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Developing pedagogical practices under umbrellas of different colours

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Abstract

The aim of this article is to introduce different ways to conceptualise approaches aimed at improving practices by combining practitioners' professional work and research. In historical terms, the oldest of these approaches is *action research* which was introduced in the 1940's. Thereafter, approaches combining practical work with academic aspirations have been conceptualised in a number of ways, such as *design research*, *translational research*, *developmental work research (DWR)* and *practitioner research*, and their numerous versions and combinations. Secondly, the purpose of this paper is, from a philosophical and theoretical perspective, to examine the relationship between theoretical and practical aims of research by integrating Aristotle's classical views on epistemology with the *theory of knowledge and human interests* of Jürgen Habermas. The methodological approach of this article is a theoretical and philosophical analysis of the literature.

Keywords: action research, pedagogical development, knowledge and human interests, Aristotle, sociology of knowledge

Introduction: Developing pedagogy under various umbrellas

This issue of *Eesti Haridusteaduste Ajakiri* introduces academic studies that share a common interest in improving methods of teaching and learning in different university and school subjects – in other words, ways of developing subject didactics. The articles cover a wide range of didactic innovations related to study materials, technology, study forms, and cooperation between universities and schools, with school and university teachers reporting on the development of their own teaching practices, especially from a learning-centred approach. The call for papers for this special issue has been associated

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with the *Scholarship of Teaching and Learning (SoTL)* paradigm, often defined as systematic inquiry into student learning, which advances the practice of teaching by making inquiry findings public, and which is often regarded as a close relative of *action research (AR)*.

The shared aim of the authors in this special issue is to explore ways of improving pedagogical practices to promote learning. However, the approaches are described in a complex variety of ways and from numerous different perspectives. In some papers, action research is explicitly mentioned. In others, AR is not mentioned at all and the authors report the pedagogical development and implementation of didactics in the school reality in quite different terms.

How, then, should we conceptualise an academic methodology where the main goal is developing pedagogical practices through research – i.e., improving teaching in parallel with studying it? Naturally, there can be no one correct definition. In the current situation there are multiple ways to conceptualise this approach, such as *research and development work (R&D)*, *action research (AR)*, *translational research*, *developmental work research (DWR)*, or *practitioner research*, and still further multiplied by their numerous versions. There is, it seems, a whole family of methodologies concerning practice development in teaching. What is common to all of them is an ambition to build a functional link between theory and practice and to develop practices through research.

The aim of this article is, firstly, to map various methodologies of pedagogical development and to clarify the relationships between them. These methodologies can be regarded as a group of academic tribes if you like, or a variety of theoretical umbrellas, under which pedagogical development work can be done. Secondly, the purpose is, from a philosophical and theoretical perspective, to examine the relationship between theoretical and practical aims of research by introducing an encompassing idea that integrates the well-known classical work of Aristotle on human dispositions to knowledge with the theory of knowledge and human interests by the German philosopher Jürgen Habermas. From this basis, the purpose is to outline different orientations to research-based pedagogical development work. The methodological approach of this article is a theoretical and philosophical analysis of the contemporary literature on methodologies of pedagogical development.

Different ways to conceptualise the development of educational practices

As an initial consideration, the key questions are: How should we conceptualise our research-based work aimed at improving educational practices? How can we best understand and analyse what we are actually doing? And how can we

tell our story to others when we are developing our own pedagogical practices by simultaneously doing research on them? In the field of educational and social research, these questions have been answered in various ways and manifested differently within different traditions. Perhaps the simplest way to express that you are improving your practices through research is to speak about *research and development work (R&D)*.

The R&D concept is originally rooted in technology and industry with the aim of developing new products and production methods in those domains. However, the expression has been broadened and nowadays refers also more generally to activities undertaken by corporations or governments to develop not only innovative products or production methods but also innovative services and social practices and to improve existing practices. *Design research* is a close relative of R&D and comes from the same terrain of technology and production. It was originally introduced as research into the process of design, but the methodology has since been expanded to include research embedded within the process of design, that is, research-based design practice. Similarly, the focus of *design research* was originally limited to the process of designing products and services but has now expanded to include also product and production evaluation as core elements (van den Akker, Gravemeijer, McKenney, & Nieveen, 2006).

Different research methodologies with the same stem *design* have often been located under the ‘umbrella’ of practitioner research, although not all advocates of design research accept this interpretation. Recently, the orientation towards developing practices in close collaboration with practitioners has also been outlined in the framework of *translational research*, based on the medical and public health research approach. The term *translational research* means research that translates or converts scientific research into practice and the improvement of practices together with practitioners. On the other hand, translational research also refers to the need to articulate (‘translate’) existing practices in the language of scientific research (e.g. Tierney et al., 2007).

A close connection can also be seen between the aforementioned methodologies and *case study methodology*. This approach does not only concern educational research, as they have been applied in various fields, such as anthropology, medicine, psychology, political science, sociology, management, coaching, education, public administration, and human services. In addition, the school of thought of *developmental work research (DWR)*; Engeström & Rückriem, 2005), an interventionist approach, builds on the principles of cultural-historical activity theory articulated by developmental psychologists Vygotsky and Leontjev.

Like the methodologies mentioned above, DWR can be used as a methodological framework for simultaneous research and innovation in workplace settings, including education. However, what is also common to all of the previously mentioned approaches is that a number of their advocates sharply contest any similarity with other approaches and are at pains to emphasise their own specificity. (Heikkinen, Huttunen, & Syrjälä, 2007; Heikkinen, de Jong, & Vanderlinde, 2016; Välimaa, Heikkinen, & Arvaja, 2018)

The oldest and apparently best-known way to conceptualise the connection between research and development work in the social and educational field is *action research*, which was first introduced by the social psychologist Kurt Lewin in the late 1940s in the US. Action research has been applied in very different forms in various fields of research for more than 70 years. It has also been very influential in the field of education. In the educational context, action research has been essentially regarded as a strategy that combines teaching with research with a view to solving immediate problems through a reflective process of the participants themselves. There is also a strong social emphasis in action research in contemporary literature, as AR has a strong impact on the work community. Action research is therefore usually done by individuals working with others in teams or as part of a ‘community of practice’ to improve the way they address issues and solve problems. For this reason professional learning communities (PLCs) have also often been highlighted in action research literature. (Burns, 2007; Carr & Kemmis, 1986; Heikkinen et al., 2007; Heikkinen, Kiilakoski, Huttunen, Kaukko, & Kemmis, 2018; Reason & Bradbury, 2007)

An approach where practitioners develop their own work has also been manifested through the concept of *practitioner research*, which can be regarded as a very close relative to action research and is even used synonymously by some (Heikkinen et al., 2016; Heikkinen et al., 2007). Generally speaking, practitioner research has been defined as ‘*the intentional and systematic inquiry into one’s own practice*’ (Dinkelman, 2003, p. 8). It contributes to local and particular knowledge generation in the contexts of teaching and learning, as well as to public and generalisable academic knowledge. Practitioner research itself resembles a family of research of its own, spanning *practice-oriented research*, *practice-as-research*, *practice-based research*, *practice-led research*, *mixed-mode research practice*, and *practice through research* (Candy, 2006). Despite the common stem, practitioner research seems, therefore, not to be a unified whole but to encompass a number of different approaches. In fact, according to recent literature reviews (Broekkamp & van Hout-Wolters, 2007; Vanderlinde & van Braak, 2010), there seems to be no real consensus regarding the meaning of the term ‘practitioner research’ itself. Also there seems to be disagreement within

this family. For example, some authors postulate that it is the practitioners who carry out practitioner research, whereas others claim that practitioner research can also be conducted by full-time academics (Marshall, 2010). Additionally, the realm of art, craft and design is sometimes regarded as the main context, while others state that practitioner research is typically undertaken in the fields of education and in social and health care. Sometimes practitioners are encouraged to become better ‘consumers’ of research reports (Marshall, 2010), whereas others emphasise the strong autonomous agency of the practitioners in the production of knowledge and speak about a ‘research journey’ (Loughran, 2004) or about empowering and developing wisdom in the practice through co-creation (de Jong, de Beus, Richardson, & Ruijters, 2013). The role of practitioner agency in the production of knowledge is especially emphasised in the tradition of critical and participatory action research (Carr & Kemmis, 1986; Heikkinen et al., 2007; Heikkinen et al., 2016; Kemmis & McTaggart, 2000).

The practitioner research approach has also been labelled as ‘*practice-based research*’, although this concept has been used in a specific sense in the field of art, crafts and design. In that area, *practice-based research* refers to an investigation undertaken in order to gain new knowledge by presenting the creative outcomes of art and craft practices, often in the form of conceptual artefacts, such as images, music, designs, models and digital media, or other outcomes, such as performances and exhibitions (Bereiter, 2002; Popper, 1963). However, the significance and context of the products are described verbally (Candy, 2006). Another related approach is ‘*practice-led research*’, which is closer to the traditional research methodologies as the emphasis is on obtaining knowledge about practices with a clear intention to improve them, rather than creating and reflecting on artefacts. Such research includes professional practices as an integral part of the research project, and often falls within the general area of action research (Candy, 2006).

Common to all of the aforementioned approaches is the intention to diminish the gap between theory and practice as much as possible. The relationship between theoretical knowledge and empirical and practical know-how is one of the most intriguing problems faced by these approaches. Often, rather than focusing on generalisable theoretical knowledge, practitioners are encouraged to address their everyday practical problems and thus formulate local and contextual knowledge in contrast to striving for universal, generalisable knowledge, which has been the ideal of the dominant research paradigm (Marshall, 2010).

For decades the relationship between theory and practice has been an issue of ongoing debate in research. Most often, theoretical knowledge has been

regarded as something separate from practical expertise, and there seems to be no easy way to bridge the gap between them. To understand this tension better between theoretical knowledge and practical work and to build a better link between them, we must start by admitting that the observed tension between theory and practice is not a new phenomenon but has already been dealt with by ancient philosophers. Therefore, we must take a closer look at the philosophy of ancient Greece. The impact of Aristotle has been particularly influential, and it is therefore useful to study the Aristotelian notion of knowledge forms. However, as the world view of philosophers of more than two millennia ago is fundamentally different from how we understand the world today, this ancient philosophy is not sufficient on its own. We therefore also need to take some contemporary epistemology into account. In this article I draw, in particular, on the work of philosopher Jürgen Habermas's theory of knowledge and human interests. The reason why this specific theory of Habermas is central in this study is the fact that Habermas uses Aristotle as his starting point but he develops an entirely new and radical view on epistemology of his own, rooting on the classical Aristotelian typology.

The uneasy relationship between theory and practice: Insights from Aristotle and Habermas

A highly influential framework for understanding the relationship between theory and practice in action research has been the book *Becoming Critical* by authors Wilfred Carr and Stephen Kemmis, first published in 1982. In it, the authors draw on the philosophical work of Jürgen Habermas and his theory of knowledge and human interests to introduce three orientations to action research: technical, practical, and critical-emancipatory. *Becoming Critical* is one of the most cited books on action research in education. It has been continuously in print for more than three decades and, according to Google Scholar, has been quoted more than 14,000 times, including the Spanish translation. Carr and Kemmis have since further developed their ideas, and in this article I apply the ideas introduced principally in the book *Enabling Praxis* (Kemmis & Smith, 2008a, 2008b), which builds on the further ideas introduced by Carr and Kemmis in the early 1980s and broadens it more towards the philosophy of Aristotle.

The core question every action researcher or practitioner researcher has to ask either consciously or unconsciously is: For what purposes and aims is knowledge acquired or constituted and used in human social practices? Or alternatively: What are the constitutive human and social interests of knowledge? To understand the aims of producing knowledge in and for educa-

tion, it is necessary to start with the basic orientations to knowledge and the relationship between knowledge and action introduced by Aristotle in his *Nicomachean Ethics* (2011). According to Aristotle, there are three kinds of disposition towards knowledge (*epistēmē*, *technē*, and *phronēsis*) and three corresponding forms of human action (*theōria*, *poiēsis*, and *praxis*).

Aristotle's *epistēmē* is based on a disposition to seek only universal and eternal truths where, ideally, the world around us is seen as through the eyes of the gods on Mount Olympus. This form of knowledge is nowadays called theoretical knowledge, and it is regarded as pure knowledge in the sense that the knowing subject has no aims or aspirations other than merely knowing how things are. Accordingly, an ideal researcher is expected to strive for objective and universal knowledge that is true regardless of time and place. The form of human action associated with the disposition of *epistēmē* is called *theōria* (contemplative action), the original Greek meaning of which was *seeing* or *watching*. (Aristotle, 2011, 1139a, 27–8; Kemmis & Smith, 2008a; Mahon, Heikkinen, & Huttunen, 2019; Saugstad, 2005)

For the disposition towards knowledge to produce material goods, Aristotle used another term: *technē* (Aristotle, 2011, 1094a, 5-10). *Technē* is the disposition towards knowledge that is needed in making or producing something, i.e., *poiēsis* (making action). The term *technē* finds expression in the modern concepts of technical knowledge and technology. Technical knowledge is not valuable in itself; its significance can only be assessed through making and producing products. It is 'good' and valid only if it helps to produce usable and appropriate objects or services or to develop methods that can be used to produce them. The disposition towards knowledge of a technically-oriented person is thus linked to finding an effective means of achieving his or her goals. In this sense, technical knowledge is instrumental: its aims are external to the knowledge itself. (Aristotle, 2011; Kemmis & Smith, 2008a; Mahon et al., 2019)

The third disposition towards knowledge identified by Aristotle (2011, 1140b, 1-6) was *phronēsis*. Often translated as practical wisdom, *phronēsis* is the disposition to seek/know how to live a meaningful, happy, and worthy life together with others. *Praxis* is the form of action (doing action) associated with *phronēsis*. This kind of human action is about living a virtuous life through choices and action based on judgements about what is wise and 'right' in everyday dilemmas and situations. In *praxis*, unlike *poiēsis*, the goals and means of activity cannot be separated; *praxis* is an end in itself. It is an essential element to living a 'good life', a flourishing and worthwhile life, called *eudaimonia* by the ancient Greeks. Inspired by Aristotle, Stephen Kemmis has reinterpreted and redefined the fundamental ideas of *eudaimonia* in his expression of 'living well in a world worth living in', which encapsulates both the individual

and social aspects as well as the temporality of the good life in a very compressed form. From a praxis perspective, a core purpose of the development of educational practices (= action research *in* and *for* education) is to foster understanding about how to live a good life, and to allow human flourishing and meaningful living together with each other, outlining the place of humans in the cosmos. (Kemmis & Smith, 2008a; Mahon et al., 2019)

While it is useful to present the aforementioned three dispositions (*epistēmē*, *technē*, and *phronēsis*) and the three corresponding forms of human action (*theōria*, *poiēsis*, and *praxis*) in such a structured manner for analytical purposes, we must remember that in everyday life and human action they are all interconnected and they all contribute to the good life. In order to live a good life, we need the ability to observe and see, to understand and interpret the world (*theōria*) as well as to utilise techniques, materials and natural resources (*poiēsis*) for the good of humankind (*praxis*). However, it is *phronēsis* that ought to guide education and educational development most, making theoretical knowledge (*epistēmē*) and technical knowledge (*technē*) subordinate to practical rationality (*phronēsis*). (Kemmis & Smith, 2008a; Mahon et al., 2019)

In addition to these three dispositions to knowledge, we may add a fourth (after Kemmis & Smith, 2008a) – a *critical disposition* – based on Habermas's (1972) knowledge-constitutive interests and his articulation of a 'critical-emancipatory' disposition. For Habermas, knowledge is always an outcome of human needs and never produced by any sort of pure intellectual act in which the knowing subject is 'disinterested' (Carr & Kemmis, 1986, p. 134). He introduces critical-emancipatory interest as a separate interest of knowledge that serves the needs of humans to become free from any coercive and illegitimate power or ideological forces of any kind. From this basis, we distinguish a *critical disposition to knowledge*.

A critical disposition is a disposition to expose belief systems and categories that maintain an unreasonable and subordinating power over people. The purpose of such exposure (i.e. generation of critical insights) is to enable people to be released from the mechanisms of power that oppress or harm them by, for example, nurturing their capacity for autonomous thinking and agency. From this perspective, the social world is understood as a struggle for power. The form of action associated with this fourth disposition is emancipatory action (Habermas, 1972; Kemmis & Smith, 2008a) or 'empowering action' (Heikkinen & Huttunen, 2017). This amounts to 'collective critical reflection and action to overcome irrationality, injustice, suffering, harm, unproductiveness or unsustainability' (Kemmis & Smith, 2008a, p. 23). It is 'collective' in the sense that it transpires in reflective communication and interaction with others. It is also transformative in that it leads (ideally and simultaneously) to changed circum-

stances and self-change. This form of transformative action can be understood as *critical praxis*, which combines Aristotelian *praxis* with Marxian interpretations of *praxis*. (Carr & Kemmis, 1986; Kemmis & Smith, 2008a; Mahon et al., 2019)

Table shows the dispositions and forms of action described above and highlights the relationship between these and *praxis* and *critical praxis*. It is important to note that the line between *praxis* and *critical praxis* is blurred; the critical edge of *praxis* can be regarded as an essential element of *praxis* itself, and understood as a participatory agency in the social world. This is illustrated in Table 1 by the dashed line between *praxis* and *critical praxis*, and the arrows, which bring *praxis* and *critical praxis* closer to each other. The idea of *critical praxis* opens up a very special approach to the development of pedagogy, which will be further clarified below the table. (Kemmis & Smith, 2008a, 2008b; Mahon et al., 2019)

Table. A synthesis of the forms of action and dispositions to knowledge of Aristotle (2011) and Jürgen Habermas (1972). Modified from Heikkinen et al. (2018), Kemmis & Smith (2008a, 2008b), Kemmis (2012), Kemmis & Edwards-Groves (2017) and Mahon et al. (2019)

| | Aristotle | | Habermas | |
|---|---|---|--|---|
| Basic orientation to pedagogical practices | <i>Research about education:</i> Knowledge is valuable in itself | <i>Research for education:</i> Knowledge is valuable for improving pedagogy: | | |
| | <i>Theoretical:</i> How things are. | <i>Technical-instrumental:</i> How to develop effective tools for teaching. | <i>Interpretive-practical:</i> How to understand processes of learning and teaching, including social, historical, political and ecological perspectives. | <i>Critical-emancipatory:</i> How to improve pedagogical practices to promote justice, fairness and equality among people, including global and ecological perspectives. |
| | <i>Practice-theoretical approaches</i> (‘practice theories’) | <i>Practitioner approaches</i> (‘practice based research’, ‘practice oriented research’, ‘practice led research’, ‘practitioner research’, etc.) | | <i>Practice-critical approaches</i> (‘critical-emancipatory action research’, ‘participatory action research’) |

| | Aristotle | | | |
|---|---|--|---|---|
| | | Habermas | | |
| Knowledge-constitutive interests (Habermas) | | Technical | Practical (hermeneutic) | Critical-emancipatory |
| Dispositions to knowledge (Aristotle) | <i>Epistēmē</i> | <i>Technē</i> | <i>Phronēsis</i> | |
| Action | <i>Theōria:</i> Contemplation e.g. theoretical contemplation about the nature of things. | <i>Poiēsis:</i> Action aimed at producing known ends. | <i>Praxis:</i> Action involving practical reasoning about what is wise, right and proper to do in a given situation and in terms of the good life. | Emancipatory action: Collective critical reflection and action to overcome injustice, irrationality, harm, and unsustainability. |
| | <i>contemplative action</i> | <i>making action</i> | <i>doing action</i> | <i>empowering action</i> |
| Aim (telos) | Attainment of universal knowledge | Production of something | Good life; flourishing; life worth living (<i>eudaimonia</i>) | Overcoming irrationality and injustice |
| Position of the knowing subject | External observer | Maker or designer of products | Agent in the social world | Questioner, critic (together with others) |
| | | | PRAXIS =====> | |
| | | | <===== | CRITICAL PRAXIS |

In research work, we can distinguish four different orientations parallel to the aforementioned four dispositions to knowledge, or interests of knowledge. The first orientation, which we can call a *theoretical orientation* to research, is closest to the traditional empirical-analytical research paradigm and is essentially interested in the question of ‘how things are’ in the world, that is, the general laws concerning teaching and learning. This basic orientation can be described as *research about education* and it can also be encapsulated as a *practice-theoretical approach*. This orientation, still most common in educational research, has, however, little to offer as an orientation to pedagogical

development *per se*. For teachers and educators the starting point is actually entirely the opposite: the main thing they want is to improve their practices, not to know more about the general laws or regularities.

Instead of carrying out research *about* education, a view that emphasises doing research *for* education may be adopted, that is, improving educational practices by doing research together with the persons involved in education. However, we may always ask whether knowing more about practices (research *about* education) at a general theoretical level would not give a better basis for us to improve practices (research *for* education)? Therefore, the relationship between these two orientations is not an *either-or* setup, but rather a *both-and* design. Basically, however, we may start from either side of the coin; we may first want to know more or to act in a better way.

Research *for* education takes place through a dialogical relationship between the researchers and practitioners. This orientation is manifested both within the *practitioner approach* and the *practice-critical approach*. Many authors seem to consider that neither research about education nor research for education can be performed from an 'outsider position', but instead the researcher must be involved in the educational practices themselves in order to understand them from an 'insider position' (Anderson & Herr, 1999). However, educational reality is always on the move. Dividing it into objects, facts and propositions, building blocks for constructing a man-made worldview, is artificial. Reality is more dynamic, a constant changing of connections. This understanding challenges the quest for an objective standpoint, which has been emphasised in the (post)-positivist research paradigm aimed at general and objective knowledge that is applicable regardless of the actual material, historical or social context or the personal experiences of the knowledge gatherer. This change can be understood as a paradigm shift from positivism through post-positivism to critical theories, constructivism and postmodernism (Denzin & Lincoln, 2005; Heikkinen et al., 2016; Niglas, 2004).

A basic disposition to pure knowledge for its own sake is, therefore, barely relevant in this case. We might also question whether it is even possible to produce knowledge that is detached from everyday concerns (Carr & Kemmis, 1986, p. 134). In this sense, we may think that we want to produce contextual and local knowledge that gives insights into how to develop educational practices in specific contexts of practice. Nevertheless, it is clear that generalisable and universal (theoretical) knowledge is useful when we are striving to improve practices as this theoretical knowledge can be used to develop local and contextual practices. If we adopt this basic orientation, we can say that we are not doing research about education but rather *research for education*.

Within this basic orientation, we can find three different interests. Firstly, we might focus on finding effective methods for teaching from an instrumental-rational perspective. This approach, labelled as a *technical-instrumental orientation*, emphasises instrumental means-ends rationality and is interested in developing effective tools and methods for teaching and learning. The main aim of these approaches is to produce methods that are effective in terms of learning outcomes. Within this kind of approach, it is also expected to show clear empirical evidence of how the new teaching methods improve learning, often expressed in a quantified form and achieved through comparative research designs. The effectiveness of the methods is proved by using causal logic focused on the relationship between causes and effects. Traditionally, didactic research and development work is oriented from this technical-rational perspective.

Secondly, we might choose a more *interpretive-practical* approach. In this case, we are not that interested in the causes and effects of a specific teaching method, but rather we want to broadly understand the processes of learning and teaching, including its social, historical, political and ecological perspectives. In this orientation, the focus is not only on developing effective methods for learning and teaching, but also on the aims and values of education. This kind of orientation, interested in not just the means but also the ends, may also be called *research on education* as an alternative to *research on schooling*, which refers to the previous technically and instrumentally oriented approach (Heikkinen et al., 2018).

The third interest in improving pedagogical practices can be called a *critical orientation to pedagogical development work*. This form of action is informed by critical insights and shaped by the critical disposition implied in Habermas' notion of a critical-emancipatory interest of knowledge. In this case, we are interested in questions of how to improve pedagogical practices to promote justice, fairness and equality among people. As Carr and Kemmis (1986, p. 204) note, this orientation is based on the aforementioned interpretive-practical orientation; it includes the forms and impulses of that orientation but extends them to collaborative work aimed at transforming educational institutions towards justice, fairness and equality among people, including also global and ecological perspectives. A prerequisite for a critical-emancipatory research orientation is that the researcher and the society in which the research is being done are aware of the social, political, historical and ecological conditions of the specific and local pedagogical practices. In other words, an interpretive-practical orientation can be seen as a step towards the critical-emancipatory approach. This orientation can also be called *critical praxis* enacted in pedagogical contexts. This kind of pedagogical development work is most typically

a collective social action that involves critique, and, where necessary, transformation of the taken-for-granted discourses, structures and relationships that prefigures, and often predetermines, our existing educational practices and which impede people's agency, both within educational contexts and society more generally. From this perspective, developing pedagogical practices is about nurturing the expression of critical dispositions and capacities for critical thinking in order to overcome injustices, indoctrination or ideological practices in education and, ultimately, to contribute through education and knowledge generation to the creation of a more just and sustainable society (Mahon et al., 2019). This perspective on educational development has been especially advocated by the *practice-critical approach* tradition, or the *participatory action research (PAR)*, or *critical-emancipatory action research*.

Conclusions: Let all the flowers blossom?

There are numerous ways to find and label your own approach to developing pedagogical practices. On one hand, from the sociology of knowledge perspective choosing between the different alternatives can be likened to choosing (scientific-political) parties or 'academic tribes'. On the other hand, different traditions of scientific research have different presuppositions about reality (ontological assumptions) as well as incompatible understandings regarding the interests of or dispositions to knowledge (epistemological assumptions).

Firstly, we can consider different scientific approaches and paradigms as sets of different human social communities. The sociological tradition, *sociology of knowledge*, essentially examines the relationship between human thought and the social context within which knowledge is generated. Sometimes the situation can be analogous to a field of flowers blooming harmoniously side by side, other times it more resembles a family dispute or battle between rival academic tribes over living conditions, resources, and academic recognition. The latter analogy of tribes is taken from the classic work '*Academic tribes and territories*' by Tony Becher and Paul R. Trowler (2001). According to them, practices are configured in academic territories so that specific 'tribal' characteristics are discernible within disciplines. An important element of a tribe is the sense of community and togetherness offered by the social community. Becher and Trowler claim that knowledge is not achieved on rational or epistemological bases alone, rather the social construction of the different academic communities and schools of thought play a significant role. The ways in which different scientific approaches are shaped follow very similar procedures to the emergence of tribes and communities in general. This perspective

on the social conditions of knowledge has also been introduced by Peter L. Berger and Thomas Luckmann in their book *The Social Construction of Reality* (1966). Also, the ideas of *genealogy and archaeology of knowledge*, introduced by the French philosopher Michel Foucault (e.g. 1969), are useful insights into the social and historical construction of knowledge. Foucault's genealogical and archaeological analyses of knowledge imply that knowledge is achieved through established conceptions of knowledge, truth and power. What are seemingly natural categories to us are actually historical constructs articulated by words and discourses. The different academic schools or 'tribes' also provide historically formed social conditions for knowledge and thus form a given frame for understanding what pedagogical development is about. Today, for example, we can see the impact of presuppositions from the economic sector on the educational sector; neoliberal assumptions, rooted in economic values and productivity thinking, that education can be made more effective by making children and schools to compete against each other (Peters & Bulut, 2011).

It is useful to be aware of these aspects of the sociology of knowledge when associating a pedagogical or didactic approach with a certain school of thought. It is also worthwhile reflecting on the relation of the approach to different knowledge-constitutive interests, or dispositions. It can be very challenging, if possible at all, to make generalisations about the relation of different traditions to different interests of knowledge, but it is possible, at least in broad strokes, to find some common characteristics.

The *design research* and *R&D* approaches focus, at least in their original sense, on questions that can be understood as technical and instrumental problems: how to design a product or a procedure, a model, or a social practice that works in an effective way. There seems to be little, if any, interest in the social or historical conditions of practices within these approaches, although the ecological aspect is present in some cases. The same seems to apply to *translational research*, where the focus is more or less on 'translating' the results of research to the practitioners, and vice versa. *Action research*, *developmental work research*, and *practitioner research* are multifaceted approaches, and it is risky to claim anything about their relation to the knowledge-constitutive interests. However, developmental work research (DWR) is associated with the social, cultural and historical contexts of action, an orientation that is highlighted in its theoretical basis, as developed by Vygotsky and Leontjev, and can thus be associated with the interpretive-practical orientation. *Action research* and *practitioner research*, in turn, seem to be very broad umbrellas for pedagogical development work. For some, action research is the broadest umbrella and also covers practitioner research, while others take a completely opposite view. However, it is at least easy to say which approach is the oldest: action research came first and, in that

sense, kicked off the game. From this perspective, it can be considered a denial of history to ignore the contribution of action research and start the historical narrative from practitioner research, design research, developmental work research, translational research or any other fashionable concepts, and to sign up to approaches claiming to be ‘new’ and ‘fresh’, perhaps merely to give an impression of smartly following the newest fashion trends.

It is also hard to say anything general about the knowledge constitutive interest of action research or of practitioner research. However, here again, a historical perspective can be helpful. Habermas developed his theory of knowledge and human interests in the late 1960s and it was first published in the early 1970s, much later than the emergence of action research came on the scene. Therefore, little can be said about the knowledge interests of action research in its original meaning. The same applies to practitioner research.

Nonetheless, each researcher must decide themselves how to name their own approach to pedagogical improvement. Whatever methodological approach or academic tribe you wish to associate with, your basic epistemological orientation is worth reflecting on. Is it all about the theory; are you aiming at pure knowledge, meaning that you hold a *theoretical* orientation *about* education? Or are you more interested in improving methods and practices *for* education? Is it more about effective tools for the work of teaching from a *technical-instrumental* perspective? Or do you favour a more contextual approach and take the historical, philosophical, social and ecological contexts as well as questions about the aims and values of education into account, which associates you with the *interpretive-practical* perspective? Or do you want to change the world instead of merely interpreting it, meaning you have a *critical-emancipatory* orientation? Only you can answer these questions – the choice is yours alone to make. If you do so, you are not choosing between black and white or good and bad, but choosing for the sake of your own awareness and for the information and enlightenment of your readers.

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