

Educational Science Traditions and Qualitative Research

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Abstract

The purpose of this conceptual paper is to analyze the two main education science traditions, Anglo-American and Continental European, in relation to their interaction with qualitative research. After these two traditions are described, construction and use of theory in research is problematized through the perspectives in these traditions, and qualitative research is positioned in the priorities and knowledge claims they offer. In addition, the use of qualitative research in various areas of educational science such as teacher education, teaching and learning, curriculum studies is analyzed through the diverse educational science orientations. Finally, the case of Turkish educational science tradition is discussed in terms of subfields and research priorities promoted.

Keywords

educational science, educational studies, qualitative research, Anglo-American tradition, Continental European tradition, educational theory, teacher education, curriculum studies

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Introduction

Education as a science has an interesting developmental story that has been shaped by diverse conceptions of science and disciplines, interaction with other disciplines, assumptions about the status of theories, and principles guiding scientific research. It has also been influenced by cultural and political agendas in relation to the purpose of education and more specifically the function of schools in society. The journey of educational science has taken diverse routes in different parts of the world in the last two centuries, which has offered various implications for production and use of theories, research methodologies prioritized and use of knowledge claims for improving practice. The purpose of this paper is to discuss the status of educational science as a discipline through various historical, social, and scientific perspectives, and to reflect on how these orientations relate to research paradigms, with a specific emphasis on interpretive research tradition. Although disciplinary foundations of interpretive research can be traced back to a variety of social sciences (Bogdan & Biklen 2007), the conceptual bases and disciplinary traditions of educational science have interacted with its development and served as platform for justifying the need for broader use of qualitative research in social sciences.

Historically there have been two main constructions shaping our understanding of educational science today: Anglo-American and Continental European (Biesta, 2011). Biesta argues that education can only be studied through the perspectives provided by other social science disciplines such as sociology, psychology, and philosophy in the Anglo-American orientation. In this view, “education is not a discipline, but rather a field of study” (Shulman, 1997, p. 12) or an applied field, that does not have a unique interest of its own but primarily applies the concepts and theories of other disciplines to educational phenomena to promote an understanding and/or propose recommendations for improved practice (Biesta, 2013). The Continental European view, on the other hand, describes education both as a normative and a scientific discipline that focuses on questions regarding developing human beings such as caring for, bringing learning to life, moral and social development (Biesta, 2011; Cameron, 2004; Drewek, 1998).

The Anglo-American tradition has mainly grown in the United States and the United Kingdom but also impacted many other countries around the world. The roots of this view go back to the early 20th century, the times when social sciences were preoccupied with situating themselves as scientific disciplines by means of the methodological perspectives borrowed from natural sciences. They mostly adapted the positivist research tradition as a way of identifying significant relations and causations in their respective fields (Yıldırım & Şimşek, 2021). Educational science went after a similar goal in the Anglo-American world even though there were rich theoretical perspectives provided by educational philosophers like John Dewey (1933) to study various aspects of education from an alternative research paradigm. This may be due to the possibility that these philosophical views were not found practical in adapting positivist orientation in scientific inquiry, so researchers looked for theories elsewhere that are more established in line with research and practice interests. Such pragmatic approach has resulted in positioning educational science as an interdisciplinary field of study rather than a distinct discipline with its own theories and methods. This position resulted in dependency on the concepts and theories of other social sciences both

for research and practice in the field. The major concern was to be recognized as an applied science within an interdisciplinary and practice-oriented framework.

The Continental European perspective on educational science finds its roots in the German concepts of “pedagogic” and “didactic” (Drewek, 1998). While the former highlights the importance of “developing a person,” the latter focuses on the science of teaching (Seel, 1999) which is more specifically focused on learning by establishing an understanding of educational processes, interactions, and consequences. Together these concepts create an area of focus that is unique to education, and theories can be established around these concepts to guide research for scientific knowledge contribution in the field. With this orientation, various educational theories were developed in the 19th and 20th centuries such as theories on how one develops as a human being through education (Herbart, 1892). In addition, education was viewed as a field that brings together particular realities rather than universal and generalized understandings. This view highlights the importance of local theories explaining how education takes place, and its potential consequences within a certain context.

The Continental European educational science tradition also has an impact on educational research orientation particularly in Northern Europe with an emphasis on theory-based research and theory construction through research. The concepts of pedagogy and didactic are at the center of this orientation with holistic perspectives into the study of educational problems and processes. Educational theories provide sensitizing concepts for designing research studies and a framework for interpreting the results of the study. This approach also promotes theoretical thinking in interpreting the results of a study such as reconceptualization and elaboration of the theory. However, these theories are primarily micro theories that are contextualized in local realities rather than universal principles and generalizations as in the case of positivist research.

The conceptual construction of “educational science” is also apparent in the key terms these traditions use to characterize the field. While the term “education” reflects an applied and interdisciplinary orientation to mostly organized institutional practices (e.g., school), the German originated term “pedagogy” presents a broader view of education extending the field of study to all aspects of human development such as intellect, identity, morality, interaction, and relation (Cameron, 2004; Loughran, 2013). Accordingly, there is a tendency to label the field as “educational studies” in the Anglo-American tradition to highlight the interdisciplinary and practice-oriented nature of the field while the term “science” is typically attached to the labels such as “educational science” or “science of pedagogy” (Zogla, 2018) with an intent to characterize the field as a scientific discipline. Similarly, the concept of “didactic” is commonly used in the Continental European tradition to refer to teaching with a specific focus on content and student learning whereas the Anglo-American orientation tends to consider “teaching” as a unique area of focus both theoretically and methodologically.

It is important to recognize the fact that both traditions went through some changes, particularly in the last quarter of the 20th century because of an increased interaction among the educational science communities in different parts of the world. The Anglo-American tradition, for example, has become more concerned with the theory use in and production

through research with the influences from the Continental European perspective. The introduction and increasing use of grounded theory approach in social science research can be considered as an outcome of such interaction. In a similar way, the Continental European perspective has adapted some of the principles of the Anglo-American tradition such as interdisciplinary approach to education as well as the increased use of positivist research approaches to study the problems of education (Sundberg, 2004). This orientation can also be observed in the effort to redefine the field with new priorities. For example, “Pedagogical work” has been promoted in Sweden as a new field of study to bring interdisciplinary and practice orientation to traditional theory-oriented field of educational science (Arreman, 2008; Hultman & Martinsson, 2018).

Theory Use in and Construction through Research

Theories are not only established through scientific research but also through reasoning and critical thinking, and normative theories fall into this category (Johnson & Christensen, 2014). Theories in philosophy, for example, are constructed through asking critical questions and developing elaborated responses in relation to the nature of some phenomenon. Scientific theories, on the other hand, are constructed through meta-analysis and synthesis of the knowledge contributions of scientific research, and continuously revised and expanded based on the new knowledge produced. Theories in these two categories often interact and establish partly normative and partly scientific explanations and principles in relation to what and how questions on the phenomenon of interest. For example, a research study can be designed through John Dewey’s perspectives on experience as a normative theory, and the results may contribute to construction of micro level theories explaining how experience interplays with learning experiences of a certain age group in a certain content area.

The two educational science traditions described above present diverse approaches to how theory is viewed, used in research, and constructed based on the research results. The Anglo-American view exclusively relies on theories of other social science disciplines (e.g., sociology, psychology, philosophy, history) in developing perspectives for educational research and practice (Biesta, 2011). The assumption is that the field of education cannot have theories of its own because of the applied nature of the field rather than a conceptual field of uniquely its own (Biesta, 2013). Thereby a critical function of educational research, for example, becomes discovering relations among educational variables or describing educational processes and consequences. In doing this, theory borrowed from other disciplines provides a conceptual framework for the research to determine and describe relevant and specific variables or establish a perspective to inquire into educational phenomena. The knowledge produced helps the target group better understand the phenomenon of interest and their relations so predictions for future could be presented for actions to be taken for improved educational processes and outcomes.

In the Anglo-American tradition, construction of educational theories is only possible through the use the theories borrowed from other disciplines to understand and elaborate on educational issues and processes (Hirst, 1996). In other words, educational theories can be produced by applying the relevant concepts and principles of social, psychological, or

philosophical theories to the relevant phenomena in the field. In this approach, educational theories are like conceptual models or a set of principles or procedures for practitioners to use in education. Hilda Taba's (1962) mastery learning, for example, is based on the principles of behavioral learning in psychology and presents a model for organizing teaching and learning activities based on the conceptual elements and principles of this theory. Therefore, the validity of educational theories is dependent on the meaningfulness of the theories borrowed from the fundamental disciplines (Hirst, 1996).

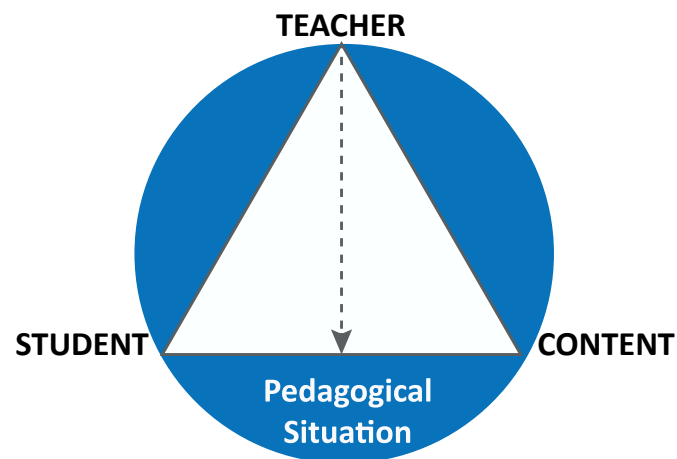
When it comes to the Continental European tradition, educational theories primarily arise from the discipline itself even though the theories from other disciplines are also perceived instrumental in studying educational problems and providing perspectives into practice. Groothoff's (1973) description of theories in education reflects this holistic perspective that addresses the potential relevance of both pedagogical theories and theories of other disciplines for the study and practice of education. Groothoff categorizes educational theories as relating to (1) becoming a human being; (2) interpersonal interaction; (3) emancipatory learning; (4) social life with a future perspective; (5) relations between ends and means of education; and (6) educational processes in different contexts (cited in Biesta, 2011). The first four categories concern the questions of what education ideally should consist of and how it should function. The fifth reflects a positivist orientation to theory since it addresses description of links between means and ends in education. The last has found body in much of the educational research with an orientation toward producing concepts and processes that explain the relations between ends and means within certain contexts (Biesta, 2013). These contextual or micro theories may eventually lead to the construction of broader and more general theories given that sufficient research is carried out and the results are validated in a variety of contexts.

Variation theory is an example of theories representing the Continental European orientation to educational science. It is a learning theory focusing on variation as a necessary mechanism for learning, such as learning about the concept of color through various representations of color or gender through men and women (Marton & Morris, 2002). In this theory, meaningful learning takes place through differentiation among various aspects of a phenomenon rather than accumulation of more knowledge. An analysis of the learner's prior knowledge sets the stage for supporting his/her further learning through varied dimensions of the phenomenon of interest (Kullberg & Ingeman, 2022).

Theories integrating teaching and learning (didaktik) can also be constructed based on research through the study of teacher, student, and the content (didaktik triangle) in different subject areas and contexts (see Figure 1). In these theories, the focus is on how the teacher and the student relate to the specific content, and how the teacher impacts and mediates student's relation to the content (Friesen & Osguthorpe, 2017). Klafki (1995) names this theory as "critical-constructive didaktik" which requires the teacher to assess the content in line with national standards, local realities, and student experiences, and involves resolving tensions in relation to content and context requirements. A teacher needs to carry out a didactical analysis of the content, conditions for students' learning and requirements of the classroom context to establish a meaningful and productive teaching and learning process.

Figure 1

Didactic Triangle (Friesen & Osguthorpe, 2017).



In the Continental European tradition, the theories focus on problematizations of these processes with context-oriented descriptions and interpretations. The focus is not on the attainment of desired outcomes but on the translation of general expectations to specific contextual circumstances. In short, the Continental European perspective considers theories as conceptual frameworks (e.g., concepts, constructs, principles) in explaining teaching and learning processes, a process which may lead to micro/mini theories.

Whereas, in the Anglo-American orientation, the educational theories are like models or collection of principles that clarify the variables critical to the teaching and learning processes and the relations among them toward desired outcomes. Behavioral, cognitive and constructivist learning theories in the fields of psychology and sociology have been found particularly useful in establishing theories or models for the design of teaching and learning processes. Curriculum theories that focus on effectiveness, for example, may present the curriculum as a tool to be used by teachers for high student achievement. “Evidence-based curriculum,” “mastery-oriented curriculum,” “curriculum as a design” are reflections of such approach. A recent example of this approach can be observed in the proposals of the central education bodies toward a teacher proof curriculum. The UK Department of Education (2022) has promoted “outsourcing the curriculum” with an assumption that expertise outside the schools (universities, educational institutions, agencies) can produce a curriculum that is scientific, effective, and better suit the needs of teachers and students in school. This initiative shifts the focus from “teacher’s curriculum agency” to “teacher as implementer” with an “expert developed and tested curriculum” (Winch, 2017), and pushes the schools in the direction of standardization and evidence-based performance (Pountney & Yang, 2021). These kinds of application-oriented theories are built around the concepts of principles of teaching and learning, instrumentalism, control of process and product, accountability through testing, and standardization in implementation in schools.

The Continental European tradition focuses on curriculum theory as perspective, culture, and organization of context-based processes toward flexible consequences. Curriculum provides a platform for problematizing didactic processes rather than a “blueprint” that determines the content, and guides teaching and assessment in the classroom. The essential concepts that shape curriculum theory construction include goal orientation, variation, process, practice, knowledge, mediation, socialization, individualization, and professional knowledge. In this tradition, teacher’s curriculum making and agency is positioned in a multidimensional understanding of curriculum rather than standardized curriculum implementation that guides teachers’ practices. Curriculum is more than an “expert developed material” to be implemented and has a social-cultural character reflecting the institutional, local, national, and international realities (Pinar, Reynolds, Slattery, & Taubman, 2008). Schools can tailor the curriculum based on nationally determined goals, but at the same time, adapt it to their own realities. In this tradition, curriculum theory establishes an essential knowledge base for a teacher whereas in the Anglo-American tradition it serves as a guide to research and practice by making the variables clear, relations to be tested, content area organization and methods to be used. In short, this diversity in curriculum theories gives shape to instrumental or professional curriculum making by providing implications such as who decides on the curriculum, who develops, who uses, and who supervises.

One example of this approach to curriculum is John Dewey’s (1963) theory, which involves four critical aspects of development: expressive, constructive, artistic, and social. These aspects should be incorporated in any curriculum since they characterize how one views the world. This requires interconnectedness in the curriculum with a focus on learner’s experiences and life. A curriculum independent from these aspects is doomed to failure and will not lead to long-term meaningful learning. Similarly, the Continental European perspective of educational science frames the concept of curriculum from a heuristic and progressivist perspective as opposed to curriculum as design (Tyler, 1949) and progression (Rata, 2021) that is apparent in the Anglo-American tradition. Another example is the theory of “powerful knowledge” (Young, 2010; 2013) focusing on the question of how to make the content meaningful and worth for the learner, and offering the concepts of “unlocking” and “transformation” to make the content pedagogically meaningful (Friesen, 2018).

How would these different theoretical orientations impact the research undertaken in educational science? How is research on curriculum positioned to reflect various orientations to educational science in general and diverse conceptions of curriculum in specific? Is curriculum a blueprint based scientific research, or an unfinished product that requires continuous problematization and development based on research? The answers to these questions differ based on ontological and epistemological assumptions we have regarding the curriculum. Traditional scientific methods would be essential in putting these theories into test for the purpose of producing principles evidenced through research. Standardization in curriculum would lead to generalization in research, efficiency in teaching and learning through performance-based processes. So, the practice can be controlled and supervised with pre-established criteria based on evidence-based research which requires a positivist inquiry orientation.

These traditions also have implications for teacher's role as a curriculum agent ranging from a facilitator who promotes prescribed learning outcomes to an investigator as to the purpose of the curriculum, enactment of teaching and learning processes with a questioning approach. Action research, practitioner research, practice-close research are some of the approaches teachers employ to investigate, reflect on and improve their practice based on research. The Continental European orientation in educational science promotes this research-based, reflective approach to implementation of curriculum whereas the traditional Anglo-American approach aims for providing teachers "effective curriculum," "perfect designs" or "proven principles and procedures" to be followed by the teachers to establish a process based on design rather than the implementer himself or herself as a professional.

In summary, the theoretical orientations in the two traditions have critical implications for the research approaches they primarily promote. When generalization is the purpose, positivist research paradigm can offer useful tools whereas contextual understanding and theory production at the micro level can be achieved primarily through interpretivist research paradigm. Further implications of educational science traditions for alternative research paradigms are discussed in the next section below.

Educational Science Traditions and Research Paradigms

Scientific research is a challenge in social sciences and requires diversity and flexibility in the approaches and methodologies. Educational science is no exception! Berliner (2002) once described education as the "hardest science of all" due to complexity of the variables, changing contexts and false knowledge expectations from research. The positivist research methods can be applied under predefined, controlled, systematic processes, and this could be achieved with a high degree of reliability and validity in natural sciences. When it comes to social sciences, particularly education, contexts and interactions within these contexts are difficult to control and the changing conditions often present tremendous threats to reliability and validity, the two significant canons of positivist scientific research. The Anglo-American educational science tradition largely ignored this critical nature of the field of education particularly in its early periods and chose to use the positivist research methods such as generalized surveys, experiments, and quantitative observations with a goal to follow what is recognized as acceptable and respectable in scientific circles. The results of such research have often been inconclusive, and conflicting given the similar research questions and target groups particularly in relation to the causal relations that the researchers tried to establish in educational processes. This problem has led many researchers in the Anglo-American tradition to explore alternative ways of studying educational questions, and most of these landed on interpretive research paradigm.

The impact of basic disciplines on the development of educational research is also evident in the research methods promoted in the Anglo-American disciplinary tradition. Furlong and Lawn (2011) argue that sociology, psychology, history and philosophy, as the four basic social science disciplines, form "the foundation of education" and influence the research approaches in the field accordingly. While sociology had an impact on descriptive educational research, psychology promoted experimental studies and history partially contributed

to the use of document analysis in the field. Philosophy's contribution has mostly been conceptual rather than methodological. So, the impact of basic social science disciplines on education can also be observed in the adaptation of positivist research methods such as survey, experimentation, quantitative observation, and document analysis studies. Historical analysis and conceptual work could be the exceptions to this trend, but they do not account for most of the research studies in educational science.

In the Continental European tradition, the relationship between theory and research is discipline based. Educational theories guide research in setting a direction, giving shape to research questions and determining the respective methods, and set the stage for interpreting the results and placing them in the conceptual literature. Theory is not considered as a framework to determine the variables and hypotheses to be tested, but a conceptual perspective that guides the research throughout all its phases, and at the end it is revisited in terms of further elaborations and expansion of the theory. So, an important goal of research becomes a contribution to the theory. As mentioned above, educational theories may be normative based on philosophical thoughts and values about education, but also rooted in educational practices. Research about beliefs and understandings of teachers, factors effecting educational outcomes, teaching, and learning processes may lead to micro theories which Carl (1986) calls "practical science" (cited in Maddock, 1997).

The positioning of alternative research paradigms in educational science traditions has also been influenced by the research needs in relation to teaching and teacher education. Traditional research on teaching mostly concerns studying variables critical to teaching processes independently from each other, particularly from the content, with a purpose to arrive at generalizations. The results of research studies with this positivist orientation have been conflicting in many cases because of the diverse contexts and the impediments to generalization. Although policy makers have looked for research-based results on effective teaching methods and processes, educational research has not been providing a clear answer to these requests. As a result, alternative research approaches have been considered to bring in more in depth and value-laden (Carr, 1985) understandings of teaching and learning processes.

Accordingly, Klette (2007) argues that there is a need for studying "the relations between content matter issues (what), instructional activities (how) and teachers and students involved (who) in studies of teachers and teaching" (p. 148). She further states that content and classroom context have been ignored in traditional studies of teaching and learning, and as a result, the understanding such research arrives at is an incomplete one. The interpretivist research paradigm has offered such methods for studies that focus on multidimensions of teaching and learning process and contextualize the findings through the study of the classroom environment.

When it comes to the needs of teacher education research, this partly has to do with the transformations the programs went through. Many Anglo-American and European countries moved their teacher education programs from teacher training colleges or institutes into universities in the 1970s and 1980s. This change resulted in more emphasis on research in teacher education in line with the research expectations as one of the pillars of university

education. Teacher education has traditionally been practice-based, and one expectation was to make this a focus of research. However, this expectation conflicted with the university academics' tendency to use positivist research methods mainly in the form of surveys and experiments. This research orientation resulted in a gap between the professional development processes student teachers went through and the research outcomes which were general and away from speaking to the practical and contextual developmental needs of student teachers.

For the Anglo-American tradition, teacher education is a “perfect” application field, thereby a good reflection of what educational science stands for. Fundamental disciplines like psychology, history and sociology have impacted teacher education by offering theories and principles in relation to development, learning and historical perspectives. An interdisciplinary perspective has given shape to many subdisciplines in teacher education such as educational psychology, educational sociology, educational philosophy, and history of education. The assumption was that teaching and learning can be understood through the concepts and theories of these disciplines, and students should learn these perspectives to make sense of social, psychological, philosophical issues they will deal with in schools. A reflection of this understanding can be observed in many teacher education programs today that represent the courses related to fundamental disciplines heavily through an interdisciplinary approach. Then teacher education research also becomes dependent on the concepts and theories of these fundamental disciplines.

When it comes to the Continental European perspective, traditionally educational science kept its distance to teacher education since practice orientation was seen as critical for the development of teacher knowledge. Educational science and teacher education programs existed independently from each other until the 1970s and 80s. But when teacher education was brought under the umbrella of university, educational science community was divided in positioning teacher education within the tradition of theory-oriented educational science. Some university departments kept their distance and continued with traditional theoretical and research work whereas others changed their orientations toward more practice and interdisciplinary theory and research. In the beginning of the 2000s, research orientation in teacher education became a critical goal both because of the requirements of being a university study and the expectations from the policy makers for teacher education to be research based (Arreman, 2008).

Positioning Qualitative Research in Educational Science Traditions

“Qualitative research is a field of inquiry ... (that) crosscuts disciplines, fields and subject matter (with) a complex, interconnected family of terms, concepts, and assumptions” (Denzin & Lincoln, 2018, p. 9). It is difficult to set the boundaries on qualitative research methods because the field is “contested with many contradictions and different perspectives” (Brinkmann, Jacobsen, & Kristiansen, 2014, p. 17). In simple terms it aims to describe what happens under certain contexts and the meanings people attach to their experiences of these processes. The roots of qualitative research can be traced back to ancient times when Plato promoted the use of observation to understand human behaviors and Socrates advocated

interaction to explore individual meanings (Erickson, 2018). In modern times, the German pedagogy tradition in Europe toward the end of 19th century and the early examples of ethnographic studies in Chicago School of Sociology in the 1920s established the foundations of qualitative methods focusing mainly on observations as the main tool of data collection. Hermeneutics tradition of the 1950s and 1960s helped development of interviews as a way of exploring meanings and experiences systematically. However, it was not until the 1990s when qualitative research was recognized as a credible and institutional field of inquiry in many disciplines.

The history of the use of qualitative research in the Anglo-American educational science tradition follows the development of qualitative research as a field of inquiry in the US. That is, qualitative research earned an equal status as a credible research approach in this tradition only toward the end of the 20th century, the time qualitative research became more common place in many other disciplines. However, the Continental European educational science tradition presents a different picture. First, this tradition was not heavily influenced by the positivist research paradigm in its early times, and more concerned about developing ideas and theories based on observations and reflections in the field (mostly unsystematic and informal) and improve educational practice through the promotion of intellectual development and interaction among the practitioners. The field offered rich perspectives on human development, identity, moral principles, relations, and interaction and ends and means of education (Loughran, 2013). The discipline's focus on development of theoretical concepts meant flexibility in inquiry methods, and this was a major difference from the Anglo-American tradition where positivist research paradigm primarily occupied the research scene in the field, particularly in the early periods of educational science as a field of study.

The research methods offered by the interpretivist paradigm have been found most relevant in the Continental European educational science tradition because of its orientation toward theory and purpose to search for meaning through observations and interaction. The development of qualitative research and respective methodological tools and strategies in the 20th century helped the Continental European tradition use research to produce new knowledge and elaborate on normatively developed pedagogical and didactical theories. Although this tradition has been influenced by positivist research methods particularly in the middle of 20th century as part of an effort to make pedagogy an academic field of study at the university level, the tradition of observation and interaction to offer insights into educational processes and problems has continued, and still is the defining approach in this tradition.

Although qualitative research is perceived and used as an established method in both traditions today, the way these traditions tend to define and use it presents interesting differences. The use of qualitative research in the Continental European educational science displays more flexibility and open-endedness whereas qualitative methods are treated more systematically in the Anglo-American educational science research. The qualitative research orientation in the Anglo-American tradition can be described as “postpositivist qualitative research” which highlights the importance of systematic, well-defined and “commonly shared” methodological procedures. This orientation comes from a long tradition of positivist research orientation in the field and the tendency to employ qualitative methods with a

similar approach. So, the concepts of “research design,” “systematic and well-structured methodological procedures,” “sampling techniques,” “structured interview, observation and document analysis tools,” “reliability and validity” are critical to the use of qualitative research in this tradition. This orientation can be seen as a compromise between the apparent need for employing qualitative research in the field and the tradition of using quantitative approach for many decades. It can also be interpreted that the tradition is still under the impact of positivist orientation, and this results in a need to define clear procedures in every aspect of qualitative research.

Whereas, in the Continental European tradition such methodological clarities are seen against the nature of qualitative research which needs to be more open ended and should not be limiting the researcher’s critical and creative solutions to research questions, and to the requirements of data collection and analysis. As long as researchers can justify their approach conceptually and argue for a methodological approach, then they do not need to be limited by systematic methods and procedures described in the methodological literature. One of the outcomes of this flexibility can also be seen in the efforts to define a new research tradition called “post qualitative research” (Lather, 2016; St. Pierre, 2021; Wells, 2020) which emphasizes the importance of researchers’ creativity, insights and reflections as well as doing research together with participants rather than positioning them only as data sources!

What does the future hold for educational science? There is a trend for more interaction between these two traditions and effort to integrate them into newly defined education science fields. As briefly mentioned above, “Pedagogical work” is one of these areas developed in Sweden at the beginning of this century. It involves a merge of these two orientations addressing pedagogical theories, practice and interdisciplinarity in line with the diverse aspects of educational work. In other words, this approach keeps the theory-oriented focus of the Continental European perspective but also focuses on practice-oriented approach in the Anglo-American tradition. One result is thick descriptions of educational practices, and this is often achieved through qualitative research as it provides effective tools to produce micro theories through small scale studies with in-depth understanding of the phenomenon. These micro theories, as mentioned above, might eventually lead to broader theories with qualifications for different contexts. This theory construction approach is also promoted by Glaser and Strauss (1967) through the concept of “grounded theory” and has met with much interest in educational science in the Anglo-American world as a reflection of the need to explore alternative research methods in line with the complex and multidimensional nature of educational concepts and processes.

Implications for Educational Research in Türkiye

What is the status of educational science in Türkiye and its reflections on research orientations? Turkish educational science is oriented toward the Anglo-American educational studies tradition in many respects including the interdisciplinary approach in the field, close connection to teacher education and the application of the theories from other social sciences to educational practices and research. This has contributed to research oriented toward teaching and learning in schools, an effort to produce evidence-based principles

and practices, and to link educational science to teacher education. On the other hand, the theory orientation promoted by the Continental European tradition has only influenced the field to a limited extent. Educational research primarily represents quantitative orientation as a reflection of the Anglo-American tradition with a purpose to produce principles and rules guiding effective practice but neglects development of perspectives or theories for educational practitioners to consider in relation to the issues relevant to their work.

The organization of educational science in subfields is also a reflection of the Anglo-American orientation. Since the field cannot establish itself as an independent discipline, establishment of subdisciplines through an interdisciplinary orientation was perceived as a necessity. So, many educational studies subfields have emerged because of transdisciplinary or multidisciplinary approaches such as educational psychology, educational management, educational economics, and educational sociology. There are also other subdisciplines reflecting various subcomponents of educational work such as curriculum and instruction, measurement and evaluation, and educational leadership. In the Continental European tradition, such divisions would not be promoted because educational work requires a holistic perspective, and these divisions can result in fragmentation in the profession. Therefore, the invention of “Pedagogical Work” as a field of study intends to address issues in relation to educational practice from a broader and integrative perspective.

It is also important to note that traditional educational science disciplines are going through a redefinition in the Anglo-American tradition as well as in Türkiye. Curriculum and instruction is one of these fields that is going through a conceptual redefinition. Edwards (2001) argues that a pedagogical act involves “... informed interpretations of learners, knowledge and environments (to) help learners make sense of the knowledge” (p. 163). How can a teacher reach such interpretations? Would a “perfect design” approach to curriculum and “evidence-based principles” for teaching take a practitioner to desired consequences in classrooms? Or would a teacher need to consider the complexity, intensity and multidimensionality of teaching and learning situations and adapt a research-based approach to his or her own practice to arrive at contextualized solutions?

These questions and their potential answers have critical implications for redefining the field of curriculum and instruction and the research approaches relevant to the field. Respectively, Bumen and Aktan (2014), in their analysis of the curriculum and instruction field, highlighted a need to bring in a new research approach that would consider political, cultural, gender and historical aspects of curriculum in Türkiye based on Pinar’s (2004) “urgent call” for a “reconceptualization” of the field. This approach would entail phenomenological, post-structuralist, biographic, aesthetic, and theological perspectives. Pinar et al. (2008) argue that the traditional “curriculum development” approach should be replaced with a “curriculum thinking and understanding” approach, and this change in perspective requires a phenomenological and case-based research design to study various aspects of curriculum. A similar approach is needed in educational science in Türkiye to transform the “atheoretical” (Schubert (2009), “curriculum development oriented” and “Tyler rationale” (Jackson, 1992; Tyler, 1949) based curriculum and instruction field to theory, research and practice based “curriculum studies” perspective.

Conclusions and Discussion

The purpose of this article was to discuss the development of educational science traditions in the Anglo-American and the Continental European scenes in relation to theory use and construction in research and research approaches they promote. One conclusion of the analysis above is that earlier versions of qualitative research were used in knowledge production in the Continental European educational science tradition since theory-oriented thinking and contextualization of research were consistent with the concept of “pedagogy” as a way of studying education from a holistic perspective. Informal observations and interactions served this purpose well and promoted the development of pedagogical theories in earlier periods. Today a similar approach is still apparent in this tradition with its theory-oriented research focus.

Research should be theory based, and lead to elaboration of existing theories and construction of new theories. A theoretical orientation is essential in the process of coherent knowledge building in the field (Lingard, 2015; Suppes, 1974; Säljö, 2009), and should be apparent in research questions, design of the study, data collection and analysis, and interpretation of results. Theory construction is a natural outcome of cumulative scientific research in all disciplines as well as in educational science.

In line with this position, a second conclusion in this paper is that educational science orientation has an impact on knowledge produced for the literature and implications offered for practice. The two basic traditions offer diverse ontological and epistemological perspectives, methodological approaches and values attached to these orientations. These differences are also reflected in the organization of research outputs and their dissemination. Traditional research methods such as survey and experimentation find their way into the Anglo-American orientation more since they offer strategies to test the hypotheses offered by various theories as applied to educational questions or issues. As a result, one can offer evidence-based rules and principles to establish systematic processes toward expected outcomes in education. Theories are borrowed from the main disciplines and applied in education as hypotheses, variables, operational definitions, and relations to be able to predict what happens when these variables interplay in a certain way under certain conditions. Theories determine the variables and potential connections among them to be tested under controlled situations. So, research is a process to apply theories borrowed from other disciplines to the realities of educational problems. The knowledge produced by research can offer guidelines for practitioners for better performance in teaching and learning.

Accordingly, another conclusion of the analysis in this paper is that the Anglo-American educational science tradition initially adapted positivist research paradigm to position itself as a university based applied discipline. In this process, theories were borrowed from other social science disciplines based on the assumptions that educational theories can only be applied theories or models based on fundamental theories in other disciplines. However, this has changed in the last few decades through the interaction between the Anglo-American “educational studies” perspective and “educational science” in the Continental European tradition. Qualitative research has found its way into the study of educational problems

as cases, contexts, cultures, and meanings. Grounded theory concept fits well with this orientation bringing theory building a significant goal of research in social sciences as well as in education.

The new fields of study under educational science that integrate interdisciplinary and application-oriented Anglo-American view with the discipline-based theoretical orientation of the Continental European perspective show that much interaction is now taking place between these two world views and new fields of studies are being defined with a more integrative perspective. Pedagogical work is one of these fields, grown in Sweden, based on such a need to integrate the two world views. With theory and practice-oriented goals, it presents a holistic approach to organizing the subfields under educational science, and time will show whether it will lead to similar other new fields as alternatives to more fragmented subfields of the discipline.

It is not the intention in this paper to claim that the Continental European educational science perspective has been the driving force behind interpretivist research paradigm, however, it is evident that the tradition has contributed to the expansion of the qualitative research methods in social sciences. Although the use of qualitative research followed a postpositivist orientation in the Anglo-American tradition that attempted to establish systematic and generalizable uses of methods through well-defined designs, sampling methods, data analysis techniques, the Continental European tradition used the qualitative research methods more flexibly not to be limited by predefined methodological procedures and processes. This methodological difference in the two traditions is helpful to keep the discussion on qualitative research approaches active and ongoing.

The literature on research traditions is expanding fast with new concepts, methods, approaches, and perspectives. It is evident that the expansion has to do with qualitative research more than quantitative. This is understandable given the open-ended nature of the qualitative methods. Still, scientific research requires a common language among the researchers and recognized methodologies that lend themselves to the production of credible scientific knowledge. Therefore, the methodological literature should address the creativity and alternative courses of action researchers need to employ to explore and understand the reality, but, at the same time, make the researchers accountable to methodological traditions established as the shared and recognized language and processes of research!

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