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Günter L. Huber (Ed.)

Diversity in Qualitative Research

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Thanks to the organizational support, intensive preparations and extensive voluntary work by Mechthild Kiegelmann and her team at the University of Education in Karlsruhe the Workshop 2018 could offer a broad program of paper presentation, posters, and discussions of work in progress, particularly in two sessions for research consulting. The program announced the following contributions:

| Keynote presentation |  |
|----------------------|  |
| **Joseph A. Maxwell** | Generalizability in Qualitative Research |

| Workgroup 1 |  |
|-------------|  |
| **Chair: Karin Schweizer** |  |
| **R. Klepser, A. Reiber, K. Schweizer, & H. Weitzel** | Chilean and German primary students’ conceptions of the musculoskeletal system—a comparison |
| **F. Müller** | Sustainability of international volunteering from a developmental psychology perspective – Biographical Meaning |
| **M. L. Springmann** | The role of gender in the recovery from eating disorders – what can we learn from formerly affected persons? |
| **A. Schmitz** | Beziehungen zwischen Jugendlichen mit und ohne Migrationshintergrund – interethnische Kontaktbereitschaft bei sich ähnelnden Gruppen |

| Workgroup 2 |  |
|-------------|  |
| **Chair: Mechthild Kiegelmann** |  |
| **J. Kramer** | Andrej is different and Selma loves Sandra. Living situations of LGBTQ from conservative, religious or immigrated families in Germany |
| **R. Lottmann** | Ageing & Diversity: LGBT and longterm care – sample, research design, analyses and ethics |
| **I. Schröter** | Research on muslim religiosity among youngsters and young adults (14 - 34 y.) in Germany |
| **A. Boumaaiiz** | Reflections on the role of the teacher in Islamic religious education |
### Workgroup 3

**Chair: Günter L. Huber**

<table>
<thead>
<tr>
<th>Author(s)</th>
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<tr>
<td>M. Dominguez, A. Medina &amp; M. Medina</td>
<td>Impact of the Focus Group on the professional development of secondary education teachers</td>
</tr>
<tr>
<td>Lopez-Gomez, Gonzales &amp; Cacheiro</td>
<td>Development of the university student’s digital competence through the learning platform</td>
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<td>M. Iglesias et al.</td>
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<td>A. Schneider</td>
<td>Changing the Classroom into a Playground–Positive Effects for Motivated Learning</td>
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</tbody>
</table>

### Workgroup 4

**Chair: Mechthild Kiegelmann**

<table>
<thead>
<tr>
<th>Author</th>
<th>Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>R. Grassl</td>
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</tr>
<tr>
<td>J. Held</td>
<td>Subject Oriented Research. a new methodological approach and two empirical projects as examples</td>
</tr>
<tr>
<td>M. Kiegelmann</td>
<td>Gaining access to research participants. What do we researchers have to offer in research relationships?</td>
</tr>
<tr>
<td>M. Tagaki</td>
<td>Contribution of qualitative research to municipal disability policy: An analysis of the issuing process of the disability action plan in Japan</td>
</tr>
</tbody>
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| Research Consulting          | Kiegelmann, Schweizer, Medina, Huber                                 |

Not all of the announced topics can be presented in Qualitative Psychology Nexus vol. 15. One of the presenters could not come to Karlsruhe, some did not find the time necessary to transform their presentation into a manuscript for publication, some reported first findings from ongoing work that was meant to be published as part of qualification papers, and in one case a misunderstanding left the editor too long just with an abstract – what the editor should have noticed earlier. Now, at the moment of publication, the editor can only apologize to the participant and the readers. The available papers are presented here in the order of the program announcement (see above).

Both the topics of diversity and the methodological problems when approaching the subjective world view, self-understanding and action strategies of the persons involved were discussed intensively in all workshop sessions. While some participants focused on particular
aspects of diversity and presented methodologically well justified findings, in other contributions the aspect of methodological possibilities and their advantages and/or problems to find answers to the research question were in the center of interest. Subsequently we present outlines of various contributions to the workshop.

The paper on “Chilean and German Primary Students’ Conceptions of the Musculo-skeletal System – a Comparison” by Adina Reiber, Karin Schweizer, Roswitha Klepser, Monica Bravo Granström, Holger Weitzel and Stephanie Bender reports the results of a comparison of Chilean and German primary students’ conceptions of the human body and discusses the commonalities and discrepancies of both countries’ curricula. The principal assumption is that the constructivist epistemology is considered as guideline for teaching and learning science in schools, which implies that teachers have to learn how to build upon and integrate adequately their students’ available conceptions. The data were gathered by problem-centered interviews and analyzed by qualitative content analysis.

The contribution on “Using a Qualitative Research Approach to Investigate Identity Development in the Context of International Volunteering Experience” by Franziska Müller builds – as the author explains – “on studies that discovered a connection between common reasons for wanting to do a voluntary service, like gaining independence from the parents or professional orientation and aspects of identity development (Marcia et al. 1993) (e. g. through active exploration of different ways of life). From a developmental psychological perspective, with a focus on identity development this study seeks to explore the subjective meaning of volunteering in a later phase of the volunteers’ lifes. Through biographical interviews the (lasting) meaning of the volunteering can be captured within the context of the volunteers’ life stories.”

Marie-Luise Springmann treats in her paper on “The Role of Gender in the Recovery from Eating Disorders – what Can we Learn from Formerly Affected Persons?” the dilemma that “empirical evidence supports the hypothesis that gender is relevant to the etiology of eating disorders, [but] little is understood about the quality of this relationship for different gender identities and how eating disordered persons deal with it during recovery. The presented study aims to address these
questions with a hypothesis-generating method: Formerly affected persons of different gender identities and sexual orientations are being interviewed about their experience of the eating disorder and the ways they found to overcome it. Narrative interview technique gives participants space to voice their experiences.”

In their study titled “Andrej is different and Selma loves Sandra: Living situations of LGBTQ+ from religious or immigrated families in Germany” Jochen Kramer, Olcay Miyanyedi and Mechthild Kiegelmann “explore the situation of homo-, bi-, transsexual, queer (LGBTQ) youth/young adults from conservative, religious or immigrated families residing in Stuttgart metropolitan area ...” While they “proved to be highly vulnerable to discrimination, ... only few of them make use of psychosocial/LGBTQ community support.” Qualitative interviews were thematically analyzed (Braun & Clarke, 2006) and revealed “a) how the members of the target group define their own sexual, gender, cultural, and religious identities, b) how integrated they feel in their social contexts, c) what experiences have strongly influenced their lifes, and d) what kind of support they want.”

Unfortunately missing is Ralf Lottmann’s paper on “Ageing & Diversity: LGBT and longterm care – sample, research design, analyses and ethics”. The presentation showed and discussed „methods of analysis, sample strategies for recruiting older LGBT participants, ethical aspects and selected results“ of two studies. „The Qualitative Approach enabled the researcher to modify the concept of culture-sensitive care in relation to diversity-sensitive aspects. Reconstructive methods especially provide a deeper understanding of diversity in order to consider individuality and biographies in long-term care (facilities) and the social inclusion of LGB(T*I) elders.“

Antonio Medina Rivilla, María C. Domínguez Garrido and María Medina Domínguez give in their paper on “Perceptions of Basic Competencies in the Last Year of Baccalaureate by the Center's Management Team: Focus Group Analysis” a differentiated presentation and discussion of the use of focus groups as “an adequate method to understand the complexity of the training problem that characterizes the final stage of Secondary Education”. The authors consider focus groups “as a qualitative method, which stimulates the involvement of the members of the educational institution in the analysis and value of teachers’ and students education in the importance and master of competencies
students-teachers), the basis of their own and their students’ professional development and the innovation of the institution/school.”

Finally, Reinhard Grassl describes in his presentation on “Discover the Unseen Through Tool-Based Scientific Observation” that an observational approach in scientific research has to be “based on scientific knowledge and hypothesis. It further requires appropriate software tools to create reliable data and interesting findings with significant validity in reasonable time.” In addition, he discussed the “major difference between everyday observation and scientific observation, and the enormous chances specific software tools can create in this field...”.
Chilean and German Primary Students’ Conceptions of the Musculoskeletal System – a Comparison

Adina Reiber, Karin Schweizer, Roswitha Klepser, Monica Bravo Granström, Holger Weitzel
(University of Education, Weingarten)
and Stephanie Bender
(University of Talca, LBI)

Abstract
In the course of a research and development project, GECKO (German-Chile-Kooperation), representatives from a Chilean (University of Talca, LBI) and a German (University of Education Weingarten) university collected primary students’ conceptions of structure and function of the human musculoskeletal system. In Germany, eight students took part in the survey (aged 7-8 years) and in Chile, eight students (aged 8-9 years). The data regarding the conceptions of the German students were collected prior the classes, those of the Chilean students after classes on the movement apparatus. The data was gathered by problem-centered interviews and analyzed by qualitative content analysis. In addition, we conducted a document analysis of the Chilean and German primary curriculum to identify objectives and epistemo-logical framework of the countries respectively. This article presents the results of the comparison of Chilean and German primary students’ conceptions and reports on commonalities and discrepancies of both countries curricula. In Germany, the students could name musculo-skeletal system structures such as muscles and bones and locate them on drawings, even prior to classes on the topic. In addition, they consider both structures to be prerequisites for movement. In comparison to the situation before the classes in Germany, the Chilean students' conceptions on the structure and arrangement of muscles, bones and joints after the class are more differentiated. They merge partial concepts (muscles and bones, muscles and joints) to describe prerequisites for the development of skeletal
movement. However, both groups are not able to explain skeletal movement as a result of the interaction of muscles, bones and joints.

1 Introduction

Teaching in European and Anglo-Saxon countries is widely embedded within a constructivist epistemological framework (Duit & Treagust, 1998). According to science education, the adaptation of the constructivist epistemology means to consider conceptions and beliefs of students as starting points for guiding the learning of science concepts (Amin, Smith & Wiser, 2014).

The students’ conceptions on various scientific topics show that students often bring ideas and explanations to class about the respective phenomena. Their explanations differ, however, to a greater or lesser extent from the technical explanations (Duit, 1995; Weitzel, 2015; Kattmann, 2017). The divergent students’ conceptions may hinder the learning of technical concepts, as they often prove themselves in everyday life, and as such they are firmly anchored in the students' conceptual system and thus difficult to change through teaching. (e.g. Bitter et al., 2015). Learning in natural sciences therefore aims to achieve a change from an initial conception to a more subject-specific conception. Already in the 1980s, the first conceptual change approaches were developed. These describe theoretical justifications and methods by which students can develop scientific concepts (e.g. Strike & Posner, 1982). While those early conceptual change approaches rather aimed at a replacement of everyday conceptions with technical conceptions, current approaches aim at the context-sensitive application of the respective appropriate conceptions (e.g. Treagust & Duit, 2008).

What all approaches have in common is the intensive reference to the students' initial conceptions (e.g. Jonen et al., 2003; Kattmann, 2007; Hempel, 2011). Regarding the situation in primary school, in contrast to the research situation in the secondary school sector, a number of research gaps are identified (e.g. Adamina et al. 2018). Moreover, compared to Europe and the US, the current research situation regarding data in Chile is less favorable. This article addresses one of the topics relevant to subject teaching in Chile and Germany and presents the results of the survey of students' conceptions of the musculoskeletal system before classes on the musculoskeletal system in
German schools and compares them with conceptions of Chilean primary school students after classes on the topic.

2. Theoretical background

2.1 How is movement constituted?

Movement in the animal world occurs through interaction of solid and contractile elements, in vertebrates with bony endoskeletons forming the solid and muscles the contractile structures. Endoskeletons serve as resistance for the contractile structures. In addition, they stabilize, support and protect the body, and are the places where the solid components of blood are essentially formed. The bones store minerals and release them as needed (Menche et al., 2003). In order for the skeleton to move, muscles move the bones actively in their position (Platzer et al., 2013; Purves et al., 2011). Joints are stable and at the same time mobile connections between the bones, which enable targeted movements in different directions (Huch & Engelhardt, 2011; Purves et al., 2011). Muscle strength is transmitted via tendons via at least one joint. For this purpose, tendons attach to bone protrusions (apophyses) on the bone surface (Lippert & Lippert-Burmester, 2010; Platzer et al., 2013).

In contrast to tendons, ligaments basically connect bones with each other. They surround the joint, stabilizing it (Spornitz et al., 2004). Since muscles contract but cannot relax without help, muscles function according to the agonist-antagonist principle. This means that muscles work together at least in pairs, with contraction and stretching in opposite directions. In this way, a contracted muscle (agonist) is stretched by the contraction of the opponent (antagonist).

2.2 Curriculum contents on the musculoskeletal system in Germany and Chile

The human musculoskeletal system is included equally in the curricula in Germany and Chile, but depending on the type of school and grade, slightly different emphases can be observed (Tab. 1).
Table 1: **Curricula on the musculoskeletal system at the participating schools in Germany and Chile**

<table>
<thead>
<tr>
<th>Country</th>
<th>Type of school</th>
<th>Grade</th>
<th>Education standards</th>
</tr>
</thead>
<tbody>
<tr>
<td>Germany (Baden-Württemberg)</td>
<td>Primary school</td>
<td>2</td>
<td>Bildungsplan Grundschule 2004 (Ministerium für Kultus, Jugend und Sport Baden-Württemberg, 2004)</td>
</tr>
<tr>
<td>Chile</td>
<td>Primary school</td>
<td>3</td>
<td>Bases Curriculares Educación Básica (Ministerio de Educación de Chile, 2012)</td>
</tr>
</tbody>
</table>

a) Primary school Germany (Baden-Württemberg)

In Germany, education policy is the responsibility of the 16 different federal states (*Bundesländer*), the educational standards may thus differ between the federal states. This survey of German students was conducted in the federal state of Baden-Württemberg. In Baden-Württemberg, the musculoskeletal system is a subject in grade 4 (Ministerium für Kultus, 2004, p. 104). Muscles, bones and joints and their functions should be thematized. Under the heading "Nature arouses curiosity: research, experiment, document" (ibid, p. 105), experiments on the subject of movement can be planned and carried out.

b) Chilean schools

In Chile, the curricula differ according to the school orientation. In the Chilean schools of the participating students, the Chilean curriculum *Bases Curriculares Educación Básica* (Ministerio de Educación de Chile, 2012) serves as a basis. It deals with the musculoskeletal system in classes two and four in the subject *Ciencias Naturales*. The function of bones, muscles and joints as well as the interaction between the structures that enables movement are thematized (Ministerio de Educación de Chile, 2012, pp. 157-166).

### 2.3 Current state of research

According to Schneider and Collatz (2001), the development of body concepts begins at the age of five. Even before regular school entry, children can already name some organs. Their statements refer exclusively to those organs which they can perceive directly with their own
senses, internal organs do not occur in the students' conceptions. Fried (2005) concludes that children up to the age of nine years are just as unaware of an organ occurrence in the human body as of the functions that the internal organs can perform. This is also confirmed by further studies (Gelman, 1990; Carey & Gelman, 1991). For example, students under the age of nine rarely describe the presence of a lung or its function. According to Fried (2005), the concepts of internal organs mostly develop first and this can imply difficulties for the students in describing characteristics and functions of organs. Children thus know what is meant by muscles or bones on a general level, but are not able to explain complex phenomena such as movement. In a qualitative study with fourth-grade students on conceptions about the human skeleton, Wilde, Homann and Grotjohann (2011) identify very heterogeneous conceptions about the structure of the skeleton. In skeleton drawings, the conceptions range from skeleton fragments to coherent representations of the supporting skeleton. About half of the test persons were able to name at least the supporting function of bones.

The current state of research on students’ conceptions of the musculoskeletal system contrasts with the potential of science teaching in primary school. In an in-depth review of research about young children’s science learning Duschl, Schweingruber and Schouse (2007) found that children at that age are capable of more sophisticated science thinking than previously assumed. The causes of the discrepancy between the potential of science teaching in primary school and reality are manifold, even though, it is often referred to the quality of teaching. This, however, does not take sufficient account of, for example, students' conceptions (Osborne & Dillon, 2008), and does not leave any space for conceptual understanding (e.g. for understanding structure-function correlations) or stimulates scientific thinking sufficiently (Furtak & Alonzo, 2010; Howes, Lim, & Campos, 2009). Considering the above mentioned aspects, the aim of the study is thus to collect students' conceptions about the musculoskeletal system prior to classes on the topic (in our case of students in Germany) as well as to relate them to conceptions about the musculoskeletal system after classes on the topic in Chilean schools. The results can help to develop and test teaching content on the basis of student conceptions.
3 Materials and methods

Within the scope of the study, problem-centred, partially standardised individual interviews were conducted with eight German (grade 2) and eight Chilean students (grade 3) (Bogner et al., 2014; Przyborski & Wohlrab-Sahr, 2014; Trautmann, 2010). The research aims at investigating individual conceptions of the musculoskeletal system. In the study, categories are developed which support the conceptions of the learners to understand the musculoskeletal system. A qualitative method of investigation is appropriate for this aim, since the diverse individual conceptions can be captured in such a research design.

The interview guide covers structures of the musculoskeletal system (bones, muscles, joints) and structure-function relationships that enable movement. The topics are organized in completed topic blocks, enabling that the order of the blocks can be adapted during the interview process. The interview guide was tested in primary schools in Baden-Württemberg and adapted to the language level of the children. For Chile, the interview guide was translated into Spanish. The interviews were also conducted in Spanish. During the interviews, the test persons were additionally given posters with human body contours in which structures and structure-function correlations were to be drawn. In such a way, a further non-linguistic form of data collection was taken up and the methodological problem of the partly insufficient verbalization ability of pupils of this age group mentioned by Wilde et al. (2011) thereby addressed. The combination of problem-centered interview and sketches is particularly suitable for questioning children, as they thus are encouraged to express their conceptions openly and freely (Lamnek & Krell, 2010).

The selection of the subjects was made by the teachers, whereby “unobtrusive” students of “normal” intelligence were selected for the study (Reinders, 2005; Weitzel, 2006), in order to intend to avoid extreme cases in the results. These include conceptions which are untypical for other learners of the same age because they have either already passed the developmental stage or have not yet reached it. The recorded conversations were completely transcribed in each case (Kuckartz, 2014; Weitzel, 2006) and anonymized (Konrad, 2011). The interviews conducted in Spanish were then translated into German.
A qualitative content analysis (Mayring, 2010) was conducted for the evaluation of the data, using the MAXQDA 2012 software. The aim was to identify general thought structures in the individual statements of the students. Conceptions drawing on Gropengiesser (2001) with common and equivalent characteristics, are combined into category-related categories. Through this categorization, the individual conceptions about the musculoskeletal system are visualized in conceivable connections. The categories are based on the generalizable structures of the students' conceptions, which are interesting at this point parting from the view that they are the ones who can be effective in learning in class.

4 Findings

In the following, we present the conceptions of German grade two students about bones, muscles and the development of movement prior to classes regarding this topic. This is contrasted with Chilean grade three students’ conceptions after classes regarding this topic.

4.1 Conceptions of muscles

Already prior to the class on the topic, all German grade two students know the word “muscle”. They identify muscles in different parts of the body, from the shoulders to the middle of the body and up to the two groups of extremities (arms, hands, legs and feet). Regarding the position and arrangement of the parts, the students can only express a few conceptions (Fig. 1). Only one student (Mara) mentions where the muscles are to be found in the body. She assumes that they are to be found outside of the bones, directly on a joint. Regarding the attachment of muscles in the body, the students do not express any conceptions. One student (Laura) addresses the function of muscles. She assumes that muscles contract bones.
Table 2: German grade 2 students’ conceptions on structure, position and function of muscles

<table>
<thead>
<tr>
<th>Concept denomination</th>
<th>Concept description</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Muscles in the body</em></td>
<td>In the body there are muscles in different places. Quote: “There is a bend here [at the arm]. There are muscles and real men, down here [at the stomach] they have three muscles.” (Mara, line 242)</td>
</tr>
<tr>
<td><em>Muscles outside on the bones</em></td>
<td>The muscles are outside on the bones. Quote: “[Muscles are] on the bones, outside on the bones.” (Mara, line 288)</td>
</tr>
<tr>
<td><em>Muscles move the bones</em></td>
<td>Muscles allow movement by contracting bones. Quote: “[Muscles] then contract the bones, they approach each other.” (Laura, lines 130 – 132)</td>
</tr>
</tbody>
</table>

After classes on the topic, Chilean grade three students name conceptions about muscles that relate to their appearance, position, arrangement and function. Muscles are located in different parts of the body, increasingly in the extremities (Fig. 2). Muscles are occasionally identified as flesh. In comparison to the students without classes on the musculoskeletal system, the Chilean students attribute more extensive functions to the muscles and are able to verbalize them in a more differentiated way. Subsequently, muscles are considered as involved in shaping, providing strength for movement, and being attached to bones, protecting those. However, no test person describes how the muscles are attached to bones with tendons. Tendons and ligaments are not mentioned in connection with movement.

Even after the classes, for the Chilean students an important prerequisite regarding the muscular movement does not exist: the arrangement of muscles over at least one joint.
Table 3: Chilean grade 3 students’ conceptions on structure, position and function of muscles

<table>
<thead>
<tr>
<th>Concept denomination</th>
<th>Concept description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Muscles in the body</strong></td>
<td>In the body there are muscles in different positions. Quote: “Some muscles have [men] here at the stomach.” (Jana, line 238)</td>
</tr>
<tr>
<td><strong>Muscles outside on the bones</strong></td>
<td>The muscles are outside of the bones. Quote: “Which bones are and around are the muscles.” (Alejandra, line 616)</td>
</tr>
<tr>
<td><strong>Protection of muscles</strong></td>
<td>The muscles protect the bones. Quote: “[The muscles] protect the bones.” (Monica, lines 438-439)</td>
</tr>
<tr>
<td><strong>Muscles shape the body</strong></td>
<td>The muscles shape the body. Quote: “Since [muscles] also shape the arm.” (Sabine, lines 579-580)</td>
</tr>
<tr>
<td><strong>Muscles give strength</strong></td>
<td>The muscles give the strength for movement. Quote: “[Muscles] give you the strength for moving.” (Alejandra, line 673)</td>
</tr>
<tr>
<td><strong>Muscles are linked to the bones and enable movement</strong></td>
<td>Muscles are linked to the bones and enable movement of the bones. Quote: “There are bones and there is a muscle, which supports the bones and are linked to the bones, to control them and to lift them up.” (Pablo, lines 387-388)</td>
</tr>
<tr>
<td><strong>Muscles are flesh</strong></td>
<td>The term muscle is a synonym for flesh. Quote: “(...) Inside there are flesh and bones.” (Pablo, line 52)</td>
</tr>
</tbody>
</table>

4.2 Conceptions of bones and joints

The German grade 2 students already have basic conceptions of the existence of bones prior to classes on the topic. They can draw different bones on the human body contours, which roughly correspond to the correct position. This also applies to bones that they cannot feel immediately, such as bones of the pelvis or the femur (Fig. 1a, Leon). The number of bones assumed to be in a body area varies considerably between students. Some of the students’ drawings contain connections between bones, which are called joints by the children, while others draw
bones as continuous, partly curved lines (Fig. 1b, Sandra). In addition, there is no correct bone pattern to be found in any of the test persons. Even if the students do not draw any conceptions about joints, they assume that such are present, where flexing or stretching movements are possible ("[joints are] at the shoulder, front toes, at the knee, at the wrist.") (Carla, lines 365-367)).

Some students make initial assumptions about the function of bones, which in the point of view of the students give form to the body. On a general level, bones are also associated with movement.

In comparison to the pre-concepts of the German students, the Chilean students mention the protection of internal organs such as the brain as a further function of bones. While the test persons use the term “bone” independently, the term “joint” is only used after the interviewer's intervention, although the student drawings contain joints between the long bones (Fig. 2). The typical long bone shape can only be found in a drawing by one test person. Ribs are increasingly drawn on the spine. In comparison, the students in Germany also draw ribs attached inside the spine. After classes on the topic, the spine is positioned more correctly, this also applies to the arrangement of the individual vertebrae, which, however, only in isolated cases reach into the neck. In no case the number of bones on an extremity is scientifically correct. Joints are mainly placed on the extremities, arranged between bones and associated to the bone protection.

Table 4: German grade 2 students’ conceptions on structure, position and function of bones

<table>
<thead>
<tr>
<th>Concept denomination</th>
<th>Concept description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bones give form and stability</td>
<td>Without bones the body would collapse.</td>
</tr>
<tr>
<td></td>
<td>Quote: “If we didn’t have any bones, we would collapse.” (Emil, lines 151-153)</td>
</tr>
<tr>
<td>Bones enable movement</td>
<td>Without bones, no movement is possible.</td>
</tr>
<tr>
<td></td>
<td>Quote: “If we didn’t have any bones, we wouldn’t be able to move.” (Ira, lines 282-283)</td>
</tr>
</tbody>
</table>
Fig. 1a: Leon (gray spots represent muscles). You can see joints between the bones.

Fig. 1b: Sandra. Bones are drawn as solid lines, joints are indicated as points, their shape is unclear.

Figure 1: German students’ conceptions of the musculoskeletal system structure

Tab. 5: Chilean grade 3 students’ conceptions on structure, position and function of bones

<table>
<thead>
<tr>
<th>Concept denomination</th>
<th>Concept description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bone protection</td>
<td>Bones protect internal organs. Quote: “For protection of the heart and the lungs. [DRAWING: Text “Ribs protect the heart and the lungs.”]” (Alejandra, lines 130-132)</td>
</tr>
</tbody>
</table>
4.3 Conceptions of movement

The grade 2 students name muscles, bones and joints as prerequisites for movement, but the conceptions do not appear together in the individual students, so that the children are not able to explain skeletal movements. One test persons (Ira) mentions the head as involved in the execution of the movement.

After classes on the topic, students combine at least two concepts (muscles and bones, muscles and joints) as a prerequisite for the development of movement. One student (Alejandra) additionally names the brain as an essential organ for the development of movements. Despite the combination of partial concepts, the students are not able to explain skeletal movement. The sub-concepts (e.g. muscles and bones) are named, but how they are connected to each other and how they act to realize movement remains unnamed in all student utterances.
Table 6: German grade 2 students’ conceptions of prerequisite and skeletal motion realization

<table>
<thead>
<tr>
<th>Concept denomination</th>
<th>Concept description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bones as a prerequisite for movement</td>
<td>Bones are a prerequisite for skeletal movement. Quote: “[We can move], since we have bones and [we move those parts], where we have bones.” (Emil, lines 207-219)</td>
</tr>
<tr>
<td>Muscles as a prerequisite for movement</td>
<td>Muscles are a prerequisite for skeletal movement. Quote: “[When we move], then the muscles tense up, then there's a little hump like that.” (Ron, lines 162-167)</td>
</tr>
<tr>
<td>Joints as a prerequisite for movement</td>
<td>Joints are a prerequisite for skeletal movement. Quote: “[If we didn’t have wrists], then we couldn’t move our hands.” (Sandra, lines 322-323)</td>
</tr>
</tbody>
</table>

Tab. 7: Chilean grade 3 students’ conceptions of prerequisite and skeletal motion realization

<table>
<thead>
<tr>
<th>Concept denomination</th>
<th>Concept description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Muscles and bones</td>
<td>The existence of bones and muscles is necessary for people to be able to move. Quote: “Since we have bones and muscles we can move.” (Maria, line 20)</td>
</tr>
<tr>
<td>Muscles and joints</td>
<td>Joints in combination with muscles enable movement. Quote: “We need joints, maybe some nerves and muscles. [to be able to move].” (Sabine, line 534)</td>
</tr>
<tr>
<td>Brain</td>
<td>The brain sends signals that trigger movement. Quote: “And for example the brain, if you want to do something, it sends one, sends like a signal of what you want to do.” (Alejandra, lines 504-505)</td>
</tr>
</tbody>
</table>
5 Discussion

In this section, the findings from the data collection will be discussed, in a comparison on the conceptions of the German grade 2 students prior to classes on the treated topic with the conceptions of the Chilean grade 3 students after classes on the topic.

In comparison to children before regular school entry (Schneider & Collatz, 2001), students in grade 2 already are able to name organs which they cannot perceive directly. The skeleton drawings mainly contain bones, but also partly muscles. A part of the bones can already be named by name. Similar to Wilde et al. (2011), some of the test persons draw bones loosely into the body contours, while others already have the conceptions that bones are connected by joints. However, none of the second graders is able to explain movement using the described or sketched structures before the classes on the topic.

Through classes on the topic, the Chilean grade 3 students are able to differentiate their conceptions about the structure of the musculoskeletal system, in particular about the function of muscles. In addition, they succeed in combining sub-concepts that are prerequisites for movement. However, it can be observed that even after classes on the topic the students are not able to explain skeletal movement as the interaction of muscles, bones and joints, as required by the Chilean curriculum (Ministerio de Educación de Chile, 2012, pp. 157-165). The agonist-antagonist principle is also not mentioned by any of the students. In most cases the students’ conceptions remain at the level of the description of prerequisites.

Summarizing, the following gaps can be found in the conceptions of the Chilean students after classes on the topic, which can serve as concrete starting points for the development of classes:

- Correct naming of the bone structure at least using the example of an extremity
- Connection between axial and extremity skeleton
- Position and type of muscle attachment to bone
- Structure and function of joints
- Structure-function relationship between muscle, bone and joint using an example so that movement can be explained
6 Conclusion

Even without classes, primary school students develop conceptions of the musculoskeletal system that relate primarily to structures which can represent important prerequisites for classes in order to develop the necessary structure-function correlations in class. The teaching at the participating schools in Chile so far has led to a differentiation of conceptions about the structures of the musculoskeletal system and the prerequisites for skeletal movement. However, it does not succeed in developing an understanding of skeletal movement, at least in the interviewees. It is possible that classes which focus more on the students’ conceptions (cf. Weitzel, 2014) can help to develop such a deeper understanding. At least this is what previous studies on other scientific topics suggest (Amin et al., 2014).

At least after the classes in Chile there is no cultural difference between the conceptions of the children from Germany and Chile. All children, regardless of their origin, refer in their descriptions to direct experiences with their own bodies. The combination of guideline-based interviews with students’ sketches proves to be a suitable survey instrument in contrast to purely verbal survey formats and seems to be superior to other methods in their ability to generate rich data (cf. Wilde et al., 2011). The qualitative and in-depth approach of the study expands research on students’ conceptions, including conceptions of the musculoskeletal system. For the first time, the study also provides data from Chilean primary school students on their conceptions of the musculoskeletal system, a compulsory topic of the primary school curriculum in Chile.

References


Using a Qualitative Research Approach to Investigate Identity Development in the Context of International Volunteering Experience

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Abstract

Determining identity development using the semi-structured Identity Status Interview based on Marcia et al. (1993) is an example for the application of qualitative methods in data collection in developmental psychology. When it comes to data analysis, standardized methods are often preferred in this area, leaving hardly any room for insights into individual development processes. The present article therefore provides a process-oriented qualitative approach in which identity development is investigated through the combination of biographical narrative interviews following Schütze (2016) and a psychological analysis method, the Voice Approach based on Gilligan’s Listening Guide (2015). I show that with this combination the comprehension of an individual’s development is possible, while at the same time societal aspects can be taken into account. Especially inner negotiations of conflicts between the self and external influences can be analyzed this way. The research approach presented here is part of my ongoing dissertation project on the subjective meaning of international volunteering from the perspective of former volunteers. The contribution seeks to complement quantitative-oriented approaches in the area of identity development.

1 Introduction

Qualitative methods were marginalized in developmental psychology for a long time. Even today, they are still often only applied in mixed methods approaches, as the potential of qualitative research in theory development has not been fully recognized yet (Mey, 2010, p. 757). However, identity development according to Marcia, Waterman, Matte-
son, Archer and Orlofsky (1993) is an area in which qualitative methods are applied frequently in data collection. But when it comes to data analysis, standardized methods are often preferred, leaving only little room for insights into individual development processes (Mey, 2010, p. 755ff). The individual was recognized as a self-reflexive subject on a theoretical level for quite a long time in developmental psychology. However, this was not reflected on a methodical level, e.g. through interpretative approaches (Mey, 2010, pp. 755-756).

The present article therefore provides a qualitative research approach to complement the quantitative-oriented approaches. Here identity development is investigated through the combination of a sociological method, Biographical Narrative Interviews following Schütze (2016), and the psychological analysis method Voice Approach (Kiegelmann, 2000 and Kiegelmann, 2007), an enhancement of Gilli-gan’s (2015) Listening Guide. The assumption is, that the combination of these two methods enables insights into the development from an individual’s perspective with a focus on negotiations with “inner and outer worlds” (Gilligan, 2015, p. 69), especially when it comes to internal struggles.

The research approach presented here is part of my ongoing dissertation project on the subjective meaning of international volunteering from the perspective of former volunteers. The context volunteering seems to be especially interesting from a developmental psychological perspective, because it provides opportunities for the fulfillment of developmental tasks (Krettenauer & Gudulas, 2003). The term “international volunteering” involves voluntary services abroad and forms of civic engagement in a university context in the presented study, such as engaging in a student initiative, or in the context of international aid associations. The engagement in all cases includes a stay abroad.

The dissertation project builds on studies investigating relations between identity development in adolescence and international voluntary services. These relations will be illustrated in more detail in Section 2 of this article. The Identity Status Approach (Marcia et al., 1993) and how identity is investigated within this approach is explained briefly in Section 3. This approach marks an important step in the operationalization of research on identity.
The proposed qualitative research approach is described in detail in Section 4, with a focus on data collection and data analysis, illustrated with an empirical example.

2 Identity Development and Volunteering

According to Krettenauer and Gudulas (2003), the possible “functional relations between volunteering and individuals’ coping with special developmental tasks” (p. 221) are particularly interesting from a developmental psychological perspective.

Research on civic engagement in Germany has been growing since the eighties (see Benedetti, 2015, pp. 51-53; Düx, Prein, Sass, & Tully, 2009, p. 12-22). Several studies demonstrate a strong connection between civic engagement and biography (Jakob, 1993; Benedetti, 2015). The “biographical fit”¹ (Jakob, 1993, p. 281), meaning that volunteering activities are closely linked to biographical plans, seems to be characteristic for shorter and more individual forms of “new” civic engagement compared to “traditional” long-term forms of voluntary commitment throughout life². Depending on the stage of life, individuals therefore can have different motives for volunteering: adolescents aim at gaining professional qualification, adults may seek a counterbalance to work etc. (Krettenauer & Gudulas, 2003, p. 222). Krettenauer and Gudulas (2003) transferred this into a developmental psychological question and discovered a connection between adolescents’ motives for wanting to do voluntary service abroad and aspects of identity development. They did research on adolescents, who decided to take part in voluntary service abroad and a comparison group, who did not take this decision. They found out that a certain identity status, Moratorium (see below for more details), correlates with a strong willingness to take part in a voluntary service programme as well as the motives “detachment from parents”/ “self-discovery” and “exploring professional perspectives”³ (Krettenauer & Gudulas, 2003, p. 226).

¹ Original version in German: “biographische Passung” (Jakob, 1993, p. 281)
² For a detailed discussion see Beher, Liebig and Rauschenbach (2000).
The underlying theoretical model on identity development and how this is operationalized for research studies is described in the following.

3 Theoretical and Methodical Framework

There are many concepts of identity⁴. In the presented article, however, the focus is on the Identity Status Approach by Marcia et al. (1993), which is explained in brief below. Marcia’s contribution consists of „paving the way for obtaining empirical access to personal identity development“, according to Born and Watzlawik (2007, p. v). The Identity Status Approach builds on Erikson’s Eight Stages of Psycho-social (Ego) Growth (Marcia, 1993, pp. 3-7), which although strongly criticised, still has great influence in social psychology (Keupp, 2008, p. 25-33). The second part of this section addresses the Identity Status Interview, a method to determine identity statuses.

3.1 Identity Status Approach

Marcia (1993, p. 7) defines identity as follows:

“The experience of having an identity is that one has a core, a center that is oneself, to which experience and action can be referred. One can trace one’s history in a meaningful way to one’s present situation and can extend that line into probable futures.”

He points at the differences of “conferred” and “constructed” identities and the consequences either form can have with regard to how life is perceived: as “fulfillment of expectations” in the case of conferred identity or “the creation of self-relevant forms” in the case of constructed identity (Marcia, 1993, p. 8).

Marcia developed the Identity Status Approach (1966), describing four different identity statuses through extending and operatio-

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⁴ For an overview on concepts of identity from a social psychological perspective see Keupp (2008).
nalizing Erikson’s model. It builds on Erikson’s variable “commitment”, understood as “personal investment” (Marcia, 1966, p. 551). This variable “determine[s] presence or absence of identity” (Marcia, 1993, p. 9). Marcia extended the model by the variable “crisis”/ “exploration of alternatives” (Marcia, 1993, pp. 10-11). By looking at how much exploration was carried out by an individual, four identity status types could be differentiated that are characterized by commitment and lack of commitment: The two statuses with commitment are (1) Identity Achievement and (2) Foreclosure. Identity Achievement means that commitment in an identity domain was reached through exploration. In the status of Foreclosure commitment was achieved without prior active exploration. This leads to a conferred identity (see above). The two types that are characterized by a lack of commitment are the status of (3) Moratorium and (4) Identity Diffusion. Moratorium describes a status of active exploration, accompanied with concern by the individual. The status of Identity Diffusion is characterized by a lack of exploration and is not perceived as a crisis by the individual (pp. 10-11). This is just a very brief summary. See Marcia et al. (1993) and Marcia (1966) for more details.

Whereas identity development according to Erikson takes place in adolescence, the Identity Status Approach is according to Marcia (1993) “a life-span developmental one” (p. 21; see also Stephen, Fraser, & Marcia, 1992). A commitment made can be questioned with the appearance of new thoughts etc. Moratorium, therefore, can be re-entered (Stephen et al., 1992, p. 296).

3.2 Investigating Identity with the Identity Status Interview

As stated above, research on identity development is one of the areas in developmental psychology where researchers work with qualitative approaches in data collection for a long time (Mey, 2010, p. 755). Marcia is one of them. The approach to investigate the identity status of an individual is characterized through open data collection followed by a quantitative data analysis (see Matteson, 1993; Waterman, 1993). This is described briefly in the following.

Because identity is, according to Marcia (1993), of an “intra-psychic and phenomenological” quality (pp. 8-10), it has to be made
measurable. The domains “occupation” and “ideology”, already identified by Erikson have been divided into “occupation”, “religion” and “politics” and expanded by several further domains such as “gender-role attitudes” or “relationships with friends” (Waterman, 1993, pp. 156-157). The identity status is determined in a semi-structured interview, the Identity Status Interview, through questions regarding the different domains (Waterman, 1993). The data is then analysed in a quantitative way, using a manual with given evaluation criteria (Waterman, 1993, p. 172-176).

A qualitative research approach that adds a process-perspective to the investigation of identity development, with the possibility to go deeper into the data in selected sections, is described below.

4 Description of the Qualitative Research Approach

My initial research interest was focused on the development of former volunteers after their volunteering stay abroad, particularly in how the stay may have influenced e.g. professional decisions. A retrospective study design with Biographical Narrative Interviews seemed to be feasible in the framework of a dissertation project. In addition, the connection between volunteering and biography (see Section 2: Identity Development and Volunteering) can be taken into account in a long-term perspective through this type of interview. This is complemented by a qualitative approach in data analysis to get a deeper understanding of individual development processes as an addition to the above-mentioned studies on identity development. Both approaches will be described in detail below.

4.1 Methodology

Reconstructive biographical research seems to fit the above-mentioned demands for process-oriented research in the area of identity development, because it is seen as an approach of generating knowledge from the individual’s perspective within a changing society, taking sociological aspects into consideration for answering psychological questions (Schulze, 2010, pp. 579-580).
The added value of biographical research especially in developmental psychology is presented by Kaiser (2005, pp. 241-243). Some aspects are mentioned here as examples: (1) An emphasis on the historicity of an individual through a focus on life-course and biography is possible by conducting biographical research. (2) Individual development can be analysed in a very detailed manner. Generalisations cannot be made very easily. (3) Subjective meaning can be taken into consideration as an addition to neuropsychological explanations (Kaiser, 2005, pp. 241-243).

Although a sociological method, according to Kaiser (2005) Biographical Narrative Interviews are particularly suitable for investigating developmental psychological questions, since development processes can be understood through the chronological order of one’s life story (p. 255). The application of Biographical Narrative Interviews in the presented study is described in the following.

4.2 Data Collection through Biographical Narrative Interviews

Biographical Narrative Interviews based on Schütze (2016) are applied for data collection in the presented study. I followed Rosenthal’s (1995) description for conducting the Narrative Biographical Interviews (pp. 186-207). She further developed the use and analysis of Biographical Narrative Interviews.

According to Schütze (2016) the development of a biographical identity can be traced with this method, with very limited intervention on the interviewer’s side (p. 57). The underlying assumption is that experience becomes tangible in narratives (Schütze, 2016, p. 57). It is possible to reconstruct how life events happened and how individuals perceived and processed experiences. Conscious and unconscious aspects can be interpreted in the context of the factual events of one's life (Schütze, 2016, pp. 55-56). Rosenthal (1993, p. 3) states:

“A life story does not consist of an atomistic chain of experiences, whose meaning is created at the moment of their articulation, but is rather a process taking place simultaneously against the backdrop of a biographical structure of meaning, which determines the selection of the individual episodes.
presented, and within the context of the interaction of a listener or imaginary audience.”

The Narrative Biographical Interview consists of three main parts. (1) The first part is the narrative request, in which the interviewees are invited to tell their life story, either in general or related to a certain phase of life (Schütze, 2016, pp. 56-57). The focus is set on volunteering through the initial opening question in the presented study, in line with the research focus:

“The overall subject is international volunteering. I am interested in the stories of your life that are important to you. Please tell me your life story, how did you get to this point.”

The interviewee is not interrupted in this part, unless the interviewer cannot follow the narration. The interviewee usually signalizes the end of this part. (2) The second part consists of questions through the interviewer. (3) The interviewee is requested to summarize her or his life on a more abstract level in the third part (Schütze, 2016, p. 56-57).

**Narrative Analysis based on Schütze.** The Narrative Analysis based on Schütze (2016) aims at determining the underlying biographical process structures of an interviewee’s biography:

1. Biographical Action Scheme,
2. Trajectory of Suffering,
3. Institutional Expectation Pattern,
4. Biographical Metamorphis Development (see Betts, Griffiths, Schütze, & Straus, p. 16; Schütze 2016, pp. 60-64).

These structures differ in respect of how individuals perceive their biography with regard to their activeness in shaping their life. A Biographical Action scheme means that individuals actively determine their lives. A Trajectory of Suffering means that individuals feel controlled through external influences (Schütze, 2016, pp. 60-64). See Schütze (2016) for a description of the analysis.

Schütze (2016) states that although biographical research in social sciences focusses on the relevance of certain life events for certain groups or cohorts, how individuals perceive phases in life has a major
impact on how they will act in this phase and how they manage difficult phases in life in the future (p. 55). Biographical Narrative Interviews and Narrative Analysis therefore seem to be suitable to investigate developmental psychological questions through this focus on the subjective meaning. This approach will be combined with a psychological based analysis method, which is described below.

**Data Analysis Based on the Voice Approach.** The assumption is that former volunteers in the presented study will have to deal with social expectations, individual wishes, possible plans on future volunteering and ambivalent thoughts about development cooperation, when it comes to shaping and planning life. To reconstruct these different and maybe partly conflicting voices within a person, I will apply the method of the Voice Approach (see Gilligan, 2015; Kiegelmann, 2000; Kiegelmann, 2007) for the analysis of interviews to complement the above described Narrative Analysis. The Voice Approach is mainly applied as an analysis tool in the presented study. Beyond that it includes a comprehensive model, also referring to the interaction between interviewers and interviewees. It is based on a relational approach, meaning that the interviewer acts in a responsive way, encouraging the interviewees to express their feelings and thoughts (Gilligan, 2015, pp. 72-73). The underlying assumption is according to Gilligan (2015) that voices and the interaction of such „provide[…] a way of exploring the interplay of inner and outer worlds“ (p. 69). The aim of the analysis is to work out how identified voices relate to each other: are they in harmony or in a relation of rivalry and power (Gilligan, 2015, p. 70)? Gilligan (2015) describes three steps of listening: (1) Listening for the Plot, (2) Listening for the “I” and (3) Listening for Contrapuntal Voices (p. 71-72). By generating so called “I poems” from the transcript, the “associative stream that flows through the narrative, running underneath the structure of the sentences” (Gilligan, 2015, p. 72) can be captured. The approach has been adapted e. g. by Kiegelmann (Kiegelmann, 2007, p. 65). What is relevant for the present article is Kiegelmann’s suggestion to not only focus on the “I”-statements but on all pronouns and namings referring to the self (Kiegelmann, 2007, pp. 67-68).
Kiegelmann (2007, p. 63) illustrates the common features of the Voice Approach and Marcia’s Identity Status Approach in her contribution:

“[B]oth approaches point to similar features of developmental processes when they address identity formation as active processes of human beings within their social surroundings.“

She comes to the conclusion, that especially through the step Listening for Self “latent expressions of how a speaker relates to the topic she or he is talking about” can be made visible (Kiegelmann, 2007, p. 69).

In line with Narrative Analysis the Voice Approach “relies on the epistemic principle that eliciting and analyzing narratives is an appropriate mechanism for understanding the ways research participants make meaning of their experiences”, according to Sorsoli and Tolman (2010, p. 497). The underlying assumption is that a shift in language can indicate psychological processes of shifting from one state of the mind to another. Thus, it reveals different perspectives on experiences (Sorsoli and Tolman, 2010, p. 497). A depersonalized or general statement can indicate an existing collective or social narrative, whereas a statement including the first person voice can indicate lived experience. It is possible to examine in the analysis if these two perspectives are in conflict and if this is a recurring pattern (Sorsoli & Tolman, 2010, p. 503).

The first step Listening for the Plot is very close to other qualitative analysis methods (Gilligan, 2015, p. 71). I will apply Narrative Analysis throughout the interview to systematize the first step with regard to my research question and continue with the further steps of the Voice Approach on parts of the interview, where the interviewee expresses doubts, conflicts or internal struggle. An example for such a part is illustrated below.

Example. As an example I would like to show an excerpt from an interview I conducted in the context of my dissertation project. Stefan\(^5\) was engaged in a student initiative during his studies, which supports

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\(^5\) Personal data has been anonymized.
regions abroad that are affected by natural disasters. He finished his studies and is already working at the time of the interview. He mentions that in the future he would like to focus on socially relevant topics with his own business “to satisfy the do-gooder” in him. When later in the question part the interviewer asks what he meant by “do-gooder” he starts with a long definition of what it means to him, revealing some potential internal struggle based on the dichotomy of altruism and egoism. Stefan is aware of the negative connotation of this term in public, but does not agree with it. “I say a do-gooder is (.) uhm someone who (.) pays attention to how he lives and how he deals with his fellow human beings.”

His definition seems to be the result of reflection processes, indicated through statements such as “I say”. The definition itself is formulated as a general statement “a do-gooder is.” However, when he applies the definition to his stay abroad in the context of the student initiative, he rejects the altruistic intentions behind it, reducing it to a “good side effect that calms”. Instead, he reveals the egoistic motives of persons doing this kind of engagement (e. g. self-realization).

This struggle could be interpreted as Moratorium. Stefan seems to be in the process of negotiating potential conflicts with respect to the ideological aspects of volunteering with himself. This negotiation could be assigned to the domain of “Religious Beliefs” according to Marcia et al. (1993). Waterman and Archer (1993, p. 257) state that in comparison with adolescents

“[f]or many adults many more life decisions may be viewed as bearing on the consistency with which one acts upon religious beliefs, including […] charity and caring for the less fortunate, in addition to the issues of the younger age groups. As a consequence, adult interviewees may call attention to the discrepancies between their avowed religious or ethical beliefs and their actual behaviors.”

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6 The interpretation is based on the results of a joint interpretation session during a post-conference workshop held by Prof. Dr. Mechthild Kiegelmann on the 16th of April 2018, within the context of the Meeting of the Center for Qualitative Psychology.

7 Original version in German: “Ich sag mal ein Gutmensch ist (.) ähm jemand, der (.) darauf achtet, wie er lebt und wie er mit seinen Mitmenschen umgeht.”
Presumably, one could have come to the same interpretation result, using the Identity Status Interview. The additional benefit of using the Voice Approach for data analysis in my opinion appears when looking more closely at where the “I” is present in the statements. This is illustrated in the next excerpt.

<table>
<thead>
<tr>
<th>Original version in German</th>
<th>Translation</th>
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</table>

Without going deeper into the analysis, the change of the pronouns from “one” [1] to “I” [2] and back to “one” [6] and even leaving the pronoun out completely (“self-realization is part”) [11], is noticeable in this excerpt. This could be interpreted as different voices within Stefan with regard to the question: who benefits from this kind of international volunteering offered by the student initiative. They could

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The excerpt is divided into different sections marked with numbers, to make the following interpretation more comprehensible. Marked in bold are the descriptions of the self with the respective verb.

Transcription conventions:
S: Stefan
I: Interviewer
/: word or sentence breaks off
( ): short break
be divided into an altruistic perspective (“I only give.”) and an egoistic one (“self-realization is part here”). Stefan seems to struggle between these two perspectives. One could assume that the egoistic perspective is a critical external perspective he tries to deal with, whereas his self (“I”) seems to be more involved with the altruistic perspective, which can be seen in the sections 1 – 4, where he uses the first person very often. Section 5 marks some kind of break. It is not clear who is speaking (“strictly speaking”). With this he introduces a section where he looks at the actions and motivations from a different perspective, at first repeating the altruistic attitude, this time in a more generalized way (“one takes”) and then with repeating the „strictly speaking“ again, naming the egoistic motives of persons doing this kind of engagement. For this, he twice starts a sentence using the indefinite pronoun “one” [8, 10], but then continues not using a pronoun at all [13]: „the point of self-realization is part here, maybe this developing something in a team together is part, too.“ This could be interpreted as gradually distancing himself from the statements, which leads to the assumption that this perspective is not so much part of his identity, but is, as indicated above, an external voice, e. g. critique expressed by someone. This is just a first interpretation. The next step would be to search for similar parts throughout the whole interview.

5 Conclusion

In this example, the ideological aspects of volunteering seem to be important for the interviewee. The dichotomy of altruism and egoism is a recurring theme in studies on volunteering, e. g. in Haas’ (2012) work on the ambivalence of reciprocity in the voluntary service program weltwärts. Whereas the content would not be so much in the center of interest from an Identity Status Approach-perspective, it is indeed interesting when looking at the functions of volunteering in the process of identity development.

I attempted to show the advantages of Biographical Narrative Interviews and Narrative Analysis and the depth that can be reached
through applying the Voice Approach in the analysis to investigate identity development comprehensively. With the biographical approach, a developmental process-perspective can be added to the Identity Status Approach through working out the individuals’ biographical process structure. The open way of data collection leaves a lot of room for the interviewees to bring in what is important to them. With this it is not only possible to determine the identity status the person is in at a certain moment, but also how the participation in moving on in life in general is perceived by this person. By applying the Voice Approach a focus is set on internal struggles, determining the different perspectives former volunteers are dealing with.

This study seeks to contribute to the further integration of qualitative methods in developmental psychology with the combination of the Voice Approach and Biographical Narrative Interviews. The presented approach seems to be promising. However, it has to be explored in detail with further interviews in the course of the presented dissertation project.

References


The Role of Gender in the Recovery from Eating Disorders –
what can we Learn from Formerly Affected Persons?

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1 Introduction

The presented study addresses the interrelations between gender and the eating disorders anorexia nervosa and bulimia nervosa by means of narrative interviews with formerly affected persons of different gender identities. By taking into account feminist theories on eating disorders and by applying a queer concept of gender on the topic of eating disorders, this study is positioned between the traditionally very different research lines of clinical psychology and gender studies and opens up a new perspective. With the interview analysis focussing on changes of the individual’s experience during the process of recovery and their connections to gender, results can provide implications for treatment.

2 Relevance of the presented study in its theoretical context

2.1 Initial Points

Anorexia and bulimia nervosa show a highly gender-specific prevalence: about 90 % of affected persons are female. Although this means that female gender is the highest risk factor for the development of an eating disorder, psychological theories about eating disorders do not yet provide a satisfactory explanation for this connection to gender. Treatment methods for anorexia and bulimia show success in about one-half of the patients, but chronification and mortality remain a substantial problem (S3 guidelines for eating disorders of the AWMF, 2010, S.73,
S.88-100, S.197, S.203-206). Therefore, research that opens up a new perspective on these eating disorders is needed.

2.2 Psychological and feminist approaches

Psychology offers a wide range of theories on eating disorders from psychodynamic (Bruch, 1982) and systemic approaches (Palazzoli, 1978) to cognitive-behavioral and biologist models (Legenbauer & Vocks, 2014). Although sociocultural ‘factors’ are usually mentioned and especially systemic approaches stress the importance of family interactions, psychologist theories usually frame an eating disorder as an intra-individual psychopathology, a problem essentially located in the individual. The question of the highly gender-specific prevalence can then be answered by pointing to extreme ideals of slimness that are internalized by vulnerable young females.

A different perspective can be found in theories stemming from sociology and cultural studies that take a feminist stance and analyze the ways in which society shapes the individual and how gender as a basic social category is relevant to a person’s experience and behavior. They have argued that the role of women in society or the ways femininity is constructed are crucial to the development of eating disorders: Objectification theory (Frederickson & Roberts, 1997) for example explains how the constant evaluation of female bodies leads young girls to disconnect from their own body and its internal signals and perceive it through an evaluating outside perspective. Concerning slimness ideals, feminist theories have pointed out that they cannot be seen as something produced by the media and then consumed by individuals, but as something that arises from specific cultural values and carries social meaning itself. Bordo (1993) and MacSween (1993) for example have identified the pursuit of slenderness as the embodiment of, and a solution to, a conflict of contradictory ideals that women have to fulfill both at the same time: the ideal of an autonomous, disciplined and strong individual on the one hand, and the female ideal of softness, care and fragility on the other. Due to fundamental differences in epistemological bases and research paradigms, these theories have received little recognition in clinical psychology or have been adopted in trivialized forms (e.g. as a female role conflict).
These different understandings of eating disorders lead to different assumptions on how to deal with them: A psychological understanding of an eating disorder as an intrapersonal psychopathology calls for a solution of the individual's problems through psychotherapy or in the case of systemic approaches, a therapy that includes the family or relevant system of persons. Concerning slimness ideals, the individual has to overcome her over-internalization of these unrealistic ideals. A feminist understanding of eating disorders as something essentially tied to culture and social constraints on women demands for social change and often rejects the idea that these problems can be solved on an individual level. Despite this reasonable critique, from a psychologist point of view, the question of what is helpful to a person acutely suffering from an eating disorder remains relevant. Therefore, the presented study maintains a psychological perspective by dealing with individual experiences and addresses the question of how changes in the process of recovery are connected to gender as a social entity.

2.3 The missing perspectives

A problematic point in feminist theories that focus on gender as relevant to eating disorders is that they provide explanations only for women. Despite the predominance of girls and women among the affected persons, there are also men who suffer from eating disorders. Furthermore, persons with gender identities such as transgender, intersexual or queer, that are not even recognized in these statistics, have a high risk of developing eating disorders (Castellini, Lelli, Ricca & Maggi, 2016) and face different social challenges regarding their gender. If gender is of basic importance to eating disorders, a theory on this topic should be able to provide explanations not only for one gender.

2.4 Theoretical access: Measuring gender?

While feminist theories differ a lot concerning their models of gender, the recognition of the social quality of gender categories is a well established common ground in gender research and other social sciences
(Degele, 2008). Psychology, however, lacks theorization of the concept of gender and tends to treat it as something that is understood by common sense (for a detailed critique see Sieben, 2014). Even studies that deal with gender mostly work with a binary model that divides gender into two supposedly natural categories, men and women, which does not need further explaining or definitions. While psychological research acknowledges that there are different gender roles for these two categories, it, in general, does not deal with gender as a socially constructed category that is of basic relevance to a person’s socialization, behavior, and experience. I argue that this lack of theorization limits the possibility of understanding the relevance of gender (for a detailed critique see Springmann, in press).

This shortcoming is supplemented by the limited access quantitative research methods provide to the understanding of this topic: Gender is often addressed by means of group comparisons, which allow for the detection of gender differences but neither for an understanding of the quality and causes of these differences, nor of gender-related meanings and experiences. To address the relevance of gender roles, quantitative research relies on correlations between questionnaires that measure the acceptance of gender roles (e.g. traditional) and other variables. Results concerning gender roles and eating disorders have shown to differ depending on which questionnaire is used (Pritchard, 2008; Mussap 2007). I argue that gender as a social category influences a person and their social experiences on various levels that cannot be reduced to the extent of cognitive approval of a specific pre-defined gender role, such as gender-specific expectations and valuations of others, or sexual harassment (Springmann, in press). Even though empirical evidence supports the hypothesis that gender is relevant to the etiology of eating disorders, as I will point out in the following section, little is understood about the quality of this relationship. Therefore, qualitative research methods, that are sensitive to the individuals’ experiences and meanings, are needed on this topic in order to develop new hypotheses.
3. State of Research

As mentioned above, research investigating connections between the acceptance of gender roles and eating disorders produces contradictory results and its methods can be questioned. A different approach with a quantitative design can be found in a study by Morrison & Sheahan (2009), as their research confirmed gender-related discourses (self-silencing, suppressed anger and objectified perception of the own body) as mediators between thinness-ideals and disordered eating in women. There are two qualitative studies by Holmes (2016) and Moulding (2016), who dealt with eating disorders in relation to gender by interviewing formerly affected women. Both studies found gender-specific social experience to be important for the development of, as well as the recovery from, anorexia and bulimia.

Concerning men, findings are contradictory: While some studies claim that ideals of masculinity put men at risk for disordered eating (Strother, Lemberg, Stanford & Turberville, 2012), results of others present masculine gender ideology as a protective factor (Magallares, 2016). I suspect that these differences might be dependent on the definition of eating disorder symptomatology and specifically on whether or not the striving for greater muscularity is considered a symptom or not. Locker, Heesacker and Baker (2012) found the concept of self-silencing (the suppression of one's needs and wishes) to be related to psychological aspects of disordered eating in women as well as men. Thus, they argue that the psychological bases of eating disorders might be the same for men and women, while eating disordered behavior might differ due to different body ideals (skinny for women and lean but muscular for men).

A review of Castellini et al. (2016) confirmed that non-heterosexual men are at higher risk for developing eating disorders than heterosexual men, a well-recognized fact in the literature. For non-heterosexual women, the results are less clear. Concerning transgender persons, Castellini et al. (2016), as well as a review by Jones, Haycraft, Murjan and Arcelus (2016), concluded that they are at high risk to experience body dissatisfaction and disordered eating. Nevertheless, the problem remains that little can be said about the quality of these connections: Why and in which ways is a non-normative sexual orien-
4. Description of the study

4.1 Aims and Principles

Based on the findings and remaining questions arising from the discussed theories and research strategies, the presented study investigates the relevance of gender for eating disorders by building on the following principles:

- The study deals with the relevance of gender on an individual level and thus maintains a psychological perspective, while being informed by a wide theoretical background that includes theories from cultural and social sciences.
- It aims to make the perspectives of formerly affected persons visible and use them for scientific insight by applying a qualitative design.
- It focusses on changes during recovery in order to take a solution-oriented perspective and provide implications for treatment and self-help strategies.
- It aims to include a wide range of gender identities and sexual orientations to generate a comprehensive theory on the connection between gender and eating disorders.

4.2 Methods

The research process is based on the principles of Grounded Theory (Glaser & Strauss, 1998). I use theoretic sampling and collect new data during the research process to widen and complete the perspectives and insights gained by the data collected so far.

The first field phase started by interviewing cis-gender1 women, who constitute the biggest group of affected persons. It is also the group
on which there already exists the most research, giving a relatively familiar point to start from and move on to persons with other gender identities to complete and contrast perspectives.

Narrative interview technique is employed as a very free approach in order to give the participants space to voice their experiences. For analysis, two methods are combined: Grounded Theory coding procedures are used to derive relevant categories from the contents of the interviews and integrate them into a theoretical model. In addition, the method of Voice Centered Listening, developed by Carol Gilligan and her colleagues (Gilligan, 2015; Kiegelmann, 2000) in the context of feminist psychology, is applied on interview parts that are especially interesting or difficult. This method is sensitive to different or conflicting parts or 'voices' inside an individual, providing a possibility to go beyond the content level.

Reflecting on one's own subjectivity in the process of working with qualitative material is of substantial importance to remain open and reduce biases. Voice Listening therefore includes the reflection on the researcher's emotional reactions and associations as a fixed step in the analyzing process. I also use the perspectives of other scholars on interview material in working groups to maintain openness.

5. Case example

Since the study is still in progress final results cannot be presented here. To give an example of relevant themes that occur in interviews, and of how feminist theory can be beneficial to the psychological understanding of eating disorders, I present the exemplary case of Johanna, a 28 year old cis-gender woman. Johanna reported having been overweight as a child and having experienced bulimia from her teenage years until her early twenties. Not unusual for bulimia, her eating disorder started with a period of anorectic behavior and extensive weight loss. She underwent inpatient admission and several outpatient treatments and described some of them as very helpful. During the interview, she identified the following two themes that were crucial to her recovery process.
Me and the chubby little girl
Johanna described a problematic process of accepting an image of a little girl inside of her, which is connected to childhood memories of being rejected, laughed at and neglected, best described in a sentence from the interview, speaking to this inner child: "You are fat, you're ugly, /ehm, and no one likes you!" She describes a family situation, in which her older brother is declared the "problem child" of the family who needs a lot of attention, while her mother has psychological problems herself and rather relies on the child to take care of her than the other way around. The father is described as authoritarian and critical, but at the same time the person to rely on in the family. In this constellation, Johanna did not have room for her needs and problems. Therefore, she learned to comfort herself with food, which made her become overweight and being bullied at school. Applying the method of Voice Listening, it is striking how her language changes when talking about this child that she struggles to accept and identify with, reflecting this conflict, which is still not completely resolved: She switches from first person I to third person it: "[...] my brother [was] the problem child and I was this chubby little girl, it was there, but never caused much problems, who was always content somehow and okay with everything, but of course also had her problems but never really said anything about it."3

While having a difficult childhood and experiencing fat-shaming is not necessarily gender-specific, two aspects in this process of self-acceptance relate to feminist theories about eating disorders: First, taking care of others' needs and setting own needs aside has been presented as a part of female socialization and as something that parallels the difficulty to accept and fulfil one's own bodily needs for food and rest (see Orbach, 1986; Bordo, 1993). Second, the notion that it is not appropriate for women to take up space, neither in a physical nor metaphorical sense: In Johanna's case, not having room for her needs leads her to use food as a compensatory satisfaction, which in turn makes her take up more room in a physical way, which then leads to being rejected for not fulfilling cultural ideals and experiencing more shame and isolation.

The fairy and the giant
Johanna, being a rather tall person, also described a process of trying to accept “what I simply am, in my physical built.”4 She remembers her therapy to have been a lot “about me feeling like a giant, but wanting to feel more like a fairy.”5 This desired idea of a fairy she explains as follows: “Well, this delicate, feminine, /ehm, somewhat this picture of a /of a beautiful woman. That, that… yes, that is actually a bit imposed on you, a pretty, little, delicate woman, that is sensitive and gentle, and / ehm, well, hm… (breathing out) light. And that somehow people, or /or maybe men /or society like.”6

This could either be seen as an individual problem of a person struggling with beauty standards that they do not fit into, or as an example of the struggle with gender-specific social norms. Note that in this description of a fairy, it is not only about bodily features. She later describes that the fairy-ideal is also about being gentle and well-adapted to social expectations. Especially in her anorectic phase, Johanna describes that her efforts to approximate this ideal made her behave more restrained and less rebellious, even though she remembered herself from her childhood as someone who always had a ready tongue and knew how to stand up for herself. She changed her appearance not only by establishing a rigid control over her eating behavior and losing weight but also by dressing more posh and conservative.

Here it becomes visible, how feminine beauty norms act as an embodiment of general notions about appropriate femininity. In this anorectic phase, her behavior was not only aimed to become more thin and delicate, but also to reach self-control and achievement: “My personal record that I set for myself at that time was that I didn’t eat anything two days in a row, so /so that was something, where I was competing with myself, how long can I stand not to eat anything, how little can I eat then, how much sports can I do then.”7 Ignoring the relation to gender (which is obvious in this case, since the fairy-ideal is explained as an ideal of femininity) this pattern could be explained as a teenager struggling for an autonomous self, as psychodynamic theory building on Bruch (1982) would put it. Drawing on feminist theory as introduced by Bordo (1993) and MacSween (1993), this can serve as an example of how striving for thinness can be understood as the embodiment of the contradictions between an ideal of an autonomous, achieving individual and an ideal of female delicateness and restraint: Reaching autonomy by controlling and denying one’s own needs instead
of trying to fulfill them, competing and achieving without being offensive to anyone, thereby fulfilling the ideals of restraint and transforming the body into a more delicate form, taking up as little space as possible.

It is important to note, that Johanna did not conform to this ideal of femininity in an uncritical way. As she described it, she never felt really comfortable with it even when trying to achieve it, and also questioned it on a rational level. “And I think that this always put a lot /a lot of strain on me that /that somehow, in /in my /in my mindset, (2) the /the goal to be achieved was this being adapted, but I never lived it and never could live it.”8 Even in the years to come, when she felt clearly that she does not want to be adapted to the social expectations she felt, it was not possible for her to just put this ideal aside: “But nevertheless, this paradox was /was always present.”9

These exemplary illustrations of Johanna’s case point out in what ways gender as a social construct can be important in the development and also in the recovery from eating disorders, since Johanna’s recovery process was a lot about negotiating gender norms and the social consequences she had to deal with for not fulfilling them.

6. Implications

Moving away from this case example, the goal of this study is to empirically derive an overarching model of the relevance of gender from the perspectives of different formerly affected persons. To my knowledge, this will be the first study that aims to include and combine the perspectives of persons of different gender identities in a qualitative analysis on this topic. Although the introduced feminist theories, that explain the relevance of gender for women with eating disorders, are based on empirical data in forms of interviews or experience with clients, do not provide transparent information on their research methods and the process of analysis that lead to their conclusions. An empirically thorough and transparent study can be an opportunity to bring these perspectives into the field of psychology as a valuable complement and challenge to existing psychological theories, while critically reassessing and possibly extending those perspectives.
References


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Andrei is different and Selma loves Sandra: 
Living situations of LGBTQ+ from 
religious or immigrated families in Germany

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Abstract

Scholars suggest that minority individuals in immigrant populations are highly vulnerable to discrimination (cf. Clarke, Ellis, Peel, & Riggs, 2010). We conducted quantitative interviews with 36 lesbian, gay, bisexual, transgender, or queer (LGBTQ+) youth/young adults from religious or immigrated families residing in Stuttgart metropolitan area in an effort to explore their unique experiences. Interviews focused on social environment and overall living situation. We used Braun and Clarke’s (2006) thematic analysis method to analyze transcripts of our interviews, with a focus on experiences and subjective meaning related to discrimination, resources, and identity management in different social contexts. Our sample proved to be highly vulnerable to discrimination, however only few of them reported making use of psycho-social / LGBTQ+ community support. Results included information about a) how the members of the sample define their own sexual, gender, cultural, and religious identities, b) how integrated they feel in their social contexts, c) what experiences have strongly influenced their lives, and d) what kind of support they would like to have.

* Our special thanks go to the interviewees for their participation in the study. We would also like to thank the members of our research team and the students from the qualitative methods colloquium at the University of Education Karlsruhe, all of whom contributed to the implementation of the study. The study was made possible by financial support from the Federal Ministry for Family Affairs, Senior Citizens, Women and Youth (BMFSFJ) through the federal program Live Democracy! (Demokratie Leben!) and the Municipal Association for Youth and Social Affairs Baden-Württemberg (KVJS).
Our results suggest that some characteristics of the family background (family structure, concept of honor etc.) may be crucial to well-being, that school experiences play an important role, and that welcome signals are very helpful for LGBTQ+ religious or immigrated individuals. Our paper concludes with a discussion of the methodological consequences for qualitative social research.

1 Introduction

"No matter where I am, I feel alone." When we asked him to sum up his experiences, one participant, a young Muslim gay man, made the preceding statement. He told us about how he went to a psychological counseling center in Stuttgart to get help. He shared that, once at the clinic, he described various experiences of discrimination and worked with the counselor on ways of leading his life as a gay identified Muslim. This situation was impactful because the client bravely disclosed and explored his sexual orientation and his counselor was sensitive and competent to work with issues faced by Muslim and sexual minority people.

These conditions for supportive, culturally appropriate counseling are not common. This is unfortunate because many people identify as sexual (e.g., gay, lesbian, bisexual, asexual) and gender (e.g., transgender or non-binary) minorities and these individuals generally report sharing somewhat common experiences with therapists. In other words, many people are not cisgender (people who experience congruence between their sex assigned at birth and their gender identity) and/or heterosexual (people who are not attracted to members of their own sex). Sexual and gender minorities describe their sexual orientation or gender identity in a variety of ways that include: lesbian, gay, bisexual, transgender, intersex or queer. Thus, we use the acronym LGBTIQ+ to describe the entire diversity of non-heterosexual or non-cisgender people. The aim of the study was to learn more about the current life situations of LGBTQ+ people with a migrant or religious background in the area of Stuttgart and to derive possibilities for intervention in order to improve their life situation. (Intersexual people did not participate in the study, even though we explicitly invited intersexual persons to participate).
There are several reasons that support our qualitative approach to this question: a) identity related topics are often taboo and rarely addressed in quantitative designs because some information is hard to elicit in questionnaires or experimental settings, b) it is important to grasp the individual meanings that participants assign to sexual orientation, gender identity, ethnicity, and religion and this cannot be done with adequate detail, according to Gargner (2013) in standardized surveys, c) we assume that the life situations of the interviewees differ too greatly from each other for generalization, especially given the invisibility or hard to reach nature of these populations. Thus, the aim of this study is to explore, identify, and to demonstrate this diversity of identities and experiences.

2 Multiple affiliations: Relevant concepts

The situation of the young man described earlier is exemplary of the challenges that one faces when belonging to several minority groups at the same time or when moving between several worlds that may be considered incompatible with each other (cf. Koc & Vignoles, 2016). Meanwhile, youth work and psychosocial counseling services are often not explicitly sensitive to the concerns of LGBTQ+ people, let alone to the concerns of LGBTQ+ people with different ethnic or religious identities (see Staudenmeyer, Kaschuba, Barz & Bitzan, 2016; Wolf, Füngfeld, Oehler & Andrae, 2015). This exclusionary dynamic also applies to gay communities where people can feel excluded on the basis of their faith or ethnic identity (Beagan & Hattie, 2015). The increasing right-wing populist and neo-conservative discourses in Germany in recent years have further aggravated this situation (cf. Schirmer, 2017).

Membership in minority groups poses particular challenges, as it increases the risk of experiencing marginalization, discrimination or even violence. These experiences and the fear of them represent threats to one's own identity (Meyer, 2003). Breakwell (1986, 2015) placed the handling of threatened identities at the center of identity process theory (IPT), which we use as a framework for identity development. The IPT is based on the assumption that a person's identity is a constantly evolving, co-production between the individual and the social context. Social representations or socially divided, interactively developed and commu-
nicatively maintained beliefs are of particular importance in this context. These social representations can be conceptualized as raw material for personal identity components and can be expressed through identity (e.g. socially divided notions of Muslima and lesbian).

In our research we draw on the identity model of Breakwell (1986, 2015), because it offers the combined focus on different identity aspects. IPT is particularly suitable for this purpose because it takes into account aspects of identity development that are relevant in the course of the coming out (cf. Jaspal & Williamson, 2017). According this model by Breakwell, the identity development process is characterized by two ongoing processes. The first process is the assimilation-accommodation-process, which makes it possible to incorporate new information into the identity structure and adapt it to it (e.g. if a person discovers that he or she is homosexual). The second process is the evaluation-process, which ascribes a certain significance to an identity aspect (e.g. if one's own homosexuality is assessed positively). According to Breakwell, (1986, 2015) these ongoing identity adjustments are necessary to ensure continuity and distinctiveness of one's own identity as well as self-efficacy and self-esteem.

As aspects of the self, this study focuses on sexual orientation and gender identity, ethnicity, and religion/spirituality. Sexual orientation describes a type of attraction to a particular sex. Starting from the socially predominant idea of two, binary sexes individuals may be conceptualized as being attracted to the opposite sex (heterosexual), the same sex (homosexual), both sexes (bisexual), attracted to people independent of sex (pansexual) or as having no interest in sexual intercourse with another person (asexual). In addition, sexual orientation not only describes sexual attraction, but can also be important for self-identification that may include sexual behavior, sexual fantasies, emotional preferences, social preferences and lifestyle aspects (cf. Klein, 1990). Sexual orientation is different than gender identity. In terms of gender identity, individuals who cannot be adequately described by the labels “male” or “female” (e.g. non-binary, queer people) and people whose psychological sex does not correspond to the sex attributed at birth (transgender) are often included in the broader LGBTQ+ community.

Ethnic identity describes the cultural group to which a person belongs and ethnic identities include the aspects of one's own thinking,
perception, feelings and behavior that are influenced by that belonging (Phinney & Rotheram, 1987). “Ethnic” in this study refers to a group of people with a common origin (e.g. a nation, a people, a religion or combinations thereof) and a common history. Within an ethnic group there can be great cultural differences. Nevertheless, in everyday use ethnic borders are often referred to as cultural borders (cf. Hoffman, 2015).

Religious affiliation is the formal belonging to a church or religious community, the adherence to its values and its practices with religiosity (Shafranske & Malony, 1990). In contrast, spirituality refers to the personal relationship to one or more transcendent forces, however described (cf. Exline, 2013). Spirituality therefore does not presuppose belonging to or agreement with a group of equals.

Describing certain groups of people according to various aspects or dimensions of identity, Breakwell (2015) refers to social representations or aspects of the person that do not necessarily have to coincide with the person’s individual identities. People may reject these categories and/or may choose different labels for themselves. Individual development models are formulated to take into account these individual aspects of identity (cf. for example D’Augelli, 1994, on sexual orientation; Phinney, 1993, on ethnicity; Fowler, 1991, on religion and spirituality).

In the concept of intersectionality, the crossover and effects of different affiliations are addressed. The concept was initially forwarded by feminist theorists who were examining the overlap between race and gender (Cole, 2009). There are also studies that deal with overlaps between sexual orientation on the one hand and gender, race, ethnicity, religion or socio-economic status on the other (cf. for an overview Zea & Nakamura, 2014). Intersectional approaches assume that experiences of discrimination and violence which a person experiences on the basis of belonging to several disadvantaged groups (cf. Meyer, 2003) do not simply add up, but influence and maybe intensify each other. There are also multicultural approaches that emphasize diversity as a resource and make clear which competences or resilience factors distinguish members of minorities (for example, greater awareness and coping strategies; see Allen, Rivkin & Lopez 2014).
3 Research Question

The aim of this study is to identify relevant concepts stemming from the self-description of young LGBTQ+ people with migrant or religious backgrounds, as they discuss their current life situation in the area of Stuttgart, in order to derive intervention possibilities that address different aspects of the target group’s life (health care; school; LGBTQ+, ethnic or religious communities, etc.). In keeping with this purpose, we used the following research question for our study: What are common central themes related to being LGBTQ+ from the subjective perspective of all participants?

4 Method

Our study is a sub-project drawn from a larger study called *Andrej is different and Selma loves Sandra* (*Andrej ist anders und Selma liebt Sandra*) to investigate this question. The study was conducted by the Turkish Community in Baden-Wuerttemberg (Türkische Gemeinde in Baden-Württemberg, tgbw) and the Initiative Group Homosexuality Stuttgart (Initiativgruppe Homosexualität Stuttgart, ihs) from 2015 to 2019 in Stuttgart. In phase one, interviews were conducted with representatives of the target group in order to learn more about their self-image and their life situation. In phase two, representatives of migrant organizations, religious organizations, youth work and social work will be interviewed. The resulting data inform our efforts derive and test methods to improve the living situations of our participants.

4.1 Data collection

We recruited participants through networking with the Turkish Community in Baden-Wuerttemberg (Türkische Gemeinde in Baden-Württemberg, tgbw) and the Initiative Group Homosexuality Stuttgart (Initiativgruppe Homosexualität Stuttgart, ihs). We also advertised the study at public events such as Christopher Street Day (CSD) prides and with the cooperation of tgbw through their psychosocial LGBTQ+ counseling project in Baden-Württemberg. We included our study in various regional and national magazines, online and on radio and television. In

10 http://www.netzwerk-lsbttiq.net/beratung-selbsthilfe/beratung
addition, we set up a website\textsuperscript{11} and Facebook page\textsuperscript{12} for the project. Flyers were used to promote participation in the interviews.

4.2 Sample description

A total of 36 interviews were conducted between December 2015 and March 2017. The age range of the interviewees was from 17 to 37 years, most of them were between 17 and 29 years (cf. figure 1). Two older interview partners in their mid-30s gave us valuable information from their time as youth. That is why we included them as well, even though they were not youth age anymore.

![Figure 1: Number and age of interviewees](chart.png)

With regard to other demographic characteristics, respondents described themselves as shown in table 1. They were predominantly male (n=22) or female (n=12). Two participants identified as non-binary and four identified as transgender. No person described themselves as intersex or cisgender. To be cisgender means to feel that you belong to the sex that was attributed to you at birth, it is a social norm and is rarely used to describe oneself. We therefore assume that the 32 persons who did not identify themselves as transgender are cisgender. The majority of interviewees described themselves as homosexual (n=30), one person each as bisexual, heterosexual or "disoriented". Pansexuality was

\textsuperscript{11} www.kultursensibel-lsbttiq.de
\textsuperscript{12} https://de-de.facebook.com/Andrej-ist-anders-Selma-liebt-Sandra-1167561966667202/
mentioned twice. One person did not assign himself to any category of sexual orientation. This also makes clear that the labels on gender identity and sexual orientation described here are groupings that were imposed by the authors. The interviewees' self-descriptions are more diverse.

The interviewees were engaged in different professional or educational activities at the time of the interview (see table 1). Eight people were still attending school. All participants were all on their way to university entrance and 31 of the 36 young people surveyed had a migration background (3 migrated themselves, 27 migration of at least one parent, 1 migration of at least one grandparent, 24 different countries of origin, see figure 2). The interviewees came predominantly from Christian (20) and Muslim (12) parental homes (multiple answers were possible). One person each indicated Jewish or "Chinese" as religious affiliation. The families of four people were described being affiliated with no religious background.

Figure 2: Countries of origin
Table 1: Sample

<table>
<thead>
<tr>
<th></th>
<th>n</th>
<th>%</th>
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<td></td>
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<tr>
<td>• Masculine</td>
<td>22</td>
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<td>• Feminine</td>
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<td></td>
</tr>
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<tr>
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<td>0%</td>
</tr>
<tr>
<td>• Cisgender</td>
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<td>0%</td>
</tr>
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<td><strong>Sexual orientation</strong></td>
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<td>3%</td>
</tr>
<tr>
<td>• Pansexual</td>
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</tr>
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<td>3%</td>
</tr>
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<td>3%</td>
</tr>
<tr>
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<td>3%</td>
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</tr>
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<td>• Jewish</td>
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<td>3%</td>
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<tr>
<td>• &quot;Chinese&quot;</td>
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<td>3%</td>
</tr>
<tr>
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<td>6%</td>
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<td>11%</td>
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<td>17%</td>
</tr>
<tr>
<td>• Grammer school (grade 12/13)</td>
<td>14</td>
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<tr>
<td>• Unskilled</td>
<td>3</td>
<td>8%</td>
</tr>
<tr>
<td>• Teaching profession</td>
<td>13</td>
<td>36%</td>
</tr>
<tr>
<td>• Akademic profession</td>
<td>8</td>
<td>22%</td>
</tr>
<tr>
<td>• Not known</td>
<td>12</td>
<td>33%</td>
</tr>
</tbody>
</table>

Remarks: n = 36; *multiple choice
4.3 Interview guidelines, setting, and recording

For the interviews, an open semi-structured qualitative interview guideline (cf. Gilligan, 2015; Kiegelmann, 2007) was developed, comprised of four topic areas: one's own self-image/identity (How should I talk about you?), the current life situation (What does your everyday life look like? Can you be as you want to be in everyday life?), c) previous life events (Which experiences have shaped you?) and d) wishes and support possibilities. Within this framework, the interviewees were given the space to answer the questions from their subjective point of view and according to their lived experience. In addition, we asked to encourage further explanations without biasing participants through exposure to the interviewers’ own topics.

Two of the six interviewers have a migration background. Two interviewers work full-time in the project and are also responsible for the evaluation of the interviews and the implementation of the project (both male, studies: religious studies, psychology). The interviewees had the choice of which person from the interview team they wanted to talk to.

Audio recordings of the interviews were made and then transcribed with a focus on content according to the simple transcription rules of Kuckartz, Dresing, Rädiker and Stefer (2008). After the recordings, memos were written to note any information and observation relevant to the interviews that were not captured in the audio file, e.g. (e.g. disturbances) and reflections of the interview situations.

4.4 Data analysis

First, we evaluated three pilot interviews using the voice-centered listening method (Gilligan, Spencer & Weinberg, 2003; Kiegelmann, 2007). The aim of these initial analyses was to pilot our research methods. For reasons of space, we do not present this evaluation in more detail here. The evaluation of all conducted interviews was carried out by Braun and Clarke (2006) with the computer-aided program ATLAS.ti (Version 8; Scientific Software Development GmbH, 2017). Following the procedure proposed by Braun and Clarke (see table 2), we
Table 2: Phases of Thematic analysis (Braun & Clarke, 2006, p. 87)

<table>
<thead>
<tr>
<th>Phase</th>
<th>Description of process</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Familiarizing yourself with your data:</td>
<td>Transcribing data (if necessary), reading and re-reading the data, noting down initial ideas.</td>
</tr>
<tr>
<td>2. Generating initial codes:</td>
<td>Coding interesting features of the data in a systematic fashion across the entire data set, collating data relevant to each code.</td>
</tr>
<tr>
<td>3. Searching for themes:</td>
<td>Collating codes into potential themes, gathering all data relevant to each potential theme.</td>
</tr>
<tr>
<td>4. Reviewing themes: Checking in the themes work in relation to the coded extracts (Level 1) and the entire data set (Level 2), generating a thematic „map“ of the analysis.</td>
<td></td>
</tr>
<tr>
<td>5. Defining and naming themes:</td>
<td>Ongoing analysis to refine the specifics of each theme, and the overall story the analysis tells; generating clear definitions and names for each theme.</td>
</tr>
<tr>
<td>6. Producing the report:</td>
<td>The final opportunity for analysis. Selection of vivid, compelling extract examples, final analysis of selected extracts, relating back of the analysis to the research question and literature, producing a scholarly report of the analysis.</td>
</tr>
</tbody>
</table>

familiarized ourselves with the interview data in a first reading. Codes for the organization of the data were assigned: Who (interviewer or interviewee) is speaking on which question (self-description, current situation, formative experiences or wishes/fears) and to which area of life (e.g. family, school, health system). Subsequently, content codes were assigned in which the interviewees' topics were paraphrased. These codes were grouped and systematized. It was notable that the coded topics contain aspects that have already been taken into account in existing classifications, for example family risk dimensions of migrant women* (Kizilhan 2006, 2014), the minority stress model (Meyer, 2003) or coming-out models (Cass, 1984; D'Augelli, 1994). These classifications were used to determine whether categories considered important in the literature were not addressed. The procedure was therefore in a first step inductive and secondly, in later coding steps, also deductive. The content coding steps were carried out interactively until the structures and content description of the topics were found to be stable. The result of this step of analysis was therefore a compilation of the contents that were important to the interviewees, sorted and classified through the eyes of the data analysts.
4.5 Presentation of results

The results were published in 2018 in a German-language report (Kramer, Miyanyedi & Wagner, 2018). This report is aimed, in particular, at professionals in youth, social and health work and focused on practical application of the findings. It was important to us to depict the variety of self-descriptions, formative experiences and current life situations. Thus, we mapped these contents in full: the self-descriptions per person in tabular form (examples: see table 3), the formative experiences grouped by topic (see list of topics in table 4) and the current life situations per person, translated into resources (examples: see table 5). In addition, we have systematized and summarized the contents that the interviewees discussed on the following aspects: a) their religiosity, b) their desires, c) ethnic, religious and family aspects, d) school, e) counseling and therapy. In the report (Kramer, Miyanyedi & Wagner, 2018) exercises were supplied that can be used in youth work to concretely address these topics.

The goal of the project is also to get into conversation with experts and members of different communities about sexual orientation and gender identity. To this end, quotes were extracted for discussions with various partners in the form of presentation materials, for examples relevant information for representatives of migrant or religious organizations, specialists in youth work, social work or health care. The interviewed persons were also invited to discuss the results. Their feedback helped ensure that our findings and recommendations were accurate and helpful for them.
<table>
<thead>
<tr>
<th>No</th>
<th>Spontaneous</th>
<th>Sexual Orientation</th>
<th>Gender Identity</th>
<th>Ethnicity</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>&quot;I am the eldest child of four daughters, 21 years old and do not conform to the norm.&quot;</td>
<td>&quot;I have a girlfriend, I don't like the word lesbian.&quot;</td>
<td>&quot;I guess I'm a woman.&quot;</td>
<td>&quot;My parents come from &lt;country&gt;&quot;</td>
</tr>
<tr>
<td></td>
<td>&quot;Ich bin das älteste Kind von vier Töchtern, 21 Jahre alt und entspreche nicht der Norm&quot;</td>
<td>&quot;Ich habe eine Freundin, das Wort lesbisch finde ich unangenehm.&quot;</td>
<td>&quot;Ich schätze, dass ich eine Frau bin&quot;</td>
<td>&quot;Meine Eltern kommen aus &lt;Land&gt;&quot;</td>
</tr>
<tr>
<td>2</td>
<td>&quot;I'm very rude, but funny, very travenous and very curious.&quot;</td>
<td>&quot;I'm a lesbian.&quot;</td>
<td>&quot;I'm pangender, I'm genderqueer first, I don't really feel feminine and I don't feel masculine.&quot;</td>
<td>&quot;My parents are from &lt;country&gt;&quot;</td>
</tr>
<tr>
<td></td>
<td>&quot;Ich bin sehr unhöflich, aber witzig, bin sehr verfressen und sehr neugierig&quot;</td>
<td>&quot;Ich bin lesbisch.&quot;</td>
<td>&quot;Ich bin pangender, ich bin zuallererst genderqueer, ich füle mich nicht wirklich weiblich und auch nicht männlich&quot;</td>
<td>&quot;Meine Eltern stammen aus &lt;Land&gt;&quot;</td>
</tr>
<tr>
<td>3</td>
<td>&quot;I'm gay and I'm from an immigrated family and I love my freedom.&quot;</td>
<td>&quot;I'm gay.&quot;</td>
<td>&quot;My gender is important.&quot;</td>
<td>&quot;I was born in &lt;country&gt; and immigrated to Germany ten years ago.&quot;</td>
</tr>
<tr>
<td></td>
<td>&quot;Ich bin schwul und habe einen Migrationshintergrund und freiheitsliebend&quot;</td>
<td>&quot;Ich bin schwul.&quot;</td>
<td>&quot;Mein Geschlecht ist schon wichtig&quot;</td>
<td>&quot;Ich bin in &lt;Land&gt; geboren und vor zehn Jahren nach Deutschland eingewandert&quot;</td>
</tr>
<tr>
<td>4</td>
<td>&quot;Clearly feminine and lesbian, I'm a high school graduate and interests are reading, video games and bassoon.&quot;</td>
<td>&quot;I'm a lesbian.&quot;</td>
<td>&quot;clearly female.&quot;</td>
<td>&quot;Shaped by my mother and she comes from &lt;continent&gt;, from &lt;country&gt; and my father from &lt;country&gt;.&quot;</td>
</tr>
<tr>
<td></td>
<td>&quot;Eindeutig weiblich und lesbisch, bin Abiturientin und Interessen sind Lesen, Videospiele und Fagott&quot;</td>
<td>&quot;Ich bin lesbisch.&quot;</td>
<td>&quot;eindeutig weiblich&quot;</td>
<td>&quot;Von meiner Mutter geprägt und sie kommt aus &lt;Kontinent&gt;, aus &lt;Land&gt; und mein Vater aus dem &lt;Land&gt;&quot;</td>
</tr>
<tr>
<td>5</td>
<td>&quot;With a young Muslim woman who lives in Stuttgart and is pansexual.&quot;</td>
<td>&quot;pansexual&quot;</td>
<td>&quot;Preferably sex-neutral, I didn't know I was a woman or a man.&quot;</td>
<td>&quot;&lt;country&gt;, to be &lt;minority&gt; is a part of my identity&quot;</td>
</tr>
<tr>
<td></td>
<td>&quot;Mit einer jungen muslimischen Frau, die in Stuttgart lebt und pansexuell ist&quot;</td>
<td>&quot;pansexual&quot;</td>
<td>&quot;Am liebsten geschlechtsneutral, ich wusste nicht bin ich eine Frau oder ein Mann&quot;</td>
<td>&quot;&lt;Land&gt;, &lt;Minderheitsname&gt; sein ist ein Teil meiner Identität&quot;</td>
</tr>
</tbody>
</table>
Table 4: Formative experiences: thematic groups

- Gender role constraints in childhood
- Self-assurance/internal coming-out
- self-doubt, depression, suicide
- Attempts to fall in love with opposite-sex partners
- Internalized homo-negativity
- Psychotherapy
- Coming-out in the family and reactions of family members
- To pretend to be not LGBTQ+
- First love
- Transition
- LGBTQ+ Community
- Religion
- Discrimination because of migrant background
- Being LGBTQ+ in public
- Children's home/Kindergarten
- School
- University
- Workplace
- Social media
- Sports
- Girlfriends
- Youth centers
- Partnership/Relationship
- Other topics

Table 5: Presentation of current life situations from a resource perspective: Example

Current resources of person “M”:

- has distanced his*herself from the family of origin by moving far away to a city to which the family members have no connections
- has not yet his*her coming-out to the family for self-protection—and does not intend to, as long as she does not have a permanent partner yet
- has organized an environment in Stuttgart in which she*he feels accepted and comfortable (LGBTQ+ youth group, flat-mates, employer, Stuttgart in general) where she*he feel safe and comfortable.
- the LGBTQ+ scene in Stuttgart is too small for her*him, everyone knows everyone. That's why she*he doesn't go clubbing often.
- his*her hobby was playing computer games, which she was very fixated on when she was still living at home. Now he*she stopped playing computer games.
- is about to start training, can even choose between several training options at a company
5 Results

In our interviews allowed participants the freedom to discuss different topics and to provide rich descriptions. This freedom was strongly used encouraged. This allowed us to collect detailed data on spontaneous self-descriptions, which participants used. Thus, our findings make clear: there is not "the" lesbian Christian, "the" transgender gay Muslim etc. It is not possible to describe this huge diversity in detail in this article.

In addition to these differentiated findings we were able to identify three common topics that were relevant for all participants. A more detailed description is available in German (Kramer, Miyanyedi, & Wagner, 2018). For each of the three aspects, we also show a quotation that illustrates how the topics were discussed. The three aspects are: a) family and “cultural” factors influencing identity development and well-being, b) the meaning of school, and c) requirements for good support of LGBTQ+ young people with and without migration background.

a) Family and “cultural” factors influencing identity development and well-being. Coming out within the family unit was described as a special challenge. We therefore searched systematically within the interview transcripts for "family and cultural" factors that participants named as important for identity development and well-being. For example, a young Muslim woman reported the reaction of her parents when she told them she identifies as lesbian:

"My mom didn’t talk to me for months. She thought I had changed religion. Then there were many requirements for how I have to behave at home: I'm supposed to do the rituals of washing before I enter the house as I'm considered impure. I never did that, of course, … and they said things like: I turned their tears into blood. They sent me paragraphs from the Koran. I didn't really look at those because it was such a terror to me. ... I admire the strength [of my mother], how she can still meet with me today. I know what kind of circumstances she grew up in, what kind of views she has on sexuality and religion. So, I think it's great how it is today, that I can visit my parents every or every other week.”

As in this example, it became clear to us in other interviews that the influence of ethnic and religious traditions on the interviewees is mediated by their families. The aspects ethnicity, religion, and family are therefore hardly separable from each other. How well the LGBTQ+ young people are doing depends largely on how ethnic and religious traditions are lived in the families (i.e. the family of origin and the wider family circle), not on which ethnicities or religions the family members feel they belong to.

b) The meaning of school: The importance of the school environment was emphasized by the interviewees. We have therefore compiled their statements on the school environment. For example, a young gay man reported among other things the following experiences from his school time:

"For me, it was back in school that I was, for example, [called] 'gay' and 'faggot' and whatever else. Just the most extreme bullying went on when I was in the fifth grade, in secondary school. For sixth grade I had to switch to a lower secondary school. I was the best in my class and the bullying started. It started with people ignoring me and they went on to teasing me. It all started with tacks on the chair, sitting on them. Then it went so far that I was dressed with my clothes as I was with my bag and they just threw me in the shower. Then gay slander was thrown at my head and my bag was stolen and thrown out of the window and that was it. This 'faggot,' 'fag' [they called me] stayed until the middle of ninth grade, until I fought back. I reached a point where I got fed up, freaked out. I actually put a fist in one's face and broke his nose without further ado. I was expelled from school. I was released for two weeks before I was allowed back in class."

„Bei mir war es auch da, damals in der Schule, dass ich auch beispielsweise als Schwuli und Schwuchtel und sonst was [bezeichnet wurde]. Ich wurde halt auf das extremste gemobbt. Das ging sogar so, also ich war auf der fünften Klasse in der Realschule dann bin ich halt von der Realschule von der fünften auf die sechste in die Haupt gekommen. Dann war ich direkt Klassenbester und dann fing auch das Gemobbe an erstmals fing es an dass ich nicht so richtig beachtet worden bin dann fing das an dass ich ein bisschen geärgert worden bin. Es fing
It was not only in this interview that it became clear how formative school experiences were for the young people. There was frequent mention of being discriminated against or having experienced violence because of sexual orientation or gender identity in schools. In comparison, the experience of discrimination and violence on the basis of ethnic or religious affiliation was rarely addressed (which does not mean that it does not play a role).

In addition to the finding which is illustrated in the quotation above we found another category: invisibility of LGBTQ+ in schools: on the one hand invisibility of LGBTQ+ issues as a specific topic and as a matter of course for society, and on the other hand invisibility of LGBTQ+ schoolmates, teachers and other staff at schools. Conversely, it became clear how strengthening it was when LGBTQ+ was made visible in schools and when discrimination and experiences of violence were effectively countered. Accordingly, the central wishes of the respondents were that information about LGBTQ+ issues should be provided at schools and that LGBTQ+ should become visible as a matter of course for society. They wanted this information and visibility on LGBTQ+ issues at the lowest possible age—ideally before students ask themselves if they might be LGBTQ+. It also became clear that transgender and intersexual people are dealing with this issue very early, often even before school starts. Not only information was important to the respondents, but also visible support from teachers, especially after experiences of discrimination and violence.
c) Requirements for a good support of LGBTQ+ young people with and without migration background. For example, a young transgender woman summed up the numerous experiences she had with psychologists and psychiatrists:

"Looking back, I don't feel that I could have talked to any of the therapists that I was assigned to or that I went to. Well, I don't know, but I don't have the feeling [I could have]. When I think about it now and go through my list and I see the faces, then I think I would have, today I would not want to talk to him about it. I don't feel like I, uh, he understood me."


In this quotation it becomes clear that the interviewee, as a client in psychotherapy, did not dare to address her transgender identity. Not taking the risk to address LGBTQ+ topics or to present oneself as a LGBTQ+ person was also a topic in several other interviews of interviewees with therapy experience. In our opinion, a prerequisite for people to reveal themselves as LGBTQ+ is that they perceive signals of welcome for LGBTQ+ people. The attitude of psychotherapeutic and other professionals "We treat everyone the same. LGBTQ+ People should come out" is not enough. Welcome signals are also needed with regard to other dimensions of diversity: other interviewees reported that they did not seek therapeutic support because they assumed that psychotherapists in Germany were not sensitive to ethnic and cultural issues.

6 Discussion

The qualitative approach with an open interview, which enabled the interviewees to set their own topics and to execute them in their own words, allowed us to illustrate the variety of self-descriptions (see Table 3), experiences, current life situations and wishes or expectations provided by participants. It was important for us to present this diversity
in an initial report of our results in order to expose and challenge stereotypes, beliefs and prejudices as inaccurate generalizations (Kramer, Miyanyedi, & Wagner, 2018). It is also useful that the biographical content we offered is current and that it comes from the Stuttgart region. This can be used to counteract discrimination and inaccurate assumptions (In social media and as general assumptions within Germany, we often are confronted with statements like: "Gay Turks only exist on the Internet", "Transgender are only an academic invention"). In our opinion, the three results presented have a high practical relevance:

a) **Family factors influencing identity development and well-being.** The research result that the processes of “how” religion, ethnicity, and family are lived are relevant can be analyzed by drawing on the theory of Kizilhan (2006, 2014). He developed this theoretical model initially in the context of research and intervention work around honor killings and forced marriages. Here, he described crucial risk factors: a) How strictly everyday religious and ethnic traditions are interpreted and lived. b) How well the families are integrated into their social environment (the better, the less at risk). c) What significance is attached to the "concept of honor", especially with regard to sexuality. d) The extend of traditional-patriarchal or conservative socialization of the parents. e) How hierarchical and traditional the family structure is (large family thinking? violence accepted and used as a means of education?). These risk factors could be replicated in our analysis of the data about participants’ descriptions of what they experienced as decisive for their identity development and well-being. These factors were also relevant irrespective of the ethnic and religious background of the families, i.e. even if the families have no recent migration background and identify as Christian. Our findings can contribute a move beyond the current focus on dichotomous attributions (migration background: yes or no, Muslim: yes or no).

b) **The meaning of school:** The significance of the findings on school are obviously of great relevance. In Baden-Württemberg, there was a major controversy in 2015 when an educational plan was drawn up in which, in addition to other dimensions of diversity, the interdisciplinary, appreciative treatment of sexual diversity and the diversity of gender identities was also provided for. After criticism, in particular by conservative and
Christian associations ("violation of Christian values", "early sexualisation") and several demonstrations, the entry into force of the education plan was postponed to August 2016 and the topic LGBTQ+ issues was only mentioned as one of several that can be addressed. The findings of our study illustrate how important it is for LGBTQ+ young people that, in addition to religious and ethnic diversity, LGBTQ+ topics are also addressed in schools and that pupils* who are LGBTQ+ are supported.

c) Requirements for a good support of LGBTQ+ young people with and without migration background. That welcome signals for, sensitivity toward, and knowledge about LSBTIQ* people are important to support for LSBTIQ clients* has already been discussed in the literature, such as: a) a knowledge aspect: for example to be familiar with the variety of sexual orientations and gender identities, the different self-designations, LGBTQ+ community structures and more (cf. Wolf, Fünfgeld, Oehler, & Andrae, 2015); b) a sensitivity aspect: for example, having reflected critically on one's own attitudes towards LGBTQ+ people, making LGBTQ+ diversity appropriately visible and reacting appropriately to discrimination (cf. Brown, 2006; Göth & Kohn, 2014); c) a signal aspect: for example, using gender- and LGBTQ+-sensitive language (Clarke, Ellis, Peel, & Hriggs, 2010).

6.1 Limitations

When interpreting these findings, it is important to note that we mainly interviewed people with educational privilege (all interviewees who were still in school were on their way to the Abitur). We had only one person from a more collectivist country (Asian) and mostly people from Muslim and Christian families. The interviewees were all already sure that they were LGBTQ+ (but some were still unsure whether they were homosexual or transgender, for example). In addition, participants were predominantly satisfied with their current life situation—at least compared with the LGTQ* people who visit our counseling center and are currently, for example, in a coming-out process from their family of origin or who want to work through experiences of discrimination. There were also exceptions, such as a lesbian interviewee that lived hidden at the time of the interview because she feared for her life.
6.2 Methodological consequence for qualitative social research

The Voice-Centered-Listening method (Giligan et al., 2003; Kiegelmann, 2007) helped us to pay very close attention to different aspects of identity and their relationships to each other. The voice-centered approach was developed precisely to listen to such a variety of "inner voices". This was helpful in the pilot phase of the study. However, the method is too complex and time consuming for the evaluation of all 36 interviews. Also, we have not yet found a representation of the Voice Centered results that would meet the richness of detail the method offers and privacy requirements needed for purposes of research ethics. (A challenge that arises also in other detailed qualitative evaluation procedures.)

Braun and Clarke's more economical evaluation method (2006), which we used to evaluate all 36 interviews, has the advantage that it can be easily adapted to a wide variety of qualitative questions. The authors explicitly wanted to develop a method that was easy to learn and to handle for different questions.

The description of Maxwell's qualitative research process (2013) has also proven its worth for us. This description served as a framework model for the entire research process. During the data evaluation with the software ATLAS.ti (Scientific Software Development GmbH, 2017) we have worked especially with network views to structure, group and define relationships. The program also helped us to keep order and, for example, to quickly find relevant text passages.

We consider our evaluation to be not yet complete. We have conducted interviews with seven other people that had not yet been analyzed when we composed this article. The questions answered so far and the presentation of the results have so far been oriented towards the needs of specialists in social work and health care. For an audience that is not educated in social sciences, there is more depth in the data that invites further analysis on the one hand. On the other hand, it is necessary to prepare the study results even better for different target groups in order to adequately convey the decisive results in a short time, which is often necessary. In addition to slide and oral presentations, auditory and video clips are also being planned.
References


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Perceptions of Basic Competencies in the Last Year of Baccalaureate by the Center's Management Team: Focus Group Analysis

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Abstract

The research presented here is a synthesis of the case study, corresponding to the IES of Andalusia (Secondary Education Center), focused on the second year of Baccalaureate. It is within the framework of the project COMPROFESU, which aims to train teachers in professional skills, from the comprehensive education of students in the key competences (learning to learn, entrepreneurship, communication, mathematics-scientific, social and artistic-cultural), applying the Focus Groups method. The management team, program directors and the coordinator-member of the Research Team participate.

The involved team values and incorporates the competences in the educational project of the institution but recognizes that the teachers of the last year of baccalaureate centers the education and training of the students in the domain of content-disciplinary knowledge, which are necessary to pass the test of University access. They emphasize that the formative demands of the educational system itself must be transformed in order to "place in the proper place the training of students in the key competences", important for training and preparing students to master the university culture. It is evident that the focus group is an adequate method to understand the complexity of the training problem that characterizes the final stage of Secondary Education.
1 Introduction

The research Project COMPROFESU lead by Professor Dominguez and subsidized by the previous Ministry of Economy, offers the imaginative opportunity to share with Teachers’ teams of the last year of Secondary School the process of being conscious and coherent dealing with the challenge of learning teachers and students in Key Competencies.

In order to teach these competencies to students, teachers need to assess and master these Key Competencies, and also those competencies required to teach with efficiency professional capacity.

We have developed a research process orientated to detect both the meaning and mastering of competencies and the creative role that is expected from teachers as the main responsible persons for the whole education of students and for their own professional development. We also take in consideration the educative institution, High School, as a reality that boosts practices and processes of preparation to advance in mastering of educative competencies.

The progress in mastering both teacher and student competencies has been developed in an educative institution in the Andalusian context, which has detected the meaning and the impact of problems, and the needed training for helping students to understand the learning vision. At the same time teachers at this institution present the responsibility to give a suitable answer to this challenge “to progress in the knowledge and practice of the competencies needed for students being themselves suitable training didactic on those competencies required in advance”.

2 Justification

1. The professional development of teachers of the last year of Secondary is necessary, in order to help students to face the challenge of the transition from Secondary School to University.

2. This requires that
   2.1 students succeed in the admission test.
   2.2 students anticipate and understand the university culture.
2.3 students are prepared to participate in the singular adaptation to the first year of university life.
2.4 students begin and consolidate the command of key competencies to reach or improve in secondary school.
2.5 teachers are well aware of the challenges of education for key competencies.

3 Context

a) The research is realized in the bordering regions of Castilla-LaMancha and Andalusia.
b) High quality agrarian products such as oil and wine along with the artistic-industrial products define the surrounding area as a developing region, with a quota of immigration between 7% to 10%.
c) Where? A secondary school (I.E.S.) of Andalusia (Spain) and in a developing town (rural/industrial services/facilities).
d) Number of students: more than 1000 students, 200 of them are in the second year of higher education (Bachillerato).
e) Socio-economic reality: mixed with a predominance of sources of services, industrial, agrarian and artistic, technological developing.
f) Village population: more than 18,000 inhabitants.
g) Economy: depends on the industry, service and agrarian sectors (in that specific order).

4 Research problem

- Teachers of the last year of Secondary Education have to work under pressure since they have to prepare students to succeed in their admission test to get into the university.
- We have to invite teachers to take part in building a teaching improvement and development culture, so they educate students in a suitable mastering of Key competencies and in a learning style, in which students would be able to overcome the challenge that an admission test implies. Which finally lets each student to achieve a positive and enough assessment to achieve their desire career at the university.
5 Main Questions

a) What model of teachers’ professional development is best to educate teachers in order to manage the Key competencies to work with their students?

b) What design of the learning-teaching process is more adequate to educate students in key competencies?

c) What is the best qualitative method to contribute to teacher professional development?

d) Is it necessary to value the impact of the focus group technique in the education of teachers and to get to know the progress in the education of its competencies?

6 Objectives

General: To empower teachers to have full training and mastering on teaching competencies in balance with those students of the second year who should improve them.

Specific:

a. To design some model of teacher professional development base on recognition and mastering of the competencies of teachers and students.

b. To clarify the concept of the competencies of the Secondary Education teacher for teachers and students of the second course in higher education (Secondary education).

c. To discover the involvement of the Directive Team in the education of the teaching competencies and overall those competencies that students must develop.

d. To identify competencies that are the best managed by students of Secondary education in this school.

e. To define which teaching practices are the most suitable to learn key competencies in Secondary education students (contents, methods, tasks, ICT, resources?) and which criteria and assessment test?
Theoretical Framework: State of the Art

The competency training program for teachers and students in the last year of Secondary Education, in the first year of University and all along their training for their future profession has been developed in many research, about teachers at the University level and at the access to Higher Education (Zabalza, 2007; De la Hoz, 2010; Medina, 2013, 2018; Domínguez, 2014, 2015; Le Boterf, 2010; Perrenoud, 2014; Baldacci, 2010). However, competency learning in students has been developed in many studies such as Medina (2009). Domínguez and García (2012) and Perrenoud, (2014). These investigations have been implemented as the most important line of the study plans in organic laws in Spain such as LOE (2007) and LOMCE (2013) that pointed out the need of Key competencies learning in students.

This topic has also been the base of continuous researchs such as Brenan (2010), Medina, Domínguez and Medina (2017), Baldacci (2010), Domínguez et al. (2017) and Medina and Medina (2018). These studies underline that within the Key competencies that must be cover during the last year of Secondary Education those competencies of the Legislative regulation present a privileged place. These last competencies have been primary objective of some of the previous studies, in which teachers of Secondary Education are aware of those competencies that must teach students

a. Learning to learn,
b. Linguistic-communication,
c. Scientific- math,
d. Digital - artistic –cultural,
e. Social – citizenship.

In some regions such as Cantabria and Castilla – La Mancha are promoted other competencies such as empathy or entrepeneurship in the conceptualization and those competencies are completed by leadership, work in team, and initiative. These competencies have been positively recognized but with a clear dominance of the whole preparation of the person.
There is an aspiration towards an authentic Humanism, building culture of respect, intellectual autonomy, the progress in personal practices and the real support on students in order to help them in the design of the objectives and the selection of the most suitable resources for the practice with a double preparation, as human being and the reinforcement of the intellectual habits.

All these processes with the intention of learning to be, learning to accept collaborative tasks with others and with commitment with professional and creative performances (Baldacci, 2010; Medina and Medina, 2018) so to take consciousness by each teacher in front of the amount of challenges, in an open call for complexity, to the technological advance and the responsible use of the right diverse educative and environmental approach.

The previous research has revealed the complementarity in mastering teachers-students’ Key competencies and how the progress of teachers in teaching and developing competencies in students help them to go beyond and transform their competencies.

The process of understanding and analyzing those Key competencies that student must learn is a suitable scenario for self-development of teachers’ competencies, taking in consideration that mastering a competence means a full advance in the professional thought and practice.

The professional development of teachers improves through reflection, action and again reflection around the preparation fact of students in Key competencies. Those Key competencies are the axis of their growing up process in order to understand themselves and to behave suitable and satisfactorily in their future personal and professional life in all the institutions.

This research has the objective to discover the reciprocity and complementarity between the progress on student’s competencies and the consolidation of these competencies and those competencies that are core for teacher performance, among them (Medina, 2013): Planification, Communication, Methodological, Evaluation, Design of media – ICT, Professional identity, Innovation, Research, Institutional, Interculturality, Leadership competencies, that are considered of great relevance for a sample of more than one thousand university teachers of Second Education, who have positively evaluated them.
This wide range of competencies have an important influence on the professional development of teachers at that stage. Teachers must work with students the reflection and orientation of the most valued competencies, defined as key competencies. It's remarkable the role of harmonization between the demands and adaptation of teacher from the last year of Secondary Education and the first year of University (Domínguez et al., 2012), (Domínguez et al., 2017). These research have presented the most relevant aspects for teachers in that transition.

The selection of Planning competency, linked to Communication, Methodological and Design of media – ICT and evaluation has facilitated to teachers of Secondary Education a new way of taking conscious of the curriculum design category and of didactic units as learning product produced by Secondary School Teachers of Bailén Institute in which the didactic innovation has been developed and adapted thanks to study case methodology, completed by the analysis of the contents of the texts created in the Focus Group. The Directive team and some teachers of some departments, vocational training and adult education were part of the Innovation and research team.

They have been intensively involved in this process of global enhancement of teachers´ competencies when they apply the didactic units, which have designed (contents, tasks, resources, learning impact) in order to achieve both the global enhancement of teachers´ competencies in teachers´ team and of each student.

Classrooms have become didactic laboratories, in order to develope the innovation-research assume by the group of teachers of the last year of the School (Medina & Sevillano, 2010; Domínguez, 2006, 2015; Baldacci, 2010). There are other studies such as Perrenoud (2014), Domínguez and Garcia (2012) and Zlatic et al. (2014), which underline the development of teachers’ competencies linked to the quality and design of the didactic units.

León et al. (2012) have presented a model for didactic units, with focus on the adaptation of methods, tasks and resources that provide a research path and a didactic practice in building training instructional designs, which better optimize the teaching performance (Medina et al., 2015; Medina, De la Herranz & Domínguez, 2017). These studies present also a new vision that grounds the design and learning developments, which adapts Study Plans to the big challenges of Education base on competencies overall on those Key Competencies, in
order to improve the global Education of students of the last year of Secondary Education.

The previous investigations present some principles that facilitate competency learning, such as,

- Transversal Knowledge.
- Collaboration.
- Meeting-point among cultures.
- Theoretical-practical research.

We find these principles in other researchs (Mallart & Mallart, 2017; Medina, De La Herranz & Domínguez, 2017; Domínguez, 2015; Baldacci, 2010). They add other ideas such as the need of comparation, progress and to act in the Educative practices, including and completing these principles.

These principles are applied in line with the practice-theorical vision that making decision competency in teachers will reveal in order to improve both the progress of the needed competencies as teacher and the methods, tasks, resources, and evaluation indicators more suitable to consolidate culture and practical performances for learning competencies.

The role of teachers should be based on models such as:

- Collaborative work, narrative competences base on case study, competences with focus group (Huber, Gürtler & Gento, 2017; Cochram Smith & Lytle, 1999; Medina et al., 2013).
- Mastery of “teaching competences”. Teachers and students (Medina, 2013; Domínguez & García, 2012; Day & Gu, 2012; Zabalza, 2016).
- Students development in Key competences (reports of different agencies, legal rules) (Brenan, 2010).

The professional development of Secondary School and Universities teachers has been the core of researchs of new programmes, creating the basis for the transformation of schools and teachers.
Brennan et al., Pepe and Antonio point out that the professional development of the teachers is the main guarantee to promote and consolidate education in students' competencies.

8 Focus Group: The Approach

The quality methodology uses different methods, among them we underline the Focus group. The choice of a Focus group as a qualitative method research – Focus group is used to take notes of perceptions, which boosts opinions and stance corresponding to the most relevant ones of the members of some research. Which must be completed by the personalized interview, offering a point of view from a team who know and experience the complexity of teaching.

The focus group provides each person with the point of view of the others involved and offers the opportunity of improving its own about the discussed object. At the same time it offers several options of configuration and supports the creation of the perceptions map, synthesis of the team members discussion and the base to increase the knowledge around the discussed object by creating relevant situations, taken from the team members’ discussion, transforming the singular perceptions into the contrast among the diverse opinions of the components, as a result of the deep dialogue/discussion generated.

Stewart and Shamdasani (2015, p. 3) explain “Today’s Focus group methodologies also evolved from two additional primary sources”: (1) “Clinical psychological use of group analysis and therapy and (2) Sociological and social psychological studies of group dynamic.”

At the same time (Wellner, 2003) considers “Ethnographic influences emerge in the use of focus groups conducted in natural setting with real social groups”. Linked to the “growing use of virtual groups, virtual worlds, and related technologies simultaneously expand the definition of “group” in time and space and extend the scope of modalities by which data many be obtained.”

Stewart and Shamdasani (2015, p. 13) analyze thoroughly the sense and adequacy of the Focus Group in social research: “The ebb and flow of focus group research across and within various disciplinary fields – and the attendant intellectual element of thesis, antitheses, and
synthesis – make focus groups an interesting and dynamic arena that continues to merit consideration and use”.

Interpersonal or individual characteristics influence group processes in two ways.
- The personal characteristics of individual affect individuals’ behavior in the group’s behavior.
- “Group cohesiveness influences a number of group processes such as verbal and non verbal interaction, the effectiveness of social influence, productivity, and satisfaction of group members”.

Stewart and Shamdasani (2015, p. 87) underline also the “Personal traits of ground qualitative researchers/moderators:
- Are they genuinely interested in hearing other people’s thoughts and feelings?
- Do they express their own feelings animatedly and spontaneously?.
- Are they insightful about people?
- Do they express their thoughts clearly and flexible?”

At the same time the main research questions present the following “Typology of focus group questions:

- Leading and testing.
- Factual and feel questions.
- Anonymous questions.
- Silence.”

Kennedy (1976) notes three different sources of biographical characteristics that threaten objective requirements:

“-Personal approach: all- human predisposition to welcome and reinforce the expression.
- Unconscious needs to peace the client: Reinforce the expression of points of view.
- The need for consistency: Reinforce the expression are internally consistent”.

“By permitting out of context favorable comments, while telling those who offer an unfavorable view out of context that We’ll talk about that later.” “Personal characteristics,
educational background and training, and amount of moderating experiences are important consideration in selecting a moderator.”

Kamberelis and Dimitriadis (2011, pp. 545-546) present

“The focus group has become and increasingly important construct used to explain complexity and contingency within many different disciplines, that involves the pedagogical function and collective engagement both designed to promote dialogue and join higher levels of understanding of issues critical to development of a group’s interests and/or the transformation of conditions of its existence”.

“A more expensive treatment of focus groups allows us to reflect-continually on the particular limits of our methodological strategies. By destabilizing how we understand focus groups-locating them at contingent intersection of research, pedagogy, and activism—we continually work against the tendency to reify our methodological strategies “…” giving us more and more acute perspectives on the data we generate from them and how we interpret these data”.

9 Focus Group: Qualitative Method

A focus group is considered as a qualitative method, which stimulates the involvement of the members of the educational institution in the analysis and value of teachers’ and students education in the importance and master of competencies (students-teachers), the basis of their own and their students’ professional development and the innovation of the institution/school.

Members and criteria of the Focus group:

- Members of the Leadership team of the School,
  - Director
  - Secretary
  - Head of studies
  - Director of the adult education program
- Director of professional training
- Responsibility for initiative and arts
- Moderator

- The criteria for being part of the Focus group are,
  - Their commitment to the Institutional / educational project.
  - Responsibility in the leadership of the Educational Center.
  - Implication with quality management and integral development of the school.
  - Projection in the improvement of the Educational Community and citizen - regional zone.
  - Continuous contribution to the educational city model.
  - Openness and cooperation in European Programs and development of dialogue among cultures.
  - Improvement and holistic education in competencies: teachers and students, mainly in the stage of compulsory education. (12-15 years).

The main questions are organized around the following dimensions,
- Competencies concept?
- Involvement of Directive Team in competencies learning?
- What are the most relevant competencies in students?
- What are the best practices in order to boost these competencies?
- Teacher’s background in order to develop those competencies in students?

The answers to the previous main question have been analyzed in the conversation between experts and team members, and we summarize in:
  - Real meaning for teachers in High School.
  - Value of education in teachers and students.

Some quotes of the leaders-teachers, who participated in the discussion group

2 Competency concept “Capacity that allows us to solve a certain situation” “To achieve an objective” “To apply learned solutions to a certain situation”
- The answers tend to be different,
“We have clear the concept, however our main responsibility is to prepare students in order to pass the university entry exam.”
“We apply a traditional methodology.”

- About the knowledge of competencies in teachers,
  “We tend to use what is familiar to us.”
  “To teach base on competencies is difficult right now.”
Conceptualization of the learning base on competencies is really well evaluated by teaches. Participants and experts synthesis from a quantitative point of view the previous main questions, they graded 4 over 5.

3 Involvement of Leadership team in competencies learning?
   a. Teachers´answers,

3. Educative project in the institution means to include the competencies learning in some subjects.
   “It requires more time and more mastery of the contents.”
Experts assess with 3 over 5 the grade of Leadership team´s towards the training in competencies in students.
   “The educative community understands competencies, however families don’t present the same approach.”
   “Families just ask about the final grade.”
   “Students don’t understand them completely.”
   “Teachers value competencies however they don’t know enough how to work with them.”
   “To think in detail about this approach is needed overall with students at the 2º course.”

b. Leadership team´s answers:
   “Occupational learning teachers are more used to working with those competencies, overall the professional students.”
   “Text books disappear and the focus is on how to advance with competencies.”
Experts consider that Leadership team highly value students´training in basic competencies, they graded 4 over 5.

4 Development of competencies in students and how to integrate them in the educative institution.
  4. Leadership team´s answers,
“Directive team has included the challenge of competencies and works towards it, however it is influenced by the university entry exam. We are aware of how competencies are a real challenge and how implies more work.”

5. In which competencies they are mastery? A wide dimension about What are the most relevant competencies in students arises. We underline that the Managerial team take in consideration the following competencies:

4. The main answers are,
   “Competencies learning is needed in High School students.”
   Students must be prepared to solve successfully future situations, with special focus on their preparation and success as university students.”

5. The competencies mastered by most of the students are,
   a. **Learning to learn and autonomy competency**  (compared with students’ answers)
   b. **Communication competency**  (some similar answers)
   c. **Citizenship and social competency**  (some similar answers)
   d. **Mastery in the second language**  (it’s not value by students)
   e. **Digital competency**
   What is the real importance and necessity of learning focus in how to develop student competencies. Experts consider that the managerial team concern about the importance and necesdity of learning with focus on competencies reach 3.5 over 5. That means a suitable value of the commitment of the Educative Institution with this training tendency.

6. What are the best practices in order to boost these competencies? Contents? Methods? Activities? Assessment of the competencies
   This question is the core of teachers’ commitment with their own professional line and the opening to teach with new models, methods and tasks, which prepare students for the suitable knowledge and development of competencies in classroom.

6. The main answers are,
There is no common answer among the different profiles, the Directive Team confirms it, however the rest of the teachers deny it.

“There is a positive tendency in order to develop competencies in students.”

The planning of the learning process is base on the contents, there is not inverted class

“Lecture is the most common method. However a more open methodology is appreciated with a higher interaction of students.”

“The priority is contents not competencies.”

Experts evaluate these phrases in order to reveal the focus of teaching practices on how to develop competencies in students, they grade 4. They agree that the main tendency of the last year “Education focus on mastering disciplinary contents.”

The most used activities are,

a. “We develop scientific experiences overall with equipments in the laboratory, overall when the contents are really difficult.”

b. “We create business cases and experiments that invite students to find the solution, and combination of the different elements presented.”

c. “We encourage them to research and find new solutions.”

Resources,

a. “Teams use equipment, databases, and internet research.”

b. “Power point presentations, IDP, Digital platform.”

c. “A suitable learning background is required in teacher at the 2º course in order to evaluate properly competencies, because exams are really difficult.”

Experts confirm that teachers used a wide range of resources, such as laboratory, Tour, ICT, that boost competencies learning in students. They grade a high mark 4.5 with high coherence.

a) Resources,

1. “We run courses, but a suitable qualification of teacher in the institution frame is required.”
2. “The involvement of new teacher in competencies from the university has increased.”

3. “An active methodology is required in order to improve teacher qualifications and to facilitate their engagement in the enhance of the competencies learning process.”

4. “To design learning teacher programs focus on practice, those programs must be close to the real problems that teachers deal with in their practices, in a suitable innovative process.”

7 Teacher’s background in order to develop those competencies in students? We close he Focus Group with this question.

10 Discussion Group

The outstanding voices of the Managerial team and Coordinators of the Educative Center (I.E.S.) have underlined the interest and the adequacy that are required in the learning-teaching process in order to obtain a rigorous and suitable approach. This approach must boost students’ training in Key competencies based on the previous research (Domínguez, Levi, Medina & Ramos, 2013; Brennan, 2010) who agree that the challenge of adequacy to the Educative system to the long-life training, which must be taken as a main line for the progress in competency training. In this approach students assume the commitment to discover and develop Key competencies, in order to prepare them for understanding the Key of the global Education.

Key competencies are understood in relation to the previous research (Zabalza, 2007; Medina, 2009; Perrenoud, 2014), as a direct line of students’ education, in which they assume the real risk of discovering a real demand of a global training.

A real understanding means a combination and application of knowledge, to value how to solve a problem. To create a permanent assessment environment of the different contents during the last year of Secondary Education help students in this understanding.

We need to go deep into the training meaning of the own competencies (Perrenoud, 2014), taken in consideration as the contents to develop and learn them. We give a special position to those competencies that are needed to improve a complementary and global sense.
The different teachers’ contributions in the Focus group have revealed how rich are those contributions and a way to establish an understanding line among people with and the identification of the potential of each human being. There is a special recognition to competencies, how their mastery and progression is needed.

We have introduced a mix between teachers’ autonomy and collaboration with the team of the university. We have noticed that there is certain discrepancy in the real value of competencies. The team value them, they were not able to work with them as expected and they were not able to find the suitable place in the training process. The time and the nature of the different tasks the the Didactic units are not enough in order to learn them.

Communication and Mathematical-Technological competencies are the only one that are understanding as suitable to deal with this challenge, due to this both are considered as a new and transforming line (Mallart & Mallart, 2017), these authors underline the value and complexity of Communication competency means for teachers, we can find this same idea among the teachers that are part of the Innovation and Research Project.

The Focus Group has provided a new method of research with excellent adequacy to the needs and expectations of teachers and because of its importance the reflection of teachers has revealed the potential of this Focus Group for the training of students in the last year of Secondary Education. We find this same idea in (Stewart & Shand-asaani, 2015) in which a real coordinated team of the Educatice Institution has been created and the Global Training Project of the IES, that has promoted a culture base on the teaching-training process with focus on teaching Key competencies.

The most outstanding output has been how the managerial team has become conscious of the importance of mastering and training Key competencies, and how it influences the progress of knowledge, the reinforcement of the personal characteristics and the self-assessment of the own experiences. All this happens when we establish our own know-how and commitment style, with the social responsibility that occurs when we take in consideration how important are the personal traits, the global education and the value of the own experiences.

We continue with the discussion within the Focus Group, we perceive a deeper involvement in each participant-manager with the
debated objective, that is defined taken in consideration the potential and the learning meaning that take place with the knowledge and practice of Key Competencies by students and teachers. Due to this the Learning program and the Educative Project of the Institution of Key competencies in students include to discover the mastery that teacher have achieved on that competencies.

Kambarelis and Dimitriades (2011, p. 545) confirm that “The Focus Group has become an increasingly important construct used to explain complexity and contingency within many different disciplines, that the pedagogical function basically involves collective engagement designed to promote dialogue.” This idea underlines the value that we must give to Key Competencies Learning with special meaning to Social and Communication competencies.

The sense of leadership that the managerial team must assume, strengthens, creating a collaborative, understanding, debated environment. In which shared responsibility, real commitment to accept demands, competencies and challenges in rural leaders are needed. These requirements are a main source for the whole institution, that produce a suitable influence in the Community and in the context of cooperative organizations of the rural environment (Medina and Medina, 2018). The main answers are:

- “To think about a new university entry exam is required.”
- “Real examples, business case and to adapt methods to each subject with a more transverse vision.”
- “To take real examples of the History and to work them with perspective/retrospective. To design projects that involves all teachers in new work teams, that would be appealing for most of them.”
- “To design some activity that engages all teachers in March, in a real work in team, sharing it.”

Experts consider, they agree with teachers and managerial team, that the biggest challenge is to discover a new style and evaluation tests, that balance competencies in the last year of Secondary Educations. Due to these, students could have a great beginning in the first year of University, which means the base of a real university culture of global education and professionalism for the future.
11 Discussion-Conclusions: Open questions for the future

About general objectives:

Achievement of the intended objectives: singularly in general, as the involved teachers in this innovation – research have valued their professional development positively, due to the approach of improvement and continuous progress in the teaching competencies, in its isomorphism and core to the education in competencies of the students.

About specific objectives:

They are considered as very valuable and they have been reached completely.

About objectives related to discovering the involvement of the school leadership team in the education in competencies, especially of the students:

- There is a high sensitivity in the responsibilities of the organization and management of the school, stating: “There is an evident collaboration and involvement of the school leadership team in promoting education in competencies, although it is more relevant and achieved in the field of professional training than in the last year of higher education”.
  “The school leadership team has incorporated the challenge of the culture of competencies and works in that direction, but the main concern is to prepare students to succeed in the admission exam to get into university”.

The teachers have highlighted:

- The competencies are guidelines and they should be worked within the second year of higher education (bachillerato), after secondary, “however it is complicated at the moment to direct the teaching towards the education in competencies”, since the main purpose of the course to get into the university is to prepare students to succeed in the admission test.

- The comprehension of the competencies has improved and its incidence on the total care education of the students at the end of secondary.
  “There is a variety of opinions, since some teachers keep working the competences, even though this concept is not used with the clarity and rigour that it should be”.

The teachers present some method and tasks to develop the key competencies, although they recognize that it is necessary to think and to deepen in new methods “since they predominate the master class and the approach focused on the command of the contents”.

Among the tasks, it is expressed that scientific experiments are the most oriented and adequate to educate students in basic competencies (key competencies).

“We encourage students to look for and find new solutions for each one. The most used resources are minivideos, blackboards, laboratory, search in the internet, but it lacks criteria and tests of assessment adapted to the command of the competencies”.

The challenge of identifying the importance of orienting teaching to the command of competencies is highlighted: “It is necessary to educate students of higher education (bachillerato) in key competencies”. It is assumed that the basic ones, established in the educational legislation, are:

- Learning to learn; Communicative, Mathematics-scientific; Initiative-learning; Social, Artistic and cultural.

The teachers consider that the competencies that students manage the most, among the mentioned above, are: Learn to learn, Communication, Citizenship-social, Second language, ICT…

The teachers need an education oriented to generate the basis to educate students in the key competencies and to consolidate in their own professional development:

“We carry out short courses, but adequate teacher training is required within the framework of the institution”.

“Design teacher training programs linked to their teaching practice, close to the real problems, that each teacher has to solve in their professional performance, from an innovative research process”.

Teachers agree on the need to design some rubric adapted to the evaluation of competencies, by getting a justified choice of specific evaluation criteria and appropriate adaptation of some test, depending on each competence to judge / evaluate.

“Adequate training for teachers is required to carry out rigorous assessment of competencies”.

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Discover the Unseen Through Tool-Based Scientific Observation
(Product Presentation – Showing the possibilities of Mangold INTERACT software)

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1 Introduction

Observation appears to be a simple skill. It is assumed to be something everyone does every day since early childhood, and thus, it seems to be an easy and well-trained skill. But observation of behavior with intended scientific outcome is far from easy. It requires a well-thought-out method based on scientific knowledge and hypothesis. It further requires appropriate software tools to create reliable data and interesting findings with significant validity in reasonable time. The major difference between everyday observation and scientific observation, and the enormous chances specific software tools can create in this field, will be discussed in this article.

2 Live Observation” – the essential remains undiscovered

Live observation can only capture very simple behavior due to the well-known and well-studies limitations of human cognition, mainly the “attentional blindness”. The majority of behavior simply remains undiscovered for many reasons.

- A live observation cannot be paused or re-wound in case the observer missed an important behavior (contact between the observed participants, a short gaze, one single word that lead to frustration, aggression or relaxation of the participants, etc.). It is simply impossible to observe complex interactions, such as gestures, speech, facial expression and actions, through live observation.
The observer need to categorize the observations in order to make some quick notes in a short amount of time. This categorization is in fact an interpretation and therefore a pre-judgment. How often do we misinterpret a situation!? (Just imagine two children arguing and then all of a sudden they become “best friends” at the moment of your intervention.)

A comprehensive live observation is not possible especially when complex situations or large groups should be analyzed. The complex interactions among each other simply cannot be detected with the naked eye.

The quality of observation highly depends on the training and knowledge of the observer. An experienced therapist will certainly observe very different behaviors than a student of psychology. Also, they will both interpret and write down very different observations and draw different conclusions.

It can also never be proven which observation and conclusion were correct, because the observation in real life can never be “re-played” for verification or clarification.

In conclusion, live observation has serious limitations and disadvantages. Numerous amounts of studies would need to be made with live observation to eventually discover the amount of insight which can be easily gained through professional video based behavioral research.

3 Advantages of Video Analysis in Behavioral Research

Capturing video during observations is essential for later analysis. This allows the researcher to concentrate on very specific tasks, such as, performing tests with the participants, observing, analyzing, and finally making conclusions.

Video based behavioral research requires a professional approach and appropriate technical system to make the process of data acquisition and observation efficient. This not only increases the
efficiency of the observation process but also its effectiveness. This is because more and better results can be expected. It further requires appropriate software tools to create reliable data and interesting findings with significant validity in reasonable time. We need to think about how more data and results can be generated from existing data, in order to discover the things that cannot be discovered by pure observation. Because that is exactly the added value of observational studies.

Now it is clear that even at very early stages, any time-saving by using professional tools will benefit the further evaluation process. Because time is the critical factor in order to present expected reliable and valid results and to discover further things that have not yet been explored.

4 Audio-/Video Recording

Observation by using audio-/video equipment is not as easy as it sounds. To make meaningful scientific observations, adequate methods and good technical solutions are necessary.

This is because you need to capture the reality. You need to have cameras and all types of audio equipment to capture and record the observed scenarios in detail. The resulting multimedia files (audio and video footage) needs to be used for all kinds of post analysis and for creating teaching, training and feedback material.

There are multiple ways to cover this part, starting from a simple camcorder, up to a complex lab setup. But the question is: Are you a researcher or an A/V professional? Especially because there are 1000 possibilities to waste your time.

• What video cameras do we need to take?
• What about audio signals? How do we get them into the recording?
• How can we do the cabling?
• Is it needed to mix any signal?
• Do we need power supplies?
• How do we get the video into the computer?
• Which format do we need?
• How can we store all recordings?
• Can we integrate external systems, like EEG, physiology, eye tracking, and so on?

The best way is to talk to someone who is an expert for these questions, so that you can be focused on the research part.

• You can talk to any audio-/video-provider. But you need to know that these companies have no experience with video based behavioral research. That’s why you’ll mainly receive equipment from the security area. So the worst case will be that you’ll end up with security cameras and special systems where you won’t be able to use the recorded video files in such a way that you can proceed with your observational studies.

• Or you can talk to someone who is an expert for video based behavioral research, which includes the observation, the recording, and also the analysis. There are certainly multiple companies on the market. But I can only talk about Mangold International (www.mangold-international.com).

Mangold International lab setups are always designed individually based on the users needs. You can have a broad range of audio and video equipment. The video device range goes from fixed HD video cameras with variofocal zoom lenses to fully remote-controlled pan/tilt-zoom cameras. Audio can come from almost anything, from stationary boundary microphones, to high end wireless tie clip micro-phones.

The lab setup can be stationary with multiple rooms (in most cases one control and one or more observation rooms) or portable so that you can go on-site.

• Stationary
  A Mangold behavior research laboratory can be as complex as you like – as long as you have the staff to operate everything.

• Portable
  With a Mangold portable lab, all the necessary audio and video components are housed in a roller briefcase and can be easily transported to the test-location.
In combination with the audio-/video-components you can use a special software called VideoSyncPro for the recording.

- VideoSyncPro starts recording of multiple videos simultaneously from different sources with a single mouse click. Thus, all recordings can get the same starting point, which greatly simplifies their subsequent analysis.
- VideoSyncPro records videos in a standard format. Thus, any previously necessary and time-consuming export or conversion of videos is a thing of the past! Use your videos immediately in other applications and analyze them qualitatively and quantitatively.
- VideoSyncPro can send synchronization signals to other software programs and recording devices, so that all data streams can be synchronized in post-analysis.

You can use almost any number of cameras in your observation lab. You can watch multiple videos in live preview. You can remotely control your cameras with the mouse. And last but not least, you can manage your videos in an easy-to-understand project structure.

5 What to do with the recorded video material

The synchronous recording of different audio / video sources cannot be the primary goal of an observational research lab, but their substantive, scientific evaluation and the production of meaningful results. To do this you have multiple options:

- You can use the old “paper & pencil” method. This will end up in a very time-consuming process, especially if you’ll try to get findings and statistics.
- You can use tools that not have to be developed for video based behavioral research (e.g. Microsoft Excel). This is also a very time-consuming process, especially there is no direct link between your data and the video(s).
- Or you can use professional software tools for your observational research projects. There are certainly multiple
tools on the market, e.g. AQUAD, Videograph, INTERACT, and so on. But I can only talk about Mangold's INTERACT.

INTERACT is a platform for synchronized viewing and analysis of video footage and audio files in observational research. It allows for content coding and event logging and creates valuable qualitative and quantitative results.

**Video / Audio**

You can open and evaluate as many videos as you wish. All videos remain synchronized. This is very important if, for example, you are filming a scene with several cameras and then evaluating these videos together.

Of course, you can play the videos at any time at any speed, from quite fast to very slow. They can even go back and forth in single images.

You can also view the soundtrack for each video. This is very handy when the audio information is an essential part of your study. In autism studies, for example, it may be silent for an hour. Suddenly the subject speaks a few words. With the audio presentation, you can immediately see this place and jump directly there instead of watching and listening to the whole video.

**Coding System**

To code the content of the video you simply define a coding or a category system. This can consist of any number of codes describing the events or contents that you want to evaluate in the video.

INTERACT allows you to use arbitrarily large category systems, which can also have any number of branches and hierarchy levels. This allows you to make very detailed speech analyzes by describing what you are observing very closely with various codes (for example: who says what to whom, why, with which intention, what tonality, what sentence structure, etc.).

Of course, this goes with any content. For example, with the Facial Action Coding System (FACS), which describes the expression of
each muscle in the face. Due to the intelligent structure of coding systems in INTERACT, the entire Facial Action Coding System needs only 3 levels to be fully usable.

**Rating / Coding process**

Once the coding-system is defined, the actual coding process can begin. To do this, the videos are now viewed and the coder captures what he/she sees in the videos using keyboard shortcuts or mouse clicks. This can, as already mentioned, take place at any speed. Even if the video is paused, data can be recorded. INTERACT stores the data in so-called events. Each event always has a start time, an end time, and any number of codes.

Of course, you can also carry out extensive transcriptions with INTERACT. You can add as much text to each event as you like.

But that’s not all. If you have additional data sources that you want to assign to a section of the video, such as PDF files, text documents, or spreadsheets, simply drag and drop them onto the text field of the event. With one click these can be called up again at any time.

**Data Structuring**

In INTERACT, events are always recorded in groups and sets. This is very useful, since you can already structure your data during the event logging. For example, use the data sets for the different subjects of the different test situations in your studies.

Best of all, you can easily restructure your data afterwards; INTERACT offers great routines that automatically group events for instance per subject or insert new data sets before a specific event.

**Independent Variables**

You can even add independent variables to the data sets. You can define these completely freely. This allows you to select e.g. all female subjects or subjects at a certain age or situation with a few mouse clicks for post analysis.
Multiple Coding Turns

Often it is necessary to code a video in several turns with a focus on different aspects. In INTERAT this is easily possible. Just set the video to the beginning, open a different coding system and capture your data as usual. Mangold INTERACT automatically ensures that all data are properly recorded.

You can also add new codes at any time to your coding system. And you can make manual corrections to your data at any time as well. If the videos are coded, interesting statistics can be created with just a few mouse clicks.

Analysis / Statistics

In the so-called time-line chart, INTERACT displays all logged events on a horizontal timeline. With a click in the timeline, all the videos immediately jump to the appropriate location. When the video is playing, you can also see a line running through the chart that shows the current location of the video.

Clicking on the evaluation button displays a series of statistical values. For example, the frequency, duration, and percentage of time of each code.

All this is pure base functionality. And it is important to generate data that can be used for further evaluations.

Real Value of INTERACT

The real value of a software like INTERACT, however, is not the collection of the data, which of course is a very powerful range of functions. The real value is to draw information from these data, which cannot be detected by pure observation.

This is first the search for simultaneous event, or co-occurent codes. If the research question is “how often is behavior A and B occurring at the same time”, it would not be easy to observe and log these situations with a single code. Simply because it is very difficult to capture several things at the same time cognitively.
The coding of A and B independently is probably much faster and more accurate, because you only need to concentrate on one thing and, maybe, can run the video even faster when you log events.

If you have logged behavior A and B independently of one another, INTERACT can tell you in a few mouse clicks exactly where these behaviors occur at the same time. This information is saved in new events that you can again evaluate statistically.

Similarly, you can examine contingencies or sequences of behaviors in your data, thus generating more and more information.

With this way of information mining, you get more and more complex results about the whole process from original simple codes.

This is exactly what makes a software like INTERACT so valuable.

Of course, you can also display and examine this data in any other way. One example is the integrated State Space Grid (SSG), which offers interesting possibilities and insights into your data.

**Rater-Realiability**

And sure, INTERACT also provides methods to test the reliability of your coders. This is, for example, the Cohen’s Kappa or the Intra Class Correlation Coefficient (ICC). These functions provide information on the quality of your data with just a few mouse clicks.

**Expansion Options**

Finally, the integrated programming language of INTERACT allows you to extend INTERACT to meet your specific requirements. Write your own data import, export, and evaluation functions, which can then be called directly from the INTERACT menu bar by your entire team.

**6 Conclusion**

By using professional tools (hard- and software) you can discover the invisible in your observational research projects. It enables researchers to conduct scientific studies efficiently without having to handle all the complex technical details.
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