

Bakenhus, Silke; Donovan, Jeramy

A comparison of primary school teacher education programmes. University of Greifswald (Germany) and University of Michigan-Flint (USA)

Schlesier, Juliane [Hrsg.]; Frey, Anne [Hrsg.]; Hoya, Fabian [Hrsg.]; Parade, Ralf [Hrsg.]; Rank, Astrid [Hrsg.]: *Foundations of learning. Unveiling the mosaic of primary education systems worldwide. Bad Heilbrunn : Verlag Julius Klinkhardt 2026, S. 422-447. - (Grundschule International / Primary Education International)*



Quellenangabe/ Reference:

Bakenhus, Silke; Donovan, Jeramy: A comparison of primary school teacher education programmes. University of Greifswald (Germany) and University of Michigan-Flint (USA) - In: Schlesier, Juliane [Hrsg.]; Frey, Anne [Hrsg.]; Hoya, Fabian [Hrsg.]; Parade, Ralf [Hrsg.]; Rank, Astrid [Hrsg.]: *Foundations of learning. Unveiling the mosaic of primary education systems worldwide. Bad Heilbrunn : Verlag Julius Klinkhardt 2026, S. 422-447* - URN: urn:nbn:de:0111-pedocs-358081 - DOI: 10.25656/01:35808; 10.35468/6239-16

<https://nbn-resolving.org/urn:nbn:de:0111-pedocs-358081>

<https://doi.org/10.25656/01:35808>

in Kooperation mit / in cooperation with:



<http://www.klinkhardt.de>

Nutzungsbedingungen

Dieses Dokument steht unter folgender Creative Commons-Lizenz: <http://creativecommons.org/licenses/by-sa/4.0/deed.de> - Sie dürfen das Werk bzw. den Inhalt vervielfältigen, verbreiten und öffentlich zugänglich machen sowie Abwandlungen und Bearbeitungen des Werkes bzw. Inhaltes anfertigen, solange sie den Namen des Autors/Rechteinhabers in der von ihm festgelegten Weise nennen und die daraufhin neu entstandenen Werke bzw. Inhalte nur unter Verwendung von Lizenzbedingungen weitergeben, die mit denen dieses Lizenzvertrags identisch, vergleichbar oder kompatibel sind. Mit der Verwendung dieses Dokuments erkennen Sie die Nutzungsbedingungen an.

Terms of use

This document is published under following Creative Commons-License: <http://creativecommons.org/licenses/by-sa/4.0/deed.en> - You may copy, distribute and transmit, adapt or exhibit the work or its contents in public and alter, transform, or change this work as long as you attribute the work in the manner specified by the author or licensor. New resulting works or contents must be distributed pursuant to this license or an identical or comparable license.

By using this particular document, you accept the above-stated conditions of use.



Kontakt / Contact:

peDOCS
DIPF | Leibniz-Institut für Bildungsforschung und Bildungsinformation
Informationszentrum (IZ) Bildung
E-Mail: pedocs@dipf.de
Internet: www.pedocs.de

UNITED STATES OF AMERICA & GERMANY

Silke Bakenhus and Jeramy Donovan

A Comparison of Primary School Teacher Education Programmes: University of Greifswald (Germany) and University of Michigan-Flint (USA)

Abstract

This article presents a comparative analysis of primary school teacher education programmes at the University of Greifswald (Germany) and the University of Michigan-Flint (USA). The German model is shaped by centralised regulations and a nationally standardised system, whereas the U.S. approach is characterised by decentralisation and institutional autonomy. The comparison examines both structural differences and the respective strengths and limitations of each system. Key areas of focus include the integration of theory and practice, admission criteria, programme duration, and the design of practical training components. The overarching aim is to identify opportunities for cross-national learning that can inform the continued development of teacher education in both contexts. By providing a concise overview of two contrasting models, the article contributes to the international discourse on enhancing the quality and effectiveness of teacher training programmes.

Keywords: Comparison Germany-USA, primary school teacher training, educational structures, University of Greifswald, University of Michigan-Flint

Introduction

Teacher education is a fundamental component of educational systems worldwide, yet its structure and organisation differ markedly across, and often within, national contexts. This article explores the similarities and differences between two specific primary school teacher education programmes, one at the University of Greifswald in Germany and the other at the University of Michigan-Flint in the United States. Although both institutions aim to prepare aspiring primary school teachers for their future profession, they operate within distinct educational systems shaped by differing cultural, political, and institutional frameworks (Wilmers & Ylimaki, 2021). Teacher education in Germany is characterised by a significant degree of centralisation and standardisation, influenced by national regulations and frameworks (Kultusministerkonferenz, 2022). In contrast, the United States' system of teacher education is distinguished by its decentralised and more flexible structure. The aim of this comparison is to analyse the respective strengths and weaknesses of both primary school teacher education programmes and to identify areas for potential improvement. The present article seeks to generate insights that can contribute to the ongoing development and refinement of teacher education in both countries. A deeper understanding of these divergent approaches may offer valuable guidance to students, educators, and policymakers alike, providing meaningful impetus for future reforms and fostering international dialogue on the optimisation of teacher education programmes.

The article is divided into four main sections. The first explores teacher education in Germany, using the primary school teacher education programme at the University of Greifswald as an illustrative example. It discusses the historical context, the state examination system, the German bachelor's–master's system, and the significance of internships. The second section turns to the United States, focusing on the corresponding programme at the University of Michigan-Flint. It examines the historical roots, accreditation standards, and the role of clinical education. The third section presents a comparative analysis of the two programmes, with particular attention to their structure, duration, practical components, and the integration of theory and practice. The final section synthesises the main findings and proposes recommendations aimed at enhancing the effectiveness of teacher education in both contexts.

1 University of Greifswald

1.1 Overview of Primary School Teacher Training in Germany: A Brief Historical Background

The education and training of primary school teachers in Germany has a long and complex history, shaped by broader social and educational policy developments (Götz, 2019). A significant milestone came after the First World War and the 1918/19 revolution, when the Weimar National Assembly established compulsory education in the constitution of Germany's first democracy. Article 146 called for the creation of a "common primary school for all", marking a major victory for educational reformers (Steinmeier, 2019). The primary school thus celebrated its centenary in 2019 (Dühlmeier & Sandfuchs, 2019b). The origins of teacher education in Germany date back to the 18th century, when it was largely under ecclesiastical control. Prospective teachers were trained in special seminaries or through practical, hands-on instruction, with curricula focused mainly on religious and basic subjects. These early centres of teacher training, known as preparatory schools or teacher training colleges, laid the foundation for the formalisation of teacher education (Sandfuchs, 2023).

The 19th century marked a period of increasing professionalisation and standardisation in German teacher education (Terhart, 2016). The introduction of compulsory schooling in Prussia in 1794 (and subsequently in other German states) led to a growing demand for qualified teachers (Blömeke, 2002; Caruso, 2019; Ingvarson et al., 2013;). In response, teacher training centres evolved into formal institutions offering multi-year programmes that gradually incorporated didactic and pedagogical content. Despite these advances, instruction within these teacher seminars was often authoritarian in nature, with a strong emphasis on discipline (Terhart, 2016).

Significant reform efforts emerged during the Weimar Republic (1918–1933), as progressive educational ideals gained traction. These reforms focused on enhancing teachers' pedagogical competencies and supporting the individual needs of pupils. However, this momentum was abruptly interrupted with the rise of the National Socialist regime in 1933. Under Nazi rule (1933–1945), education became a vehicle for ideological indoctrination, and teacher training was reoriented toward preparing educators to serve the authoritarian state. Prospective teachers were systematically aligned with National Socialist ideology through specially designated "teacher training colleges" (Dühlmeier & Sandfuchs, 2019a; Viehhauser & Lehmann, 2022).

In the post-World War II period, Germany's division into East and West resulted in two distinct systems of teacher education. In the Federal Republic

of Germany (FRG), traditional teacher seminaries were gradually phased out and replaced by teacher training colleges, which were later integrated into the university system. This led to the development of a two-phase model: an academic university programme followed by a practical traineeship.

Conversely, the German Democratic Republic (GDR) adopted a centralised, state-controlled model of teacher education. Training was conducted in pedagogical institutes or specialised universities, with a strong emphasis on practical preparation aligned with the ideological aims of the socialist state (Viehhauser & Lehmann, 2022; Miller, 2023).

Following German reunification in 1990, the previously separate systems were harmonised into a unified national framework. This process involved the alignment of teacher education standards and structures across the former East and West, leading to a largely standardised model across Germany today (Miller, 2023).

Currently, primary school teacher education is primarily university-based and includes two main pathways: the traditional state examination and the Bachelor's/Master's degree system. Both routes are complemented by a practical traineeship designed to provide in-depth school-based experience. The choice of pathway – first state examination or Bachelor/Master – depends on the policies of individual federal states (Sandfuchs, 2023; Vogt, 2019), a reflection of the continued influence of federalism in the German education system. The following sections describe these qualification routes in more detail.

State Examination. One established route to becoming a primary school teacher in Germany is the state examination system, which remains prevalent in federal states such as Saxony, Bavaria, Hesse, and Mecklenburg-Western Pomerania (LAVO, 2011; LehbildG M-V, 2014). This model involves two phases. Initially, students complete a university degree, concluding with the First State Examination. This assessment covers both disciplinary and pedagogical content. Subsequently, students undertake a school-based traineeship, originally two years in duration. This has since been revised, ranging from 12 months in Brandenburg to 24 months in Bavaria (Terhart, 2000). The teacher training programme for primary school teachers in Greifswald, and therefore also in Mecklenburg-Western Pomerania, lasts 18 months.

Bachelor-Master-System. As part of the Bologna Process, many German universities have introduced a Bachelor-Master structure. Prospective teachers complete a three-year Bachelor's degree followed by a two-year Master's degree. This path qualifies graduates for the school-based traineeship and supports greater academic mobility across Europe (Röhner et al., 2009; Schmees, 2020). Nonetheless, the state examination continues to operate in several federal states (e.g., Mecklenburg-Western Pomerania), resulting in a dual-track system.

Internships in Teacher Training. Internships represent a foundational element of teacher education in Germany, serving as a bridge between theoretical instruction and practical application. These school-based placements allow prospective teachers to engage directly with classroom environments, develop professional competencies, and reflect on their emerging teaching identities. In most federal states, internships are distributed across multiple phases throughout the entirety of the degree programme, ensuring sustained contact with school settings (Vogt, 2019).

Students typically begin with an orientation internship (*Orientierungspraktikum*), which offers an initial introduction to school life, institutional culture, and basic teaching activities. This experience provides students with early exposure to the practical realities of teaching and supports informed career decision-making. Following this, students undertake a didactic or pedagogical internship, during which they begin to assume instructional responsibilities – such as lesson planning, classroom delivery, and the application of pedagogical strategies. These internships are closely supervised and provide opportunities for formative feedback and reflection (Hascher, 2012).

In most programmes, a longer practicum phase – commonly referred to as the practical semester (*Praxissemester*) – occurs later in the degree. During this intensive placement, students spend several months fully immersed in school routines, assuming greater responsibility for lesson delivery, student support, and collaboration with mentor teachers. This extended experience is designed to strengthen the integration of theoretical learning with practice and to deepen students' understanding of classroom dynamics and professional ethics.

Although the duration, timing, and specific structure of internships may vary across universities and federal states, they share a common purpose: to ensure that future teachers are adequately prepared for the multifaceted demands of the teaching profession. Internships complement university-based coursework by offering authentic contexts in which students can experiment with instructional strategies, reflect on their practice, and cultivate a sense of professional agency. In this way, they form a core pillar of Germany's teacher education framework.

The German Primary School. The German education system is shaped by the principle of federalism, which delegates educational policymaking to the 16 individual federal states (Länder) (Kultusministerkonferenz, 2022). This decentralised structure results in some regional variation in curricula, assessment methods, and school structures; however, the overarching framework and institutional progression remain broadly consistent across the country (Terhart, 2016).

Primary school (*Grundschule*) constitutes the first stage of compulsory education and is attended by all children regardless of their social or cultural back-

ground (Fölling-Albers, 2019; Terhart, 2000; Vogt, 2019). Typically, primary education spans Years 1 to 4. Exceptions exist in Berlin and Brandenburg, where primary schooling continues through Year 6. During these formative years, pupils acquire foundational skills in reading, writing, and mathematics, as well as instruction in science and social studies (*Sachunterricht*), physical education, and the arts. The extended duration in Berlin and Brandenburg is intended to provide a more gradual transition into differentiated secondary school tracks. Primary schools play a pivotal role in shaping students' educational trajectories. They are designed to establish the academic and social groundwork for lifelong learning and civic participation (Sandfuchs, 2023). In addition to basic academic skills, primary education fosters critical competencies such as collaboration, responsibility, and conflict resolution – contributing significantly to personality development and social integration (Brandt et al., 2021).

An essential feature of the system is the school type recommendation (*Empfehlung*), which is issued at the end of primary school. This recommendation influences the subsequent placement of pupils into secondary school tracks, such as grammar schools (*Gymnasien*), intermediate schools (*Realschulen*), or comprehensive schools (*Gesamtschulen*). As such, it has a lasting impact on students' academic and professional futures (Götz, 2023).

While the German primary school is often viewed as a levelling institution, empirical research suggests that it does not always fulfil this role equitably. Although it aspires to offer equal opportunities, various studies have shown that it may inadvertently perpetuate or even deepen educational inequalities (Krüger-Potratz, 2019). Children's socioeconomic background, migration status, and access to learning resources significantly affect their academic performance and the recommendations they receive. The school type recommendation, in particular, has been criticised for its susceptibility to bias and subjective interpretation, leading to divergent educational outcomes even among equally capable students (Götz, 2023).

In this context, primary schools may function not only as sites of foundational learning but also as institutions that reflect and reproduce broader societal inequities. Rather than mitigating initial disadvantages, they can – intentionally or unintentionally – contribute to the stratification of educational opportunities (Krüger-Potratz, 2019). Recognising and addressing these challenges is essential for strengthening the equity and inclusiveness of the German education system.

Importance of the Kultusministerkonferenz (KMK) (The Standing Conference of the Ministers of Education and Cultural Affairs). The Standing Conference of the Ministers of Education and Cultural Affairs of the federal states (KMK) plays a pivotal role in shaping and regulating teacher education across Germany. As the central coordinating body, the KMK is responsible for

establishing overarching standards and framework conditions that govern the training of teachers. Its work ensures a level of nationwide consistency while allowing for the flexibility inherent in Germany's federal system of education. One of the KMK's most significant contributions is the formulation of national standards for teacher education. These standards are binding across all 16 federal states and define essential parameters for programme content, structural design, and expected teacher competencies. For example, the KMK outlines the core educational and subject-specific knowledge that prospective teachers must acquire, as well as pedagogical and didactic principles. These guidelines underpin both the traditional state examination route and the Bachelor's/Master's degree model, ensuring that either pathway meets uniform criteria for academic and professional quality.

Additionally, the KMK establishes specific regulations for the state examination, including content expectations, formats, and timelines. It also determines the framework for practical training – defining not only the duration but also the objectives and integration of internships within teacher education programmes. These guidelines ensure that practical experience aligns meaningfully with theoretical study and that graduates are well-prepared for the demands of classroom teaching.

Beyond setting structural standards, the KMK actively responds to contemporary challenges in education through the publication of strategic documents and policy recommendations. Recent initiatives have addressed the digital transformation of education, calling for the integration of digital media and technologies into teacher preparation. Other focal areas include strengthening inclusive education, promoting intercultural competencies, and advancing sustainability in the curriculum. These position papers serve as important reference points for universities, ministries, and teacher education institutions.

By coordinating efforts across states and aligning teacher education with broader societal needs, the KMK plays a vital role in both standardisation and innovation. Its authoritative status ensures that teacher education in Germany is not only coherent and high quality but also responsive to emerging educational trends and policy imperatives. In this way, the KMK contributes significantly to the continuous development and professionalisation of teacher training nationwide.

1.2 Special Features of the Greifswald Location

The University of Greifswald, located in Mecklenburg-Western Pomerania, is one of Germany's oldest universities, founded in 1456. The "Primary School Teaching Training" degree programme was launched in the winter semester of 2020/21 and features a distinct emphasis on practical experience and structured progression.

The “Primary School Teaching Training” degree programme at the University of Greifswald was newly introduced in the winter semester of 2020/2021. It is distinguished by several structural and pedagogical features that make it both practically oriented and clearly organised, setting it apart from comparable programmes in Germany. Designed to meet the specific demands of primary teacher education, the curriculum offers a coherent progression and strong alignment with the competencies required for the profession. The standard duration of the programme is ten semesters, with the final semester dedicated to preparation for and completion of the First State Examination. The full programme comprises 9,000 hours of study, corresponding to 300 credit points (CP), and is structured around five main academic areas: educational sciences, German (as the first primary school subject), mathematics (as the second), and two additional primary school subjects. The distribution of credit points is as follows: educational Sciences accounts for 2,700 hours (90 CP), German 1,500 hours (50 CP), mathematics 1,200 hours (40 CP), and each of the other two primary school subjects 1,350 hours (45 CP each). In addition, students complete a practical semester (school internship) and an academic thesis, each comprising 450 hours (15 CP). The workload across subject areas also incorporates 3 CP per subject for oral or practical components of the state examination.

Table 1: Structure of the Degree Programme (University of Greifswald)

Semester	1	2	3	4	5	6	7	8	9	10	Total CP
Educational science	15	15	5	5	10	15	15	5	5		90
1st subject: German	5	10	5	7	3	5	5	5	1	4	50
2nd subject: Mathematics	12	5	5	5	8				1	4	40
3rd subject (e.g. Sachunterricht*, Niederdeutsch**)			10	5	5	5	5	10	1	4	45
4th subject (e.g. english, philosophy with kids)			5	10	5	5	5	10	1	4	45
Practical day	one day a week at school to gain practical experience in different subjects										
Practical semester									15		15
Academic final thesis									3	12	15
Total CP	32	30	30	32	31	30	30	30	27	28	300

Note. CP = Credit points; These reflect the workload associated with the course; one credit point corresponds to 30 hours of work. * Sachunterricht: subject that combines social studies and science education for primary school **Niederdeutsch: Low German is a West Germanic language spoken mainly in northern Germany and the east of the Netherlands. It is a dialectal form of the German language.

A defining feature of the Greifswald model is the class teacher principle, which reflects the integrated nature of primary education in Germany. German and Mathematics are compulsory subjects within the degree programme. The third subject is generally recommended to be subject teaching (*Sachunterricht*), though students may opt instead for Polish or Low German. A broader range of subjects is available for the fourth area of study, including English, Protestant religion, art and design, philosophising with children, Low German, and Polish (University of Greifswald, 2024). While students in the programme's early years selected their third and fourth subjects upon enrolment, this now typically occurs in the third semester.

Admission to the programme is regulated through a numerus clausus (NC) system. Thirty percent of places are allocated based on the best Abitur grades, 10 % through an additional aptitude quota, and the remaining 60 % via the university's selection procedure. In the winter semester of 2023/24, the admission threshold was 600 Abitur points (equivalent to an average grade of 2.3), whereas in 2020/21 it was 654 points (grade 2.0). The Abitur represents the highest general school-leaving qualification in Germany and is broadly equivalent to a U.S. high school diploma. In addition to academic criteria, prospective students must complete the Career Counselling for Teachers (CCT) online self-assessment to qualify for admission.

This structured and differentiated programme ensures that graduates develop strong subject-specific knowledge alongside pedagogical skills that prepare them for classroom teaching. Another distinctive element is the three-group cohort system, which provides a supportive and consistent learning environment. Seminars are capped at 25 students and grouped according to individual preferences, facilitating stable academic communities. Most lectures are delivered to the full cohort; however, only a small number – such as developmental psychology in the first semester and educational psychology in the fifth – are shared with students from other degree programmes. The accompanying seminars remain exclusive to teacher training students.

One of the programme's logistical strengths lies in its pre-planned timetable, which guarantees course availability and simplifies enrolment procedures. This clarity reduces administrative stress and enables students to concentrate on their studies.

Practical training is another central feature. From the first semester onward, students participate in a weekly "practical day" in schools, with placements matched to their preferences. After the fourth semester, students are re-assigned to a different school to broaden their exposure to varied school types and sponsors. These days typically involve at least two classroom sessions per semester. Beginning in the third semester, students also prepare and deliver lessons. Although these lessons are not graded, they are discussed in reflec-

tive dialogues with mentor teachers. This practical experience is supported by a practice coordinator, who is responsible for school assignments, monitoring attendance, and providing guidance.

The eighth and ninth semesters include a transitional internship and a practical semester, respectively. Unlike the earlier school placements, these must be independently arranged by the students, fostering autonomy and personal responsibility. Both experiences are supported by block seminars that provide theoretical grounding for the applied work.

An additional strength of the programme is the collaborative culture fostered among academic staff and students. Regular closed meetings, student-faculty exchanges, programme management sessions, and the primary school working group contribute to ongoing curriculum development and pedagogical responsiveness. The student council also plays an active role in shaping programme delivery and enhancing the learning experience.

In summary, the University of Greifswald offers a robust, practice-oriented primary teacher education programme that combines a well-organised curriculum with extensive classroom engagement. Its unique structure and features ensure that graduates are thoroughly prepared for the demands of the teaching profession and adaptable to the evolving educational landscape.

2 University of Michigan-Flint

2.1 General US Education: Brief Historical Overview of Primary School Teacher Training

The preparation of primary school teachers in the United States reflects the country's decentralised educational system, shaped by its history of adapting to societal and policy changes. Unlike many nations with centralised systems, the U.S. places educational authority largely in the hands of states and local districts, as implied by the Tenth Amendment to the U.S. Constitution. This decentralised framework has resulted in a diverse landscape of teacher preparation programmes that reflect the cultural, economic, and educational priorities of individual communities. While this variability fosters innovation and localised solutions, it also presents challenges in achieving equity, consistency, and portability of teacher qualifications nationwide (Mayer, 2021). The history of teacher training in the U.S. is marked by its progression from informal beginnings to a more structured and professionalised system, evolving into a game of "tug-of-war" between state and national policy makers vying for control (Bales, 2006, p. 395).

The Colonial Period and Early Foundations of Primary School Teacher Training During the colonial era, formal teacher training was virtually non-existent. Teaching was often viewed as a vocation requiring little specialised training, with individuals of basic literacy and good moral character considered suitable for instructing children. Education largely took place in homes or churches, with minimal emphasis on formalised teacher training. The establishment of the first public schools, such as the Boston Latin School in the mid 17th century, signalled a gradual shift towards structured educational settings and highlighted the need for a more systematic approach to teacher training (Ortlieb et al., 2018).

As the 18th century progressed, the foundations for state-level public school systems began to take shape. This period saw the expansion of primary education and growing recognition of the importance of prepared educators. However, the training of teachers remained informal, with little standardisation, reflecting the decentralised nature of education in the United States (LaBue, 1960).

The Establishment of Normal Schools. The 19th century marked a turning point in teacher training with the establishment of normal schools: institutions specifically designed to prepare teachers. The first American normal school, founded by Cyrus Peirce in Lexington, Massachusetts, in 1839, was modelled after European institutions and emphasised both academic study and practical training. Normal schools focused on pedagogy, subject matter expertise, child psychology, and classroom management, providing a more structured framework for teacher training (McCaul, 1958).

By the late 19th century, normal schools had spread across the country, becoming the primary institutions for training teachers. They played a pivotal role in professionalising teaching and standardising practices for primary schools. However, some scholars argue that the initial focus on cultural and holistic aspects of teacher training gave way to a more technical, skills-based approach, shaping the field of teacher training in ways that persist today (McCaul, 1958). Over time, many normal schools transitioned into state colleges and universities, reflecting the growing demand for more comprehensive teacher education (Fraser, 2007).

The Emergence of Teacher Training Programmes. Between the 1890s and 1930s, teacher training underwent significant transitions influenced by societal changes, including modernisation, professionalisation, and the rising demand for formal credentials. Many normal schools expanded their curricula and evolved into teachers' colleges, integrating collegiate level coursework and seeking accreditation to establish themselves within higher education (Whitford & Villaume, 2014).

During this period, prestigious institutions like Teachers College at Columbia University and Harvard prioritised graduate studies and research over undergraduate teacher preparation, distancing themselves from practical teacher training. Historians documented this shift, noting how these universities emphasised education as a theoretical discipline, contributing to the marginalisation of practical teacher training within elite institutions (Labaree, 2008). Despite this, regional universities, smaller colleges, and Historically Black Colleges and Universities played a critical role in sustaining teacher preparation, blending academic rigour with practical training and addressing the unique needs of their communities.

The Accreditation Movement and the Professionalisation of Teacher Training. The late 19th and early 20th centuries also witnessed the rise of accreditation efforts aimed at standardising and professionalising teacher training. Organisations such as the National Council for Accreditation of Teacher Education and its successor, the Council for the Accreditation of Educator Preparation (CAEP), established quality standards for teacher training programmes across the United States. Accreditation efforts sought to ensure consistent and rigorous training for prospective teachers, addressing concerns about the variability in teacher training programmes due to the decentralised nature of the U.S. education system (Prakasha & Kenneth, 2023).

While these efforts elevated the professional status of teaching, they also introduced challenges. Some critics argued that the focus on accreditation and academic rigour sometimes overshadowed the importance of practical, hands-on experience in teacher training (American Association of State Colleges and Universities, 2017). Nonetheless, accreditation has continued to shape teacher training, fostering debates about balancing theory, practice, and local control in the preparation of teachers. While some states see value in national accreditation for ensuring rigour and consistency, others believe that localised control and evaluation better serve their educational systems. This balance often reflects broader debates about the role of federal versus state authority in education policy.

Bachelor-Master-Alternative Route Systems. In the United States, the pathways to primary teacher certification reflect the decentralised education system, offering both traditional and alternative options. The traditional route involves earning a bachelor's degree in primary education, which includes coursework in pedagogy, child development, subject content, and classroom management, alongside a supervised teaching experience. Graduates must pass state-specific certification exams, to obtain licensure. Alternative routes, such as Teach For America and state-specific programmes, provide expedited entry for those with noneducation bachelor's degrees, often allowing candidates to teach under provisional licences while completing certification requirements.

To address teacher shortages, some states offer emergency or provisional certifications, enabling individuals to teach while meeting qualification requirements. National certifications, like those from the National Board for Professional Teaching Standards, provide advanced credentials and facilitate cross state certification. Flexible options, including online and hybrid programmes, cater to career changers and those with other responsibilities. Whereas alternative pathways help diversify the workforce and address shortages in urban and rural areas, particularly in high need schools, further research is needed to evaluate their long-term effects on teacher quality, student outcomes, and educational equity (Mensah et al., 2020).

Clinical Teacher Training and the Emphasis on Practical Experience. In recent decades, teacher training programmes have increasingly emphasised clinical preparation, recognising the importance of hands-on experience and field-based learning in preparing effective educators. Feiman-Nemser (2001) argued that teacher preparation must provide “more powerful learning opportunities to teachers” through extensive time spent in real world classroom settings (p. 1014). This shift towards clinical preparation addresses concerns about the disconnect between theory and practice in traditional programmes and reflects the need to better prepare prospective teachers for the complexities of modern classrooms (Baum & Korth, 2013).

The United States Primary School. The purpose of primary school in the United States is broad and foundational, focusing on equipping students with essential literacy and numeracy skills, fostering cognitive development, supporting emotional and social growth, instilling civic responsibility, and preparing them for future academic challenges (Pyle et al., 2020; Santamaría-Villar et al., 2021; Yeboah, 2002). The curriculum is generally structured to promote permanent literacy, numeracy proficiency, and effective communication, while encouraging critical and scientific thinking (Olibie et al., 2015), also emphasising character building, moral development, and nurturing attitudes that prepare students for responsible citizenship and social participation (Smith, 2013).

The process of curriculum selection and implementation presents significant challenges, as federal law prohibits the imposition of specific curricula, state policies vary considerably, and many local schools and districts lack the capacity for comprehensive material evaluations and sustained teacher training in high-quality curricula (Pickford & Poteet, 2024). Further complicating the issue, cultural and political debates often create additional barriers to effective curriculum decision-making. Despite these obstacles, some states have successfully introduced policies and initiatives that support districts in selecting and utilising quality instructional materials while maintaining local control. These states, diverse in size, geography, and political context, demonstrate

that improving curriculum selection is both achievable and necessary, highlighting the crucial role that state boards of education can play in facilitating these efforts (Pickford & Poteet, 2024).

Conclusion. The evolution of primary school teacher training in the United States demonstrates the interplay between local control, professionalisation, and the changing needs of society. From the informal practices of the colonial period to the establishment of normal schools and the development of university-based teacher education, each phase reflects efforts to balance the unique demands of a decentralised system with the goal of standardising and elevating the teaching profession. Accreditation movements and the rise of clinical preparation further highlight the ongoing challenges and innovations in teacher training. As the field continues to adapt, it remains shaped by the tension between localised autonomy and national aspirations for high quality, equitable education.

2.2 Special Features of the Michigan-Flint Location

The University of Michigan-Flint (UM-Flint), founded in 1956, is a regional comprehensive public university located in Flint, Michigan, in the United States, and is part of the University of Michigan system. Situated in a city with a rich automotive history and a legacy of economic and social challenges, including the infamous Flint water crisis in 2014, UM-Flint leverages its location to foster meaningful community partnerships and support diverse student populations, including first-generation university students and working adults. The university is recognised as one of Michigan's five Doctoral/Professional Universities under the Carnegie Classification of Institutions of Higher Education and is an active member of the Coalition of Urban and Metropolitan Universities, promoting community engagement and social equity through its teaching and research efforts.

At UM-Flint, undergraduate courses are typically three credit hours, with students generally taking four courses per each 14-week semester. Full-time undergraduate status is achieved by enrolling in at least 12 credit hours per semester, a designation that plays a critical role in determining eligibility for financial aid, campus housing, and other university services. Full-time undergraduate students can anticipate dedicating approximately 12 hours per week to in class instruction across four courses, accompanied by an estimated 24 hours of academic work outside the university classroom.

Paths to Certification. The University of Michigan-Flint's Bachelor of Science in Elementary Education programme prepares future educators through a phased approach blending foundational knowledge, practical application, and advanced pedagogy. Prospective teachers begin with at least 30 General

Education credits, covering areas such as English, communication, quantitative literacy, and sciences. These courses foster critical thinking and interdisciplinary understanding.

The teacher training programme is divided into three phases. Phase I: Foundations (56 credits) introduces core teaching principles, focusing on literacy, social foundations, and creative instruction, while allowing students to select a certification track (PreK–3 or Grades 3–6). Phase II: Practical Application (30 credits) integrates hands-on fieldwork in local schools, where students develop skills in classroom management, inclusivity, and assessment under the mentorship of experienced teachers. Phase III: Advanced Pedagogy and Student Teaching (27 credits) deepens instructional expertise in subjects like mathematics and science. It culminates in a 14-week full-time teaching internship, where candidates assume lead teaching roles while engaging in reflective seminars. By graduation, students are equipped with strong theoretical foundations, extensive practical experience, and professional insight, ready to make a meaningful impact in primary education.

Table 2: Structure of the Degree Programme (University of Michigan-Flint)

Phase/Semester	Phase I (1-4)	Phase 2 (5-7)	Phase 3 (8-9)	Total Credits
General Education Requirements (Not Specific to Teacher Preparation (e.g., Humanities, Fine Arts, et.)	15	15		30
Initial Education Studies (e.g., Learning Sciences, Social Foundations of Education, etc.,)	21	12	15	48
Education-Mathematics	6	6	3	15
Education-Special Education	3	6		9
Education-Reading	6	3	3	12
Education-English	6			6
Education-Linguistics	3			3
Education-Science	8		4	12
Education-Psychology	3			3
Education-Social Studies		3	3	6
Field Placement (Hours in a classroom)		180 Hours	120 Hours	
Student Teaching			14 Weeks	
Total Credits	71	45	28	144

Alternative Route to Certification. The Michigan Alternate Route to Certification (MARC) provides a flexible option for those seeking certification while actively teaching. Participants in MARC receive an interim teaching certificate and engage in a three-year programme that includes mentoring and professional development, culminating in a standard teaching certificate. This pathway reflects UM-Flint's commitment to preparing effective and adaptable educators and is a necessary step to addressing the teacher shortage in the state of Michigan.

State Test. In addition to completing the three phases of the teacher training programme, prospective teachers must pass a battery of subject area tests corresponding to the specific endorsements they are seeking. The Michigan Test for Teacher Certification (MTTC) is a series of examinations mandated by the Michigan Department of Education to ensure that prospective educators possess the necessary professional readiness, pedagogical, and content knowledge to effectively teach in Michigan schools.

A Typical Design of Teacher Preparation in Michigan. The teacher training programme at the UM-Flint reflects the standards established by the Michigan Department of Education (MDE), ensuring alignment with state requirements for teacher preparation. In addition, the MDE requires teacher training programmes to achieve national accreditation, with the Council for the Accreditation of Educator Preparation (CAEP) recognised by the MDE as the "gold standard".

Atypical Design of Teacher Preparation at UM-Flint. The University of Michigan-Flint's teacher preparation programme stands out for its focus on diverse teaching environments and student populations, equipping future educators to meet the varied needs of students. While adhering to state and national standards, UM-Flint enhances teacher training through unique opportunities to work in both urban and rural settings. Situated in Flint, one of Michigan's few urban university locations, the programme provides candidates with valuable experience in schools serving urban communities, addressing distinct educational challenges and strengths. Furthermore, Flint's proximity to rural areas allows prospective teachers to engage with different socioeconomic and cultural dynamics, fostering adaptability and cultural competence essential for modern classrooms.

The university's commitment to diversity is further reflected in its high percentage of nontraditional students, with 35.9 % of undergraduates aged 25 or older. These individuals bring varied life experiences and professional backgrounds, enriching classroom discussions and collaborative learning. Their practical insights and mature perspectives enhance the programme, offering prospective teachers a broader understanding of teaching practices and student needs. By bridging urban and rural environments and promoting diverse perspectives,

UM-Flint prepares educators to excel in a range of classroom contexts with the skills and cultural awareness necessary for effective teaching.

Despite the University of Michigan-Flint's location in an urban centre, the primary teacher preparation programme remains predominantly white and female. This trend is not unique to UM-Flint but reflects national patterns in the teaching workforce. According to the National Center for Education Statistics (2023), in the 2020–2021 school year, 89 % of primary school teachers in the United States were female, and 79.9 % were white. At UM-Flint, autumn 2024 enrolment data for the primary teacher preparation programme indicates that of the 171 students, 87.13 % were female, and 82.46 % identify as white (University of Michigan-Flint, 2024). While such demographics align with broader national trends, they highlight a persistent challenge in achieving greater diversity within teacher preparation programmes, even in urban settings where proximity and accessibility might suggest a more representative enrolment.

The lack of diversity among preservice teachers has significant implications for the education system, particularly as student demographics become increasingly diverse. In 2020, less than half (46 %) of U.S. state school students were non-Hispanic white, with Hispanic (28 %), Black (15 %), Asian (5 %), multiracial (4 %), and other racial and ethnic groups comprising the majority (National Center for Education Statistics, 2023). A racially and linguistically homogenous teaching workforce limits the breadth of cultural perspectives integrated into curriculum development and instructional strategies. Research suggests that teachers from underrepresented backgrounds bring valuable cultural insights and pedagogical approaches that can enhance learning experiences for all students (Hughes, 2010). Furthermore, diverse educators serve as important role models, fostering a sense of belonging and academic confidence among students of colour (Carver-Thomas, 2018). Recognising this need, UM-Flint participates in initiatives such as "Growl Your Own," a programme designed to recruit and train teachers from within the communities they will serve (Michigan Department of Education, 2025). Such efforts are essential in addressing disparities, ensuring that the next generation of educators better reflects the students they teach, and fostering a more equitable and inclusive educational environment.

Conclusion. The University of Michigan-Flint's teacher preparation programme stands out by integrating diverse clinical opportunities and nontraditional student population into its framework. These unique features not only enhance the quality of teacher education but also prepare future educators to meet the challenges of diverse classroom environments with confidence and competence. By fostering adaptability, cultural awareness, and student centred teaching practices, UM-Flint exemplifies how institutional characteristics can enrich the broader mission of preparing effective, inclusive educators.

3 Comparison of Two Programmes

A comparative analysis of the *structure and duration* of the teacher education programmes at the University of Greifswald and the University of Michigan-Flint reveals substantial differences in duration, structure, specialisation, and flexibility. At Greifswald, the teacher training programme spans 10 semesters (five years), comprising 9,000 hours and 300 credit points. This culminates in either a Master's degree or the First State Examination. The curriculum is highly structured and includes a pre-planned timetable, which significantly reduces organisational complexity – an approach not commonly found in university settings. Approximately 75 students are admitted annually and divided into three cohorts of 25. Students select two core subjects (German and Mathematics) alongside two additional subjects such as Polish, Low German, or Art and Design. This broad subject combination supports the class teacher principle, preparing graduates to deliver a substantial portion of instruction in their own classrooms.

Currently, no pathway exists at Greifswald for lateral entrants – individuals entering teaching from other professions – though such a route is in development to address teacher shortages. In Mecklenburg-Western Pomerania, lateral entry is presently limited to vocational education and involves an 18-month programme (LehVDVO M-V, 2024). This standard route concludes with the Second State Examination.

In contrast, the University of Michigan-Flint offers a four-year programme leading to a Bachelor's degree with 120–128 credit hours. The curriculum combines general education with pedagogical and content-specific courses. While the programme provides flexibility in course selection, it typically allows for less specialisation than Greifswald's model. Several alternative pathways to certification exist, including graduate-level programmes and accelerated licensure options.

Greifswald's longer duration allows for deeper subject engagement and broader training, albeit at the cost of delayed entry into the workforce. By comparison, UM-Flint's shorter, more adaptable programme facilitates faster certification but offers less curricular breadth. These differences reflect broader educational structures and priorities in each national context.

Practical training is a cornerstone of both programmes, though the timing and intensity of this component vary markedly. At Greifswald, practice is embedded from the outset. Students begin school placements in their first semester, participating in a weekly "Practical Day" dedicated exclusively to in-school experience. By the third semester, they are actively teaching, and later placements include a transitional internship (eighth semester) and a full practical semester (ninth semester). These experiences are scaffolded, progressively building students' pedagogical competence. Practical learning is

supported by mentorship and close supervision, fostering reflective connections between theory and classroom practice. As Hascher (2014) and Müller and Dieck (2011) note, the effectiveness of practical training depends less on its duration than on its integration into the degree structure and the quality of reflective engagement.

At UM-Flint, practical experience begins later, during Phase II of the programme. Students typically complete around 300 hours of school-based contact prior to the capstone student teaching placement. The final semester features a 14-week full-time internship, also totalling approximately 300 hours. This intensive practicum focuses on inclusive teaching, classroom management, and differentiated instruction. While more concentrated than Greifswald's model, it provides comprehensive preparation for diverse classroom settings.

Both institutions emphasise the importance of practical experience. Greifswald's approach, with its early and continuous exposure, encourages iterative learning and professional maturation. UM-Flint, though offering a more compressed timeline, ensures targeted, skills-based training. These differences reflect systemic priorities and assumptions about when and how teaching expertise is best cultivated.

Admission and selection procedures at both universities reflect differing philosophies around access to the teaching profession. At Greifswald, admission includes a mandatory online self-assessment – the Career Counselling for Teachers (CCT) – which encourages applicants to reflect on their motivation and suitability. Admission is further regulated through a numerus clausus system: 30 % of places go to applicants with the highest Abitur grades, 10 % are reserved for those demonstrating aptitude, and 60 % are allocated through institutional selection.

UM-Flint, by contrast, maintains an open admissions policy for the general education phase of the programme. Entry into the teaching phase, however, requires students to meet specific academic and dispositional criteria. This staged approach allows broad initial access while maintaining gatekeeping standards later in the programme. While Greifswald emphasises upfront assessment of suitability, Flint focuses on in-programme development and monitoring. Both models share an inclusive ethos – “anyone can become a teacher” – but implement this principle differently.

Both universities aim to integrate academic coursework with practical training, but their models differ in emphasis and organisation. At Greifswald, the linkage between *integration of theory and practice* is tightly woven into the programme structure. The three-group cohort model fosters strong collaboration between students and faculty, allowing for real-time adaptation of content to meet emerging needs. Regular exchanges among lecturers and students contribute to a responsive and dynamic learning environment.

At UM-Flint, the theory-practice nexus is achieved through a blend of general education, pedagogy, and reflective coursework. Flexibility is a defining feature, enabling the programme to align with diverse state-specific requirements. This adaptability allows individualisation, although it may come at the expense of a unified theoretical framework.

Overall, Greifswald's programme offers a cohesive and systemic integration of theoretical and practical elements, whereas Flint prioritises individual flexibility and context responsiveness. Each model has strengths: Greifswald's tight alignment may ensure more consistent outcomes, while Flint's flexibility caters to a wider range of learners and educational settings.

Teacher education in both Germany and the United States is shaped by national and regional *regulatory frameworks and flexibility* that establish programme standards and certification requirements. At Greifswald, teacher education operates under the KMK (Standing Conference of the Ministers of Education and Cultural Affairs), which ensures a high degree of standardisation across Germany. Despite this, the programme allows for subject customisation, offering a mix of regulation and adaptability.

UM-Flint must meet requirements set by both the Michigan Department of Education and the Council for the Accreditation of Educator Preparation (CAEP). These bodies mandate strict certification protocols, creating a paradox in which a decentralised system imposes centralised constraints. While Greifswald's model offers flexibility within a rigid national framework, UM-Flint's operates within a prescriptive, standards-based system that limits structural flexibility despite its local autonomy.

4 Mutual Lessons and Future Directions

Teacher education programmes around the world stand to gain significantly from cross-cultural comparison, particularly by identifying opportunities for growth through mutual learning. The University of Greifswald in Germany and the University of Michigan-Flint in the United States exemplify contrasting yet complementary approaches to primary teacher preparation. By engaging in critical reflection on these differences, both institutions can enhance their training models to better equip future educators for the multifaceted realities of teaching.

The University of Greifswald's programme could be strengthened by incorporating more flexible and accelerated pathways tailored to mid-career changers and non-traditional candidates – a key feature of UM-Flint's approach. By developing alternative certification routes or streamlined entry points into the profession, Greifswald could expand access to teaching and attract individuals with diverse life experiences and professional backgrounds. These additions

would not only contribute to addressing Germany's growing teacher shortage but would also diversify the teaching workforce, enriching educational settings with broader perspectives and skillsets. Tailored support structures and modular course offerings could further enhance the accessibility and responsiveness of the programme.

Conversely, the University of Michigan-Flint could draw valuable insights from Greifswald's integration of early and sustained practical experience. Embedding school-based placements from the first semester would allow students to develop their pedagogical skills progressively and establish deeper connections between theoretical coursework and professional practice. Greifswald's use of smaller, consistent student cohorts fosters collaboration, peer mentoring, and relational learning – elements that could be adapted within UM-Flint's framework to enhance student support and professional identity formation.

Moreover, UM-Flint may benefit from exploring strategies used in Germany to elevate the societal status of the teaching profession. These include more selective admission procedures, increased academic rigour, and policies that advocate for competitive salaries and long-term career development. Such measures can help attract highly qualified candidates and enhance the prestige of the teaching field.

Both institutions would benefit from striving for an optimal balance between structural coherence and curricular flexibility. This could be achieved through the integration of regular feedback mechanisms, collaborative learning environments, and opportunities for reflective practice. Strengthening the connection between theoretical instruction and classroom application would further support students in developing into confident, competent, and adaptive educators.

Ultimately, fostering a shared culture of innovation, collaboration, and continuous improvement across both programmes would enhance their capacity to meet the evolving demands of education in diverse and globalised contexts. Through these mutual lessons, the University of Greifswald and the University of Michigan-Flint can refine and enrich their teacher education offerings, ensuring that future teachers are well-prepared to lead inclusive, responsive, and effective classrooms.

5 Conclusion

The comparative study of teacher education at the University of Greifswald and the University of Michigan-Flint reveals distinctive strengths rooted in each country's educational philosophy. Germany's model prioritises structure, academic depth, and early practical immersion, while the U.S. system values flexibility, access, and diversity. By learning from one another – Greifswald

adopting more inclusive entry pathways and Flint enhancing its practicum structure – both programmes can evolve to better prepare primary teachers for the complexities of modern classrooms. Through mutual reflection and adaptation, international collaboration can raise the quality and equity of teacher preparation globally.

References

- American Association of State Colleges and Universities (2017). Preparing teachers in today's challenging context: Key issues, policy directions and implications for leaders of AACSU universities. Retrieved May 28, 2025, from <https://aascu.org/wp-content/uploads/2023/02/TeacherEdReport17.pdf>
- Bales, B. L. (2006). Teacher education policies in the United States: The accountability shift since 1980. *Teaching and Teacher Education*, 22(4), 395–407. <https://doi.org/10.1016/j.tate.2005.11.009>
- Baum, A. C., & Korth, B. B. (2013). Preparing Classroom Teachers to Be Cooperating Teachers: A Report of Current Efforts, Beliefs, Challenges, and Associated Recommendations. *Journal of Early Childhood Teacher Education*, 34(2), 171–190. <https://doi.org/10.1080/10901027.2013.787478>
- Blömeke, S. (2002). *Universität und Lehrerbildung* [University and teacher education]. Julius Klinkhardt.
- Brandt, B., Hoffmann, J., Ibelshäuser, B., Wagener, M., & Werner, C. (2021). 100 Jahre Grundschule in Deutschland–eine Schule für alle? [100 years of primary school in Germany–one school for all?]. In N. Böhme, B. Dreer, H. Hahn, S. Heinecke, G. Mannhaupt, & S. Tänzer (Eds.), *Mythen, Widersprüche und Gewissheiten der Grundschulforschung* [Myths, contradictions and certainties of primary school research] (pp. 39–51). Springer VS. https://doi.org/10.1007/978-3-658-31737-9_4
- Carver-Thomas, D. (2018). Diversifying the Teaching Profession: How to Recruit and Retain teachers of Color. Learning Policy Institute. <https://doi.org/10.54300/559.310>
- Caruso, M. (2019). Eigensinn, Nationale Referenz und Strukturbildung. Die deutsche Grundschule in ihrer Transnationalität [Self-reference, national reference, and structure formation. The german Grundschule in its transnationality]. *Zeitschrift für Grundschulforschung*, 12(2), 457–474. <https://doi.org/10.1007/s42278-019-00047-6>
- Dühlmeier, B., & Sandfuchs, U. (2019a). Die Grundschule und ihre Geschichte [The primary school and its history]. In B. Dühlmeier, & U. Sandfuchs (Eds.), *100 Jahre Grundschule: Geschichte–Aktuelle Entwicklungen–Perspektiven* [100 years of primary school: history–current developments–perspectives] (pp. 15–32). Julius Klinkhardt.
- Dühlmeier, B., & Sandfuchs, U. (2019b). Was kann Grundschulgeschichte leisten? [What can primary school history achieve?]. In B. Dühlmeier, & U. Sandfuchs (Eds.), *100 Jahre Grundschule: Geschichte–Aktuelle Entwicklungen–Perspektiven* [100 years of primary school: history–current developments–perspectives] (pp. 7–14). Julius Klinkhardt.
- Feiman-Nemser, S. (2001). From Preparation to Practice: Designing a Continuum to Strengthen and Sustain Teaching. *Teachers College Record* (1970), 103(6), 1013–1055. <https://doi.org/10.1111/0161-4681.00141>
- Fölling-Albers, M. (2019). Grundschule 1919–Grundschule 2019. Eine andere Grundschule? [Primary school 1919–2019. A different school?]. *Zeitschrift für Grundschulforschung*, 12(2), 475–491.
- Fraser, J. W. (2007). *Preparing America's teachers: A history*. Teachers College Press.

- Gesetz über die Lehrerbildung in Mecklenburg-Vorpommern (Lehrerbildungsgesetz – LehbildG M-V) [Act on Teacher Training in Mecklenburg-Western Pomerania (Teacher Training Act – LehbildG M-V)] (2014). Retrieved May 28, 2025, from <https://www.landesrecht-mv.de/bsmv/document/jlr-LehrBiGMV2013rahmen>
- Götz, M. (2019). Die Entwicklung der Institution Grundschule [The development of the primary school as an institution]. In B. Dühlmeier, & U. Sandfuchs (Eds.), 100 Jahre Grundschule: Geschichte–Aktuelle Entwicklungen–Perspektiven [100 years of primary school: history–current developments–perspectives] (pp. 33–47). Julius Klinkhardt.
- Götz, M. (2023). Die institutionelle Entwicklung der Grundschule 1919 bis 2019 [The institutional development of primary schools from 1919 to 2019]. In M. Götz, S. Miller, & M. Vogt (Eds.), Ein Jahrhundert Grundschule. Zur Geschichte der Basisinstitution des deutschen Schulsystems [A Century of Primary School. On the history of the basic institution of the German school system] (pp. 73–148). Springer VS. https://doi.org/10.1007/978-3-658-31058-5_2
- Hascher, T. (2012). Lernfeld Praktikum–Evidenzbasierte Entwicklungen in der Lehrer/innenbildung [Learning setting student teaching–evidence based developments in teacher education]. Zeitschrift für Bildungsforschung, 22(2), 109–129. <https://doi.org/10.1007/s35834-012-0032-6>
- Hascher, T. (2014). Forschung zur Wirksamkeit der Lehrerbildung [Research on the effectiveness of teacher training]. In E. Terhart, H. Bennewitz, & M. Rothland (Eds.), Handbuch der Forschung zum Lehrberuf [Handbook of Research on the Teaching Profession] (2nd ed., pp. 542–571). Waxmann.
- Hughes, J. A. (2010). What Teacher Preparation Programs Can Do to Better Prepare Teachers to Meet the Challenges of Educating Students Living in Poverty. Action in Teacher Education, 32(1), 54–64. <https://doi.org/10.1080/01626620.2010.10463542>
- Krüger-Potratz, M. (2019). 100 Jahre Grundschule–100 Jahre. Umgang mit nationaler, sprachlicher und ethnischer Differenz [100 years of primary school–100 years of dealing with national, linguistic and ethnic differences]. Zeitschrift für Grundschulforschung, 12(2), 383–398. <https://doi.org/10.1007/s42278-019-00052-9>
- Kultusministerkonferenz (KMK) [The Standing Conference of the Ministers of Education and Cultural Affairs] (2022). Standards für die Lehrerbildung: Bildungswissenschaften [Standards for teacher training: Educational Sciences]. Retrieved May 28, 2025, from https://www.kmk.org/fileadmin/veroeffentlichungen_beschluesse/2004/2004_12_16-Standards-Lehrerbildung.pdf
- Labaree, D. F. (2008). An uneasy relationship: The history of teacher education in the university. In M. Cochran-Smith, S. Feiman-Nemser, D. J. McIntyre, & K. E. Demers (Eds.), Handbook of Research on Teacher Education: Enduring Questions in Changing Contexts (3rd ed., pp. 290–306). Routledge. <https://doi.org/10.4324/9780203938690-36>
- LaBue, A. C. (1960). Teacher Certification in the United States: A Brief History. Journal of Teacher Education, 11(2), 147–172. <https://doi.org/10.1177/002248716001100203>
- Mayer, D. (2021). Teacher Education Policy and Research: Global Perspectives (1st ed.). Springer. <https://doi.org/10.1007/978-981-16-3775-9>
- McCauley, R. L. (1958). Chapter I: Historical and Philosophical Foundations of Education. Review of Educational Research, 28(1), 5–15. <https://doi.org/10.3102/00346543028001005>
- Mensah, R. O., Acquah, A., Frimpong, A., & Babah, P. A. (2020). Towards Improving the Quality of Basic Education in Ghana. Teacher Licensure and Matters Arising: Challenges and the way Forward. Journal of Education & Social Policy, 7(3), 117–127. <https://doi.org/10.30845/jesp.v7n3p11>
- Michigan Department of Education (2025). Future Proud Michigan Educator Staff Grant. Retrieved May 28, 2025, from <https://www.michigan.gov/mde/services/ed-serv/educator-recruitment/future-proudmieducator/individuals-working-in-pk12-schools/staff-grant>
- Miller, S. (2023). Der Grundschulunterricht im historischen Verlauf [Primary school teaching over the course of history]. In M. Götz, S. Miller, & M. Vogt (Eds.), Ein Jahrhundert Grundschule. Zur Geschichte der Basisinstitution des deutschen Schulsystems [A century of primary school. On the history of the basic institution of the German school system] (pp. 149–254). Springer VS. https://doi.org/10.1007/978-3-658-31058-5_3

- Müller, K., & Dieck, M. (2011). Schulpraxis als Lerngelegenheit? Mehrperspektivische empirische Befunde zu einem Langzeitpraktikum [School practice as a learning opportunity? Multi-perspective empirical findings on a long-term internship]. *Journal für Lehrerinnen- und Lehrerbildung*, 11(3), 46–50.
- National Center for Education Statistics (2023). Characteristics of Public School Teachers. Condition of Education. U.S. Department of Education, Institute of Education Sciences. Retrieved May 28, 2025, from <https://nces.ed.gov/programs/coe/indicator/clr>.
- Olibie, E. I., Ofojebe, W. N., & Ezugoh, T. C. (2015). Rationales, Mechanisms and Challenges of Quality Assurance in Teachers' Professional Practices at the Primary Education Sector. *International Journal of Education*, 7(2), 160–175. <https://doi.org/10.5296/ijev.712.7237>
- Ortlieb, E., Cheek, E. H., & Semingson, P. (2018). Best Practices in Teaching Digital Literacies, 1(9). Emerald Publishing Limited. <https://doi-org/10.1108/S2048-0458201809>
- Pickford, J., & Poteet, K. (2024). States Take Many Paths to Advance High-Quality Curriculum and Align Professional Learning: State boards can take a lesson from the work of leading states. *State Education Standard*, 24(1). Retrieved May 28, 2025, from <https://www.nasbe.org/states-take-many-paths-to-advance-high-quality-curriculum-and-align-professional-learning/>
- Prakasha, G. S., & Kenneth, A. (2023). Teacher Education: An Analytical Approach to Internship Practices Around the World (1st ed.). Routledge. <https://doi.org/10.4324/9781003253242>
- Pyle, A., DeLuca, C., Danniels, E., & Wickstrom, H. (2020). A Model for Assessment in Play-Based Kindergarten Education. *American Educational Research Journal*, 57(6), 2251–2292. <https://doi-org/10.3102/0002831220908800>
- Röhner, C., Henrichwark, C., & Hopf, M. (2009). Europäisierung der Bildung: Konsequenzen und Herausforderungen für die Grundschulpädagogik [Europeanisation of education: consequences and challenges for primary school pedagogy]. Springer VS. <https://doi.org/10.1007/978-3-531-91721-4>
- Sandfuchs, U. (2023). Die Entwicklung des Grundschullehrerberufs [The development of the primary school teaching profession]. In M. Götz, S. Miller, & M. Vogt (Eds.), *Ein Jahrhundert Grundschule. Zur Geschichte der Basisinstitution des deutschen Schulsystems [A century of primary school. On the history of the basic institution of the German school system]* (pp. 303–358). Springer VS.
- Santamaria-Villar, M. B., Gilar-Corbi, R., Pozo-Rico, T., & Castejón, J. L. (2021). Teaching Socio-Emotional Competencies Among Primary School Students: Improving Conflict Resolution and Promoting Democratic Co-existence in Schools. *Frontiers in Psychology*, 12, 659348–659348. <https://doi-org/10.3389/fpsyg.2021.659348>
- Schmees, J. K. (2020). Lehrer*innenbildung und Bologna-Prozess: Politische Strategien zur Einführung der Bachelor- und Masterabschlüsse im Bundesländervergleich [Teacher education and the Bologna Process: Political strategies for the introduction of Bachelor's and Master's degrees in a comparison of federal states]. Julius Klinkhardt. <https://doi.org/10.25656/01-20324>
- Ingvanson, L., Schwille, J., Tatto, M.T., Rowley, G., Pec, R., Senk, S. L. (2013). Historical Perspectives on the Policies and Organization of 75 Teacher Education. In L. Ingvanson, J. Schwille, M. T. Tatto, G. Rowley, R. Peck, & S. Senk (Eds.), *An Analysis of Teacher Education Context, Structure, and Quality- Assurance Arrangements in TEDS-M Countries. Findings from the IEA Teacher Education and Development Study in Mathematics (TEDS-M)* (pp. 75–110). International Association for the Evaluation of Educational Achievement (IEA). Retrieved May 28, 2025, from https://www.iea.nl/sites/default/files/2019-02/TEDS-M_Findings.pdf
- Smith, B. H. (2013). School-based Character Education in the United States. *Childhood Education*, 89(6), 350–355. <https://doi.org/10.1080/00094056.2013.850921>
- Steinmeier, F.-W. (2019, 13. September). Eröffnungsrede des Bundespräsidenten beim Festakt "100 Jahre Grundschule" des Bundesgrundschulkongresses "Kinder Lernen Zukunft" [Opening speech by the President of the Federal Republic of Germany at the ceremony "100 Years of Primary School" of the Federal Primary School Congress "Children Learning Future"]. Retrieved May 28, 2025, from <https://www.bundespraesident.de/SharedDocs/Reden/DE/Frank-Walter-Steinmeier/Reden/2019/09/190913-Grundschule-100-Jahre.html>

- Terhart, E. (2000). Perspektiven der Lehrerbildung in Deutschland: Abschlussbericht der von der Kultusministerkonferenz eingesetzten Kommission [Prospects for teacher training in Germany: Final report of the commission appointed by the Conference of Education Ministers]. Beltz.
- Terhart, E. (2016). Geschichte des Lehrerberufs [History of the teaching profession]. In M. Rothland (Eds.), *Beruf Lehrer / Lehrerin. Ein Studienbuch* [Profession: Teacher. A Study Book] (pp.19–32). Waxmann. <https://doi.org/10.36198/9783838586809>
- University of Greifswald (2024). Das Lehramtsstudium an der Universität Greifswald. Die Studienfächer im Lehramt Grundschule [The teacher training programme at the University of Greifswald. The subjects in the primary school teaching degree programme]. Retrieved December 12, 2024, from <https://www.uni-greifswald.de/studium/vor-dem-studium/lehramt-studieren/faecherauswahl/>
- University of Michigan-Flint (2024). General Student Body. Office of Institutional Analysis. Retrieved April 10, 2025, from <https://www.umflint.edu/ia/campus-statistics/general-student-body/>
- Verordnung über die Ausbildung von Lehrern für die öffentlichen Schulen des Landes Mecklenburg-Vorpommern (Lehrerausbildungsverordnung – LAVO) [Ordinance on the Training of Teachers for the Public Schools of the State of Mecklenburg-Western Pomerania (Teacher Training Ordinance – LAVO)] (2011). Retrieved May 28, 2025, from <https://www.landesrecht-mv.de/bsmv/document/jlr-LehrAusbVMVrahmen>
- Verordnung zum Vorbereitungsdienst und zur Zweiten Staatsprüfung für Lehrämter an den Schulen im Lande Mecklenburg-Vorpommern (Lehrervorbereitungsdienstverordnung LeVDVO M-V) [Ordinance on the Preparatory Service and the Second State Examination for Teaching Professions at Schools in the State of Mecklenburg-Western Pomerania (Teacher Preparation Service Ordinance LeVDVO M-V)] (2024). Retrieved May 28, 2025, from <https://www.landesrecht-mv.de/bsmv/document/jlr-LehrVorbDVMV2013V7P30>
- Viehhauser, M., & Lehmann, L. (2022). Geschichte des Lehrerinnen- und Lehrerberufs [History of teaching profession]. In T. Hascher, T.-S. Idel, & W. Helsper (Eds.), *Handbuch Schulforschung* [Handbook of School Research] (3rd ed., pp. 263–280). VS Verlag. https://doi.org/10.1007/978-3-658-24734-8_11-1
- Vogt, M. (2019). Professionalisierung von Grundschullehrkräften [Professionalisation of primary school teachers]. In B. Dühlmeier, & U. Sandfuchs (Eds.), *100 Jahre Grundschule: Geschichte–Aktuelle Entwicklungen–Perspektiven* [100 years of primary school: history–current developments–perspectives] (pp. 270–284). Julius Klinkhardt.
- Whitford, B. L., & Villaume, S. K. (2014). Clinical Teacher Preparation: A Retrospective. *Peabody Journal of Education*, 89(4), 423–435. <https://doi.org/10.1080/0161956X.2014.938590>
- Wilmers, A., & Ylimaki, R. M. (2021). Public education at the crossroads: Introduction to the special issue. *European Educational Research Journal*, 20(3), 245–256. <https://doi.org/10.1177/1474904121994415>
- Yeboah, D. A. (2002). Enhancing Transition from Early Childhood Phase to Primary Education: Evidence from the research literature. *Early Years* (London, England), 22(1), 51–68. <https://doi-org/10.1080/09575140120111517>

Author Information

Bakenhus, Silke, Dr.

Carl von Ossietzky University of Oldenburg

Institute of Pedagogy, Primary Science Education and Social Studies

Areas of Expertise: Primary Education, Early Historical Learning, Digital Education in Primary Schools, and Historical Thinking

Address: Carl von Ossietzky University of Oldenburg

Ammerländer Heerstr. 114–118

26129 Oldenburg, Germany

E-Mail: silke.bakenhus@uol.de

ORCID: 0000-0001-9311-7635

Donovan, Jeramy, PhD, Assistant Professor of Mathematics Education

University of Michigan-Flint

Education Department

Areas of Expertise: Primary Education, Mathematics Education, Use of Learning Progressions for Formative Assessment and Instructional Decisions

Address: University of Michigan-Flint

303 E. Kearsley Street, Flint, Michigan, USA,

E-Mail: jeramyd@umich.edu

ORCID: 0009-0007-8858-6622