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Teacher Education Students' Visions Shaping Future Generations

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Abstract

Teacher education programs shape prospective teachers, and teachers (can) shape future generations. Teachers serve as multipliers for society; their beliefs and visions have a high influence on their teaching, independently from curriculum directives.

This paper describes a study in which we reconstructed teacher education students' (n = 113) visions of the future in general as well as their future visions on learning and teaching. Methodologically, we chose an open, explanatory free-writing approach (micro-articles) to provide room for emotional expression and creativity. The analysis shows a wide variety of themes, approaches, and dispositions. The results indicate that teacher education programs can build awareness on future visions of prospective teachers. Thus, it appears important to allow them room in their training to reflect and further develop their expectations and visions of the future, so they realize their responsibility towards the future in their role as teachers.

Keywords: *teacher education; future visions; higher education, society; future generations; responsibility.*

1. Introduction

The future lies with our young generations. Teachers (can) have an enormous impact on them (UNESCO, 2021) because what and how they teach influences and shapes students' knowledge and attitudes (Lee, 2019; Ross-Hill, 2009; Tang & Hu 2022; Hill, 1971). Thus, teachers serve as multipliers for society. Therefore, visions of teachers become important. They shape their professional believes (Lachner, Jarodzka, & Nückles, 2016) as well as behavior (Guerra & Nelson, 2009), and influence their performance (Muijs & Reynolds, 2015). In short: what teachers believe has a high influence on how and what exactly they teach, independently from curriculum directives (Bonner, Diehl & Trachtman, 2020).

With regard to the urging global societal and environmental challenges (Steger, 2020; Beck, 2000; De Haas et al., 2019; Barry, 2005; Rosa, 2015) but also ideas to tackle them (eg. SDGs,

UN, 2015), the importance of *future visions of teachers* becomes apparent. (Positive) Future visions can create hope (Ginevra et al., 2017) and activate people to develop and implement solutions (Jørgensen & Grosu, 2007; Adam & Groves, 2007).

But teachers are not just born; they are shaped by higher education, specifically by teacher education (Darling-Hammond, 2016; Stolz, 2020). For all these reasons, we believe that teacher education should deal with and address prospective teachers' future visions (Sherin, Russ & Colestock, 2008; Sherin, 2014). A first step in this direction is to explore the field. Therefore, we conducted a study within a teacher education program with the aim to reconstruct teacher education students' (n = 113) future visions based on the research question, what teacher education students think of the world in 2040 in general and education (learning and teaching) specifically.

2. Theoretical Background

There is a long tradition in arguing the importance of teachers for society and its development. By teaching and educating, they ensure the dissemination of cultural heritage from one generation to the next. Formal education conveys and passes existing knowledge to the next generation, and, therefore, provides the basis of new knowledge, innovation, and change (Kraler, Bacher, & Schreiner, 2022). As important, teachers provide young generations with an objective, science-based picture of the world, to learn what humankind has gained as well as the challenges we face. Thus, optimally, data and facts are transformed to knowledge and competencies through learning. Both, together with creativity and visionary thinking build the fundament for innovations to master challenges and adapt successfully to an ever-changing world. Human beings and especially learners cannot be reduced only to their cognitive minds. Emotions play a crucial role in almost every learning process (Tyng et al., 2017). And together with knowledge and competencies, they are the catalyst for innovation (Mayer & Salovey, 1997).

A pivotal step leading to innovation is creating creative visions (Reid & Petocz, 2004). These visions also need to be emotionally loaded to be realized (Chiu & Kwan, 2010). Considering future visions in higher education in general and specifically of teacher education students – as argued above – we need to conceptualize visions and future thinking. Visions usually refer to an idea or mental image of something or an imagined mental image of something. Future thinking refers to the mental simulation of future events or circumstances specifically that one might be personally involved in (Atance & O'Neill, 2001). We can approach it in at least four different ways: biographically (e.g., life planning, cf. Brooks & Everett, 2008), with respect to different populations/groups (e.g., age, cf. Steinberg et al., 2009), topic oriented (e.g., climate change, cf. Norgaard, 2011) and especially timescale oriented (short- and long-term future, cf. Adam & Groves, 2007).

In the context of higher education – and here specifically in teacher education – we can especially refer to the rich corpus of teacher belief research that shapes their professional activities in everyday school life (Kagan, 1992; Zhihui, 1996; Guerra & Nelson, 2009). This theoretical approach offers a conceptual blueprint for studying future visions of teacher education students. Remarkably, we couldn't find any content specific references to future visions within teacher belief research. Therefore, we combined this approach with the concept by Ruth Levitas (2013), who understands utopia as a method rather than a goal. Hence, as a first step, we tried to reconstruct the topic empirically, to gain a better understanding and draw possible conclusions for teacher education programs. In this context, we also refer to Cook (2018), who did research on imagined futures of young adults in general.

3. Methodology

In the presented study, we chose an open, explanatory free-writing approach (Elbow, 1998) to provide room for emotional expression and creativity following the structure of micro-articles (Willke, 2004). In detail, teacher education students were asked to first write about their visions of the future in general (from a global, societal perspective) and, subsequently, about their future visions of school and their future role as teachers, both in about 15 to 20 years from now. We used a mid-term period to avoid slipping off into unrealistic scenarios based on science-fiction. Also, the concrete memories of the participants reach back to at least 15 years in the past.

The sample consists of 113 teacher education students (secondary schools). Approx. 20% were on the bachelor's and 80% on the master's level. Each student typically studies in order to teach two different school subjects, with 25 different school subjects being studied in the sample in total. Data collection took place between November 2022 and June 2023 during course.

The data was analysed computer-assisted with MAXQDA. A qualitative content analysis (Kuckartz & Rädiker, 2022) was conducted in form of triangulated coding with three coders. Main- and subcategories were derived inductively.

4. Results

Asked for an overall assessment of perspective on the future, 30% express an optimistic, approx. 20% a negative and about half of the students a neutral view.

The teacher education students' free-writing texts show a wide variety of themes, approaches, and dispositions in describing their visions of the world, schools, and themselves as teachers. Recurring themes are technology and digitalization, societal and economical changes, as well as sustainability and climate. Table 1 lists the main categories and their frequencies regarding to coded segments and the number of texts with such (a) coded segment(s).

Table 1. Future visions in general – main categories

MAIN CATEGORIES	per code	per text	% of all texts
Technologization and Digitalization	145	102	90%
Society	111	80	71%
Economy	80	59	52%
Sustainability and Climate	60	53	47%
Formal Education	43	32	28%
Conflicts, Crises, and Concerns	60	23	20%

The most frequent main category is *technologization and digitalization*, which occurred in 90% of the texts. A closer look reveals four major areas the students bring up: technology and the world of work (e.g., automatization and its effects on the labor market); technological advancement in general; technological advancements that lead to changes in everyday life (e.g., self-driving cars); technology and its impact on school and education.

The participants' visions of the future range from extremely negative to (deliberately) positive. How they expect technological progress to influence teaching and learning is one example for this diversity: On the one hand, they expect substantial change in school life and teachers' roles because of digitalization; on the other hand, some visions very much stress the stability of the school system using technology only as a tool in mostly unchanged settings. Some future visions are characterized by widely exploring opportunities of digitalization and technology; others very much ponder the effects of mobile devices and social media on students' wellbeing and social skills.

A high level of heterogeneity characterizes also other themes in the students' texts. Most pronounced differences in their visions for the year 2040 can be found regarding societal developments and climate-related issues. Approximately 30 segments coded in the main category *society* express a (very) pessimistic view, writing about (further) societal and/or socioeconomic division; in another 30 segments, students draft visions about an increase in tolerance and the appreciation of human rights. Half of the segments coded in the main category *sustainability and climate* talk about expectations of further advancement of climate change and its consequences on the earth, humans, and society; the other segments of this category concentrate on coping with climate challenges.

5. Conclusion and Outlook

The premise of this paper was that future visions held by teacher education students (can) have a significant influence on future generations. Their visions (can) shape the direction of their educational practices, and eventually, societal development.

The aim of the empirical study presented in this paper was to find out about future visions of teacher education students. We asked a sample of teacher education students (n = 113) to write about what they think of the world in 2040 in general as well as particularly regarding formal education and the teaching profession. The main findings show that the participants' basic tenor towards the future was mixed. About 30% of respondents express optimism, 20% negativity, and the remaining 50% a neutral stance towards the future. Thematically, we could identify specific categories that are relevant for most participants. The texts reveal diverse perspectives on technology, societal changes, and sustainability. Technology dominates the discussion, with both optimistic and pessimistic views about its impact on work, daily life, and education. Themes like societal development and climate change also elicit diverse viewpoints, with some emphasizing division and others promoting tolerance and sustainability. A closer look at these topics is essential because teacher education students' anticipations indicate a development trend with regard to future generations.

The method applied, the combination of micro-articles with freewriting, supports exploring students' mental landscapes (Tolman, 1932). In the context of the present study, micro-articles on what the world, schools and teaching will be like in 2040 were produced during a university course. The learners thereby got the opportunity to explore their own visions of the future, could explicitly span their personal semantic field on the subject and become aware of their state of knowledge and believes. This shows that teacher education programs have the potential to build awareness on future visions through reflection on the subject matter. Given the variety of future visions shaping teacher education students' expectations of school life in 15-20 years, it appears important to allow them room in their training to work and reflect on expectations and further develop future visions. By nurturing a reflective mindset among teacher education students, we believe that teacher education programs have the potential to empower prospective teachers to become catalysts for positive change, ensuring a brighter future for generations to come.

To gain a deeper understanding of the future visions of teacher education students, this study is currently undergoing an extension. The initial approach outlined in this paper was confined to a singular institution and a specific moment in time. By expanding the sample, we aim to transcend such limitations, encompassing both spatial and temporal dimensions: (1) With regard to space, we are currently extending the study to diverse geographical locations. Our next step is to include samples of students from at least one teacher education institution from each continent. This allows us to explore whether future visions among teacher education students remain consistent across different cultural contexts. However, factors such as cultural nuances,

educational systems, and societal norms may influence the transferability of our results. Thus, while seeking patterns and trends across diverse contexts, we must remain mindful of the limitations in generalizing our findings to a wider population. (2) With regard to time, we plan to conduct this study over successive years. Our goal is to examine not only whether but also how future visions of teacher education students evolve over time. We are particularly intrigued by how external circumstances, such as periods of stability versus times of crisis, impact the formation of their vision. Longitudinal analysis will allow us to track these changes and discern patterns in response to varying contexts.

As we delve deeper into understanding the evolution of future visions of teacher education students over time and across diverse contexts, on the long run, we aim to gain valuable insights into how to best prepare educators to meet the evolving needs of learners and societies. Ultimately, understanding the dynamic nature of future visions within the field of teacher education can provide valuable insights for curriculum development, policy-making, and fostering resilience within the teaching profession.

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