

Teaching as an Art in an Age of Science and Technology

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Abstract

This study examines the dominant concept of education as a “hard science” as well as the widespread application of business models in the realm of education. Some of the implications of these views are discussed including the decisive role which standardized national and international testing play in current educational policies. The possible effects of the COVID-19 pandemic on education are also briefly considered in this context. A view of education and teaching as an art is considered as an alternative educational concept. Its historical origins in the West are explored as well as perspectives from prominent 20th and 21st century Western educators who have advanced this position. Waldorf Education and Waldorf Teacher Education are examined as long-standing examples of its practice. Finally, this study discusses some of the broader implications of this educational concept as well as its relevance in a world that is increasingly being shaped by digital technology.

Keywords: teaching as an art, aesthetic education, Waldorf education, attunement, resonance



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** This article draws, in part, on themes which I have also written about extensively in other contexts including in my book *The Art of Foreign Language Teaching: Improvisation and Drama in Teacher Development and Language Learning* (2007), as well as in more recent articles and chapters mostly published in German. In the planned 2nd revised edition of “*The Art of Foreign Language Teaching*” parts of this article will appear in the appendix.

1. Contemporary Concepts of Teaching and Their Implications

Concepts of teaching profoundly shape the framework in which all educational questions are considered and addressed. The concept of teaching as a science widely prevalent today became an accepted view in the West in the course of the 20th century. Its origins can be traced to educational approaches developed in the second half of the 19th century. From this point on, the practices of teaching and teacher education increasingly came to be seen as legitimate fields of scientific inquiry and knowledge, providing the underlying foundations for educational theory and practice. This view has remained the basis of most educational research today in which the methods of the natural sciences have generally been accepted as a standard paradigm. Through wide-scale attempts to establish objective standards, a general approach to teaching and learning frequently based on the dictum of education as a ‘hard science’ has decisively shaped educational policies throughout much of the world. At the same time, it has also in many cases become a dominant perspective in teacher education, shaping both pre-service and in-service training.

It is evident that the adoption of the methods of quantifiable measurement as the primary yardstick to evaluate success or failure has had far-reaching consequences in both educational theory and practice. Moreover, it has also often been a decisive factor in determining educational policies throughout the world. For both teachers and pupils, this has meant that extensive standardized testing has often become the dominant method of judging the quality of their work. The general acceptance of quantification in evaluating educational practice has also frequently led to the implementation of governmental policies in which the collected data is then used as the basis for measuring efficiency. Whereas the methods of the natural sciences have been considered models

for research-based educational theories and practice, successful business practices are often thought to offer the best models of efficiency and productivity. The integration of the quantifiable methods of educational science with the measurable outcome orientation of the business world has profoundly shaped the frameworks in which questions are posed and answered.

From a perspective focused on achieving the best possible results in the most efficient manner, schools have increasingly been considered as a type of service institution in which, for instance, teachers are held accountable for productivity, generally measured by the success of their pupils' test scores. Irrespective of different national traditions and educational systems, a commonly held belief in the necessity of achieving aims based on those maxims of standardization and accountability which both science and economic production demand, has shaped educational policies in many countries.

The profound impact of these developments on both schools and teacher education have become increasingly evident (Coles, 2018; Graupe & Krautz, 2012; Krautz, 2017; Ravitch, 2016). In the United States the most prominent critic of these processes has been, strikingly enough, Diane Ravitch who as the former Secretary of Education for the United States had originally been one of its proponents (Ravitch, 2016). Another leading American educator, Linda Darling-Hammond, has consistently made the case for more differentiated and qualitative approaches to educational evaluation (2013, 2015). In different European countries the dominance of this approach to education has also been viewed increasingly critically by leading educators. Gert Biesta has focused on the decisive role of the teacher in determining the quality of education and has fundamentally questioned the use of measurement and quantification as a basis for instituting educational change (Biesta, 2017, 2020). In Germany, the Gesellschaft für Bildung und Wissen [the society for education and knowledge] (n.d.) has instituted a series of academic

conferences and publications along with publishing public manifestos in which the ‘economization’ of education has been critically viewed. The prominent Austrian educational scientist Konrad Paul Liessman has described this process as *Unbildung* the actual ‘negation of education’. He writes:

The current practice of negating education always poses the question of what is practical and useful – for the individual, for the economy, for society. (...) If one reduces education to what is useful, if one only counts that which can later be used and views education only from the perspective of whether it will be utilizable, one loses every chance of giving young people in schools and universities a chance to learn something for its own sake, to be fascinated by the subject itself, to pursue a question just out of curiosity, even when one doesn't find the answer or it has no value for one's career. (Liessman, 2016, p. 179) ¹

It is, of course, not only on national levels in which standardized testing currently determines educational policies. One of the most striking developments of the late 20th and the 21st century has been the increasing internationalization of educational policies, both in schools and universities, which in Europe has been driven by the far-ranging effects of the Organization for Economic Co-operation and Development (OECD), and the so-called Bologna Process. However, the most striking example of the worldwide effects of standardization is undoubtedly the role that the PISA tests have come to play.

¹ All translations from German texts, unless otherwise noted, are my own translations.

1.1 PISA: The Standardization and Economization of Education

Perhaps the most extraordinary example of the merger of scientific paradigms with business models in evaluating teaching and learning can be seen in the profound effects that the PISA tests have had throughout much of the world. The significance of such comparative international testing with its resulting country rankings, has profoundly shaped both educational systems and concepts of teaching and learning. In analysing the far-ranging consequences of the PISA tests, Silja Graupe and Jochen Krautz write:

The PISA studies and their results determine how future generations will be educated. Through measurement, the capabilities and competences of pupils in over 30 countries have been compared and evaluated. Thereby, PISA openly admitted already back in 2000 that what was being measured was not oriented on the educational traditions, laws and guidelines of the countries that were tested. Instead, their own concept of what was to be tested was to have a normative effect: teachers, schools and entire educational systems throughout the world have thus been forced to adopt the one and only concept through which they can achieve and demonstrate excellence. (Graupe & Krautz, 2012, p. 139)

One of the many striking effects of PISA has often been the widespread loss of national cultures and traditions which had previously shaped much educational thinking. In its place, international and standardized models of testing have succeeded in replacing not only what was formerly considered essential for a specific culture, but also in decreasing the significance of direct pedagogical interaction. The actual educational processes that occur between teachers and pupils have, in

many cases, become subservient to achieving better test results. The educational framework which the PISA tests have instilled and in which pupils, teachers, schools and countries are evaluated is connected neither to the actual lives and cultures of the pupils, nor to what actually takes place between teachers and pupils in their classrooms. It is a framework existing solely in an ‘artificial world’ of abstract data. Graupe & Krautz write:

The intrusion of the artificial world of PISA measurements alienates pupils from their cultural roots and destroys the interpersonal basis of pedagogy. The direct experience of the pedagogical practice loses its significance for education because the attention which is paid by politicians, society and educational science is solely focused on an artificial, statistical world. (...) Thereby the mysterious power which measurement evokes does not, in the end, lie in its results. Independent of what PISA actually measures und regardless of whether the test results are good or bad, the power lies in the process of measurement and being measured itself. People become habituated to only distinguishing between more and less without ever thinking about or asking about the qualities that matter in education. Education today is designed to qualify people for a world which only strives for economic growth and which measures success solely on quantity. (Graupe & Krautz, 2012, p. 144)

The highly visible changes which have occurred due to the PISA results range from establishing new curriculums expressly designed to increase test scores to instituting financial and career incentives and pressures on schools and teachers to produce better results. The political and educational consequences of making standardized testing and statistical comparisons of different countries the primary yardstick of judging educational progress can be seen both in those countries that

achieved high marks and were accordingly motivated to put teachers and pupils under intensified pressure to maintain those rankings, as well as on those countries that did poorly, and in suffering a so-called ‘PISA shock’ were accordingly expected to focus on methods designed to achieve higher scores on the next series of tests.

One of the prime sources of the pressures on both ends of the ranking scale were economic considerations; no country can afford to ‘fall behind’ in an area that would be decisive for their future economic prosperity. At the same time, along with the highly visible effects of the test scores on educational policies there are also the inner consequences of the widespread adoption of a way of thinking that can be considered equally significant. Krautz describes this way of thinking as a process of internalizing the principles of economization in education:

This internalization of economization leads to a fundamental change in the underlying pedagogical view of the human being and of the paradigms of education. It shapes not only the public perception and discussion of education, but it also has profound effects on the thinking, feelings and actions of individual teachers. This internalization of economization thrusts all areas of life – health, art, religion and education into a manner of thinking and acting adapted to the logic of economic markets. (...) In the meantime, the programme of neo-liberalism has trickled down deeply into peoples’ thinking and feelings. (Krautz, 2016, p. 56)

The current educational policies and societal processes which Eisner, Liessman, Graupe, Krautz and other leading educators have critically analysed call for the consideration of alternative educational approaches. Before examining a different concept of education, it is currently imperative to also consider the possible effects that the pandemic caused by the COVID-19 virus will have on educational systems and approaches

to teaching and learning.

1.2 COVID-19 and Digital Learning in the Future

It has already become evident that the necessity of online teaching precipitated by the COVID-19 pandemic will have far-ranging consequences on educational concepts and policies throughout the world. These consequences occur in educational landscapes which were already undergoing widespread changes due to the possibilities which digitalization now offers – a process which the pandemic will undoubtedly accelerate. These developments have increasingly been the subject of critical reflection and discourse in the educational sciences and the necessity to bring these discussions to a more general audience which also includes parents and educational policy makers is becoming increasingly apparent. The overwhelming economic and political pressures in the last two decades to embrace the digitalization of schools and learning and the absence of educational concepts and research attesting to its actual educational value has been well-documented (Landri, 2018; Lankau, 2017; Leipner, 2020; Münch, 2018; Rittelmeyer, 2018). At the same time, extensive research documenting the negative neurological and psychological effects of excessive digital usage on children and young people has been largely ignored (Patzlaff, 2017; Spitzer, 2017, 2018; Teuchert-Noodt, 2017; Twenge, 2017).

In being forced to follow policies which to a significant extent are also driven by the immense economic profits gained by specific industries through the widespread digitalization of schools and their adopting digital and online forms of learning, educators will be increasingly challenged to develop and explain alternative educational concepts based on a clear understanding and consideration of what will most benefit the learning and well-being of children. It is from this understanding that it will be necessary to consider what role digital learning can play. These

discussions will need to take place in the realm of political and societal discourse, as it has become increasingly crucial for educators to be able to present coherent and convincing alternatives to what is often seen from a political and economic viewpoint as the long overdue ‘modernization’ of education.

In addressing these challenges, I believe it will also be necessary to explore and develop concepts of teaching and learning which offer clear alternatives to what has often been accepted as the paradigm of teaching as a science based on measurement, coupled with the corresponding models of standardized testing and the goal of efficiently attaining the desired results.

2. Alternative Concepts of Education: Education and Teaching as an Art

Although the contemporary understanding of schooling and teaching has come to represent a dominant view of our times, there are and have always been very different views of education. In this article I will explore the wide-ranging implications of an alternative concept, namely *education and teaching viewed as an art*. After very briefly examining this concept in a wider historical context, I will then consider the standpoints of leading Western educators of the 20th and 21st century who have made significant contributions to its further development. At the conclusion of this section, the unique example of Waldorf Education and its attempt to put the concept of teaching as an art into practice for over a hundred years, will be discussed.

Considering teaching as an art implies not only a different understanding of education, but calls for a different understanding of the nature of knowledge as well. In the arts there are clearly ways of knowing that cannot be satisfactorily evaluated within those measurable

frameworks used in traditional educational research. A musician's extraordinary sensitivity to nuances of pitch and tone colours, an actor's abilities to use her voice, gesture and physical presence on stage, a dancer's capabilities of expression through movement, all represent dynamic and emergent forms of knowledge which inherently resist standardization. At the same time, such forms of 'knowledge in action' undoubtedly indicate precise ways of knowing and acting. Intrinsic to a concept of teaching as an art is a belief that precisely those abilities and skills which excellent teaching demands are to a significant degree far closer to those required of artists, than of scientists.

There is no single established concept of teaching viewed as an art, (that in itself would be quite inartistic), but rather educators have in the course of time adopted different perspectives and emphasized different aspects, thereby creating a broad spectrum of connections between artistry and teaching. The historical basis of this concept can be traced back to the Sophists in the 5th century BCE who were the first educators to develop a broadly humanistic and ethical approach to education reflected in the concept of *paideia* (Jäger, 1973). In the Renaissance, crucial elements of this Greek tradition re-emerged and the strict dialectical approach of *lectio* and *disputatio* which had been the accepted teaching practice in all subjects throughout the Middle Ages, was gradually transformed. In the course of the 17th century, particularly through the works of Comenius, specific principles of teaching were developed and systematized and the formal study of didactics began (Lichtenstein, 1970).

A broadly humanistic view of education and teaching also became a cornerstone of German Idealism, and was reflected in the writings of Herder (1744-1803), Lessing (1729-1781), Goethe (1749-1832), Schiller (1759-1805), Humboldt (1767-1835) and Fichte (1761-1814). In this context, Friedrich Schiller's *Über die ästhetische Erziehung des Menschen* [the aesthetic education of man] can be viewed as the highpoint of this entire development. In Schiller's educational/aesthetic

concept, individual freedom and an inner sense of responsibility only become possible through cultivating and developing one's senses, sentient life and imagination through *aesthetic experience*. "There is no other way to make the sensory human being thoughtful and reasonable other than to first make him aesthetic" (Schiller, 1801/2004, p. 132).

Schiller's work can be regarded as particularly significant in regard to the later development of the concept of teaching as an art which was reflected in a number of reform pedagogical initiatives at the beginning of the 20th century, most notably, but not exclusively, in Germany. One of those pedagogical initiatives was Waldorf Education, founded in 1919 in Stuttgart. The unique contribution of Waldorf Education with respect to the further development of teaching as an art will be discussed in a later section.

2.1 Anglo-American Traditions of Teaching Viewed as an Art

2.1.1 Psychology and Education: William James

In the Anglo-American educational tradition, the concept of teaching as an art has a clearly defined origin. In 1892, the renowned psychologist and philosopher William James (1842-1910) was asked by Harvard University to give a series of public lectures on psychology to schoolteachers in Cambridge, Massachusetts which were later published. In his lectures James draws clear distinctions between the insights which can be gained from the science of psychology and what is required in teaching:

I say moreover that you make a great, a very great mistake, if you think that psychology, being the science of the mind's laws, is something from which you can deduce definite programmes and

schemes and methods of instruction for immediate schoolroom use. Psychology is a science and teaching is an art; and sciences never generate arts directly out of themselves. (James, 1899/1962, p. 3)

James' entire view of teaching was based on a deep respect for the sovereign role of the teacher and a sceptical evaluation of the possibilities of science in advancing educational practice. From the perspective of the leading psychologist of these times, the injunction that "inventiveness and sympathetic concrete observation" and not the findings and methods of science were the basis of successful teaching, constituted an educational vision at the end of the 19th century which was to have practical consequences in a number of reform movements at the beginning of the 20th century in both the United States and Europe.

2.1.2 Art and Education: John Dewey

In contrast to most of his contemporaries in the European reform movements in the first third of the 20th century, the writings and work of John Dewey (1859-1952) have continued to influence different aspects of educational thinking throughout the 20th and 21st centuries. His influence on educational thinking has also not been limited to the United States.² In his foreword to the writings of the renowned art teacher Henry Schaefer Simmern, Dewey explains what he views as the guiding principles underlying artistic processes in teaching and learning:

The first of the principles to which I would call attention is the emphasis upon individuality as the creative factor in life's experiences. (...) This creativity is the meaning of artistic activity – which is manifested not just in what are regarded as the fine arts, but

² For instance, the University of Cologne in Germany has established an important international center for Dewey Studies (<https://www.hf.uni-koeln.de/30446>).

in all forms of life that are not tied down to what is established by custom and convention. In re-creating them in its own way it brings refreshment, growth, and satisfying joy to one who participates. Accompanying this principle, or rather inseparable from it, is the evidence that artistic activity is an undivided union of factors which, when separated, are called physical, emotional, intellectual, and practical –these last in the sense of doing and making. (Schäfer-Simmern, 1948, pp. ix-x)

In many respects, Dewey's understanding of the nature and significance of artistic experience can be considered the keystone of all his educational writings. He thus continually drew parallels between teaching and artistic expression. At the same time, he makes clear that this concept of teaching also requires a fully new understanding and vision of education than that which was prevalent in his times:

It is by way of communication that art becomes the incomparable organ of instruction, but the way is so remote from that usually associated with the idea of education, it is a way that lifts art so far above what we are accustomed to think of as instruction, that we are repelled by any suggestion of teaching and learning in connection with art. But our revolt is in fact a reflection upon education that proceeds by methods so literal as to exclude the imagination and one not touching the desires and emotions of men. (Dewey, 1934/1980, p. 347)

Not only have Dewey's ideas regarding art and experience had a significant influence on the thinking of a number of later educators, but his attempts to develop an educational science based on using scientific *methods in an artistic manner and context* also demonstrated the first possibilities of mediating between what had commonly been perceived

as irrevocable polarities of thinking. In that sense his work has offered possibilities of integrating crucial elements of different approaches to research and teaching (Garrison, 1997, pp. 96-101). Some of the most visible fruits of his attempts at integrating teaching as an art with new approaches to educational research took place not in the United States, but in England.

2.1.3 The Teacher as Artist and Researcher/Lawrence Stenhouse

The most important contribution to the concept of teaching as an art to come out of Great Britain is connected to the influential work and writings of Lawrence Stenhouse (1926-1982). Stenhouse's name and work are inextricably tied to the idea of the 'teacher as researcher' or, 'action research' which he pioneered in England. His concept had a twofold basis: first, he proposed that it was through consciously monitoring and researching their own work that teachers could become conscious artists:

A teacher lays the foundation of his capacity for research by developing self-monitoring strategies. The effect is not unlike that of making the transition from amateur to professional actor. Through self-monitoring the teacher becomes a conscious artist. Through conscious art he is able to use himself as an instrument of his research. (Stenhouse, 1985a, pp. 15-16)

Secondly, he argued that it was research conducted by teachers that would lead to the most significant improvements in teaching and curricula. "The assertion is that the improvement of teaching rests upon the development of the art of the teacher and not through the teacher's adoption of uniform procedures selected from competing alternatives" (Stenhouse 1985a, p. 28).

Stenhouse's concept of the 'teacher as researcher' hinges on the teacher's adopting the attitude of the researcher, testing hypotheses in action, recognizing the provisional nature of results and a continual willingness to revise them. For him, this is an essential aspect of what constitutes artistry in teaching:

...for the most part neither teachers nor pupils recognize teaching as an art. Hence teachers do not see their own development as key to the situation in the same way as actors or sculptors or musicians do. And pupils do not understand – nor do teachers generally share the understanding with them – the significance of experiment in the classroom and their role in it. (Stenhouse, 1985b, p. 69)

In the development of this attitude and in learning to adopt such methods, a teacher makes crucial and necessary steps in attaining artistry. Stenhouse considers this to be vital for the teacher's own self-development. The process through which this occurs demonstrates significant parallels to the learning and practice of any form of art:

I am claiming that the expression of educational ideas in curricular form provides a medium for the development – and if necessary the autonomous self-development – of the teacher as artist. To say that teaching is an art does not imply that teachers are born, not made. On the contrary artists learn and work extraordinarily hard at it. But they learn through the critical practice of their art. Idea and action are fused in practice. (...) Thus, in art ideas are tested in form by practice. Exploration and interpretation lead to revision and adjustment of idea and of practice. If my words are inadequate, look at the sketchbook of a good artist, a play in rehearsal, a jazz quartet working together. That I am arguing, is what good teaching is like. It is not like routine engineering or routine management. (Stenhouse,

1985c, pp. 96-97)

The tradition of action research which Stenhouse initiated has since become an accepted research practice throughout the world and has continued to develop through the works of influential figures such as John Elliot and Herbert Altrichter.

3. Further Developments of the Concept of Teaching as an Art in the 20th and 21st Century

In the following sections, contributions of influential educators who have viewed teaching as an art will be discussed. Just as it lies in the very nature of the richness of a work of art that judgements regarding its specific and unique qualities cannot satisfactorily lead to set definitions, there can be no question of defining the concept of teaching as an art in a normative manner. The approach I have chosen is based on considering multiple perspectives and therefore illustrating different aspects, offering a rich and varied picture of how education and teaching can be conceived from this standpoint. A particular focus will be placed on the possible implications of these views for teacher education.

3.1 The Concept of Teaching as a Performing Art

In the 1970s and 80s there were a number of educators in the United States who advanced the idea that teaching should be considered as a *performing art*. This connection between teaching and performance became a central focus in the thinking of Louis J. Rubin and Elyse Lamm Pineau among others (Rubin, 1985; Pineau, 1994). The most prominent educator who developed this concept was Seymour Sarason whose book *Teaching as a Performing Art* (1999). Since then, there has also been a rapid further growth of interest in this idea in a variety of

contexts, perhaps most notably in connection with the general areas of performativity and performance studies as particularly developed in the works of Erika Fischer-Lichte (2008).

Seymour Sarason's contribution to the concept of teaching as an art is unique in a number of respects. At the beginning of his book, he explains his overarching aims and what he sees as the fundamental parallel between teachers and performing artists:

My main interest is less in convincing the reader that teaching is a performing art and more in indicating that the process by which a person enters and grows up in the traditional performing arts has enormous implications for improving teaching. A performing artist is one who uses him or herself to convey an emotion, or situation, or imagery intended to be meaningful and stimulating to an audience. The "message" whatever the medium, is for the purpose of evoking in others the response "I understand and believe what I am seeing and believing. You have not left me cold, you have engaged me." (...) In the case of the teacher, engagement is a sustained one; it is not a one-night stand. (Sarason, 1999, p. 6)

The response that is evoked by a performer should have meaning past the moment and continue to live in others:

A teacher, like an actor, wants to have an impact during the performance but both also clearly want that impact to continue in some way to some degree afterward. You perform in the here and now in the hope that your performance has a future in the memories and actions of the audience. (Sarason, 1999, p. 5)

One of the vital connections that he draws between teachers and performers is the necessity of constantly re-creating their material and

avoiding routines. In this regard, he argues that teachers can learn from the underlying relations between actors and their audiences. In the expectations which an audience brings to every performance and the responsibilities which a performer takes on, he sees a paradigm for the relation between a teacher, her material and the pupils:

It makes no difference to an audience how many times an artist has performed the role. They expect that person to perform as if it was the first time the artist is performing the role. Audiences do not want to feel that they are being treated to a routinized performance devoid of the appearance of spontaneity and feeling. Audiences do not want to become aware that the artist is acting; they want to identify with the role, they want to “lose themselves,” to be caught up in the welter of thought and feeling the role requires. (...) When you are insensitive to audiences, when you have forgotten your obligation, it is time to quit. (Sarason, 1999, pp. 13-14)

While pointing out clear differences between teaching and performing, he maintains that the underlying similarities constitute crucial dimensions of artistry which teachers can and must learn,

The venue is different, the audience is different, ultimate goals are different, the scripts (the curriculum) are different, but two things are not different; the teacher wants the audience of students to find that teacher interesting, stimulating, believable, someone who helps them see themselves and their world in a new and enlarged way, someone who satisfies their need for new experiences that take them out of their ordinary selves, someone they willingly come back to because they want to see the next act in a play about learning. (Sarason, 1999, p. 36)

It is the complete absence of this idea in teacher education which Sarason considers to be a glaring weakness. His central point is that future teachers could immensely profit through studying examples from the other performing arts:

Like it or not, and some do not like it, the teacher as performing artist is faced with a terribly complex and difficult task that all those in the conventional performing arts confront: how do you put yourself into a role and then enact it in ways that instruct and move an audience, fulfilling the expectation of the audience that they have in some way learned something about themselves and their world? They have been moved, they seek more such experiences. Teachers are not born, so to speak with such attributes. It requires a kind of training which no preparatory program I know has taken seriously, if at all... (Sarason, 1999, p. 54)

He argues that the approach which he is now advocating means a radical transformation of teacher training, insofar as the one-sidedness of traditional programs up until now have reflected a strikingly limited perspective of what a teacher needs to learn. In discussing previous efforts to reform teacher education, he complains that no one ever had anything new to say,

...except, of course, to assert that a more solid grasp of subject matter (taking more courses) would improve the quality of teaching. In some unexplained way the knowledge of teachers would stimulate the hearts and minds of students. There was absolutely no recognition that maybe teaching required more than a solid grasp of subject matter, that maybe the teacher as performer needed to be analyzed and judged in regard to the selection and preparation of teachers. In brief, teaching was a relatively simple affair devoid

of artistry (...) Teachers taught the way they were taught, their performing style and repertoire were in a very narrow range. Students performed the way they thought the teacher expected them to behave. I regard what I have said in this book as glimpses of the obvious, but it took me years to truly take the obvious seriously. (Sarason, 1999, pp. 165-166)

In the two decades following publication of his book there have been further significant contributions to developing a new understanding of teacher education and the possibilities of developing artistry in teaching through drama studies, most prominently with respect to the pre-service- and in-service training of foreign language teachers (Mentz & Fleiner, 2018; Sambanis & Walter, 2019; Schewe & Even, 2016).

3.2 Teaching as an Improvisational Art

In trying to quantify the highly improvisational nature of actual classroom practice, Andreas Hillert concludes that in a given lesson a teacher may have to make up to 200 decisions and on the average, deal with 15 conflicts (Hillert, 2004). From this perspective, it becomes apparent that teaching understood as an art will not be based on theoretical knowledge, but far more on capabilities that enable a teacher to make intuitive and appropriate pedagogical decisions in a classroom, a form of knowledge that Max van Manen has termed “knowledge in action” (van Manen, 1995).

It is this understanding of the highly improvisational nature of teaching that has led to a number of developments in teacher education, most notably the inclusion of courses in theatre clowning as part of teacher education, particularly in the pre-service and in-service training of foreign language teachers (Lutzker, 2007). The empirical research which has been conducted on effects of these courses has shown that

the improvisational skills developed in such courses are considered by teachers to be highly valuable in learning to later improvise creatively and intuitively in classroom teaching (Lutzker, 2007).

The intrinsic connection between teaching as an art and a teacher's improvisational skills has also been a dominant theme for a number of leading educators who, in different ways, have made the case that a teacher's artistry will be highly dependent on her improvisational abilities.

3.2.1 Elliot Eisner and the Art of Teaching

One of the most prominent and influential educators who has made the case for teaching to be considered an art and who has particularly focused on teaching as an art created in *process* is Elliot Eisner. In a chapter called "On the Art of Teaching" in his book *The Educational Imagination* (1985) he explains the four reasons which lead him to define teaching as an art:

First, it is an art in the sense that teaching can be performed with such skill and grace that, for the student as for the teacher, the experience can be justifiably characterized as aesthetic. (...)

Second, teaching is an art in the sense that teachers, like painters, composers, actresses, and dancers, make judgments based on qualities that unfold during the course of action. (...)

Third, teaching is an art in the sense that the teacher's activity is not dominated by prescriptions or routines but is influenced by qualities and contingencies that are unpredicted. (...)

Fourth, teaching is an art in the sense that the ends it achieves are often created in process. (...)

It is in these four senses – teaching as a source of aesthetic experience, as dependent on the perception and control of qualities, as a heuristic, or adventitious activity, and as seeking emergent ends – that teaching can be regarded as an art. (Eisner, 1985, pp. 175-177)

Using terms like “flexible purposing” and “fluid intelligence,” Eisner discusses how artists learn through improvising to address changing elements in their mediums, drawing on a repertoire of possibilities to create and work with those dynamic qualities intrinsic to their respective art forms. In drawing wide-ranging parallels between such processes in the arts and in teaching, a fundamentally different vision of teaching is advanced. His argument is that working within a context in which qualities such as openness, sensitivity, flexibility, creativity and expressiveness are most essential, the teacher as an artist in her classroom is exhibiting comparable skill and grace as a musician, dancer, or actor.

3.2.2 Ted Aoki and “Curriculum in a New Key”

One of the most eloquent voices in teacher education has been the Canadian educator Ted Aoki. In his seminal work *Curriculum in a New Key* (2004) he critically views the dangers and implications of traditional curriculum design and the concepts and terms normally associated with these practices:

As educators, we all know that the very word “curriculum” was coined as an administrative category, sponsored by management interests. No wonder, then, at the prominence of instrumental language in curriculum talk populated by expressions like “curriculum development,” “curriculum implementation,” “curriculum integration” “curriculum piloting,” and the like. The

danger in speaking this language is that we become the language we speak. And in so becoming, we might become forgetful of how instrumental language disengages us from our bodies, making of us disembodied, dehumanized beings, indifferent to the nihilistic drying out of inspiredness. (Aoki, 2004, p. 369)

In its place he advances a fundamentally different vision of a curriculum designed to value the possibilities not of implementation but rather of improvisation. In this context he draws specifically on curriculum workshops held with the jazz trumpet player Bobby Shew:

So when we are called upon as teachers to “implement” a curriculum, we ought to recognize implementation as an instrumental word, and we ought to ask not “How do I implement?” but “What is it to implement?” Here we should recall Bobby Shew whose notion of improvisation reverberates within us and animates us. Instead of “curriculum implementation” how about “curriculum improvisation”? (...) What “curriculum improvisation” does for me is twofold. First, it reminds me more clearly that curriculum implementation asks teachers to be installers, primarily interested in fidelity to the curriculum to be installed. The danger lies in the possibility of indifference to the lives of teachers and students to the situation. “Second, “curriculum improvisation” rings differently. In curriculum improvisation teachers are asked to shift from being installers to being improvisers, sensitive to the ongoing life and experiences of themselves and students in the situation. The quality of the curriculum-as-lived becomes a leading concern. (Aoki, 2004, pp. 369-370)

It is striking that exactly in curriculum design, an area normally explicitly conceived to be closely followed, Aoki calls for a

fundamentally different perspective based on the lived experiences of teachers and pupils in actual classroom situations. In a later interview he explains the roots of this view:

Sensitive teachers have told me that teaching in a live situation is midst the planned and unplanned, between the plannable and the unplannable. The unplanned and the unplannable appear unsolicited midst teaching, entering engagingly into play with the planned and plannable. And these teachers know too that, though difficult to articulate, they try to be alert to confront both the predictable and unpredictable. (Aoki, 1999, p. 180)

It is the improvisational nature of teaching itself and the relation of that to improvisation in the arts that has been the focus of the work of other educators as well.

3.2.3 Teaching as an Improvisational and Collaborative Art: Keith Sawyer

Another influential educational scientist advancing the concept of teaching as an art has been Keith Sawyer. He offers a vision of teaching as a form of collaborative improvisation in which the teacher and pupils co-create a creative classroom discourse. Arguing that research has convincingly demonstrated that one of the defining characteristics of outstanding teaching is the ability to react flexibly to the dynamics of classroom interaction, he has strongly criticized recent formalistic approaches to teaching in which this element of teachers and pupils improvising together in the classroom is discounted. In the context of explaining his understanding of collaborative learning, he draws clear parallels with the methods of improvisational theatre work:

In improvisational theatre, a group of actors creates a performance without using a script. Some groups specialize in short skits only a few minutes long, and others specialize in fully improvised one- or two act plays of an hour or more. These performances emerge from unpredictable and unscripted dialogue, on stage and in front of an audience. In a similar way, an effective classroom discussion emerges from classroom discourse, and is not scripted by the lesson plan or by the teacher's predetermined agenda. (Sawyer, 2004, pp. 12-13)

In his discussion of the potential significance of such improvised classroom discussions for learning, Sawyer draws on both his own experience as a jazz pianist, as well as on constructivist thinking in which learning is viewed as a creative and improvisation process, co-created by teacher and pupil. Moreover, he establishes connections to recent socio-cultural theory in which the overriding significance of the activities and processes within the entire group are emphasized. In the end, he draws conclusions as to what this could mean for teaching:

The socio-cultural perspective implies that the entire classroom is improvising together; and it holds that the most effective learning results when the classroom proceeds in an open, improvisational fashion, as children are allowed to experiment, interact, and participate in the collaborative construction of their own knowledge. In improvisational teaching, learning is a shared social activity, and is collectively managed by all participants, not only the teacher. (Sawyer, 2004, p. 14)

In discussing the necessary attributes of the teacher as improviser, Sawyer first stresses the importance of a high degree of pedagogical content knowledge in order to be able to respond spontaneously and

creatively, and contrasts this kind of broad subject knowledge to the narrow range of materials offered in pre-planned lesson scripts. He then describes what he considers the decisive and subtle skill of managing a group improvisation, requiring a fine sensitivity to finding the balance between the need to maintain pre-existing structures and leaving enough openness for collaborative learning to emerge. In conclusion, he suggests that teachers should have the opportunity to practice those types of skills that are also taught to aspiring improvisational actors and makes the case for the inclusion of such courses into teacher education. (Sawyer, 2004, pp. 14, 16-17)

3.3 Conclusions

Teaching viewed from this perspective is considered as being based on a broad range of perceptual and improvisational abilities which take place within the collaborative framework of a classroom. In facing the shifting, unpredictable dynamics of a classroom situation, its realization depends on the requisite capacity to make immediate and appropriate choices in such a manner that the collaborative learning process between the teacher and students and, naturally, among the students themselves, takes on those creative and dynamic qualities inherent, for instance, in a jazz improvisation. In such moments one is reminded of Eisner's conviction that “grace” in teaching can be achieved.

Establishing parallels between such processes in the arts and in teaching offers the further possibility of designing frameworks in which the practices and the paradigms of studying the arts can also become fruitful for teachers own studies within their own specific professional context. The courses and workshops offered by the Lincoln Center Institute in New York are perhaps the most prominent examples of the fruitful integration of the study of the arts into in-service teacher training programs (Fuchs-Holzer & Noppe-Grandon, 2005; Greene, 2001). In

recent years there have been exciting new developments in related areas of teacher education, most notably in the work of Donald S. Blumenfeld-Jones, who in addition to his own studies in this field has also edited a later volume in which other authors have elucidated their own perspectives on the integration of aesthetics and the arts in teaching and teacher education (Blumenfeld-Jones, 2012, 2016).

To my knowledge there is only one example where the concept of education and teaching as an art is the guiding paradigm of an entire teacher education programme and that is in Waldorf Pedagogy. The following sections of this article will examine this approach, both in its theory and practice.

4. Teaching as an Art as a Guiding Educational Principle: Waldorf Education and Waldorf Teacher Education

Waldorf Education, founded by Rudolf Steiner (1861-1925) in Stuttgart in 1919, has since grown to become a leading international educational reform movement with over 1200 schools and 2000 kindergartens all over the world. Steiner's view of education as an art, *Erziehungskunst* and accordingly the teacher as an artist *Erziehungskünstler* is one of the central themes going through all his educational writings. He considered the study and practice of the arts as unique in their integration of physical, emotional, cognitive and volitional dimensions of learning. Thus, art and artistic learning play a central role in Waldorf Education at all age levels. Subjects such as music, painting, sculpture, handicrafts and Eurythmy (a specific form of dance created by Rudolf Steiner) have, alongside traditional cognitive subjects, a prominent place throughout the entire school curriculum. The effects of artistic practice are seen as going beyond the experience and learning of the individual arts themselves and to have transformative effects on a

pupil's entire development:

And one shall see what this developing human being – the child – can experience through art. The intellect first truly awakens in the encounter with art. A sense of responsibility develops when, out of an inner motivation, material is artistically mastered in freedom. It is the artistic sense of the teachers and educators which brings those qualities of the soul into school that allow for happiness in seriousness and for character in joy. Though intellectual understanding, nature is merely comprehended; through artistic sensibility it can be experienced. (Steiner, 2004, p. 608)

Through artistic experience and practice he sees unique possibilities of freeing and educating the entire human being intellectually, spiritually and socially: “Art is an ongoing process of the emancipation of the human spirit and at the same time educates humanity to act out of love” (Steiner, 1985, p. 41).

However, Steiner's vision of education as an art goes beyond the prominent role of the arts in the school curriculum. The development of an artistic attitude and approach towards teaching and learning is viewed as a vital part of every educational process. In the first course for teachers in 1919, he says:

From the beginning on, we will place the highest value on developing the artistic nature of the child. [...] But not only the study of the Arts must be cherished, but rather all lessons must be derived from what is artistic. All methodology must be immersed in artistry. Education and teaching must become a true art in itself. (Steiner, 2019, p. 55)

In later lectures he continually returns to this theme, emphasizing

the fundamental role of a teacher's artistry in the teaching and learning of all subjects and not just in the different arts. Thereby, he was convinced that if this vision were realized, it would then lead to fruitful forms of integration including the wish from pupils to combine other subjects with artistic forms of perception and expression and to a deeper and more reflected understanding of art.

If teachers themselves feel a strong bond with the artistic element and appeal to the artistic appreciation in their pupils, and if they create an artistic atmosphere in the classroom, the proper teaching methods and human influence will stream out into all other aspects of education. Then they will not "save" the artistic element for other subjects, but let it flow and permeate all their teaching. The attitude must not be: Here are the main subjects — this one will train the intellect, this one the feelings and the sense of duty, and over there, separate, more or less on a voluntary basis, is the art lesson. On the contrary, art is in its proper place only when all teaching is arranged so that, at the right moment, the students' souls feel a need for the artistic; and art itself must be cultivated so that, in the artistic activities themselves, students feel the need for a rational understanding of, and dutiful concentration on, the things they have come to see as beautiful, as truly free, and thus as human. (Steiner, 1996, pp. 77-78)

In contrast to all the other above-mentioned approaches to teaching as an art, Waldorf Education became and has remained a living practice in schools which have served countless pupils throughout the world for over a hundred years. Its growth and success are inextricably tied to its understanding of the importance of a holistic education in which the arts play a prominent role, as well as its general approach to education as an art and the consequences for teaching and learning which derive from

that concept. It is also inevitably connected to the quality of teaching in Waldorf Schools which has its origins in the teacher education they have received. Among the most far-reaching innovations of Waldorf Education has undoubtedly been the creation of the corresponding forms and practices of teacher education which have enabled these concepts to become a living practice.

4.1 Waldorf Teacher Education and the Art of Teaching

From the very beginnings of Waldorf Education, a specific training for Waldorf teachers was considered to be necessary: the pedagogical and methodological approaches which were called for were vastly different from what traditional teacher training courses offered (Zdražil, 2019). The first courses were taught by Rudolf Steiner in Stuttgart. As the Waldorf movement grew, other teaching seminars were formed, in Germany and in other countries. In the meantime, there are Waldorf teaching seminars throughout the world including a broad range of accredited university academic programs for Waldorf teacher education. The International Network of Academic Steiner Education (INASTE) is an organization in which educators representing these programmes come from all over the world to confer regularly and also to organize international academic conferences (International Network of Academic Steiner Education, 2021).³

To do justice to the unique form of teacher education practiced in Waldorf teacher education and instituted in accredited university programmes, it will be necessary to first give an overview of the curriculum. Some elements of these programmes are quite obviously related to developing the artistry of the teacher, insofar as the actual practice/s of the different arts play a vital role. Some of the contents of

³ The National Tsing Hua University is a member of INASTE.

other courses which, at first glance, may seem to bear no direct relation to learning the art of teaching, are, in fact, also very much intended to develop and enhance those capabilities which are intrinsic to this educational concept. This is particularly the case in the central role which pedagogical anthropology plays in all Waldorf teaching seminars and university programmes.

An intensive and encompassing study of the development of the child and adolescent and the significance of this understanding for education is considered to be the fundamental basis for what, when and how a subject is taught. Achieving artistry in teaching thus hinges on a deeper and living understanding of childhood and adolescent development out of which a basis for more fully perceiving and understanding individual children can be established. In the end, Steiner's admonition that there should be no clearly defined separation between art as a subject and all other subjects which are taught in schools, but rather they should be conceived and practiced as constituting a whole, has its correlation/s in teacher education.

4.2 A Threefold View of the Human Being: Anthroposophy and Pedagogical Anthropology

At the heart of Waldorf Education lies an encompassing view of a threefold human being taking into account physical, soul and spiritual dimensions. In the context of teacher education, this means taking into account a wide range of academic disciplines and incorporating them into the coursework. Together with the educational sciences and general pedagogical studies, there are also courses which include relevant aspects of philosophy, psychology, biology, neurology and the study of health and well-being (salutogenesis). These subjects are, of course, also taught in traditional universities, although not usually as part of teacher education.

What is unique in Waldorf teacher education programmes is the

inclusion of the study of anthroposophy which provides a foundation for the pedagogical anthropology and the methodology underlying Waldorf Education. Anthroposophy, founded by Rudolf Steiner, can be understood as a spiritual path to achieving knowledge based on both extensive meditative practice as well as on exact phenomenological observation and studies. Its subject is the study of the nature of the human being. “Anthroposophy is the consciousness of one’s own humanity” (Steiner, 1986, p. 203f).

Being conscious of one’s humanity from an anthroposophical perspective implies a threefold view of the individual as a physical, ensouled and spiritual being, who is also connected to a larger spiritual world encompassing nature and cosmos. Bound up with this understanding of the human being are related perspectives including the general study of relations and correspondences such as microcosmos and macrocosmos; the concept of the earth as a living organism; the central role of images and pictures as modes of expression; the concept of transmutation, meaning the transformation of the student through his or her studies, often through forms of contemplative practice (Kiersch, 2008).

The study of anthroposophy in Waldorf teacher education is conducted as an open and discursive process in which critical discussions and new impulses are very much encouraged. Such courses are designed to serve as heuristic models through which qualities of observation, perception and sensibility can be developed and become potentially fruitful in teaching. Group discussions and individual meditative/contemplative studies provide different ways to deepen an understanding of anthroposophical texts (Rittelmeyer, 2017; Zdražil, 2016).

In the context of teacher education, anthroposophy provides a basis for the intensive studies in pedagogical anthropology. Steiner’s pedagogical anthropology and, in particular, the initial series of lectures he gave before the opening of the first Waldorf School in 1919, “The

Foundations of Human Experience” (Steiner, 1996), have continued to play a crucial role in Waldorf teacher education throughout the world for over a hundred years (Lutzker & Zdražil, 2019). Despite the radical changes which have taken place since then and despite the completely different cultures and traditions in which Waldorf Education is now practised, the universal and holistic dimensions underlying a threefold view of the human being connected to a larger spiritual world has led to a perspective on the development of children which different cultures and traditions throughout the world have been able to embrace and develop within their own contexts (Kullak-Ublick & Zdražil, 2019).

4.3 Pedagogical Anthropology and its Connection/s to Artistry in Teaching

Intrinsic to the pedagogical anthropology underlying Waldorf Education is its direct connection to pedagogical practice. This connection implies a course of studies in which not only a clear intellectual understanding of the content is necessary, but beyond that, emotional and volitional dimensions are called upon as well. Such studies do not have a clearly defined goal that students are required to reach, but are designed to encourage students to actively reflect on the subject material in such ways that the processes of reflection and contemplation can lead to new insights into educational questions. More concretely, they are also intended to lead to the development of clarity in perceiving and understanding children and adolescents and thereby enabling them to better identify and address the specific needs and possibilities of each pupil. It was with exactly this intention that all of Steiner’s pedagogical lectures and courses were given.

What Erich Schwesb, a member of the faculty at the first Waldorf School, later wrote about the initial series of lectures which Steiner had given in 1919, gives a clear insight into both the intentions of the

pedagogical anthropology and the way it was meant to be studied and then realized in the practice of teaching.

This is not a system that can be taught without the learner becoming active himself. Rudolf Steiner did not present a finished and refined picture of the nature of the human being, but rather he was immersed in life itself, showing us how to follow the metamorphoses going through the different phases of childhood. And whoever learns to understand the nature of these metamorphoses, comes to experience in the course of time an artistic picture of the total individuality of each single child. (...) It isn't that a system is imposed on that picture, but an encompassing intuition begins to create a conscious and individual picture of that special, developing human being. (Schwebsch, 1932, pp. 77-78)

In his discussion of the role of anthroposophy and Steiner's pedagogical anthropology in Waldorf teacher education, Peter Loebell describes an intensive heuristic and phenomenological process through which teachers are given the chance to develop a reflective and living understanding of childhood development. He argues that it is precisely this potentially transformative process that enables these studies to become more fruitful for teaching than much of traditional educational science taught in university programmes.

Anthroposophy taught in this manner is not dogmatic, but heuristic: its categories offer views of phenomena which enable one to connect scientific knowledge and living experience. Through such connections the distance between educational science and the actual practice of teaching can be overcome without sacrificing the necessary reflective qualities of university studies. Because in education it is not one's knowledge of educational research that will

be decisive in teaching but rather the nature and qualities of the work that one put into the pursuit of educational knowledge. (Loebell, 2013, p. 224)

It is evident that in Waldorf teacher education the kinds of educational knowledge, the ways that knowledge is acquired and its intended cognitive, affective and volitional connection to the practice of teaching are, in some crucial respects, significantly different than much of the knowledge and methods of study which are predominant in university education programmes (Rumpf & Kranich, 2000). This is also the case with the extensive courses offered in the methodology and didactics of teaching different subjects. It is certainly not the case that leading concepts and paradigms underlying traditional educational science and research play no role in academic Waldorf teacher education. However, the emphasis lies on educational knowledge designed to help aspiring teachers to develop a deepened and experiential understanding of the developing child in such a manner that it can lead to the teacher's own personal and transformative development. It is this knowledge and approach that is seen as a decisive basis for a "knowledge in action" that can contribute to learning the art of teaching.

Along with the anthroposophical/anthropological courses and the courses in methodology and didactics, a further cornerstone in all Waldorf teacher education programmes throughout the world is the actual study of different arts (Jeuken & Lutzker, 2019). As we have already seen, prominent educators such as Dewey, Sarason, Eisner, Aoki, Sawyer and Greene have established significant connections between teaching and the arts and also made the case for the value of artistic practice for teachers. What is unique to Waldorf teacher education is that such ideas have long been integrated into its programs and thus offer a longstanding and living example of its actual practice and results.

4.4 The Study of the Arts in Waldorf Teacher Education

Waldorf teacher education understands artistic practice as both an essential aspect of a teacher's personal and professional development and as fostering many of those specific capabilities necessary to attain artistry in teaching. Steiner made no distinctions in this context between teachers of intellectual subjects and artistic ones. Teachers of all subjects and at all levels from elementary to secondary are required as part of their studies to engage actively and intensively in the regular practice of the arts as an essential part of their preparation for learning the art of teaching.

The idea is not that teachers should attain to reach professional standards, but that artistic practice, in itself, offers unique potentials to actively and creatively experience different dimensions of the world and of oneself. The personal, embodied experiences which the arts offer become challenging and fruitful learning processes for teachers themselves. Through such practice one gets to experience and address different challenges, including experiencing oneself as someone who also fails and has to try again. This experience in itself can be seen to be of great value in understanding the experiences of many pupils in a more differentiated and empathetic way. The Waldorf teacher educator Christoph Lindenberg writes:

There is a type of activity though which one continually learns to observe the results of one's actions and that is most notably artistic activity. In sculpting or carving one not only directly sees that one was too tender or too rough in the way one handled the material. When one intends to sculpt a hand or a foot, one often first realizes how inexactly one has observed and perceived its form: the result itself will demonstrate how one observed it. When one repeats such exercises over a period of time, one notices that one is beginning to learn to see. (...) It's the same with playing music, with each tone on

the flute or on the violin one immediately hears what one has done and is perhaps rightfully shocked by it. (Lindenberg, 1985, pp. 154-155)

In expanding and intensifying the qualities of perception and the feeling for something through artistic practice, Lindenberg draws a clear connection to teacher education:

Through artistic practice, it is not knowledge which is accumulated, but rather its effects can be seen in one's actions at a level that is usually unconscious - in the feeling one has for something. Through artistic practice, which in no way is based on an expectation that it should lead to a work of art, the very nature of one's attentiveness is changed. One is led from thought to perception. That change is decisive, because in perceiving a connection is established and the more one learns to actively hear and see the more one is connected to the world. For that reason Rudolf Steiner suggested the study of four different arts in teacher education; sculpting, music, speech and Eurythmy. (...) The effects of these studies and the way they are taught can only be experienced in their living practice. (Lindenberg, 1985, p. 155)

It is the role of practising in teacher education that is highly significant in this context and which bears closer examination. Artistic practice not only leads to some form of artistic product, but also transforms the person who has engaged in it. The distinction between practising and training is in this respect crucial (Bollnow, 1982). Although, the term 'practice' is often used interchangeably with 'training', they have very different meanings. When training for something, one has clear goals and attaining those goals becomes the focus of the work; the way one reaches them becomes, at most, a

secondary consideration. Much traditional learning relies heavily on training, focussing on defined, short-term and testable goals. Practising is fundamentally different and involves a longer and subtler process. The carpenter and violinist have in common that they have practised for years and through their practice they have been gradually transformed. Their practice sits deeply in their bodies and movements and shapes the way they feel and perceive. It is not reaching the goal that transforms a practitioner - she may not even reach a goal - but the nature of the practice itself.

The study of each form of art has its own special qualities which can also be connected to learning the art of teaching. For instance, the work on speech and drama can play a significant role in developing those capabilities of voice, gesture, expression, timing which can play a significant role in the teaching of all subjects. Sarason's abovementioned emphasis on the teacher as a performer, – "...how do you put yourself into a role and then enact it in ways that instruct and move an audience, fulfilling the expectation of the audience that they have in some way learned something about themselves and their world?" – is directly connected to what can be learned through such courses. Going through such learning processes in the course of teacher education will also enable teachers to help their pupils, in age-appropriate ways, to develop their own capabilities. Likewise, the study of music and specifically of singing opens up possibilities for a teacher's own musical/artistic development and later to support the development of her pupils. The same holds true for the visual arts.

Moreover, the study of the arts almost invariably leads to the enhancement and differentiation of perception through working with the different materials themselves. Whether in the development of a different sensibility to colours and forms through painting, in conjunction with haptic processes through sculpting, in music through the practice of singing, rich opportunities for the development of sensory and perceptual

capabilities which are inseparable from our connection to the world around us are offered. Goethe's maxim "Every object well-observed opens up a new organ in us" points out the relation of the development of the senses to our connection to the world (Goethe, 1988, p. 38).

In this context the study of eurythmy in Waldorf teacher education plays a special and unique role which bears closer examination, also because it is both unique to Waldorf education and Waldorf teacher education. Matthias Jeuken Professor for Eurythmy at the Freie Hochschule Stuttgart (Stuttgart Waldorf Teachers College) writes:

Through working on expressive eurythmic movements, one develops an increased awareness of the effects of one's own physical/gestural expressiveness, one's own sense of being 'bodily expressive'. The fact that such capabilities are necessary in an educational context has become evident in numerous courses that are offered and in different publications (Argyle, 2013; Caswell & Neill, 2003; Heidemann, 2007). In the context of Waldorf Education, these capabilities are developed through artistic activity and thus implicitly through developing inner and performative artistic expressive capabilities and not explicitly learned for teaching. (Jeuken & Lutzker, 2019, p. 298)

Along with developmental processes that can be seen in conjunction with both studies in performativity in education, as well as in research on embodiment (Fuchs, 2018), there is a strong social element in eurythmy lessons in teacher education through the common work on creating appropriate choreographies to music or, in some cases, to poetry. Jeuken writes:

Along with developing one's own expressive capabilities, other processes also occur in eurythmy. Developing choreographies

together in a group requires a continual and dynamic adjustment of one's own movements to the movements of others. Thereby it is necessary at any given moment to sense whether one is called upon to give a new, leading impulse or whether one is to be led by others. Through this dynamic and continually changing process of leading and following an artistic gestalt, a kind of social weaving, is created based on perceptual and relational capabilities. (Jeuken & Lutzker, 2019, pp. 298-299)

In drawing these aspects together, he then outlines specific connections to teaching:

There are aspects of this ongoing dynamic of perceiving and moving that are significant in educational contexts. The heightening of perceptual capabilities in eurythmy is not limited to one's own movements. Eurythmic movements and, in particular, the conscious perception and expression of movements imbued with feeling, can certainly be considered as helpful in being able to empathize with the feelings and moods of others. In fact, research has shown this to be the case in drama pedagogy. (Jeuken & Lutzker, 2019, p. 299; Rittelmeyer, 2017, p. 48)

From the perspective of Waldorf teacher education, the entire spectrum of artistic experience offers unique possibilities of developing those capabilities which different forms of “knowledge in action” in teaching call for. Such artistic processes can also initiate far-ranging possibilities of personal development and transformation. In conjunction with the abovementioned studies focusing on pedagogical anthropology and the methodology and didactics of specific subjects, the active practice of the different arts is designed to provide a basis for achieving artistry in

teaching.⁴

At the same time, it has always been one of the central tenets of Waldorf teacher education both in its emphasis on pedagogical anthropology and in the practice of the arts, that pre-service pedagogical studies are not designed to instil knowledge which the student then 'has' and then later applies, but rather they are forms of knowing which have to be continually renewed through the active and continual development of the teacher. They are not only learned cognitively, but are also deeply rooted in the affective and embodied experience of the teacher. Ernst Michael Kranich writes:

The idea that after completing one's university studies, one's task in school is to implement what one has learned, is a problematic expectation that needs to be revised. Every preparation for every lesson is a study in bringing the lesson material to life. This has to happen for each single lesson because in the realm of experience it is not a question of the command of knowledge. (...). It should be clear that with experience one does not mean a diffuse emotional reaction to some kind of impression. And the pedagogical goal is the opposite of the so-called "Adventure Pedagogy" that leads to a momentary experience that is then quickly forgotten. Instead, it is the expansion of horizons, drawn from the deepest sources of learning, an interest which affects the pupils and through which questions develop. Thereby the experience for the teacher and for the pupils becomes the basis for the next steps in learning. (Kranich, 2000, pp. 136-137)

⁴ In other contexts, I have examined the specific effects and benefits of theatre clowning and drama in pre-service and in-service teacher education (Lutzker, 2007, 2016, 2017, 2018). In a qualitative/quantitative study comparing teaching students at the Freie Hochschule Stuttgart (Waldorf Teachers College) with teaching students at a traditional German university, higher degrees of empathy and tolerance of ambiguity were found among the students at the Freie Hochschule. It was hypothesized that this could be attributable to the major emphasis placed on artistic studies (Martzog, Kuttner, & Pollak, 2016).

From this perspective, the art of teaching calls for an inner preparation which includes but also goes beyond the preparation for a specific subject and for a specific lesson. What Kranich refers to as an ongoing process goes deeper and it is at this deeper level that a further decisive basis for artistry in teaching lies. Waldorf teacher Christoph Gögelein writes:

What is most important in all of a teacher's preparations is not that knowledge has been accumulated which will then be decisive in classroom teaching, but that the teacher through engaging in practice has initiated transformative processes that affect the configuration of his entire physical, soul and spiritual being. He then has the trust that such practice at the right moment – both in his preparations and in the classroom – will make fruitful insights and actions, also completely new ones possible. (Gögelein, 1994, p. 307)

The entire spectrum of anthroposophical, pedagogical, didactical and artistic courses at the Freie Hochschule and in other Waldorf teacher education programs is designed to support students in their developing their own individual ways of achieving artistry in their teaching. At the same time, like in every other teacher education program, there invariably remain a host of open questions, as to what degree these programs actually accomplish those goals they have set for themselves. This is undoubtedly a question that continually calls for different forms of evaluation and quality development, as well as research which reveals what has been most fruitful and what hasn't succeeded in the way/s that were imagined. There have been attempts made in all these different areas, but this is an ongoing process. What I have described here should thus be viewed as a continual work in progress.

For more than one hundred years, Waldorf education has remained

unique with respect to the prominent role which the arts play throughout the entire school curriculum. No less unique is the decisive role which the study of the arts and the concept of teaching as an art play in Waldorf teacher education. The question of what potential and general consequences these practices could have with respect to educational thinking and policies outside of Waldorf Education is worthy of consideration.

5. Education and Teaching as an Art: A Concept for the Future?

Having begun this article with the thought that the concepts underlying education will be decisive in establishing the entire framework in which teaching is viewed, it is now possible to consider some of the larger implications of the alternative frameworks which different concepts of education and teaching as an art can offer. It is evident that in place of preeminent educational models based on the paradigm of standardization and its requisite emphasis on testability, very different models with their own corresponding paradigms emerge. Both the difference of perspectives and the terminology itself lead to different perceptions and understandings of how education and teaching can be viewed. Thereby it becomes possible to consider the crucial questions which educational thinking and policies have to address both today and in the future from a fundamentally different standpoint.

Two different concepts that are seen as emerging from this perspective will be examined. Both are not specific to education and are used today in a broad range of fields. They also share much in common and are highly relevant for our times and for the future.

5.1 Attunement and Teaching

The concept of attunement exists in a broad spectrum of fields ranging from philosophy to education, from psychology to psycholinguistics. Its origins are clearly musical; to bring tones into tune, to tune an instrument, or, often, to bring something into harmony or accord. In the study of childhood, it is a term used regarding the attunement of the caregiver to the child; in psycholinguistics it refers to the attunement of the child to her mother tongue. In 20th century philosophy it is a concept that Heidegger and his student Medard Boss refer to, most notably when speaking of “hearkening”. Boss writes:

Every attunement as attunement is a particular mode of the perceptive openness of our existence. The prevailing attunement is at any given time the condition of our openness for perceiving and dealing with what we encounter; the pitch at which our existence, as a set of relationships to objects, ourselves and other people, is vibrating. (Boss, 1979, p. 110)

Considering attunement in relation to artistry in education and teaching offers a perspective in which the teacher and students can be considered as mutually dependent on that “openness for perceiving and dealing with what we encounter”; an openness allowing for a resonance that is created and experienced both individually and collectively. The “pitch at which our existence, as a set of relationships to objects, ourselves and other people is vibrating” in a classroom is inextricably tied to the qualities of the learning process itself. A classroom based on developing a culture of attunement is inevitably a classroom based on attentive listening to each other and to what the subject itself calls for. The “pedagogical atmosphere” (Bollnow, 1968) thus created will include qualities such as openness, interest and care. This is not to say that in

such a classroom, teaching and learning are ineffective; on the contrary they will most probably be more 'effective'. When attunement and the evocation of 'resonance' are seen as preminent educational goals, effectiveness and efficiency can become 'by products' of processes that lie far deeper. Aoki has drawn illuminating contrasts between the goals of effectiveness and attunement in teaching:

In the first flush of thought, the notion of effectiveness has a seductive appeal of essential simplicity that suggests the possibility of a focus that can be grasped. It suggests, too, that effectiveness is mainly a matter of skill and technique, and that if I can but identify the components of effective teaching and if, with some concentrated effort, I can but identify the skills, maybe in a three-or four-day workshop, my teaching can become readily effective.

All of these scientific and technical understandings of teaching emerge from our interest in intellectual and manipulative grasp and control. But in so understanding we must be attuned to the fact that although those understandings that can be grasped are uncannily correct, the essence of teaching still eludes our grasp. What we need to do is to break away from the attitude of grasping and seek to be more properly oriented to what teaching is, so we can attune ourselves to the call of what teaching is. (...) So placed, I may be allowed to hear better the voice of what teaching essentially is. The question understood in this way urges me to be attuned to a teacher's presence with children. This presence, if authentic, is being. I find that teaching so understood is attuned to the place where care dwells, a place of ingathering and belonging, where the indwelling of teachers and students is made possible by the presence of care that each has for the other. (Aoki, 2004, pp. 190-191)

The distinction that Aoki makes between the gesture of "an interest

in intellectual and manipulative grasp and control” and the gesture of teaching as being “attuned to a place where care dwells” is decisive. This distinction can also be made in the corresponding gestures in music: How do you tune a musical instrument? Following what one hears, one carefully adjusts the length of a string, or with a wind instrument the length of a slide or a tube. While playing music, there is the constant necessity to stay ‘in tune’, requiring immediate and subtle adjustments of the finger’s placement on the string or, on a wind instrument, of the speed and the volume of air. The singer, always wholly dependent on her ear, will also make fine and immediate adjustments of the amount and velocity of air passing through the vocal cords. Musical attunement as an ongoing musical process invariably requires continual, attentive listening and immediate and appropriate movements; it is never a manipulative grasping but rather an immediate, sensitive response, reacting appropriately to what one has just heard. The parallels between the processes required to attain attunement in music and in teaching are illuminating. The levels of artistry which attunement in each case call for and depend on include both a clear and felt understanding of its significance, along with the necessary preparations and practice enabling one to achieve this.

5.2 Resonance in Education

Achieving optimal forms and degrees of resonance in music depends on the richness and harmonies of tones and overtones generated by an instrument or instruments and/or the human voice or voices. It is also inextricably tied to attunement – instruments or voices being ‘in tune’ and thus able to resonate more fully and richly. It is precisely the phenomenon of resonance that has recently become a widely discussed theme in philosophy, sociology and in education, most notably through the pioneering work of the German sociologist Hartmut Rosa (Rosa,

2016, 2020). For Rosa, resonance is a holistic and existential experience that profoundly affects physical, emotional and cognitive dimensions of human existence. From this perspective, he views one's relationship to oneself, to others and to the world as fundamentally dependent on the experience of resonance. He thus uses this concept both descriptively as well as normatively:

Resonance is an emotional, neuronal and most of all a physical reality. It is the primary form of our relation to the world. (...) Because this is the case, we can understand the deepest structures underlying human actions as being motivated by the longing and the search for resonance and by the fear of being left alone in a cold, hostile world. (Rosa, 2016, p. 747)⁵

A leading thought that goes through Rosa's entire work is the existential openness of a human being to different forms of experience, particularly in relationships to others, as the underlying basis of resonance. This existential openness is uniquely and most profoundly the case in childhood. What Nietzsche called "the sacred 'Yes' of the child" (Nietzsche, 1984, p. 569), characterizes that limited period in which, for instance, the wonder of child language acquisition takes place, as well as the possibility to deeply form the entire emotional disposition of a person for their entire lives. It has become evident that the effects and consequences of experiencing or not experiencing resonance in childhood will profoundly affect different levels of being and a general attitude

⁵ Rosa's understanding of resonance as the „primary form of our relationship to the world“ is closely connected to a view of the human being as inextricably tied to the world (Lambert Wiesing) who is fundamentally 'towards the world' (M. Merleau-Ponty) who is 'woven together with the world' (Rudolf Steiner); a viewpoint which stands in clear contrast to the views of some philosophers and neurologists of an encapsulated human being whose self-generating brain activity leads him or her to imagine that a perceived connection to the world is real. In the words of Nobel Prize winner Francis Crick: "What you see is not what is really there, it is what your brain believes is there" (Crick, 1994, p. 31). (italics in original).

towards life (Bowlby, 1988).

In the context of viewing education and teaching as an art, it is Rosa's understanding of the lifelong significance of resonance or lack of resonance that pupils experience in school that is highly relevant. "There is no doubt that a person's relation to the world will be profoundly shaped in and through school" (Rosa, 2016, p. 402).

He sees this forming of a person through their experiences in school as having far less to do with the curriculum than with the relationships and interactions that take place:

The curriculum only plays a secondary role. The relation to the world unfolds far more in the intensive interactions with people and things in the classroom, but also in the schoolyard, on the way to school, in summer camp etc. (...) In and around the classroom the sensitivity to different forms of resonance will be developed; the repertoire of experience that one has acquired, determining one's way of working with materials, of finding meaning, of being together with the living creatures of the world. (Rosa, 2016, p. 403)

He also examines what young people most wish for from school. In this respect he takes into account the books, songs and films they are attracted to. His conclusion is that although the view of school in pop songs is, on the whole, decidedly negative, in all other genres there is a general and pronounced longing for more meaningful, resonant and humane experiences:

In fact, I have the impression, that the secret passion behind almost every short story, novel and film about school (...) is always the question whether teachers, students and the subject remain cut off, in opposition, or indifferent to each other, or whether the teacher is able to reach the students, to create a resonant and vibrant

connection to let the world sing to them. (Rosa, 2016, p. 407) (my italics)

With his vision of the teacher enabling the world to resonate in a classroom, to sing to pupils, Rosa draws connections to similar educational ideals that have also been articulated in the past:

The idea that educational processes in which the world resonates for pupils are initiated through the teacher is deeply rooted in the traditions of humanistic education; one sees it clearly in Humboldt's and Herder's writings, but also with Friedrich Schiller and in many others, who view educational processes as a dynamic and immersive interaction between one's self and the world, as playing on the "string of the soul" and thus making it resonate. (Rosa, 2016, pp. 410-411)

Viewed in the context of contemporary educational research, Rosa considers his emphasis on the humanistic qualities of a teacher and a teacher's relationship to her pupils as being the most decisive factors in determining whether resonance will take place in a classroom, as being confirmed by John Hattie's extensive meta-studies (Hattie, 2012; Rosa, 2016, p. 418). In this context he also explicitly refers again to one of the leading images going through his book: the *first tuning fork* that is struck and which through its own vibrations and resonance then creates vibrations and resonance in a *second* tuning fork. From this perspective he is critical of concepts of the teacher as a kind of neutral moderator or mediator: "This underestimates, in my opinion, the significance of the first tuning fork, the teacher inspiring or initiating an impulse in her pupils: it is through being moved by the teacher that the world begins to sing for the learner" (Rosa, 2016, pp. 414-415).

Rosa ends his discussion of the role of education and schooling

with a long-term biographical perspective in which he considers its later consequences for inner attitudes, how someone views and interacts with the world – with what openness and interest, with what resistance and distance one goes through life (Rosa, 2016, p. 418). The German educational scientist Jens Beljan has drawn extensively on Rosa's work and drawn further illuminating connections to the potential significance of resonance or its absence in school (Beljan, 2017). The case he makes for a very different understanding of education than what presently determines educational policy is highly relevant for our times and for the future.

5.3 An Education for the Future

Both the present generation and coming generations will not grow up with less need of experiencing attunement and resonance, whether in their personal relationships, or in their experiences with the phenomena which the world presents to them. However, they will be growing up in an age in which the significance of direct human contact and a direct sensory connection to the world - understood as the necessary basis of both attunement and resonance - has been drastically changed through the omnipresence of digital technology in all aspects of their lives – including in their education. This change raises completely new questions about the future role and tasks of schools.

The present and almost exclusive focus in education on different types of cognitive learning is occurring at a point in which children are growing up with significant deficits in various forms of sensory experience, particularly with respect to their physical and motor skills (Koch, Herbert, & Bleckmann, 2017; Spitzer, 2017, 2018). At the same time, neurological, physiological and educational research has shown that the appropriate sensory and motor development in childhood is imperative for the health and well-being of children and for their later

social and intellectual development (Hübner, 2017; Lutzker, 2017; Patzlaff, 2017; Spitzer, 2017; Teuchert-Noodt, 2017). Recent research has also documented the widespread and negative psychological and social effects in childhood and youth resulting from a massive decrease in direct personal contact with peers and adults and a corresponding increase in the use of social media (Turkle, 2011; Twenge, 2017)

From this perspective, giving children and young people opportunities to experience different forms of attunement and resonance during the critical phases of childhood and adolescence is a pressing pedagogical task. However, these well-documented needs stand alongside massive economic and political pressures to digitalize all forms of learning, whether in the use of computers in schools from primary school on and/or through the expansion of online learning. The effects of these changes in childhood, youth and in the context of an entire life need to be considered from educational perspectives and not, as mentioned above, from perspectives largely driven by economic and political forces (Coles, 2018; Krautz, 2016; Landri, 2018).

The existential questions that Rosa poses at the beginning of his seminal book are also the pedagogical questions that are most necessary to address and to find answers to that meet the specific needs of our age: What leads to the necessary experiences of resonance - in human relationships and in all the possible forms which the world can offer? What leads to a higher quality of life? What makes a “good life” possible? (Rosa, 2016, pp. 19-20).

The perspective offered by the dominant framework of education today will not be able to answer these questions. Neither will they ask them. Caught within a mode of thinking ruled by paradigms of science and business, the aims of education and teaching will continue to be viewed through lenses which prevent one from raising and addressing those questions. A view which first focuses on that which can be objectively measured and tested and then on effectively teaching pupils

to achieve the highest possible scores, does not look deeply enough into the question of what children and young people actually need for their lives. What is measured by standardization and quantification is only the very surface of what the education of each child and adolescent calls for. Education can and should aim for more than that.

Education viewed as an art tries to address those questions which go deeper. In doing so, it calls upon educators to become attuned to what lies below the surface. This article has attempted to make the argument that in our times it has become increasingly imperative that new perspectives in education be considered. Viewing education and teaching as an art offers a possible framework for doing so.

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科技時代的教學作為一門藝術

Peter Lutzker*

摘要

本文主要在檢視教育被當作一種「硬科學」(hard science)的主導概念，連同商業模式在教育領域的應用。同時也討論了這些觀點的一些含義，包括標準化的國家和國際考試在當前教育政策中發揮的決定性角色。COVID-19大流行對教育的可能影響也一併檢視。本文提出將教育和教學視為一門藝術，作為一個替代的觀點，並探討其在西方的歷史淵源，以及20世紀和21世紀西方傑出教育家如何推動此一立場。華德福教育和師資培育被視為長期實踐此教育理念的例子。本文討論了此教育概念之一些更廣泛的影響，以及它與越來越受數位科技形塑的世界的相關性。

關鍵詞：教學作為一門藝術、美感教育、華德福教育、調音、共鳴



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