Crisis in Teacher Education

Crisis in Teacher Education:

A Manual Dealing with the Results of Ignoring Studies in Creativity

By

Fredricka Reisman, Larry Keiser,
Christopher Wilson and David Mattson

Cambridge Scholars Publishing

Crisis in Teacher Education: A Manual Dealing
with the Results of Ignoring Studies in Creativity

By Fredricka Reisman, Larry Keiser, Christopher Wilson
and David Mattson

This book first published 2026

Cambridge Scholars Publishing

Lady Stephenson Library, Newcastle upon Tyne, NE6 2PA, UK

British Library Cataloguing in Publication Data
A catalogue record for this book is available from the British Library

ISBN: 978-1-0364-6502-5
ISBN (Ebook): 978-1-0364-6503-2

To Jeff and Jen Westphal whose courage, support and dedication to creative endeavors are at the heart of this manual.

TABLE OF CONTENTS

LIST OF FIGURES, TABLES AND BOXES

Figures

Tables

Boxes

PREFACE

Creativity is a 21st-century key competency for future leaders as indicated in the seminal studies conducted by IBM (2010) and the World Economic Forum's Future of Jobs report (2024). Schools develop our future leaders – both PreK-Grade 12 and higher education. However, there is a pervasive lack of awareness and understanding of *creativity* – what it is, as well as what it is not – by the current teaching workforce and those responsible for preparing future teachers. The vast majority of teacher education programs ignore incorporating studies in creativity, which results in unawareness of how to identify and teach creative students and even breeds prejudice against them. This omission has led in no small part to a crisis in teacher education – and must be addressed. To solve the crisis, it is critical that both pre- and in-service teachers, as well as those who run teacher education programs, be provided with the necessary knowledge to identify and teach creative students. This Manual serves that purpose.

The Crisis in Teacher Education Manual has two goals: i) bring greater awareness to educators, policy makers and the public of the consequences resulting from a lack of studies in creativity, and ii) fill in the knowledge foundation teachers must acquire to understand creativity and implement instruction for all students, since everyone has creative potential. The Manual describes two recent surveys of teacher education curricula at top US and UK and other European universities to ascertain what, if any, formal study of "creativity" were components of their preparation of teachers. Although ongoing, the findings to date indicate that virtually none of the teacher education programs surveyed included studies on creativity as reported in Chapters 2 and 3 of this Manual. This omission is alarming given that creativity has been identified as an essential competency for the future – and that a major objective of education is preparation of the workforce of tomorrow.

Excluding studies in creativity from educational curricula can have several significant negative impacts on teachers, students, and professors, as outlined in Chapter 1 of this Manual. Today's teacher education programs are failing future teachers, those teachers' students, and the future workforce by neglecting studies that prepare them to identify and nurture rather than punish their creative students, our future leaders. This gap in teacher education results in teachers who cannot identify their

creative students, effectively teach them nor develop a creative classroom environment.

The goal of the Manual is to help fill this teacher education gap and provide instructors with the knowledge and skills that their education programs neglected. To accomplish this task, the Manual contains unique content such as an explanation of the Freddie Reisman Center for Translational Research in Creativity and Motivation (FRC) in Chapter 11, which describes a creativity support organization that bridges research and instruction in creativity to benefit teachers. Chapter 11 explains Mosaic, a nonprofit organization dedicated to fostering independent, meaningful learning that offers access to mentors, coaches, educational resources, and unique opportunities, enabling the development of valuable skills that are required for the future workforce and a life of purpose. As teachers become aware of their own creative strengths, Mosaic offers unique complements to traditional teacher education. An additional support organization MeaningSphere, enables people to create and pursue deeper meaning in their work as well as become aware of their creative strengths.

It is important to communicate with our readers that the term *Manual* is included in the title to highlight that current and future teachers can use this book to access fundamental information lacking in their initial teacher preparation training. This information is essential to preparing teachers, and ultimately their students, with the skillsets of creativity and innovation for use in a future complex society.

Fredricka Reisman
Larry Keiser
Christopher Wilson
David Mattson

CHAPTER 1

CREATIVITY: A SURVIVAL SKILL?

Introduction

The title of this chapter elicits an intriguing question. Creativity can indeed be seen as a survival competency. Throughout history, humans have used creative thinking to solve problems, adapt to changing environments, and innovate in ways that ensure survival and improve quality of life. Then why are we so afraid of creativity? Why do people desire but reject creative ideas?

We may say we value creativity- we may glorify the most imaginative among us, but in our heart of hearts, imagination can scare us. Is there an innate predisposition against novelty? Is the brain hardwired to distrust creativity? People often reject creative ideas even when espousing creativity as a desired goal. People are subtly prejudiced against novelty, even when they claim to be open to new ways of thinking. However, creativity is a 21st-century key skill for future leaders, as indicated in the seminal IBM 2010 and 2012 studies and the World Economic Forum report described next.

IBM 2010 Global CEO Study

IBM surveyed more than 1,500 Chief Executive Officers from 60 countries and 33 industries worldwide and asked, "What is the most important competency for future leaders?" and found that the chief executives believed that "more than rigor, management discipline, integrity or even vision -- successfully navigating an increasing complex world will require creativity." CEOs further stated that creativity helps them capitalize on complexity. "The effects of rising complexity calls for CEOs and their teams to lead with bold creativity, connect with customers in imaginative ways and design their operations for speed and flexibility to position their organizations for twenty-first century success." (Naiman, 2023.)

World Economic Forum

The World Economic Forum is an independent international organization headquartered in Geneva, Switzerland, whose mission is to improve the state of the world by engaging leaders from various sectors, including business, politics, academia, and civil society (see Box 1.1 for definition of civic society).

Box 1.1

> "Civic society," also known as civil society, refers to the aggregate of non-governmental organizations (NGOs), institutions, associations, and individuals that operate independently of the government but work towards the common good, public welfare, and social progress. In a civic society, citizens engage in various forms of civic participation, such as volunteering, advocacy, community organizing, and philanthropy, to address social issues, promote justice, and uphold democratic values.

To anticipate the challenges and opportunities that both companies and employees will face in the near future, the World Economic Forum itemized a list of the top 10 skills for the years 2025 and 2027.

Top 10 skills of the future:

1. Analytical thinking and innovation
2. Active learning and learning strategies
3. Complex problem-solving
4. Critical thinking and analysis
5. Creativity, originality, and initiative
6. Leadership and social influence
7. Technology use, monitoring, and control
8. Technology design and programming
9. Resilience, stress tolerance, and flexibility
10. Reasoning, problem-solving, and ideation

The World Economic Forum's Future of Jobs report finds analytical thinking, creative and critical thinking, and big data will be top in-demand skills by 2027. Big data refers to extremely large and complex data sets that cannot be easily managed or analyzed with traditional data processing tools, particularly spreadsheets.

Additional information from the World Economic Forum (2024) include:

- 50% of all employees will need reskilling by 2025.
- Critical thinking and creative problem-solving top the list of skills employers believe will grow in prominence in the next 5 years.
- Newly merging are skills in self-management such as active learning, resilience, stress tolerance, and flexibility.

Thus, the skills most required by 2027 are likely to be critical thinking and complex problem-solving in addition to skills like adaptability, active learning, resilience, and flexibility. This is because automation and digital technologies that include computers, smartphones, the internet, and various software applications will demand employees who can analyze situations, solve problems creatively, and continuously learn new things. It is interesting to note that surveyed businesses reported creative thinking to be growing in importance, slightly more rapidly than analytical thinking while technology literacy is the third-fastest growing core skill. In essence, creativity isn't just about art or expression, it's a fundamental aspect of human resilience and adaptability (World Economic Forum, 2024).

In many industries, the most in-demand occupations or specialties did not exist 10 or even five years ago, and the pace of change is set to accelerate. By one popular estimate, still widely referenced, 65% of children entering primary school today will ultimately end up working in completely new job types that don't yet exist (World Economic Forum, 2016). However, teacher education programs ignore studies in creativity, which results in unawareness of how to identify and teach creative students who are our future leaders and even breeds prejudice against them.

Creative and Critical Thinking

By 2030, there will be a demand for higher cognitive skills such as creativity, critical thinking, and decision-making. According to a study by Adobe (2020), 74% of professionals believe that creativity is important for their career success and personal growth. Creativity drives innovation and problem-solving, enabling individuals and organizations to stay competitive. Companies that score higher on innovation are more likely to generate higher financial performance, as found by a report by McKinsey & Company (Creativity's Bottom Line: How Winning Companies Turn Creativity into Business Value and Growth, n.d.). Organizations are leveraging creativity to overcome challenges and seize new opportunities. An online survey commissioned by software maker Adobe found that 78% of

college-educated, full-time salaried American adults 25 and older believe that "creativity is important" to their current career and 85% of the 1,000 survey participants agreed that "creative thinking is critical for problem solving" in their jobs (Jana, 2012).

Critical thinking, the ability to objectively analyze information, make informed decisions, and solve complex problems also is important. Saville and Holdsworth Limited (SHL) (2024), a company founded in 1977 known for its psychometric assessments and talent measurement solutions and widely used in recruitment and talent management reported that 70% of employers believe that critical thinking is crucial for their employees' success**.**

Teacher Dilemma

School leadership edicts and policies have led to the rise of high-stakes testing resulting in control of the curriculum by policy makers and test publishers. The result limits teachers to providing traditional content and a narrow pedagogical approach that fails to provide students with the creative problem-solving skills and real-world experiences needed to succeed in an unknown and future complex society. Profound unresolved questions regarding future teacher preparation exist. Colleges and universities preparing teachers for their career in education are experiencing criticism from many arenas. Arthur Levine, a scholar of higher education at New York University's Steinhardt Institute for Higher Education Policy, a senior fellow and president emeritus of the Woodrow Wilson National Fellowship Foundation and president emeritus of Columbia University's Teachers College commented that Teacher preparation is archaic and stuck in the ivory tower. Not only do teachers squelch kids' creativity, but tragically, they do not recognize either their students' or their own creative strengths (Levine, 2012).

In a TED Talk, Sir Ken Robinson (2006), a renowned expert on creativity and education, argued, "My contention is that creativity is as important in education as literacy and should be treated with the same status." The future of teacher education and indeed the future of teaching is dependent upon teacher preparation programs addressing current as well as impending societal needs in both undergraduate pre-service as well as practicing in-service teachers' learning experiences. Unfortunately, many teacher education curricula do not address societal needs.

Creativity has been identified by both corporate and education groups as an essential competence for the future. Yet a 2024 national and international survey conducted by the Drexel University Freddie Reisman Center

for Translational Research in Creativity and Motivation (Freddie Reisman Center for Translational Research in Creativity and Motivation, 2018) throughout the United States as well as a survey of British and European programs conducted by the British co-author of this book, described in Chapters 2 and 3, found that teacher education programs do not include studies in creativity. In fact**, c**urrent teacher education programs fail future teachers by neglecting studies that prepare them to identify and nurture rather than punish their creative students. This gap in teacher education results in teachers not able to effectively teach their creative students nor develop a creative classroom environment.

When practicing teachers in our graduate level creativity courses become aware of this void in their education, they express profound anger and welcome professional development to fill this vacuum. The purpose of this book is to plug the shortcomings caused by the teacher education crisis that ignores studies in creativity now missing in most teacher education programs. Education providers need to recognize that creativity enables curriculum to be dynamic and adaptable, preparing students for the complexities of modern life and work.

Throughout history teacher education has revealed recurring crises each of which presents unique challenges that expose the urgent need for teacher preparation reform. These challenges have led to a shortage of qualified teachers often made worse by low salaries and inhospitable if not dangerous working conditions. The repercussions have been profound resulting in decline in enrollments in teacher education programs and reflection about the fundamental sustainability of the teaching profession. A major contributing issue to this crisis has been the lack of consensus on the essential knowledge and skills teachers should possess. The result has been a fragmented approach to teacher preparation, unable or unwilling to establish an up-to-date unified foundation for educators entering the field. Relatedly, the issue of underrepresentation of minority teachers failing to keep pace with an increased minority student population continues. See Box 1.2 for a history of the crises in teacher preparation and efforts to address them.

Box 1.2

The history of crises in teacher preparation programs has been marked by several significant challenges that include:

i. **Early 1900s.** Establishment of Normal Schools to address the lack of standardized training for teacher
ii. **1950s.** The launch of Sputnik by the Soviet Union in 1957 raised concerns about the U.S. lagging in science and technology education. The National Defense Education Act (NDEA) of 1958 provided funding to improve the teaching of science, mathematics, and foreign languages.
iii. **1960s-1970s**. Increased awareness of the need for better educational opportunities for minorities and children with disabilities resulted in The Elementary and Secondary Education Act (ESEA) of 1965 and the Individuals with Disabilities Education Act (IDEA) of 1975 that required teacher preparation programs to include training for diverse and special needs populations.
iv. **1980s.** The 1983 report "A Nation at Risk" emphasized the need for teacher accountability, certification standards, and performance assessments.
v. **2000s.** The No Child Left Behind Act (NCLB) of 2001 required states to ensure that all teachers were "highly qualified," leading to stricter certification requirements and increased focus on teacher effectiveness.
vi. **2010s**. Many states adopted *the Common Core* and *Race to the Top* (2016) initiatives to develop rigorous teacher evaluation systems based on student performance. The **Common Core** is a set of educational standards outlining the skills and knowledge that public school students should acquire in each grade with special focus upon teaching and testing English and mathematics between kindergarten and 12th grade. The **Race to the Top** initiative focused on the following key areas of K-12 education reform:

- Development of rigorous standards and better assessments.
- Adoption of better data systems to provide schools, teachers, and parents with information about student progress.
- Support for teachers and school leaders to become more effective.

vii. **The COVID-19 Pandemic** crisis disrupted traditional teacher preparation and education systems and shifted to online learning and virtual teacher preparation programs. Emergency certification processes were implemented in some areas to address teacher shortages. Programs such as virtual practicums and online mentorship were developed.
viii. **Ongoing Challenge.** Teacher shortages, especially in STEM, special education, and rural areas led to programs such as residency models (e.g., Urban Teacher Residency) that provide intensive, hands-on training in real classroom settings.

Other programs include:

- **Teach for America (TFA)**: A program that recruits and trains recent college graduates to teach in low-income schools for at least two years.
- **Urban Teacher Residency (UTR)**: A model that combines a year-long classroom apprenticeship with masters-level coursework, designed to better prepare teachers for urban school environments.

Creative Student Characteristics

One of the most consistent findings in studies of creativity has been that teachers dislike personality traits associated with creativity (Bachtold, 1974; Cropley, 1992; Getzels & Jackson, 1962; Tabarrok, 2011, Torrance, 1963, 1965; Whitelaw, 2007). In fact, research has indicated that teachers prefer traits that seem to run counter to creativity, such as conformity and unquestioning acceptance of authority.

Torrance (1965) from a study of over 1000 teachers in five countries, concluded that instructors may be unduly punishing students who are good at guessing and estimating, those courageous in their convictions, emotionally sensitive, intuitive thinkers, and those who are unwilling to accept assertions without evidence. On the other hand, instructors may be unduly rewarding students for being courteous, doing work on time, being obedient, popular and willing to accept the judgment of authorities.

Creative students may display challenging behaviors including dislike of routine type learning, are self-directed learners, day dreamers, persistent in tasks that interest them, and are often pinpointed by instructors as trou-

blemakers and poor students (Whitelaw, 2006). The reason for teachers' dislike is that creative people tend to have traits that some have referred to as obnoxious (Torrance, 1963). In fact, Torrance (1963) described creative people as not having the time to be courteous, as refusing to take no for an answer, and as being negativistic and critical of others. On the other hand, students who are complacent, agreeable, subordinate, task-oriented, and smile at the teacher are identified as creative by their teachers.

In examining creativity and intelligence, Getzels and Jackson (1962) observed that teachers tended to prefer students with high IQ scores in their classrooms over students who were highly creative. Note that scoring high on an IQ test requires answers in line with the norming population, while the opposite is true for creativity assessments where being different from the test taker population is key. Thus, IQ test responding is convergent while creativity assessment requires divergent responses. As a result of the findings of their study, Getzels and Jackson made several suggestions for fostering creativity in the classroom. They recommended that teachers recognize that highly creative students have a desire for independence and values that are different from other students. Therefore, rewarding behavior that might not be typical is necessary for this group of students. Inventiveness requires some alone time, so teachers should allow time for personal reflection. Also, teachers should be open to unconventional responses by students that might not be expected but are still appropriate for the situation.

Further research has suggested that traits associated with creativity may not only be neglected, but actively punished (Myers & Torrance, 1961). Stone (1980) found that second graders who scored highest on tests of creativity were also those identified by their peers as engaging in the most misbehavior (e.g., "getting in trouble the most"). Given that research, Harrington, Block, & Block (1987) suggested that a supportive environment is important to fostering creativity. Chapter 11 is focused on establishing a creative classroom environment and presents a variety of ideas that support creative pedagogies as well as teaching for creativity.

Most classrooms today are not designed for impulsive expression; that's called talking out of turn, walking around without permission, responding with out-of-the-box answers to routine questions, daydreaming when bored, or demanding evidence for teacher or peer statements. Instead, it's all about obeying rules and doing well on standardized tests. Such skills have little to do with fostering and dealing with creative thinkers. Research at the high school level that uncovered students' hidden talents demonstrated that when instructors become aware of their students' creative strengths positive changes occur in their pedagogy and teacher-

student interactions as well as positively affecting student self-efficacy and academic performance (Reisman et al., 2002). In addition, research has suggested that teachers who recognize their own creative strengths are better able to recognize and appreciate the creative strengths of their students with the result of higher quality learning (Whitelaw, 2006).

By making instructors aware of possible challenging behaviors of creative students, they will have the potential to view such student behavior in a different way and adjust their pedagogy resulting in win-win student-instructor relations and increased opportunities for the student to achieve in the classroom. Because rigid enforcement of rules will alienate creative students and squelch their creativeness, flexibility and understanding are necessary; creativity needs a facilitative environment, not an authoritarian one. This means that creative writing teachers need to accept ideas unhampered by grammar and structure to avoid writer's block and to facilitate one's creative flow (Reisman, 2014). Then, depending on the assignment goal, revisions subsequently may focus on "cleaning up" the written product. Chapter 7 provides instructional strategies for the teacher that are missing from their education programs on integrating creativity with literacy (Reisman, 2014).

Consequences of the Crises

Excluding studies in creativity from educational curricula can have several significant impacts on teachers, students, and professors including the following:

Impact on Teachers:

1. **Limited Teaching Strategies**: Without a focus on creativity, teachers may rely heavily on traditional teaching methods, which can limit their ability to engage students effectively (Soh, 2015).
2. **Reduced Professional Growth**: Teachers miss opportunities to develop their own creative skills, which are essential for adapting to diverse classroom needs and fostering a dynamic learning environment (School of Education, 2020).
3. **MeaningSphere:** Presented in chapter 11, describes working together with a threefold purpose: 1. To help teachers make time for reflecting on what's truly important in their work. 2. To assist teachers in making sense of their newfound insights for clarity and inspiration. 3. To empower teachers to make changes – big or small – that infuse more meaning into their work.

4. **Mosaic:** Presented in chapter 11, Mosaic infuses meaningful self-directed learning into the teacher's toolbox and provides strategies that augment the rest of the chapter content.

Impact on Students:

1. **Hindered Cognitive Development**: Creativity is linked to cognitive development and problem-solving skills (Rinkevich, 2011).
2. **Lower Engagement and Motivation**: Creative activities often make learning more engaging and enjoyable. Without them, students might find the learning process less stimulating and motivating (Rinkevich, 2011).
3. **Limited Future Skills**: Creativity is crucial for innovation and adaptability in the workforce. Students who lack creative training may find themselves at a disadvantage in their future careers (Zhong et al, 2024).

Impact on Professors:

1. **Narrow Research Opportunities:** Professors may have fewer opportunities to explore innovative teaching methods and interdisciplinary research, limiting academic growth and contributions to the field (Zhong et al, 2024).
2. **Reduced Student Interaction:** Professors might miss out on fostering a more interactive and collaborative classroom environment, which can enhance both teaching and learning experiences (Fleith, 2019).

Overall, integrating creativity into education is essential for fostering a well-rounded, engaging, and enhanced learning environment. It is noted that students taught by teachers who are not prepared for the classroom (including studies in creativity) are more likely to struggle academically and experience behavior problems. Students taught by teachers who do not feel supported are more likely to feel stressed and anxious. Finally, students in schools with a shortage of qualified teachers are likelier to have lower academic achievement and higher dropout rates.

More senior teachers often recognize they need access to relevant professional development to employ new information regarding how students learn, new pedagogies such as self-directed and self-determined learning, and new technologies including the use of artificial intelligence (AI). The mission of the Freddie Reisman Center for Translational Research in

Creativity and Motivation is to conduct and translate research that end-users (teachers, parents, corporate trainers, the military) need but do not have access to and correct this situation by serving as a resource for the end-users (Freddie Reisman Center for Translational Research in Creativity and Motivation, 2018).

Criticisms of Teacher Preparation

Several criticisms are directed specifically at Teacher Preparation, including the following concerns (Cochran-Smith et al., 2015; Feistritzer, et al., 2007, Feuer et al., 2013):

i. Schools of education overemphasize theory, and teachers are inadequately prepared for modern classroom practice. Schorr (2012) stated "They know who Dewey is, and they know Piaget … but do they know how to teach reading, and how to apply those skills in a setting where kids are three or four levels behind?
ii. Schools of education embrace an outdated 19th-century understanding of student learning and their instructional needs.
iii. Certification standards created a generation ago are inadequate resulting in misalignment between educational outcomes and both current and future societal needs.
iv. Wide variability exists in both the content and rigor of teacher education programs.
v. Teacher education programs generally lean toward one of a narrow range of thematic perspectives: behaviorist or competency-based, humanistic, developmental.
vi. Programs to prepare teachers lack contextual diversity and remain remarkably uniform.
vii. Some teacher preparation programs have instituted a year-long field experience without sufficient instruction in pedagogy content.
viii. New teachers often lack access to gifted mentors who can provide guidance and support.
ix. Teachers often are caught in the crossfire of policy and political debates, which can lead to inconsistent or contradictory expectations.

Griffiths (2014) and Morris (2022) argued that creativity, innovation and imagination in the classroom are being stifled as teacher education is becoming too focused on theory and training. Traditional teacher-directed learning driven by uniform learning objectives often hinder creativity. Bloom & Van Slyke-Briggs (2019) pointed out that educators' disposition

toward creativity in lesson planning impacts classroom practices and student experiences. Cropley & Patston (2019) stated that research supports creative teaching, which encompasses divergent thinking and creative-problem-solving that includes identifying the *real* problem.

While professionalization and theory play essential roles in teacher education, balancing them with creativity and imagination is crucial for fostering innovative classrooms. Addressing these issues requires a comprehensive approach that includes updating curricula, providing more practical training opportunities, and ensuring ongoing support for new teachers. Improving teacher preparation programs involves several key strategies:

i. **Increase Practical Experience**: Programs should provide more opportunities for student teachers to gain hands-on experience in real classrooms under carefully selected mentors who serve as role models for enhancing student critical and creative thinking.
ii. **Enhance Mentorship and Support**: Have knowledgeable teachers who can help bridge the gap between theory and practice and who have established creative learning environments.
iii. **Update Curriculum:** Incorporate the latest research, teaching methods and technology as offered by the Freddie Reisman Center for Translational Research in Creativity and Motivation (FRC) accessed at: https://www.frcenter.net/.
iv. **Focus on Diversity and Inclusion**: Preparing teachers to meet the needs of diverse student populations, including those with special needs and English language learners, is crucial.
v. **Improve accessibility and Affordability:** This can help attract a broader range of teacher education applicants.
vi. **Encourage Professional Development:** This helps teachers stay current with new research-based teaching strategies and technologies. This is a major goal of the FRC.

By focusing on these areas, teacher preparation programs can better equip new teachers to succeed and positively impact student learning.

Criticisms of Schools

Schools also are found lacking. These include the following (Campbell et al., 2000; Chall, 2000; Borko et al., 2006):

- Public schools are mired in an early 20th-century understanding of student learning (McDonald, 2017).

- Public schools do not prepare children for life outside of school.
- Public schools are based on an out-of-date factory model in need of reform to prepare students to succeed in a rapidly and increasingly changing world and a technologically integrated global economy (Boyce, 2019).
- Continual poor test results and low graduation rates are evidence that schools are not teaching all children effectively.
- Standardized high-stakes tests are unfair and data demonstrates cultural bias against racial and ethnic minority students from low-income families as reflected by lower assessment scores.
- Following years of instructional, pedagogical, and management reforms (e.g., whole language vs. phonics instruction in reading, constructivist vs. direct instruction, centralized decision-making vs. site-based control) classroom practices have changed very little.

But this is only part of the story. As Cochran-Smith (2005) noted:

> "To get from teacher education to impact on pupils' learning requires a chain of evidence with several critical links: empirical evidence demonstrating the link between teacher preparation programs and teacher candidates' learning, empirical evidence demonstrating the link between teacher candidates' learning and their practices in actual classrooms, and empirical evidence demonstrating the link between graduates' practices and what and how much their pupils learn. Individually, each of these links is complex and challenging to estimate. When they are combined, the challenges are multiplied. (p. 303)."

Why Are Studies in Creativity Not Included in Teacher Preparation Programs and the Impact

The question addresses a significant gap in teacher education: the relative absence of creativity studies in teacher preparation programs. Several factors contribute to this issue. Table 1.1 lists excuses as well as related impacts on students and teacher behavior in the classroom (Fredericks, 2021; World Economic Forum, 2018).

Table 1.1 Excuse and Impact Statements for Not Including Creativity in Teacher Preparation Programs

Excuse	Impact
Emphasis on standardized testing. Teacher preparation programs often prioritize subjects that align with standardized testing and state-mandated curricula. These programs emphasize content knowledge in core academic areas like math, science, and reading. Creativity, while valued, is seen as less directly linked to these high-stakes tests and thus receives less emphasis.	This focus on standardized testing can negatively affect creativity. Students are conditioned to seek a single solution to each problem, limiting their ability to explore multiple potential responses. Creativity is seen as less directly linked to these high-stakes tests and thus receives less emphasis. Furthermore, fear of making mistakes can hinder students' willingness to explore innovative solutions. As a result, they may avoid taking creative risks, fearing low test scores. When teachers focus too much on grades, students may become more concerned with getting a good grade than with expressing their creativity.
Accreditation requirements. Since accreditation does not require studies in creativity, teacher preparation programs in virtually all US states currently do not include studies in creativity as a required competency.	If teacher preparation professors were to study creativity, they could model creative pedagogy and sprinkle this throughout the curriculum without needing separate creativity coursework.
Lack of Expertise and Resources. Integrating creativity into teacher preparation requires instructors who are knowledgeable about creative teaching methods and the discipline of creativity including theories, research and applications. Faculty members and instructors in teacher preparation programs often have limited knowledge or training about integrating creativity.	There is a shortage of qualified instructors who can teach courses on creativity. Most current higher ed faculty have not been exposed to studies in creativity.