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## **Inclusive Vocational Teacher Education in Austria and Germany – A Country Comparison of Personal Characteristics of Pre-Service Teachers**

**Miesera, Susanne**

susanne.miesera@tum.de, Technical University Munich

**Moser, Daniela**

daniela.moser@phst.at, University College of Teacher Education Styria

### **Abstract**

All around the world, educational institutions are developing into inclusive systems. Inclusion in vocational education and training includes young people with very heterogeneous individual needs and demands. Teachers are confronted with the challenges of designing inclusive instruction that enables successful vocational training. To fulfil these requirements, educational institutions are implementing inclusion-oriented courses in teacher education based on state-specific regulations. This article examines the experiences, attitudes, and self-efficacy expectations of prospective vocational teachers regarding inclusive education in a country comparison. Baumert and Kunter's propose a competency model of teacher professionalism, which considers the competency facets of knowledge and skills as well as personality characteristics. Significant differences in attitudes and self-efficacy between Austrian and German trainee teachers are found. The results of the study and their implications for future research and teacher education are discussed.

### **Keywords**

vocational teacher education, inclusion, Austria, Germany

### **1 Inclusive education and teacher education**

The ratification of the Convention on the Rights of Persons with Disabilities by Austria 2008 and Germany 2009 (United Nations, 2006) brought with it the obligation to implement the law in schools and teacher-training. Consequently, students with and without special educational needs (SEN) are learning together in inclusive schools, and teachers at schools are confronted with diverse individual needs of students with SEN (Gebhardt et al., 2015). Increasing heterogeneity in classrooms requires an adapted teaching and learning atmosphere, which presents teachers with new demands. In order to enable every student's participation and learning success, it is the teacher's responsibility to support students in their individual development. For this purpose, adaptations to the qualifications and competences of educational staff are required. Teachers have to adjust learning settings to enable participation of all learners and to make teaching accessible. Previous studies have shown that teacher characteristics, like experience, attitude and self-efficacy, exert the main influence on a positive inclusive learning atmosphere and the implementation of inclusion in classrooms (Avramidis & Norwich, 2002; Boyle et al.,



2013; Specht et al., 2016). Teachers with high self-efficacy work harder and persist longer in assisting students who experience learning challenges (Woolfolk et al., 2009). While comprehensive empirical results are already available in the general education sector (Gasteiger-Klicpera et al., 2013; Kopp, 2009; Schwab et al., 2017; Schwab & Seifert, 2015), little is known so far about teachers' attitudes toward inclusive education in the vocational system (Bylinski & Rützel, 2011; Bylinski & Vollmer, 2015; Heinrichs et al., 2019). The significance of inclusive teacher education is shown by studies which highlight that the development of individual personal characteristics, specifically attitudes and perceived self-efficacy, in pre-service teachers depends in part on qualifications obtained in their university teacher education training (Beacham & Rouse, 2012; Hernandez et al., 2016). Although inclusion and diversity should be a mandatory part of all teacher training programs (Florian et al., 2010; Sharma & Sokal, 2015), there are few studies regarding the introduction of inclusion in the area of vocational teacher training (Miesera et al., 2018; Miesera & Gebhardt, 2018).

## **2 Inclusive teacher education in the VET system**

As the VET system intends to build a future-oriented development of the cognitive, emotional and social human capital of the coming generation, a forward-looking teacher education is particularly important. Bylinski (2020) therefore identifies four aspects of successful learning settings: personal characteristics, individualization in heterogeneous learning groups, individual development and qualification planning, and the connection between diagnostics and didactics. Through teacher education, VET teachers should be empowered to be successful in inclusive learning settings. The implementation of inclusive aspects in vocational teacher training is determined by the state-specific understanding of inclusion and the legal regulations. The Austrian Curricula of teacher education define "inclusive, cross-cultural, interreligious and social competences as well as diversity and gender competences" (BGBl. I Nr. 30/2006, 2006/21.02.2020). Furthermore, the targets of the UN Convention have to be implemented in the curricula (BGBl. I Nr. 30/2006, 2006/21.02.2020). The development of inclusive competences is provided in an early stage of teacher education. As an analysis of curricula focusing diversity and their dimensions highlighted (Reutler & Steinlechner, 2018), the term "inclusion" can be found mainly in the curricula of VET Teacher Education in the general educational sciences in context of attitudes towards inclusion. In Germany, the integration of young immigrant people and the handling of the continuous integration and inclusion tasks are seen as challenges for vocational schools. (Kultusministerkonferenz, 2017). The aim of teachers to deal professionally with heterogeneous target groups and to integrate underachievers and disadvantaged people can be achieved through appropriate teacher training programs. In Germany, the "Hochschulrektorenkonferenz" highlights differentiation, integration and support to understand diversity and heterogeneity as conditions of school and teaching (Kultusministerkonferenz & Hochschulrektorenkonferenz, 2014). Compulsory courses in teacher education impart not only skills and competences but also beliefs and attitudes towards diversity (Kultusministerkonferenz & Hochschulrektorenkonferenz, 2015). In order to provide inclusive contents, interdisciplinary efforts of educational sciences, subject sciences and subject didactics are required.

## **3 Study design**

This paper presents the results of testing existing survey instruments in an international comparative study of the role of teacher characteristics, experiences, attitudes, and self-efficacy in inclusion. The success of inclusive efforts in the school system is largely dependent on trained teachers (Avramidis & Norwich, 2002; Forlin & Chambers, 2011). Concerns, lack of self-efficacy expectations, and negative attitudes reduce efforts to implement inclusive instruction (Sharma & Jacobs, 2016). The correlations of the factors are based on the models of Tschanen-Moran et al. (1998) and Bandura (1997), which are based on a self-efficacy concept with

the influencing factors "own experiences", "beliefs", "analysis of own competence". Following (2006) this study understands professional competence of teachers as an interplay of knowledge, skills and personality traits. Comparative studies confirm country-specific characteristics (Abegglen et al., 2017; Miesera & Gebhardt, 2018; Schwab et al., 2017). This paper explores the question of what experiences, attitudes, and self-efficacy regarding inclusive education prospective Austrian vocational teachers exhibit and how these differ from their colleagues in Germany. The study focuses on the correlation between experiences, attitudes and self-efficacy and inclusion. The following research questions are considered:

1. Is there a significant measurable difference between these countries in experience, attitudes and self-efficacy regarding inclusion of pre-service vocational teachers?
2. What are the correlates of self-efficacy in inclusive education; how do the correlates relate to each other; and do these correlates align with findings in other settings?
3. Do the statistical predictors experiences, attitudes, age, gender and country explain the variance in self-efficacy in these two countries?

Since Germany and Austria have taken different approaches to implementing inclusion in their schools and teacher education programmes, these two countries were selected in order to compare pre-service teachers' development as inclusive educators. An online survey was given to pre-service teachers in Germany and Austria (Miesera & Weidenhiller, 2018). The online survey was conducted in the vocational teacher training programmes in Bavaria, Germany and in five pedagogical colleges for teacher education in Austria (Styria, Tyrol, Vienna, Vorarlberg, Carinthia). The German pre-service teachers were enrolled in the first and second years of a two-year post-university internship program. In contrast to the German system, the Austrian vocational system is highly differentiated concerning the levels of qualification, the diversity of branches and the transfer opportunities. Accordingly, Austrian vocational teacher education has some specific characteristics. A crucial precondition to become a vocational teacher in the dual system or in a technical college is at least three years of professional practice, followed by employment in a school. Generally, after two or three years teaching in schools, vocational teachers start their bachelor studies as part-time or full-time pre-service teachers. Therefore, vocational teacher students for both the dual system and for technical colleges were surveyed. At the time of the survey, the respondents were studying full-time at teacher education colleges in Austria (Pädagogische Hochschule). All the participants had had a minimum of at least one year teaching experience. 206 pre-service teachers (101 in Germany and 105 in Austria) for vocational programs completely answered the questionnaire. All the items were constructed by using five categories (five-point Likert scale items: strongly disagree, disagree, undecided, agree, and strongly agree). The analysis of resulting factors was based on three constructs: experience, attitude and self-efficacy. The three scale were tested for reliability in Germany and Austria.

#### 4 Results

The "Experience" scale includes six items. Example items are: "I have already taught pupils [...] with special educational needs" or "I have experience in dealing with young people with special educational needs". The German group rated their experience lower ( $M = 2.31$ ;  $SD = 0.71$ ) than the Austrian participants ( $M = 2.37$ ;  $SD = 1.05$ ). In summary, the German group reports less experience than the Austrian group, but this is not significant. The scale "Attitudes" includes nine items. Example items are: "In my opinion, students with special needs who are taught inclusively at regular vocational schools are better prepared for the labor market" or "In my opinion, students without special needs show a better willingness to perform in inclusive learning environments." The ratings of German prospective vocational teachers ( $M = 3.58$ ;  $SD$

= 0.59), and the Austrian ratings ( $M = 3.37$ ;  $SD = 0.66$ ) show significant differences. The "Self-Efficacy" scale comprises 13 items. Example items are: "I feel able to meet the needs of students with and without special needs" or "I believe that I will be able to appreciate the achievements of all students equally, even if they did not reach the learning goal". It can be seen that the German group brings significantly lower estimation of self-efficacy (Germany  $M = 3.42$   $SD = 0.56$ ; Austria  $M = 3.70$ ;  $SD = 0.73$ ). The scales of "Attitude" and "Self-Efficacy" and the scales of "Experience" and "Self-Efficacy" correlate in the total group; the scales of "Attitude" and "Experience" do not correlate. The regression analysis clarifies the variance on the data basis from Germany and Austria of the dependent variable "Self-Efficacy" by demographic and experience-related parameters. Experience, attitude, age, gender and country are set as independent variables influencing the variance of self-efficacy. The results show that experience, attitudes, and country are the significant variables that explain the prediction of self-efficacy. Gender has little influence on the dependent variable of self-efficacy. The study and the results were published in detail (Miesera & Moser, 2020).

## 5 Conclusion

This cross-national comparative study shows the differences of personal characteristics among prospective teachers preparing for professional schools in different countries. The results of the transnational study show that there are differences in the rating of the scales between the two countries. In summary, Austrian and German prospective professional educators build on similarly few experiences. This suggests that in contact with school practice the interviewed participants rarely experienced diversity. The question to what extent a lack of experience affects the implementation of inclusive teaching needs to be investigated in further studies. With regard to attitudes towards inclusion, Austrian vocational teachers in training show a significantly lower value compared to German trainee teachers. One possible explanation is that some of the trainees surveyed are required to teach a great deal of content in vocational schools under the time pressure. Input-oriented instruction rarely takes heterogeneity-related interventions into account and possibly leads to teachers' experiences of failure. Further research focusing on instructional design and diagnostic skills of teachers in vocational schools is recommended. Compared to the assessment of their own self-efficacy, there is a significant difference in favour of the Austrian participants. This may be due to the fact that Austrian teacher trainees have several years of professional experience, which probably leads to a higher self-efficacy perception. The correlations between the constructs "Attitude", "Experience" and "Self-Efficacy" towards inclusion show that the scales of "Attitude" and "Self-Efficacy" and the scales of "Experience" and "Self-Efficacy" correlate in the overall group. Correlations of these constructs have been studied several times in the literature, sometimes leading to contradictory results (Gebhardt et al., 2015; Savolainen et al., 2012). Therefore, the results need to be examined in further studies with a participant group of professional educators. The regression analysis confirms that attitudes and experiences significantly influence self-efficacy beliefs. There are only a few regression analyses available on the relationship between these psychological constructs (Gebhardt et al., 2015), so further investigation is needed. It should be noted that the selected independent variables only explain 33 % of the variance in self-efficacy; further regression analyses with additional variables are recommended. It is a limitation of this study that the small participant groups and the state-specific surveys in Germany only allow a limited statement on the transferability of the results. The authors recommend further studies in other countries. Overall, a limiting factor is that there are too few empirical studies on the psychological constructs of attitude and self-efficacy toward inclusion for vocational schools. As a result, only comparisons with general education schools are possible. The results of the current study are similar to the findings of the international studies for regular teachers (Sharma & Sokal, 2015; Specht et al., 2016). Further calculations might show differences or similarities between European countries.

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### Biographical notes

Dr **Susanne Miesera** coordinates the inclusive teacher training at the Technical University (TU) of Munich, Faculty TUM School of Education. She is the coordinator of the Department of Nutrition and Home Economics at vocational schools at the TUM School of Education. Her research focus is on inclusive teacher education and successful conditions for inclusion in schools with a focus on vocational schools.

Dr **Daniela Moser** is a Professor of Educational Science and Vocational Research at the University College of Teacher Education Styria, Institute for Educational Sciences. Her research interests are psychological aspects of teaching and learning, learning environments in VET and initial vocational teacher education. She is also working in fields of diversity management and digital distance learning in VET.