensions that have arisen from the empirical data on DePaul University can be subsumed under this concept.

Interestingly, only one dimension of skill development in students is fully present in all three institutional accounts on VE pedagogy and learning, i.e. the development of intercultural skills. As a format of Internationalizing the Curriculum (IoC) the fostering of intercultural skills in students through VE is consistent with scholarly accounts on the topic (Beelen 2017, Beelen & Jones 2015). The aspect of culture as a success factor for VE in Knoth and Kiy's (2016) adaption of Leask's framework for IoC will be discussed and analyzed in more detail in the next chapter.

The presented list of skill items exemplifies that a) universities have put different rationales and learning goals to work, b) align the development of student skills from VE participation in different degrees with overarching institutional policies and qualification frameworks, and c) the student skills defined by the three cases are consistent with those delineated in scholarly writings and research findings on VE.

TABLE 6. Overview of Virtual Exchange Student Learning Outcomes per Case

Learning Outcome	DePaul University	University of Potsdam	Malmö University
Future Skills		X	
Global Citizenship Skills	X		
Transferable Skills	X		
Intercultural Skills	X	X	X
Communication and Language Skills	X ⁶	X	
Organization Skills	X	X	
Project Skills	X	X	
ICT Skills, Data and Digital Literacies	X	(X)	X
Critical Thinking	X		
Creativity	X		
Ethical and Moral Reasoning	X		
Research Skills		X	

⁶ The skill dimension of language learning at DePaul University does not address the acquisition of foreign language skills, but the raising of awareness about the fact that English is spoken in different ways in non-English-speaking and other English-speaking countries (Global Englishes).

Interdisciplinary Skills		X	
Academic Writing Skills		X	

A general deduction that can be made from Table 6 is that the qualification frameworks of future skills and transferable skills as well as the sub frame of global citizenship as a component of transversal skills (cf. chapter 2) have not been fully captured in terms of their skill dimensions by the three universities. This may hint at the fact that there is a gap between theoretical academic framings of student learning outcomes for VE (and in general) and their implementation at the institutional level. Given the nature of the three institutions as places of higher learning and research, I would argue that the investigated universities do not fully utilize conceptual resources of established qualification frameworks as a form of informational and organizational resource (Seppänen & Mäkinen 2007). Moreover, I would reason that operationalizing qualification frameworks by fully aligning their skill dimensions with institutional student learning goals and integrating them completely in VE conceptualization and realization would contribute to convincing and activating stakeholders like university teachers, institutional leadership and senior administrators. This is because such a full integration and consistency further sharpens the profile and brand of VE at each institution and help communicate purpose, function as well as policy and value coherence. In the context of mobilizing stakeholders to engage in VE the interviewee of DePaul University recommended to “talk to them, and first thing, fundamental, get them onboard on the *Why* [...]. *Why* are we doing this? Make sure you can articulate the *Why* very carefully and in a way that resonates with the ethos of your institution” (Interview 1; emphasis added). This statement substantiates my argument in that a full integration of qualification frameworks, their skill dimensions, operationalization as student learning in VE modules and institutional mission, vision and goals would strengthen reasonings as to why stakeholders should engage in VE. Based on the interviewee’s statement and the fact that the largest number of skill dimensions emerged from the collected data on DePaul University, it is no wonder that of the three cases this institution is

characterized by the strongest alignment of concepts, policy and practice as regards institution-wide implementation of VE.

University of Potsdam: Why No ICT Skills and Digital Literacies?

With regards to the consideration of skill dimensions as learning outcomes of VE University of Potsdam represents an interesting case. Although the content of the collected data is rich in regards to e-learning practices and tools, ICT based teaching scenarios and mentioning of media didactics and social media applications, institutional documents and policies as well as the interviewee's elaborations only focused on faculty development and teaching approaches for VE facilitation. In other words, there is but one account on student learning outcomes in terms of developing ICT skills and digital literacies. The university internationalization strategy in the context of Potsdam's European University grant stipulates to create a "European university community based on [...] digital technologies which will optimally prepare students for the challenges that society will face in the future" (Universität Potsdam 2020b). Besides this contextualization of digital means and the preparation of students (through skill development) there is no framing or mentioning of ICT skills or digital literacies as learning outcomes. Therefore, the skill dimension is listed in brackets in Table . I would claim the non-alignment weakens institutional leverage to activate stakeholders and to some degree reveals an inconsistency between policy, conceptualization of learning and the format of VE which in its essence is based on the usage of ICT and thus conceptually facilitates the discussed skills or rather presents an ideal platform to develop them. Arguably, the reason for this status quo and blind spot may be found in the assumption that students do not need skill development in this area given the omnipresence of ICT in everyday life. However, this would omit the fact that students indeed need to learn how to use different ICT programs and applications for both online learning settings and the workplace, and to generally develop a differentiated understanding of digital media (Murray & Perez 2014, Alexander, Adams Becker & Cummins 2016).

Malmö University: Why only Two Learning Outcomes?

The skill dimensions extracted from the data on Malmö University are very limited and only address intercultural skills, ICT skills and digital literacies which were discussed in detail by the interviewee. As a professor who represents the driver for VE engagement at the investigated university through involvement in the aforementioned VE European funding grant and project (EVOLVE), the interviewee has rarely been connected with central university administration or received additional resources for VE planning and conduct. Therefore, the potential of VE as an instrument and platform for student skill development has not been fully realized or expanded across the university. The two skill dimensions captured in Table 6 have been identified by the professor and thus reflect the perspective of an academic with a particular disciplinary background. This aspect in conjunction with the bottom-up nature of VE at Malmö University may serve as an explanatory foil for the limited exploitation and conceptualization of a larger number of learning outcomes that VE allows for. Overall, this status quo presents a missed opportunity for institutional leverage of VE as a vehicle to internationalize the curriculum and equip students with a broad(er) range of transversal skills.

VE and Student Research Skills

Table 6 also confirms that University of Potsdam has framed VE as an instrument to foster research skills in students since three skill dimensions address this aspect. Of the three scrutinized cases, the research-orientation in student learning is a marker of distinction. It illustrates the specific feature of research-oriented learning and teaching in German higher education which has prevailed at comprehensive research universities and technical universities before and after the Bologna reform (Dippelhofer-Stiem 1989, Langemeyer & Rohrdantz-Herrmann 2014). At the same time, the aspect of employability as expressed under the future skills and transferable skills paradigms also plays a crucial role at this institution. This specific combination of skill dimensions demonstrates how different notions and traditions of higher education and the learning goals associated with higher learning impact on institutional conceptualizations and the utilization of VE as a learning format. Put differently, VE didactical design and conduct is a situated practice influenced by the higher education system it is placed in. Similarly, the above presented finding that

University of Potsdam solely focuses on faculty with respect to e-learning and ICT skill development may hint at another characteristic of the German higher education system in contrast to the other two cases. Faculty in German higher education enjoy a large degree of freedom in regards to both their teaching and research which is rooted in a long tradition of academic freedom of the professoriate (Enders 2001, Baker & Lenhardt 2008). For this reason I would posit that the strong institutional focus on developing university teachers' skills both as regards the dimension of ICT and online teaching skills as well as in general reflects a specific institutional strategy to involve this group of stakeholders in VE in the context of a higher education culture and system in which stakeholder engagement from this group of key actors is fully voluntary.

Coherence with Research Findings

The skill dimensions presented in Table 6 generally align with research findings and discussions about student skill development through VE participation. Jansen (2015, 53) foregrounds that VE can foster skills important for employability such as critical thinking and problem solving, collaboration across networks, effective oral and written communication, accessing and analyzing information, and curiosity and imagination. In addition, the author also points out that VE has the impetus to develop skills like awareness and understanding of global issues, global interdependence, diversity and the ability to integrate knowledge from other disciplines (*ibid.*). What is more, VE can represent a format to develop intercultural skills in students (Boehm, Kurthen & Aniola-Jedrzejek 2010, Herrington 2010, Bégin-Caouette 2013, Villar-Onrubia & Raijpal 2015, Rubin 2017). The findings from the three cases therefore confirm previous research on the subject. With respect to the implementation of VE across Goethe University the definition of skill dimensions and student learning outcomes that are in coherence with institutional values, policies and an overarching, fully operationalized qualification framework will be an integral task.

In sum, the success factor of pedagogy frames the development of teaching skills in faculty and the skills students attain from participating in VE. Best practices for VE implementation can be encapsulated as follows:

- Faculty training measures should include intercultural aspects, skills pertaining to technology (ICT skills, social media usage and e-learning tools), as well as partnering skills and reflection skills. (Further) developing these competences in academic teachers coheres with the qualification frame of transversal skills.
- The formats and approach to qualifying academic teachers hinges upon the relationship between institution and teacher. Persuasive measures need to be designed in higher education systems that are characterized by a high degree of individual academic freedom. This is the case in Germany.
- Student learning outcomes should be fully based on and operationalized on qualification frameworks. Also, student learning outcomes need to cohere with institutional policies and conceptions of learning in higher education. These two aspects safeguard and increase leverage of VE implementation in the respective academic setting.

In the next section, I will present the empirical findings on the success factor of culture. As will be shown below aspects of culture play an important role for VE project planning, co-teaching and student learning.

6 CULTURAL ASPECTS

Knuth and Kiy delineate the dimension of culture as one of the success factors for establishing VE (2016) within their adaption of Leask's model of internationalizing the curriculum across higher education institutions. In their elaborations they do not specify or define the notion of culture and what role culture exactly plays in successfully establishing VE at a university. However, they refer to intercultural awareness in the context of VE by acknowledging that “[S]tudents and teachers from different intercultural backgrounds share different expectations about what should happen in the classroom” and contextualize these expectations as embedded in the hidden curriculum of “unspoken rules and judgements” (2016, 8). These quotes allow for a twofold approach as regards the success factor of culture. For one, the consideration of cultural differences and intercultural communication as part of students' learning processes during the planning and conduct of VE contributes to the attainment of both faculty development goals as well as student learning outcomes for VE as already alluded to in the previous chapter. Hence, the success factor of culture pertains to raising intercultural awareness and intercultural communication skills in academic teachers and their students through exposure to intercultural contents and interactions. Secondly, the aspect of hidden curriculum highlighted by Knuth and Kiy is not only an influencing factor of communication between cultures in terms of different frames of mind, but also has effects on structural levels of learning and online learning environments used for VE. In this regard, Gunawardena & Jung (2014, 1) note that

[C]ulture impacts every facet of online learning, from course and interface design, to communication in a socio-cultural space, and to the negotiation of meaning and social construction of knowledge; thus a definition of culture that is flexible, dynamic and negotiable is more appropriate to understand the online learning context.

Their statement bespeaks the fact that culture in collaborative international online learning not only refers to what students and faculty realize about cultural differences or reflect upon, but also to how they learn in terms of both norms, values and collective approaches to learning as well as to learning design aspects and how digital media and learning management systems are used and conceived. This

dimension is further corroborated by Yang, Kinshuk, Chen and Huang (2014) who observe that culture has an influence on learning methods. In short, culture from this vantage point concerns the medium and structure of VE planning and conduct. What is more, Gunawardena and Jung's call for an adaptable and open definition of culture to understand and frame this dimension for the case of cross-cultural online learning is provided by Watson, Ho and Raman (1994, 46) with their definition of culture as "the beliefs, value systems, norms, mores, myths, and structural elements of a given organization, tribe, or society". In the context of this thesis, their notion represents the conceptual frame for the two dimensions of culture outlined above. In what follows, I will present and discuss findings from the three cases that pertain to the two dimensions of culture as a learning and development goal for students and academic teachers (culture as content and interaction), and culture as a situated learning structure which in the case of VE relies on how digital and social media and learning management systems are used and understood (culture as medium and structure) primarily by stakeholders like faculty, instructional designers, administrators and also students. Seen through the lens of resources for VE implementation, the two dimensions of culture can be framed as predominantly organizational resources (Seppänen & Mäkinen 2007) that also hinge upon the interaction with human resources (the aforementioned stakeholders) and relational resources, i.e. the relationships between the involved internal and external stakeholders. The latter pertain to international faculty collaborators and their international students as well as other representatives from international partner universities involved in respective VE projects.

6.1 DePaul University: Cultural Aspects

At DePaul University there is a focus on culture as content and interaction which addresses both faculty and students. The dimension of culture as medium and structure has not emerged from the empirical sources.

Intercultural Skills in Faculty

At DePaul University the importance of faculty being equipped with intercultural awareness and intercultural competencies is connected to the realization that

faculty have divergent views and skill levels as regards this dimension. The relevance of this aspect has been brought to the fore by the interviewee in illustrating how knowledge about culturally-specific forms of communication have an impact on faculty collaboration for the realization of VE: “If you want to work with a Japanese colleague, you better know what a high context communication style looks like because you will never hear a ‘no’” (Interview 1). Moreover, differences in faculties’ intercultural skills and awareness are seen to have a connection with the respective discipline that university teachers are situated in and socialized into as illustrated in the previous chapter. Specifically, there is a difference between the hard sciences with a tendency towards less intercultural awareness and the social sciences and humanities which often embed this aspect in their research (Kumi-Yeboah 2018). In order to address and mitigate this status quo, DePaul University has introduced the two measures of integrating intercultural communication into the structured professional development program for faculty who anticipate planning and realizing VE (cf. chapters 4.1 and 5.1) as well as providing seed funding for travel in order for faculty to meet up and prepare VE with their international colleagues as part of a structured quality-assured funding program (Interview 1). Travel funds are important since face to face interactions with colleagues from different cultures constitute the basis for the partners to later have a functional collaboration online (ibid.). The relevance of in-person meetings and interactions for VE planning has also been emphasized by previous research (Wilson 2013, Bégin-Caouette, Khoo & Afridi 2015, de Castro, Dyba, Cortez & Benito 2018). For similar reasons, planning VE with a colleague that the academic teacher has already interacted with and whose working style is familiar to the faculty increases chances of success (DePaul University n.d.a). Also, having previously worked together helps faculty collaborators to bridge potential cultural differences that come up as students collaborate online (DeWitt, Damhof, Oxenford, Schutte & Wolfensberger 2015, Little, Titarenko & Bergelson 2005). These statements bespeak two culturally situated dimensions that influence the planning and conduct of VE, i.e. the aspect of culturally specific or mitigated working styles and the aspect of trust and trust building, respectively. In sum, there are two broader categories of resources that the university has mobilized in order to (further) develop intercultural awareness and

skills in faculty who facilitate VE: the structured professional development program that entails an intercultural training which represent organizational and informational resources, and the internal funding program as a financial resource that makes sure faculty integrate intercultural learning aspects and reflection into their VE design. Also, it provides travel grants to meet international colleagues in person as a mechanism to safeguard the establishment of a productive intercultural working relationship.

Intercultural Skills in Students

A further motivation for the institutional implementation of VE at DePaul University is the goal of strengthening intercultural skills in students in such a way that students have been exposed to and are able to deal appropriately with different cultural modalities without getting hung up (Interview 1). This aspect is reflected in the institutional conceptualization of VE as an instrument that encourages interaction between students with the goal of “maximizing the richness and intensity of intercultural exposure” and opportunities for “reflection in a multicultural context” (DePaul University n.d.b). Moreover, the development of intercultural skills in students through international online collaborative learning is aligned with overarching institutional goals at DePaul University. Specifically, one strategic institutional priority pertains to preparing all students for global citizenship and success (DePaul University 2019, 3) which is based on the rationale that “[I]n an interconnected globalized society, a quality educational experience will reflect the complexity of cultural and social issues, the diversity of opinions and ways of thinking, and appreciation of difference” (DePaul University 2019, 10). The institution therefore aims at cultivating opportunities for students to develop skills required for success in a multicultural society (DePaul University 2019, 1). Generally, given its learning impact on intercultural skills development VE is understood as a high impact practice (DePaul University 2019, 11) that can be compared to or connected with traditional study abroad (Global Learning Experience Application 2019, 4, Interview 1).

Teaching Methods for Intercultural Skills Development

On the operational level, DePaul University encourages faculty to integrate intercultural skills development in their teaching design as a requirement to receive seed funding for VE. Specifically, faculty are required to think about and elaborate on how their VE activities address cultural differences as a key factor and how they intend to prepare their students for this aspect in order to reach the learning outcome of developing intercultural competence (Global Learning Experience Program Application 2019, 3). Moreover, DePaul University in this context emphasizes that best practices suggest the integration of a reflection phase into VE which “allows students to process the intercultural competence component of the experience” (Global Learning Experience Program Application 2019, 2). Finally, the university has designed its own (post-) experience evaluation instrument to measure student perceptions in terms of intercultural awareness (Interview 1).

6.2 University of Potsdam: Cultural Aspects

University of Potsdam has defined as an internationalization goal for VE the co-designing of VE modules that integrate elements of intercultural exchange in a productive manner (Universität Potsdam 2017b, 4). Therefore, intercultural skills development is connected to Internationalizing the Curriculum (Universität Potsdam 2017a). In order to address the dimension of intercultural awareness and skills, the university provides resources in the form of ample information and advice for faculty on different institutional websites on VE and the university’s handbook for online international learning. In particular, their contents with regards to intercultural awareness can be subsumed into the following categories: academic teachers’ personal attitudes and approaches to international collaboration, teaching for intercultural awareness, and learning about intercultural communication. Therefore, these organizational and informational resources are geared towards the dimension of culture as content and interaction.

Intercultural Skills in Faculty

In order to raise awareness among academic teachers about aspects and issues of intercultural skills University of Potsdam emphasizes open-mindedness as an important characteristic on the academic teacher’s part when looking for an

international collaborator and suitable courses to integrate VE into (Universität Potsdam 2017b, 4). Moreover, there is the awareness that intercultural misunderstandings and conflicts can be exacerbated by differences in collaborators' personal traits of character (Interview 2). For this reason, University of Potsdam defines the overall goal of searching for an international partner as finding fellow international colleagues with whom collaboration is fruitful and easy (Universität Potsdam 2017b, 3). Moreover, there should be regular interaction between the two university teachers with the goal of gaining an impression of one's counterpart and building mutual trust which makes communication and collaboration easier in unknown situations and during conflict (Universität Potsdam 2017b, 5). The strengthening of the intercultural working relationship between the academic teachers allows for an intensive discussion about the learning goals and demands on the partner side (Universität Potsdam 2017, 4). In addition, the institution advises its faculty engaged in VE to agree with their international partners on different terms and aspects at the onset of the collaboration including the time to respond to emails, scheduling regular online meetings, establishing rules for communication both with each other and with the groups of students, communicating problems early on, and giving regular feedback to each other and to the students (Universität Potsdam 2017b, 5). These measures are supposed to facilitate a functional socio-cultural environment for the planning and conduct of VE. This is particularly relevant since intercultural aspects are oftentimes underestimated by faculty both inside and outside the actual course setting (Interview 2).

Intercultural Skills in Students

With respect to the dimension of culture as content integrated into student learning there is the awareness at University of Potsdam that dealing with intercultural communication constitutes a process of continuous learning (Universität Potsdam 2017b, 5). In order to limit insecurities with respect to intercultural communication the institution advises faculty to conduct thorough student preparations for the collaborative components and a comprehensive exchange between the involved teachers (ibid). This is because a lack of concept about the other culture significantly limits students' ability to address fellow international students adequately and to

communicate, in general (Interview 2). Therefore, the planning and preparation of students' intercultural interactions decreases the emergence of difficulties with cross-cultural communication (ibid.). Furthermore, the institution advocates that faculty double check on students' understanding and comprehension of intercultural communication as a twofold process: after a first intuitive assessment of a statement, students should take a cultural perspective which helps them to situate the content of a statement (Universität Potsdam 2017b, 6). Also, in case there arises the necessity to talk about intercultural communication, university teachers should approach intercultural challenges in a sensitive manner (Universität Potsdam 2017b, 10) while raising awareness about cultural characteristics and differences can help prevent awkward situations (Universität Potsdam 2017b, 5).

Implications of Intercultural Challenges

University of Potsdam proactively addresses the issue of intercultural communication and behavioral challenges stemming from international online collaborative learning and conceives of it as an instance of potentially productive learning. Specifically, the institution acknowledges that respectful conduct with cultural differences can contribute to generating new knowledge and insights and that the responsibility of transforming cultural misunderstandings between the participating groups of students into an instance of learning rests with the faculty (Universität Potsdam 2017b, 5). Oftentimes, misunderstandings and frictions evolve from different normative and moral concepts with regards to religion, gender, social justice, or citizenship (Interview 2). What is more, one particular aspect in the context of experiencing cultural frictions and shock that the interviewee observed is the implication these have on strengthening the identity and sense of belonging of each national group of students (Interview 2). This bifurcation can have both productive and destructive effects for both intercultural skills development and the learning process in general, and it again is the academic teachers' task to maneuver the learning towards the anticipated learning goal of developing and enhancing intercultural skills.

6.3 Malmö University: Cultural Aspects

Intercultural Skills in Faculty

Culture as content and interaction also plays a role at Malmö University for developing intercultural skills in faculty. This aspect is facilitated by the institution's engagement in the European project that fosters VE development (EVOLVE 2020a). Specifically, the project provides an online training program for faculty development to teach VE which includes a module on how to handle intercultural challenges (EVOLVE 2020b). In addition to the training on intercultural aspects for VE preparation and realization, the project conducted a face to face international training week for partner institutions and also an online partnering fair (Interview 3). Hence there is a focus on providing platforms for interaction and direct contact between faculty from different cultural contexts who are interested in VE which again hints at the concept of culture as content and interaction. This conception is at play both for the facilitation of faculty development and networking opportunities of the European project and, by extension, Malmö University. The establishment of cross-cultural working relationships for VE realization are indeed seen as a very relevant and challenging component of the endeavor. In this vein, the interviewee foregrounded that "another thing that is really crucial for an effective virtual exchange is a good working relationship with a collaborating teacher or teachers. That is, I think, the hardest thing to ensure works well" (Interview 3). In sum, the institutional approach towards the success factor of culture is similar to the other two cases and generally characterized by understanding culture as content and interaction embedded into the planning and conduct of VE.

Intercultural Skills in Students

The institutional engagement in VE is led by the notion that international online collaborative learning represents an instrument to prepare graduates for work life in a globalized, multicultural society: "Sweden is not monocultural [...]. So our graduates [...] are going to be working with many different cultures and assumptions, and even if they are working in Swedish or English, there is a great deal of misunderstanding that can happen" (Interview 3). Therefore, VE is seen to equip students with intercultural skills and improve their language proficiency. Put into the

framework introduced above, the dimension of culture is conceptually embedded in VE as learning contents and interactions at Malmö University. What is more, institutional stakeholders are cognizant of the fact that intercultural awareness increases with interaction and conversation among the groups of students involved in VE. In order to stimulate interaction and awareness, the didactic tools of individual portfolio and pedagogical mentoring of binational student groups are used (ibid.). In this vein, the interviewee emphasized that “the richer the conversations in class, the more the students start to realize certain things that they believe to be true and universal [...] are actually very culturally situated” (ibid.). In other words, the intercultural communication taking place in VE environments are seen to bestow students with cultural relativism as one dimension of intercultural awareness.

6.4 Discussion

Experiential Learning and Intercultural Skills

All three cases accentuate that intercultural skills development in students center around experiencing online interaction and communication with fellow international students. In this way, they highlight the aspect of experiential learning (Kolb 1984) that VE facilitates. What is more, being aware of cognitive and emotional responses to these interactions as well as demonstrating (adequate) social behavior are deemed relevant by all three institutions. Based on these insights, for the implementation of VE at Goethe University it is important that pedagogical design and facilitation integrate a high degree of experiential learning components and platforms for interaction while also supporting students to become aware of cultural differences. In all three cases the crucial determinant for these undertaking is the academic teacher and her/his capabilities. This aspect will be considered for the design and conduct of a VE faculty training program as part of the VE implementation plan for Goethe University.

Tools for Relationship Building

The categories deduced from the empirical data on the topic of intercultural skills in faculty suggest that academic teachers’ relationship with their international colleague should be characterized by trust, familiarity, and a functional working

collaboration. Intercultural skills can thus be conceived as a set of capabilities that foster these three dimensions and reduce the chance of conflict or negative feelings like fear. Also, two of the three cases (DePaul University and Malmö University) provide resources to for face to face meetings as a mechanism to build or solidify the relationship between collaborating faculty. As elaborated in the previous chapter, at DePaul University there has been the realization that faculty does not equal faculty in terms of previous intercultural awareness with their respective academic background and socialization as potentially mitigating the degree of awareness. Therefore, the faculty training program as a component of VE implementation at Goethe University will put a strong focus on equipping faculty from various academic fields with the necessary skills to both establish a functioning working relationship with their international counterparts in addition to pedagogical skills that foster intercultural skills in students. In addition, the plan will also include seed funding for travel in order to consolidate intercultural skills and intercultural relationship building among academic teachers.

Culture as Medium and Structure

The meta aspect of how culture influences collective understandings of learning and digital learning environments as proposed by Gunawardena and Jung (2014) has not been addressed by the three investigated cases. Therefore, Knoth and Kiy's (2016) allusion to the hidden curriculum as entwined with cross-cultural interactions in VE environments appear to be valid. Generally, the notion of hidden curriculum refers to the social context of, and the impact of social relationships, socio-cultural and organizational processes on curriculum creation (Smith 2000) and thus relates to Biesta's second domain of the question of purpose of education, i.e. socialization (2015, 77). This process encompasses students' initiation into "ways of being and doing, such as cultural, professional, political, religious traditions" (ibid.). The social context and socialization aspect of hidden curriculum directly relates to beliefs, value systems and norms as components of the above introduced concept of culture (Watson, Ho & Raman 1994). Including this dimension into institutional faculty trainings for VE, VE instructional design and VE learning content would significantly

enhance intercultural awareness and skills of all involved parties. Consequently, it will be embedded into the VE implementation plan for Goethe University.

The fact that dealing with cultural differences is itself culturally situated and not universal has arisen from the data and solidifies the importance of being cognizant about the meta level of differences in collective understandings. Specifically, the aspect of planning and preparation for intercultural interactions is a dominant category in the empirical sources on University of Potsdam which is not present in the two other cases. This category emerged both in the context of intercultural skills of faculty and students. Indeed, German (work) culture is characterized by a high degree of planning and a desire for clear and unambiguous principles (Strohschneider & Güss 1998, Warner & Campbell 1993). Therefore, there appear to be cultures of dealing with culture which call for awareness in those engaged in intercultural encounters within and outside the field of higher education. This aspect will be integrated as learning content into the VE faculty training program that the implementation plan for Goethe University stipulates. It addresses both academic teachers' awareness when navigating their relationship with their international colleagues and international students as well as facilitating awareness about this dimension to both domestic and international students through pedagogical means and learning design.

Higher Education System and Constructions of Meaning

Intercultural skills in students are embedded in different learning and higher education concepts which are specific to the higher education system that the institution is situated in. This can be deduced from the empirical categories around this topic that emanated from the analyzed materials of DePaul University and University of Potsdam. The former ties intercultural skills development through VE student participation to study abroad and the notion of high impact practices. I have argued elsewhere that indeed collaborative online international learning and study abroad can be conceived as similar in terms of their effects on intercultural skills development in students (Stärke 2019). This connection is generally present in higher education discourse in the United States (Marcillo-Gómez & Desilus 2016, Risner and Kumar 2016). Similarly, from American higher education there has

evolved the concept of high impact practices which subsume different institutional learning formats that systematically advance student learning and learning outcomes for an economically self-sufficient and civically responsible life (Kuh, O'Donnell & Geary Schneider 2017). Kuh introduced this notion in the 2006 National Survey of Student Engagement annual report and it has proliferated in higher education institutions, practices and research ever since (ibid., Kuh 2008).

In contrast to the framing of intercultural learning through VE participation at DePaul University, University of Potsdam enmeshes this topic with higher education internationalization. This again is symptomatic of the higher education system that the university operates in. "Internationalization by Digitalization" has become a paradigm in German Higher Education which integrates various international learning and collaboration formats that have been promoted by the German Academic Exchange Service (DAAD 2019, DAAD n.d.). This organization is the largest national funding body for international higher education support on the globe and represents a key instrument of the federal German government to stimulate developments in the public and private higher education sector of the country (Bundesministerium für Bildung und Forschung n.d., DAAD 2019). The connection between higher education internationalization and digitalization also gives way to framing VE as an instrument of Internationalizing the Curriculum (IoC) which constitutes a further category that was found in the empirical data on University of Potsdam. In sum, the two cases provide indication that although actual practices of VE and the forms in which VE is implemented at the institutional level are similar, its meanings and interconnections to higher education paradigms and concepts on the level of institutional and national policy may be disparate. Given the bottom-up context of VE implementation at Malmö University, the institution has not integrated VE into any policies. This renders an explanatory foil for the absence of categories in the data that touch upon constructions of VE meanings and functions in relation to policy.

In sum, the following aspects can be deduced from the above discussion for the implementation planning at Goethe University:

- Institutional VE training and informational materials addressing faculty should embed the raising of awareness among the group of key stakeholders about their essential role in facilitating intercultural skills.
- The design and conduct of faculty training measures on intercultural awareness need to make sure that faculty with diverse academic backgrounds receive the knowledge, skills and support necessary to establish a functional working relationship that is grounded in mutual trust.
- The university should install incentives or support instruments for faculty to meet their international colleagues face to face as a mechanism of relationship building or solidification.
- All institutional activities, processes and structures for VE implementation and operation should be designed and deployed with a critical awareness about the cultural situatedness of these aspects in order to avoid intercultural ignorance on the meta level of culture as medium and structure.
- An awareness about the dependency of conceptual frames that VE is placed in on higher education paradigms that are specific to the respective higher education system can prevent a foreclosing of novel ideas and approaches of how to understand and conduct VE in other systems. This can support a transfer of best practices from other higher education systems.

In the below final chapter of my thesis, I will elaborate on the meaning and functions of implementation, introduce Goethe University and its institutional culture, and apply the insights from the three case studies in order to compile a VE implementation plan for this institution. The plan is presented in the appendix of this report.

7 VIRTUAL EXCHANGE IMPLEMENTATION AT GOETHE UNIVERSITY

7.1 Implementation: Definition and Approaches

What is implementation and how can it be defined? Padrao, Rocha and Sagvik (2018, 14) put forth a definition suggested by Rovik, Furu and Eilertsen (2014) who conceive of implementation as bringing decisions and ideas to life by interpreting, concretizing and settling them into structures, routines, and activities in organizational areas of practice. Implementation is therefore entangled with organizational change which is initiated when individuals in the respective institutional setting intend to reach a particular new goal (ibid.). Their institutional perspective on implementation also envisages the implementation process realized through a hierarchical translation model in which top leadership is responsible thus reflecting a top down approach with the implementation of ideas as an ongoing series of transactions via different institutional levels and increasing concretization on each level (ibid.). For this endeavor, it is necessary to develop a structure to oversee the implementation process consisting of a clear implementation plan and the assignment of responsibilities (Meyers, Durlak & Wandersman 2012, 471). Implementation is also a sequential process and should include specific timelines and time allocation for each task as Roland and Westergard (2015) point out (in Padrao, Rocha & Sagvik 2018, 10 et seq.). In general, the function of the implementation plan is to turn goals and objectives into a working plan (Hinton 2012, 12). The implementation of decisions and new ideas as well as their operationalization are part of strategic planning (Hinton 2012, 9). The implementation plan should therefore be aligned with the institutional mission, vision and values as providing the context of the planning and points for guidance (ibid.). For the case of VE, the importance of this aspect has been brought to the fore in the chapters on organization and pedagogy by exemplifying that an alignment between overarching institutional learning goals and strategic objectives on the one hand, and the functions and outcomes of VE conduct on the other, represent a utilization of organizational and informational resources to create leverage for establishing VE across an institution.

What is more, the identification of resources that each goal and step of the plan requires also plays a crucial role for the process (Hinton 2012, 12). Such resources

should be defined in a broad way as including people, time, space, technology and funding (ibid.). The categorization of resources by Seppänen and Mäkinen (2007) I have used as a framework to identify and determine success factors for VE implementation is both broad and at the same time more differentiated in terms of different resource dimensions. Their conceptualization of resources will thus be integrated into the below plan.

Specific organizational characteristics can act as drivers and barriers for implementation (Nilsen 2015, 3). For the case of educational technology, Ely (1999) outlines the existence of knowledge and skill, availability of resources, and commitment and leadership as drivers for implementation. Furthermore, Schönwald (2003, 4) posits that for the strategic planning of establishing e-learning across a higher education institution, the implementation planning needs to consider aspects like faculty development program, fostering knowledge exchange, stakeholder-group specific communication plan, setting incentives for innovative teaching, building technical infrastructure, funding plan and guidelines, and external cooperation (e.g. other universities). These drivers and aspects for setting-up a teaching and learning innovation in higher education can be applied to VE. Indeed, they have been considered both on the theoretical level of Knoth and Kiy's model adaption as well as throughout the presentation and analysis of the three cases. As a consequence, they will also factor into the VE implementation plan for Goethe University.

Finally, Schönwald also points out that the planning and designing of an implementation process requires comprehensive knowledge about the inside situational context of the institution (2003, 4). This will be accounted for by integrating feedback on the first draft of the implementation plan from an institutional expert at Goethe University. As a next step, I will introduce Goethe University and particularly its institutional culture, values and existing structures, resources and stakeholders that are relevant for VE and VE implementation. This description will be enriched with my own knowledge and experience with the institution as an employee who has worked with Goethe University for four years on the levels of the president's staff, central administration and the department level. Following this illustration I will introduce the VE implementation plan for Goethe University based

on the findings from the three cases, the above elaborations on implementation, the organizational set-up of Goethe University and the feedback received from the institutional expert during an interview.

7.2 Goethe University: Institutional Profile, Culture and Resources for VE

Goethe University in Frankfurt on the Main, Germany, is a comprehensive research university with 16 departments in the fields of social sciences, humanities, and natural and life sciences (Goethe-Universität n.d.d). Accordingly, it offers Bachelor, Master's and Doctoral degrees across its disciplinary range. With more than 47,000 students, 580 tenured professors and 3,056 academic teaching and research staff it counts among the largest universities in Germany (ibid.). As a typical representative of the German higher education model, Goethe University stands in the Humboldtian ideal of unity of research and teaching (Pritchard 2004, Ash 2008) and thus is characterized by a strong research-orientation in its teaching. Moreover, the institutional culture is shaped by the notion of academic freedom and independence as well as academic collegiality among faculty. In other words, tenured faculty are bestowed with a large degree of freedom as regards their research and teaching activities both in terms of quantity and quality. In addition, German academia is also determined and socially organized as a hierarchical culture with respect to the interactions between tenured professors, associate professors, early career researchers and lecturers (with an increase in freedom along the academic career path) (Enders 2001).

The organization can be described as rather decentral with distributed power relations between central management and leadership on the one hand, and the 16 departments on the other. What is more, as a public institution founded in 1914 the university administration and management is modelled in the tradition of nineteenth century public administration and has started to undergo reforms under the new public management paradigm fairly recently, from the mid 2000s on (de Boer, Enders & Schimank 2008). As a consequence of increasing neoliberalization in conjunction with traditional and novel public management styles, university administration is built and operates as a hierarchical construct in the image of the machine metaphor with routine operations, well-defined structures, procedures and

standards as characteristics (Morgan 2006, Cameron & Green 2010) while at the same time there is the necessity to act and react in flexible ways since many activities and operations rely on external and third party funding as a consequence of increased public funding cutbacks combined with the conferment of more autonomy from the state. Also, given its size with a number of more than 2,040 administrative staff (Goethe-Universität n.d.d) different offices and units of the central university administration and department administration tend to operate as silos and at a rather high degree of isolation from another.

Moreover, Goethe University has established various policies and administrative units that address learning, internationalization and digitalization and define the normative and concrete goals associated with these dimensions. Different policies that the institution has set in place represent organizational and informational resources for VE implementation. These encompass the institutional Mission Statement (Goethe-Universität n.d.c), Principles of Teaching and Learning (Goethe-Universität n.d.) as well as Guidelines for Digital Teaching. Although Goethe University has an Internationalization Strategy, the current version dating back to 2014 is under revision (Goethe University 2014). However, the university periodically arranges for an Higher Education Development Plan with the state ministry which represents a further important institutional policy. The contents of these documents and statements as they relate to VE are summarized in the four tables below (TABLE 7, 8, 9 and 10). The tables illustrate that VE connects in various ways with these core institutional policies at Goethe University. These connections will play a vital role in devising stakeholder-specific communication plans as part of the suggested implementation process that will be introduced at the end of this chapter. They will serve to develop lines of argumentation to lobby and disseminate information about VE to university leadership and senior leadership of administrative departments and units relevant for VE implementation and expansion across the university.

TABLE 7. Mission Statement contents in relation to VE

Content	Connection to VE
University as a workshop for the future	VE can be used to develop new, forward thinking teaching and learning approaches
Social responsibility integrated into teaching and research	VE fosters responsibility and openness in students
Fostering of innovative thinking and interdisciplinary action	VE stimulates creative thinking in students and academic teachers VE permits interdisciplinary collaborations
Freedom and unity of research and teaching	VE is flexible and allows to combine teaching with research (research-oriented teaching) VE is a flexible and open format for diverse topics
Teaching and learning at international level	VE is inherently international

TABLE 8. Principles of Teaching and Learning contents in relation to VE

Content	Connection to VE
Learning outcomes: research-oriented teaching and learning (critical thinking, independence, reflection skills)	VE allows for research-oriented learning and teaching VE equips students with critical thinking and reflection skills VE invites students to learn and collaborate in an independent manner
Responsible citizens and global citizenship	VE stimulates responsibility and global citizenship in students
Respect and collaboration skills	VE strengthens respect for others and collaboration skills in students and faculty
Openness and intercultural exchange	VE fosters openness and intercultural exchange
Success in work life	VE contributes to a successful transition into work life by strengthening transversal skills
Teaching skills development and professionalization as a continuous lifelong learning process	VE allows faculty to further develop their teaching and mentoring skills
Adaptiveness in teaching (to situations and diverse students)	VE requires academic teachers to act and react in flexible ways
Openness to diversity and access in teaching and learning	VE stimulates openness in students and academic teachers towards diverse people VE allows for diverse students to have an international learning experience (independent of

	socio-economic, ethnic, religious or cultural background; independent of physical ability)
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TABLE 9. Guidelines for Digital Teaching contents in relation to VE

Content	Connection to VE
Digital media become a natural component of academic studies	VE mainstreams digital media usage in diverse courses
Digital teaching opens the institution up towards heterogeneous students and towards internationalization	VE is a vehicle to include heterogeneous students in international education VE strengthens institutional internationalization through consolidating and building international partnerships
Digital teaching fosters reflective and independent learning, and learners' autonomy	VE is an instrument to stimulate students' reflection, independence and autonomy in learning
High degree of qualification and support for faculty	VE implementation both fosters qualifications in faculty and expands institutional support structures
Academic teachers' and students' willingness to approach digital media in an critical-reflective, open and active manner	VE exposes academic teachers and students to digital media, trains them to use digital media and to reflect on their experiences
Media and information literacy and continuous qualification of academic teachers are indispensable	VE promotes the further development of faculties' information literacy and online teaching skills
Utilization of digital learning methods founded in didactics fosters interaction and collaboration between students	VE bundles digital didactics and learning methods VE stipulates interaction and collaboration between students
Students learn to use, assess and develop digital media during their course of study; media competency qualifies them for their professional lives (in- and outside academia)	VE equips students with digital media competency
High quality digital teaching aligns didactic methods and forms of assessment with learning outcomes	VE allows for the integration of constructive alignment
Academic teachers are role models in their usage of digital media	VE preparation and design (further) familiarizes academic teachers with digital media as the basis to become role models for students
The university offers support and service structures for digital teaching	VE implementation builds on and expands support and service structures for digital teaching

The university further develops incentives and support for digital teaching	VE implementation includes the set-up of an incentive structure and support for digital teaching
Digital Teaching accounts for internationality and diversity as typical of the university location in Frankfurt	VE infuses internationality into digital teaching VE allows for diverse students to have an international learning experience (independent of socio-economic, ethnic, religious or cultural background; independent of physical ability) (cf. TABLE 9)

TABLE 10. Higher Education Development Plan contents in relation to VE

Content	Connection to VE
The university supports students to develop an individual profile through digital skills	VE serves as a format for students to attain digital skills for individual profile development
Expansion of digital teaching	VE implementation contributes to an expansion of digital teaching practices across the institution
Development of transdisciplinary competencies in students (ICT literacy and future skills)	VE promotes the development of ICT literacy and future skills
Broadening of Internationalization at Home (IaH)	VE is an instrument to support and grow IaH practices across the university
Designing digital transformation processes in consideration of student diversity	VE contributes to changes of teaching practices through digital media which integrate the needs of diverse students
Further increasing the institution's openness towards interculturality	VE trains and expands intercultural skills in academic teachers and students

With regards to the organizational make-up of Goethe University there are different administrative departments and units which represent important organizational resources to draw from for the implementation of VE. These can provide knowledge and expertise, and they host executive power to conduct necessary processes and changes for VE implementation in their respective areas of operation. Accordingly, Schönwald (2003, 4) acknowledges that the involvement of key stakeholders in the planning phase is important in order to make sure that an innovation is accepted and that there is commitment. The relevant departments and units are the following:

1. International Office (IO): central unit in charge of international student, faculty and administrator mobility, devising internationalization plans, and supporting academic departments in their internationalization efforts

2. Central E-Learning Unit (CEL): responsible for the advancement of e-learning across the university, hosts structures and offers trainings and tools for digital teaching, learning and didactics
3. Interdisciplinary College for University Teaching (ICUT): fosters professionalization of teaching university-wide by offering training in university didactics to academic teachers
4. Department for Teaching and Quality Assurance (DTQA): responsible for the advancement of high quality teaching and learning and the implementation of policies for teaching and learning
5. University Computing Center (UCC): provides ICT hard- and software as well as ICT services and support

In addition, top leadership engagement and support is necessary in order to create leverage and to align top-down and bottom-up activities that pertain to VE as emphasized by Knoth and Kiy (2016). This argument is substantiated by the fact that universities in German-speaking countries are characterized by a strong autonomy of the chairs and departments which makes a diffusion effect of bottom-up implementation processes difficult (Kerner 2001 in Schönwald 2003). At Goethe University the Vice Presidents for International Affairs and for Teaching and Learning are important stakeholders for VE. This is because the collaborative online international learning format as an instrument of internationalizing the curriculum (and internationalization at home) is a nexus between internationalization and learning in higher education. The implementation of VE at Goethe University will be initiated by the International Office which is why the implementation plan stipulates the involvement of the Vice President for International Affairs as the key leadership representative. This alignment between leadership and executive unit guarantees a smooth line of communication and division of responsibilities.

The final plan is placed in the appendix of this thesis. After a first draft, I discussed the plan with an institutional expert who has worked with Goethe University for the past eight years and currently holds the post of director of student affairs and international relations. The discussion took place in the form of an open interview. I included her comments and additions to the final plan. These are highlighted in blue.

8 CONCLUSION

Implementing VE as a centralized effort across an institution of higher learning is a comprehensive project that calls for the engagement of multiple institutional stakeholders and draws on various resources. Stakeholders include academic teachers, university leaders, administrative staff and leadership from various units and also students. Similarly important are the external stakeholders of international faculty collaborators, their students and the institutions they are placed at. The necessary resources for VE implementation identified in this thesis concern organizational, human, informational and relational resources, most of which are based on financial resources.

In accordance with the three success factors for VE implementation of organization, pedagogy and culture I have been able to identify structures and processes that have emerged as best practices for expanding VE. In terms of structures, these entail the set-up of a VE coordination and support office, a faculty training program on digital media pedagogy and tools, intercultural awareness and intercultural learning, and a seed funding program for faculty particularly for them to travel and have face to face meetings with their international collaborating colleagues. Also, establishing an institutional brand and an advisory board on VE are best practices for building structures supporting the growth of VE.

In terms of processes, a general alignment between top-down and bottom-up efforts have been found to be highly relevant (and functional) (Rubin 2017). This means that there are support structures and directions provided from central university administration, but at the same time there remain “pockets of freedom” on the academic teachers’ side to pursue VE in a way that suits their professional interests. Further processes encompass the alignment of VE with institutional policies and learning outcomes, and conducting continuous internal lobbying with faculty and institutional gatekeepers, involving university leadership, developing an institutional VE brand and providing continuous support for faculty. Although the respective institutional contexts and higher education systems are different, these implementation components have surfaced from all three case studies. For this reason, they could be framed as potentially having universal validity for launching

and conducting VE at universities around the globe. Further research, however, would need to substantiate this argument.

With the conduct of the three case studies I have been able to demonstrate that differences in the respective higher education systems indeed have an effect on how VE is conceived and embedded in institutional policies. This finding pertains to conceptions of student learning in collaborative online international learning environments and associated student learning outcomes. Whereas skill development for graduate employability represents a common denominator of all three cases, only University of Potsdam frames VE as a format to foster research skills in students. This difference is determined by the higher education tradition in Germany. The same university also neglects the skill dimension of ICT skills and digital literacies. The general finding that student learning outcomes are, among others, geared towards employability confirms the notion of neoliberal global citizenship as an underlying norm in all three cases.

Future research could investigate the relationship between higher education system and tradition on the one hand, and constructions of what VE means on the level of institutional policy, on the other. Equally, gaps between qualification frameworks that universities base their VE learning outcomes on and VE actual learning outcomes as defined by these institutions are worth further scientific explorations. These may shed light on how systematic student learning in VE environments are embedded in higher education institutions worldwide.

I have identified a gap in research and practice with respect to the suggested meta level of culture as structure and medium in VE learning environments. Although there are studies on how culturally-situated perceptions influence the design, maneuvering and usage of e-learning environments, research on this dimension in VE contexts has yet to be undertaken. I would posit that this aspect may particularly play a role for VE projects conducted between institutions in the Western hemisphere and universities in non-Western contexts (e.g. the Global South).

The three success factors selected from Knoth and Kiy's model adaption of Leask's IoC framework have served as a fundamental structure to organize my thesis. Given

the lack of clear definitions for the dimensions of organization and culture, I supplemented them with conceptions provided by other scholars. At the same time, the empirical results that fall under the frames of organization and culture could similarly serve to define them. For future research, a quantitative study on institutional VE implementation would provide insight into the most common organizational and cultural components utilized for this endeavor that would thus constitute entities of the model. Overall, the descriptive model calls for further academic contemplation and development in order to provide a clearer and more unambiguous basis to investigate other cases of VE implementation and conduct. This may also include a re-visitation of the success factor of economics, i.e. financial aspects. I have argued that financial resources are a core building block to mobilize most other relevant resources for VE implementation. For this reason, they cannot be conceptualized as an isolated pillar within the proposed model, but rather represent the foundation for generating VE structures and resources in other areas. The same conceptual imprecision applies to the interrelation between the pillars of pedagogy and culture in Knoth and Kiy's model adaption. They interconnect in the dimensions of intercultural skills development in faculty and students and thus lack demarcation. Given these conceptual imprecisions, I decided to provide detailed accounts of the different topics and categories that relate to the three success factors of the model. Although rather descriptive in nature, they illustrate both the complexity of VE from an institutional perspective as well as interlinkages between the pillars of the model.

Further studies could look into the interplay between the different success factors and the organizational instruments and resources they involve with a particular focus on the interdependencies between financial and other resources in the effort to grow VE in different institutional contexts. This would contribute to both enrich scholars' and practitioners' understanding of how to initiate and expand VE in institutional settings. Also, research on this topic could clarify the conceptual imprecisions of the model in regards to the success factor of economics in relation to all other pillars of the model as well as the interconnections between pedagogy and culture.

Because ICT technology is a complex issue that my interviewees have no expertise in, I have factored out the success factor of technology that the descriptive model stipulates and only integrated the user side of this topic where it appeared in the data, i.e. social media and digital didactic tools. Further research needs to be done on digital and computational solutions and infrastructures that enhance VE conduct between different institutions.

VE has been on the rise alongside internationalization and digitalization in higher education. The current Covid-19 pandemic has provided significant momentum and sparked interest for this innovative intercultural online learning format (Abdel-Kader 2020). Higher education institutions need VE in order to keep fulfilling their mission of educating students for civil and professional purposes in a globalized world. This was already highlighted by Wilson ten years ago in the context of facilitating intercultural learning experiences to students with diverse backgrounds. She posited that VE holds the opportunity for “higher education institutions for a renewal of social responsibility within the university” (2010, 187). I am hopeful that the VE implementation plan I have developed and the insights I have provided on VE will contribute to this goal at Goethe University.

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10 APPENDIX: Goethe University VE Implementation Plan

(form adapted from Hinton 2012)

Goal	Step	Description	Time (Month)	Assigned to	Resources needed	Assessment
1		Implementation Preparation				
1	1	Commissioning institution-wide implementation (including budget approval) by Presidential Board	M1	VP, IO	Human Informational Relational Financial	Institution-wide VE implementation has been commissioned by university leadership
	2	Identification of relevant Administrative Stakeholders and Gatekeepers	M1	IO	Human Informational	Relevant Stakeholders and Gatekeepers have been identified
	3	Devising Communication Plan for different stakeholder groups and stakeholder group segments: <ul style="list-style-type: none"> Academic Teachers (tenured faculty, early career researchers) University Leadership Leadership from relevant administrative units Contents: <ul style="list-style-type: none"> Benefits of VE for each stakeholder group Benefits of VE for the institution (with reference to vision, mission and values; policies) Faculty: call for participation combined with services and support offered Communication structure and process between different stakeholders and bodies (two-way, iterative) throughout implementation 	M1-2	IO	Human Informational	Communication Plan has been composed
	4	Setting up VE Coordination Office	M3	IO	Human	VE Coordination Office is in place and operable

		<p>(VECO) in charge of:</p> <ul style="list-style-type: none"> • Monitoring overall implementation process • Coordinating Pan-Institutional Task Force • Coordinating Faculty Training Program • Planning and coordinating VE Funding Program and Review Committee • Bundling and providing all VE services to Faculty • Building expertise and international network on VE 			Financial Organizational Informational	
		<p>Initiating Pan-Institutional Supervisory Board (PISB) with involvement of Academic Senate and University Leadership</p> <p>Functions:</p> <ul style="list-style-type: none"> • Providing strategic advice and recommendations for implementation • Deciding on suggestions made by Pan-Institutional Executive Board (e.g. institutional brand) • Disseminating and representing the topic of VE in senate commissions and political institutional bodies • Reviewing VE Funding Proposals <p>Members:</p> <ul style="list-style-type: none"> • VP International / VP Learning and Teaching • Faculty and Student representatives (from senate; representation of different academic cultures) • VE Coordinator (VECO) 	M5	VP, VECO, IO	Human Relational	Pan-Institutional Supervisory Board with senate and leadership representation is in operation

5	<p>Setting up a Pan-Institutional Executive Board (PIEB) with involvement of all relevant Administrative units and University leadership</p> <p>Functions:</p> <ul style="list-style-type: none"> ● Operationalizing advice and recommendations given by supervisory board ● Identifying resources in respective administrative areas that can be used towards VE ● Overseeing institutional implementation process ● Reporting status quo to Supervisory Board (via VE Coordinator) <p>Members:</p> <ul style="list-style-type: none"> ● VP International (VP) ● VE Coordinator (VECO) ● International Office (IO) ● Central E-Learning Unit (CEL) ● Interdisciplinary College for University Teaching (ICUT) ● Department for Teaching and Quality Assurance (DTQA) ● University Computing Center (UCC) ● Student Representative(s) 	M5	IO, VECO, VP	Human Relational	Pan-Institutional Executive Board with representation of all important units and leadership is in operation
	Creation of Institutional Brand : devising name, acronym and logo in line with institutional culture	M6-9	PIEB	Human Informational	Institutional Brand is developed
6	Aligning General Student Learning Outcomes and VE goals with institutional policies and ethos	M6	DTQA, IO, VECO	Human Organizational	VE and General Student Outcomes have been defined in alignment with university mission, vision and values
7	Developing/adapting Faculty Training Program as a hybrid format with self-paced online components and face to face	M7-9	CEL, ICUT	Human Informational Financial	Faculty Training Program has been developed

		workshops Contents: <ul style="list-style-type: none"> • VE examples (from peers) • VE teaching scenarios • Instructional design aspects • Technology for VE (ICT, social media, e-learning tools) • Intercultural communication • Integrating institutional student learning outcomes into VE • Partnering for VE • Being flexible and reflective with VE 				
	8	Compiling institutional VE Handbook and Guidelines for Academic Teachers (written synopsis of Faculty Training Program contents)	M8-10	CEL, ICUT	Human Informational	VE Handbook and Guidelines have been composed
	9	Creating institutional VE Website , contents: <ul style="list-style-type: none"> • Introduction of institutional VE brand name, functions and goals • Presentation of Coordination Office and its support and services portfolio • Presentation of VE Faculty Training Program • Presentation of VE Funding Program • Information portal for pedagogical, didactic and organizational aspects of VE (Handbook and Guidelines) 	M7-10	IO, VECO	Human Informational	VE Website has been designed and contents integrated
	10	Devising International Partnership Inventory with partners interested in and providing resources for VE	M5	IO	Human Informational Organizational	International Partnership Inventory has been created
	11	Designing structured VE Seed Funding	M6	IO, VECO	Human	VE Funding Program is set-up

		<p>Program for face to face international collaborator meetings, and support:</p> <ul style="list-style-type: none"> • Travel funds • Daily allowances • Student assistantships <p>Funding Requirements:</p> <ul style="list-style-type: none"> • Participation in VE Training Program • VE project including a definition of student learning outcomes in line with institutional goals • Evaluation of and report on VE project 			Financial	
2		Launching Virtual Exchange				
	1	<p>Conducting VE Kick-Off:</p> <ul style="list-style-type: none"> • University-wide event • Workshops with external VE experts addressing Leadership and Faculty 	M7	VECO, IO, CEL, ICUT	Human Financial Organizational	VE-Kick Off has been realized
	2	Launching VE Website	M7	VECO	Human Informational	VE Website is online
	3	Launching VE Faculty Training Program	M7	CEL, ICUT, VECO	Human Informational Financial	Faculty Training Program is executed for the first time
	4	Commencing structured VE Seed Funding Program	M9	VECO	Human Financial	Call for applications is finalized, first round of proposals have been received
	5	<p>Initiating PISB as Review Committee for VE Funding Proposals</p> <p>Members:</p> <ul style="list-style-type: none"> • VP (chair) • PISB: faculty and student representatives from Natural and Social Sciences, and the Humanities 	M10	VP PISB	Human Relational	PISB has started operation as reviewing board and selected first round of applications

3		Regular Operations				
	1	Regular iterations of 2.3 to 2.5 (twice per year)	2 p.a.	sup.	sup.	Regular iterations have been realized
	2	Conducting VE Faculty Meetings (invitation by VP) Function: <ul style="list-style-type: none"> • Knowledge and best practice exchange • Quality assurance • Creation of VE Faculty Alumni/ae Network 	2 p.a.	VP, VECO	Human Relational	VE Faculty Meetings have taken place
	3	Organizing annual VE Conference Function: <ul style="list-style-type: none"> • Increasing internal and external visibility • Promoting VE knowledge exchange • Fostering and cultivating VE networks 	1 p.a.	VECO	Human Relational Financial	Annual VE Conference has been conducted

List of Abbreviations

CEL	Central E-Learning Unit
DTQA	Department for Teaching and Quality Assurance
ICUT	Interdisciplinary College for University Teaching
IO	International Office
PIEB	Pan-Institutional Executive Board
PISB	Pan-Institutional Supervisory Board
UCC	University Computing Center
VECO	VE Coordination Office
VP	Vice President (International)