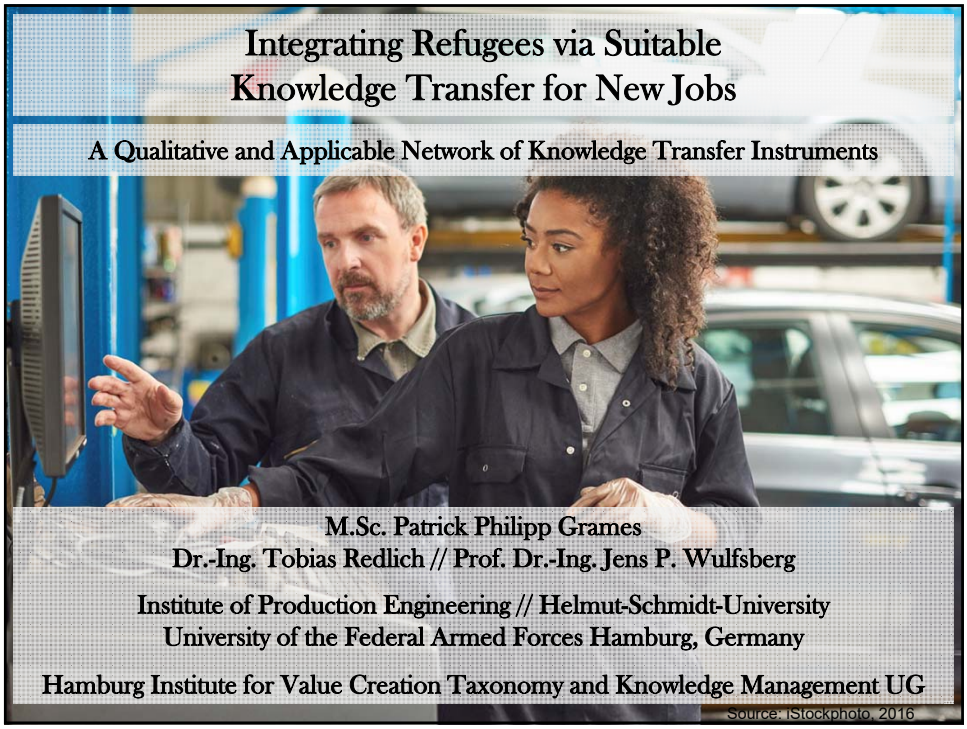

Abstract

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Today we face the largest migration of human beings in the modern era. This situation is full of chances and threats, but definitely: the scale of the challenge is epic! Social integration is obviously the goal of all global endeavors but it has many very different levels. Besides the language it is a regular job that can be the most suitable instrument to find oneself implemented and accepted as a valuable part of the "new-home" society. It is difficult enough to learn European languages, especially German, and what comes on top are complex in-company-procedures everybody has to learn, when trying to gain sustainable access to the European employment market.

It is our duty to contribute to establishing easier ways of getting access to our every-day-manufacturing knowledge for the people who seek asylum.

This working paper offers a variety of carefully selected instruments of knowledge transfer that will enable to learn new jobs quicker and more sustainable. We demonstrate how existing scientific instruments can be arranged to prepare, execute and review a qualitative knowledge transfer session. This knowledge transfer network is being developed and evaluated in the German public sector since early 2015 on real life job changes.

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Structure

1. Situation
   1.1 First pillar: migration
   1.2 Second pillar: integration
   1.3 The link: knowledge transfer for suitable employment
1. The task – definition of the scientific focus
1. Scientific approach
1. Results
1. Future applications and lessons learned
2. List of references

1. Situation

First pillar: migration

- Large parts of the world face the **hugest migration** of human beings in the modern era (Betts, 2015).
- In the year 2015 at least **0.5 million refugees** immigrated to Germany with the intent to stay at an own population of 80 million (BAMF, 2016).
- In 2016 until today (April) the wave of people fleeing from war and crime has risen to **50.000** already and naturally will keep rising (BAMF, 2016).
- This situation is full of chances and threats, but no mater which side of the phenomenon is pronounced more, it is a fact that:
  the scale of the **challenge is monumental!**

1. Situation

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Second pillar: integration

- For modern societies the only chance to cope with this situation is to foster the integration of as many migrants as possible.
- Given the fact that an integration is accepted by both, the migrant and the society, it can happen on many different levels, concerning social, religious, employment-related and private areas (Hirseland, 2010).
- In addition it is proven, that integration always works when fortified with a delivery vehicle like a common language, collective activities in sports clubs, higher education or regular employment (Hirseland, 2010).

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1. Situation

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The link: employment

- Besides other delivery vehicles a **regular job** can be a very suitable instrument to implement oneself as an accepted and valuable part of the "new-home" society.
- Having a regular job helps to improve social integration, language skills, personal education and skills and helps delivering the very personal feeling of having-a-part-in-society (BAMF, 2016).
- So it would be a very rewarding goal to bring refugees into regular employment very soon, after immigrating into another country. At the same time it is not deniable that learning new in-company procedures and rules in a mostly foreign language is again a huge task for itself.

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The task

2. The task – scientific focus of the study

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Definitions of essential terms used in the contribution

- Knowledge:
  Knowledge is an understanding of something acquired through experience or education by e.g. learning. It can refer to a theoretical (mostly explicit knowledge) or a practical (mostly implicit knowledge) understanding of a subject and can be more or less formal or systematic.
- Knowledge management (KM):
  The term summarises all efforts an organisation has to do aiming towards the best possible way of handling knowledge within its boundaries. This includes activities to gather, document, arrange knowledge and to transfer it from one medium or individual to another.
- Sources: Oxforddictionaries.com (2016), Desouza et al. (2011)

2. The task – scientific focus of the study

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Definitions of essential terms used in the contribution

- Implicit (or tacit) knowledge (IK):
  Implicit or tacit knowledge is characterised by the fact that it is bound to people and their experience (sticky information). It is difficult to articulate and to formalise it because it is based on practical activities the owner of this knowledge has done mostly several times. This often makes it hard to transfer this kind of knowledge.

- Explicit knowledge (EK):
  EK can be articulated, written down in documents, easily copied and transferred between individuals. The internet is a perfect example of a database of EK. EK is usually a basis to learn a new topic, but then has to be fortified with important implicit knowledge taught by an individual.

- Source: Reichwald, Piller (2009)

2. The task – scientific focus of the study

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Definitions of essential terms used in the contribution

- Knowledge donor (KD):
  He/she is an individual who is experienced in a current job and holds a lot of process-relevant implicit and explicit knowledge. He/she is able to and motivated to share his/her knowledge with a new employee. His/her superiors approve this intent and give needed support.

- Knowledge recipient (KR):
  He/she is the new employee of a company or organisation. He has a basic qualification for the job he/she is up to start in, but of course a lack of knowledge about intra-organisational procedures. In addition he/she might have cultural and/or religious barriers that hinder immediate performance on the job which need to be overcome.

- Source: Mittelmann (2011)

2. The task – scientific focus of the study

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- **Description of research object of this study**

Field of research:
This contribution operates in the field of knowledge and furthermore in the very large subfield of knowledge management. The most precise description of the overall field of research is “knowledge transfer between human individuals.”

Object being researched:
Within the field of “knowledge transfer” the object of this study is the “implicit knowledge of an experienced unspecified employee.”

Overall idea of research project:
This is to improve ways of extracting implicit knowledge from individuals, transfer it to other individuals to their benefit and optimise the whole process, so that knowledge-related friction losses stay at a minimum.

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2. The task

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Development of a methodology that allows to systematically allocate, document and later teach experts’ job-focused implicit knowledge

Essential conditions

- **Easy to learn** for teachers, mentors, superiors, knowledge donors
- **Easy to facilitate** while continuing to do other everyday work
- **Easy to understand results** for job successors and knowledge recipients
- **Effective in transferring** knowledge from one individual to another

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Scientific approach

3. Scientific approach

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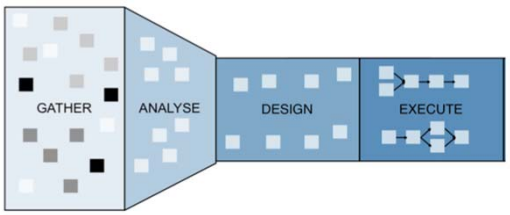
1. **Gather** well known and working instruments of knowledge management that deal with intra-company knowledge transfer
2. **Analyse** the most applicable ones to the topic
3. **Design** a methodology focused on “new employment” situations
4. **Execute** the methodology on real life cases and optimise it



Source: Grames et al. (2016, unpublished)

3. Scientific approach

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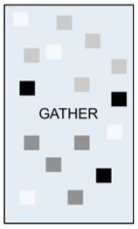
1. GATHER KM instruments

- 23 scientific sources reviewed
  (journals, books, case studies, websites, articles)
- 78 KM instruments identified, 18 of them are applicable to topic and were processed to the next step for a detailed analysis
- Further examination will show adequacy for whole study



Scientific method used:
literature review

3. Scientific approach

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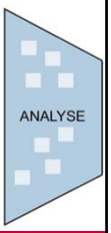
2. ANALYSE the obtained data

- 18 applicable knowledge management methods are basis. 306 method intersections were analysed concerning intra-factorial influence and their output-input-relations.
- Methods with too low influence (impulse index < 1.0) on other methods were eliminated because of insufficient suitability to the whole concept of a combined knowledge management methods network
- Result after step 2 (see chapter results for details):
  4 knowledge management methods eliminated
  14 knowledge management methods remaining



Scientific method used: direct interdependency matrix

3. Scientific approach

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2. ANALYSE the obtained data

- active sum:
  Objects (or here: KM methods) with strong influence on other methods are characterised by a high active sum.
- passive sum:
  Methods which are strongly influenced by other methods feature a high passive sum.
- impulse index: $impulse\_index = \frac{active\_sum}{passive\_sum}$
  This index shows a relation between the degree of activeness and passiveness of a research object within a system or network.

Scientific method used: direct interdependency matrix

3. Scientific approach

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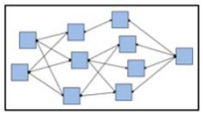
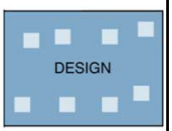


3. DESIGN a specified methodology

- The selection of 14 knowledge management methods builds the basis of this step.
- They were brought into a useful sequence, based on the indices of the matrix. This enables to later apply the methodology to the case study.
- The above mentioned index shows if a method stands rather at the beginning (influential, high active sum, low passive sum) or at the end (influenced, low active sum, high passive sum) of a consecutive sequence of objects.



Scientific method used: direct interdependency matrix

3. Scientific approach

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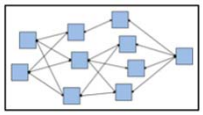


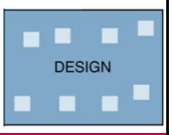
3. DESIGN a specified methodology

- For setting the sequence the impulse index was used (Gausemeier/Ebbesmeyer/Kallmeyer, 2001)

$$impulse\_index = \frac{active\_sum}{passive\_sum}$$

- To reach this goal strict requirements had to be guaranteed:
  1. methods generating much output fit at the beginning of the sequence
  2. methods generating less output fit at the end of the sequence
  3. methods desiring less input fit at the beginning of the sequence
  4. methods desiring much input fit at the end of the sequence

- During this process for setting the sequence 3 KM methods, were eliminated for being to similar to other, selected methods (11 remaining)



Scientific method used: direct interdependency matrix

3. Scientific approach

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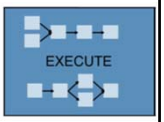
4. EXECUTE case study

The sequence of 11 KM methods for knowledge transfer was developed, based on the data of the interdependency matrix. Now it had to be evaluated and validated by a four-case-study which was/is being conducted. Research object always was/is a person who was/is about to leave the current job position and therefore has to transfer knowledge to another individual.

- Case I: case finished (see results / lessons learned)
  manager, medium management position, 16 employees, public sector
- Case II: case finished (see results / lessons learned)
  secretary, lower administrative position, typical office environment, private sector



Scientific method used: Case study analysis

3. Scientific approach

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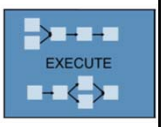
4. EXECUTE case study

- Case III: On-going case (45 %, finished by Mai 2016)
  product manager, medium management position, product responsibility, private sector
- Case IV: On-going case (10 %, finished by July 2016)
  Senior Manager, medium management position, 42 employees, public sector

The cases influenced the sequence of the designed methodology. One KM method was eliminated for being to time-consuming, when applied together with other KM methods (10 methods remain as final sequence). The results and the lessons learned from this is referred to in the next chapters.



Scientific method used: Case study analysis

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Results

4. Results

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Summarising facts

- 18 KM methods identified, (step 1: literature review)
- 4 KM methods eliminated, 14 remaining (step 2: matrix data)
- 3 KM methods eliminated, 11 remaining (step 3: sequence design)
- 1 KM method eliminated, 10 remaining (step 4: case study)

- Repetitive evaluation und optimization of method selection and sequence

- Result:
  A sequence of 10 consecutively arranged knowledge transfer methods to assist professionals in transferring knowledge from one individual to another.

4. Results – eliminated KM methods

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Summary of 18 identified knowledge transfer methods in step 1

- **After action review**
- ~~Forum for communication~~ proven as to less influential (step 2: interdependency matrix)
- **Key competence portfolio**
- **Knowledge-based talks**
- ~~Knowledge network~~ proven as to less influential (step 2: interdependency matrix)
- ~~FAQ~~ proven as to less influential (step 2: interdependency matrix)
- **Checklist**
- **Knowledge database index**
- ~~Handbook~~ proven as to less influential (step 2: interdependency matrix)
- **Expert Debriefing**
- ~~Knowledge meeting~~ proven as too similar to “expert debriefing”, so eliminated (step 3: design)
- **Knowledge owner cards**
- ~~Storytelling~~ proven as to time-consuming, when applied in sequence (step 4: case study)
- **Knowledge structure cards**
- **Knowledge application cards**
- ~~Social network analysis~~ proven as too similar to “person-focused relationship map” (step 3: design)
- **Person-focused relationship map**
- ~~Lessons learned process~~ proven as very similar to “after action review”, so eliminated (step 3: design)

4. Results

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Evaluated sequence of knowledge transfer methods

1. Knowledge-based talks
2. Person-focused relationship map
3. Knowledge owner cards
4. Key competence portfolio
5. Knowledge application cards
6. Knowledge structure cards
7. Knowledge stock index
8. Expert Debriefing
9. Checklist
10. After action review

Following this sequence of methods the most important and desiring questions a new employee can have will be satisfied.

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Future applications and lessons learned

5. Potential contribution to future applications

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Integrating refugees

- As mentioned in the introduction Europe and other large parts of the world are facing a huge wave of immigration. This situation will persist for many more years.
- Immigration has to be followed by integration, when a healthy and peaceful society should sustain (Hirseland, 2010).
- One pillar of integration is regular employment and the importance of contributing something worthy to a society.

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5. Potential contribution to future applications

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Integrating refugees

- This contribution offers a sequence of carefully selected knowledge management methods for knowledge transfer.
- They are easy to use, can be applied to many different environments and to different job positions.
- Especially when refugees come to a new country, without proper knowledge of the language and the culture, they need clear and easy to understand information to gain access to the new-home society.
- The developed methodology is able to generate important pieces of implicit knowledge a professional is not actively aware of and therefore would not be able to articulate by himself.

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5. Lessons learned

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Focused on possible "integrating refugees" application

- Every involved individual (knowledge donor, knowledge recipient and their supervisor) has to be highly motivated to externalise and transfer knowledge.
- A new employee will never be able to use the presented methods on his own to gain others' knowledge. Companies will always need to have (external) professionals who lead through the KM method sequence.
- New and learning individuals (here: refugees) have a good chance of learning faster and more sustainable what they need for their new job, when there are moderators and knowledge donors who know how to use KM methods and how to present little pieces of important information to them.
- Essentials: **motivation and moderation**

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