



University of Jyväskylä
Information Technology Research Institute



Scenario of Virtual Mobility

**Virtual Mobility of Researchers in a cross
cultural setting within a social network**

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1 Motivation and introduction

Virtual Mobility can be seen as the equivalent for physical mobility programs (such as ERASMUS) utilizing information and communication technologies. It aims at creating and improving (international) collaboration competencies by collaborating with an international partner.

Virtual Mobility programs and activities do not have to be long planned or highly structured in the beginning in contrast to traditional mobility. It might as well occur out of the sudden need for collaboration. In the research community, this kind of collaboration is widely-used, e.g., working on common projects. But the recognition of the VM activities does still not exist.

In the scenario presented, we show a virtual mobility example in an academic environment. It is based on the process of collaborative work and accompanied by a Virtual Mobility Research process. This process with the support of ICT will lead to the expected results of the researcher. However one important learning outcome is international collaboration including inter-cultural competencies. This field is usually not directly address in VM programs. In our example, we describe intercultural competency acquisition as part of virtual mobility processes to cover those fields as well.

2 Virtual Mobility Cross Country Research

The Virtual Mobility Research Process is similar to a traditional cooperative work process. For both processes, a high amount of ICT is needed to support the distributed partners with their work. The specialties of Virtual Mobility as mentioned above trigger the need of additional processes, denoted as “Virtual Mobility processes” in our scenario.

Therefore, the developed model of a Virtual Mobility Cross Country Research Process consists of three different layers. Figure 1: Virtual Mobility Research process shows the model.

The tools, support all processes and functions of the processes and functions. In this case, they are just examples and can be exchanged in different settings.

The traditional collaborative work process that is central of this model. Both the tools and the virtual mobility processes support the collaborative work process to improve the outcome. The collaborative work process is done by the collaborators and VM partners.

The virtual mobility processes support the collaborative work and are mandatory for an institutional VM recognition and acceptance. The different processes of this layer are done by both collaborators and their institutions.

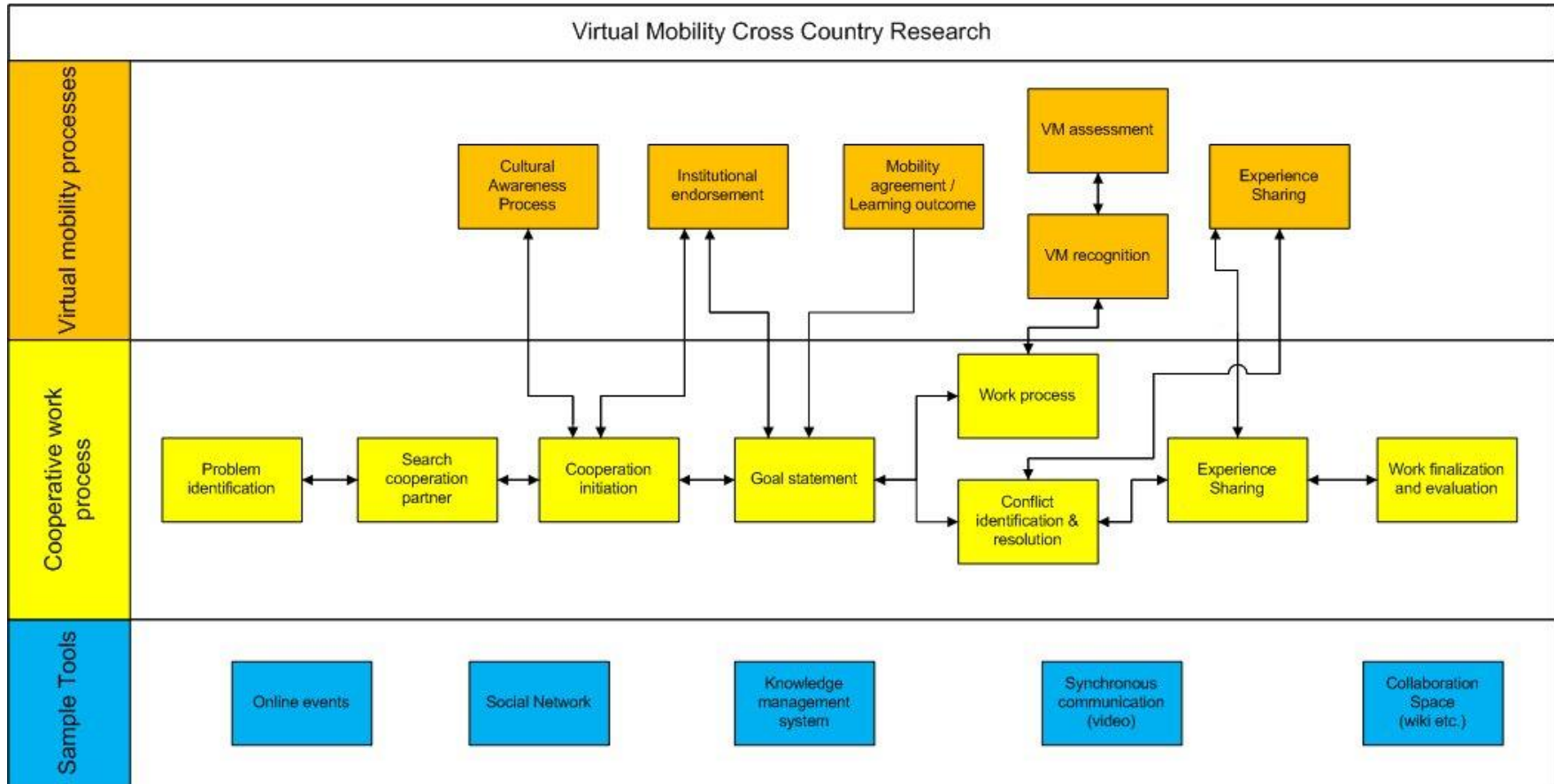


Figure 1: Virtual Mobility Research process

2.1 Cooperative Work process

Phase 1: Problem identification	
1. Phase description	<p>In this phase the researcher identifies that he will need input or help from someone else.</p> <p>Intended outcome</p> <ul style="list-style-type: none"> • a clear understanding of the problem • a clear picture of his upcoming research partner • a basic understanding of the research field of his upcoming research partner
2. Virtual mobility processes	
3. Sample Tools used	
4. Example	<p>Researcher X is writing a paper on trust building in the context of Open Educational Resources. For his research and paper he is looking for the trust building process used by different research fields. The main field of his interest is the field of social science, but because of his lack of knowledge in this field he does not know, who the important references in this field are. Because of this he decides to find a research partner from this field.</p>

Table 1: Phase 1: Problem identification

Phase 2: Search coordination partner	
1. Phase description	<p>The researcher searches for his upcoming research partner according to the outcomes of Phase 1. Therefore, he checks possible research partners and compares them with his requirements.</p> <p>Barriers and success factors</p> <ul style="list-style-type: none"> • Correct outcome of phase 1 • Knowledge how to find a suitable research partner <p>Intended outcome</p> <ul style="list-style-type: none"> • Suitable research partner with interest to collaborate • First contact and communication (problem exchange)
2. Virtual mobility processes	
3. Sample Tools used	<ul style="list-style-type: none"> • Social Network

Phase 2: Search coordination partner	
4. Example	<p>Researcher X is aware of his needs and searches for a suitable collaboration partner. For this he is using Research gate (www.researchgate.net). He is using research groups for social science and especially trust building. He is stating his problem and request in different groups and starts to discuss with other researchers. From those researchers he chooses the best suitable and starts a private communication with him.</p>

Table 2: Phase 2: Search coordination partner

Cooperation initiation	
1. Phase description	<p>In this phase the collaboration partners intensify their communication. The partners discuss about the collaboration and problems and get a feeling for each others ideas, wishes, intentions and fears.</p> <p>Barriers and success factors</p> <ul style="list-style-type: none"> • Common understanding of intended outcome of the collaboration • Knowledge of partners ideas, wishes, intentions and fears <p>Intended outcome</p> <ul style="list-style-type: none"> • Intensive Communication between research partner • Common understanding of the problem and intended outcome of the collaboration • First collaboration plan
2. Virtual mobility processes	<ul style="list-style-type: none"> • Cultural Awareness Process • Institutional endorsement
3. Sample Tools used	<ul style="list-style-type: none"> • Social Network
4. Example	<p>Researcher X and Researcher Y intensify their communication within the social network and discuss about first issues of their collaboration. They also discuss about the problem, first solution and intended outcome. A First idea exchange is done and both partners make sure that the collaboration would be beneficial for them.</p> <p>X and Y get to know each other better and understand each others working habits. They decide on a first collaboration plan.</p>

Table 3: Phase 3: Cooperation initiation

Goal statement	
1. Phase description	<p>The partners form structured goals of their collaboration according both to their own needs and wishes and to their institutional rules and guidelines. The structured goals include:</p> <ul style="list-style-type: none"> • Learning outcomes • Mobility agreement (including IPR issues and planning activities) • Intended outcome <p>Barriers and success factors</p> <ul style="list-style-type: none"> • Controversial goal expectations • Controversial rules and guidelines of institutions <p>Intended outcome</p> <ul style="list-style-type: none"> • Goal statement • Collaboration plan
2. Virtual mobility processes	<ul style="list-style-type: none"> • Institutional endorsement • Mobility agreement / Learning outcome
3. Sample Tools used	<ul style="list-style-type: none"> • Synchronous communication
4. Example	<p>X and Y have refined their collaboration plan and agreed on how to proceed and what their goals of the collaboration are. They form a contract handling IPR issues, tasks and responsibilities after their institutions agreed to their collaboration.</p>

Table 4: Phase 4: Goal statement

Work process	
1. Phase description	<p>In this phase the partners collaborate and solve the problem according to their agreements. A high amount of communication and coordination is needed.</p> <p>Barriers and success factors</p> <ul style="list-style-type: none"> • Lack of communication and coordination <p>Intended Outcome</p> <ul style="list-style-type: none"> • Result of the collaboration • Understanding of learning outcomes • New Experiences
2. Virtual mobility processes	
3. Sample Tools used	<ul style="list-style-type: none"> • Collaboration space (wiki) • Synchronous communication • Online Events

Work process	
4. Example	X and Y start to collaborate and to solve the problem together. Both contribute to their research paper. They have a high amount of communication and use different tools to support their work. For the collaborative writing they set up a wiki and for their communication they use Skype.

Table 5: Phase 5: Work process

Conflict identification & resolution	
1. Phase description	<p>In this phase the collaboration partners identify and solve problems</p> <ul style="list-style-type: none"> • between the collaboration partners, • regarding different goals and • between involved institutions. <p>Barriers and success factors</p> <ul style="list-style-type: none"> • Conflicts have to be solved efficiently and fast • Unsolvable conflicts
2. Virtual mobility processes	<ul style="list-style-type: none"> • Experience Sharing
3. Sample Tools used	<ul style="list-style-type: none"> • Collaboration space (wiki) • Synchronous communication
4. Example	During their work process X and Y identify some problems like time difference, different guidelines of their institutions and different scopes in their writing. They discuss about these problems and solve them by agreeing on common guidelines.

Table 6: Phase 6: Conflict identification & resolution

Experience Sharing	
1. Phase description	<p>In this phase the collaborators exchange their experience regarding their research, their research field and collaboration to improve the quality of both their collaboration and the collaboration outcomes.</p> <p>Barriers and success factors</p> <ul style="list-style-type: none"> • Partners not willing to share their research methodology <p>Intended Outcome</p> <ul style="list-style-type: none"> • Obviation of repeating mistakes from former collaborations
2. Virtual mobility processes	<ul style="list-style-type: none"> • Experience Sharing
3. Sample Tools used	<ul style="list-style-type: none"> • Knowledge management system • Collaboration space (wiki) • Synchronous communication

Experience Sharing	
4. Example	X and Y exchange their impressions and experiences of this and former collaborations to improve their efficiency. They try to avoid errors that were made in former collaborations and to solve conflicts and problems before they appear.

Table 7: Phase 7: Experience Sharing

Work finalization and evaluation	
1. Phase description	<p>In this phase the collaboration is getting finalized and the partners evaluate the outcomes of the collaboration. They also check, if they reached their goals stated in the goal statement. The results will be reported to the institutions to trigger the VM recognition and VM assessment.</p> <p>Intended Outcome</p> <ul style="list-style-type: none"> • Final version of collaboration results • Evaluated results
2. Virtual mobility processes	<ul style="list-style-type: none"> • VM recognition • VM assessment
3. Sample Tools used	<ul style="list-style-type: none"> • Collaboration space (wiki) • Synchronous communication
4. Example	X and Y finished their collaboration and evaluate the results. They check if they really reached all stated goals of the collaboration and hand their work to different reviewers. Afterwards they do small changes and publish their results.

Table 8: Phase 8: Work finalization

3 Virtual Mobility processes

Cultural Awareness Process	
1. Process description	<p>The Cultural Awareness Process is going on during the full work process. It describes the building of cultural competencies, needed for a successful international collaboration. Collaboration partners have to be aware of cultural differences to other partners and how to handle these.</p> <p>Barriers and success factors</p> <ul style="list-style-type: none"> • Problem to describe culture • Understanding of partner's culture <p>Intended outcome</p> <ul style="list-style-type: none"> • Understanding of cultural differences • Solutions for cultural differences • Cultural competencies
2. Example	<p>Research X and Research Y are from two different countries with different cultures and time zones. They learn about each others culture and obtain cultural competencies necessary for the collaboration. Both are getting aware of the cultural differences and try to solve problems. They discuss about those issues and find compromises.</p>

Table 9: Cultural Awareness Process

Institutional endorsement	
1. Process description	<p>The process of Institutional endorsement describes all actions taken and all tasks of getting to a cooperation or VM approval of the involved institutions. For this research and collaboration proposals might be necessary to show the institutions what the plans are and how much extra work load has to be done.</p> <p>Barriers and success factors</p> <ul style="list-style-type: none"> • Understanding of VM on institutional level • Acceptance of VM <p>Intended outcome</p> <ul style="list-style-type: none"> • Approval of all partners' institution
2. Example	<p>Both X and Y present their collaboration and VM plans to their supervisor at their institution. The institutions discuss about the plans and give them approval to do their VM activities. The institutions inform the VM partners about their rules and guidelines.</p>

Table 10: Institutional endorsement

Mobility agreement / Learning outcome	
1. Process description	<p>The process of Mobility agreement / Learning outcome leads to a cooperation or VM agreement on institutional level. This includes for example both guidelines and rules for the researcher, IPR issues and funding and goals of the collaboration like intended results and learning outcome. It also specifies the time of the VM activities.</p> <p>Barriers and success factors</p> <ul style="list-style-type: none"> • Clear rules and guidelines for VM on institutional level necessary <p>Intended outcome</p> <ul style="list-style-type: none"> • Goals, guidelines and rules for the VM
2. Example	<p>X, Y and their institutions discuss about guidelines, intended learning outcome and rules for the VM activities of X and Y. They form a contract that is signed by both sides.</p>

Table 11: Mobility agreement / Learning outcome

Experience Sharing	
1. Process description	<p>The process of Experience Sharing describes the discussion and sharing of experiences within one of the collaboration partners' institution. The discussion between the VM partners and their colleagues and the administration about their experience with international collaboration and VM.</p> <p>Barriers and success factors</p> <ul style="list-style-type: none"> • Little experience with VM <p>Intended outcome</p> <ul style="list-style-type: none"> • Problem and Conflict identification • Good & Bad practice collection
2. Example	<p>X and Y talk to their colleagues at their institutions about their plans. The colleagues tell them their experience with VM and collaboration. Also the administration helps both to avoid possible conflicts.</p>

Table 12: Experience Sharing

VM recognition

VM recognition	
1. Process description	<p>The process of VM recognition deals with the evidence description and transcription of the VM. The process uses the results of the VM assessment to provide official certificates of the VM to the collaborators.</p> <p>Barriers and success factors</p> <ul style="list-style-type: none"> • VM often not recognized by institutions • Clear understanding of VM activities and work load missing <p>Intended outcome</p> <ul style="list-style-type: none"> • VM recognition on institutional level • Evidence of VM • Certificates for collaborators
2. Example	<p>X and Y receive after finishing their collaboration a certificate by their institutions after the institution reviewed the outcomes. The VM activities are accepted as an additional work load and will be considered the same way as a traditional temporary stay abroad.</p>

Table 13: VM recognition

VM assessment	
1. Process description	<p>Within VM assessment process the administration of the involved institutions check the outcome of the VM level and provide an evidence record. For this the results are compared to the institutional goals and targets of the VM. If the results are approved the VM will be recognized as extra activities for the researchers.</p> <p>Barriers and success factors</p> <ul style="list-style-type: none"> • No proven methods how to assess VM <p>Intended outcome</p> <ul style="list-style-type: none"> • VM evidence record
2. Example	<p>X and Y provide their results to their institutions. The institutions evaluate the results and provide a VM evidence record.</p>

Table 14: VM assessment

4 Open issues and questions

The model describes how Virtual mobility cross country research could look like and what steps and phases have to be taken. But while the functions of the collaborative work process are clear and already well described, the virtual mobility processes are vague. There is a clear picture of what has to be done and what the outcome has to be, but no description on how it can be done. Especially tricky is the part of VM recognition and assessment. How will this be handled in universities? How will they evaluate the extra work load for the researchers? Will it be the same way as traditional mobility?

And even if those processes are working fine in universities, how will it be outside? How will HR Managers react when they see in a Curriculum Vitae “Virtual Mobility visit for 3 month to”?

Therefore, the next steps would be to develop a clear understanding of the virtual mobility processes with clear identified steps, outcomes and involved actors.