Knowledge Transformation via Dialog: The Perspectives of Practitioners in Early Childhood Education

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Abstract:

Knowledge transfer, understood as the collaborative transformation of knowledge through practice and research, demands dialogue among the participants. This involves the exchange of not only knowledge but also behavioral and interpretative patterns. A content analysis of five group discussions conducted in early childhood education and care centers unveils that practitioners primarily highlight existing barriers to productive dialogue between research and practice. These barriers include the perceived lack of practical relevance in research, a vague conception of research, and a hostile relationship between the two domains. Addressing these diverse needs for action is pivotal for achieving sustainable, practice-oriented development and fostering the necessary connectivity among the participants.

Keywords:

Knowledge transfer
Early education
Knowledge transformation
Group discussions
Research-practice dialog

1. Introduction

The question of how empirical findings can become relevant for action in practice is increasingly at the center of educational science discourse [1–2]. In the multidisciplinary debates, it is becoming apparent that the idea of a linear transfer of knowledge is increasingly being replaced by that of a reciprocal, interactive transfer process between equal actors [1–2]. Scientific knowledge is therefore not adopted one-to-one by practice but only becomes connectable through "reinterpretations" of the scientific interpretations offered [3]. It is evaluated by subjects with their logic, processed and integrated into their bodies of knowledge so that new knowledge can emerge, i.e. it is transformed. Dewe emphasizes that this transformation of knowledge is by no means the exclusive task of practitioners, but that all relevant actors, including researchers, participate in such processes [4]. He speaks of the constitution of a "third field of knowledge", which is fed by interactions between the actors and makes it possible to relativize different perspectives [1–2, 4].

To initiate such a process of knowledge transformation, a dialogue between relevant actors from

different systems, such as representatives of providers, researchers, or educational professionals, is crucial. This is because they are shaped by the respective logic of action of their organization and act as autonomous and control subjects [5]. Through dialogue, it is possible to make patterns of interpretation and action as well as bodies of knowledge easier to understand and to transform knowledge [6]. This article takes up this perspective and aims to clarify how educational professionals perceive such a dialogue. To this end, selected results from five group discussions in daycare centers (Kitas) are presented, which were conducted as part of the project "Metavorhaben: Quality development for good education in early childhood (MetaQEB)" project.

2. State of research and research question

The conditions for knowledge transfer can be described as an under-researched topic for early education [1–2]. However, findings from various fields of research provide indications of the relevance attributed to dialogue and cooperation between the actors involved.

For example, studies from social science utilization or transfer research show that the exchange between research and practice is a prerequisite for transfer. A DFG priority program from 1982 can be seen as the starting point here, which stimulated a discourse on a new conceptualization of the relationship between science and practice [3]. Utilization is outlined as an adaptation process that takes place in interaction systems in which the actors from different areas communicate and differentiate themselves from one another, i.e. relate to one another [7]. Studies can also be found for social pedagogical fields of work that emphasize a "dialogical transformation of knowledge" if practices in social pedagogy are to be changed [6]. Dialogue is a concrete practice that takes place between acting subjects. The aim is to initiate processes of understanding the different perspectives on the same object.

Results from implementation research in the education sector also show that dialogue between those involved is a success factor for the further development of practice. As a result of a systematic overview of 33 studies, Schrader et al. pointed out that, in addition to other factors, a changed culture between research and practice is crucial for the successful implementation of innovation [8]. Such a culture should be characterized by cooperation and the active involvement of practitioners in the implementation process. In addition, practitioners must be recognized (e.g. through public acknowledgements, assignment of expert status). Roth et al. also emphasized the importance of developing a common language and reflecting on the implementation process between practitioners and academics [9].

Studies from the USA on "research-practice partnerships", which are regional, long-term collaborations between representatives from research and practice, also provide indications of the relevance of dialogue between research and practice [10]. These are successful in terms of the sustainable further development of systems, routines, and behaviors if they are characterized by joint negotiation processes and shared decision-making power [11]. In addition, it is crucial that the participants overcome barriers due to different languages and thus broaden their perspectives [10]. Uncertainties, different expectations about norms and responsibilities as well as possible conflicts should be dealt with in a solution-oriented manner [11].

The selected research results cited above indicate that a dialogue between practice and research can also be considered a prerequisite for the effective further development of the field of work in early education. This article follows on from this. It focuses on the question of how educational professionals in daycare centers perceive the dialogue with researchers and what expectations they associate with it.

3. Method

In October 2021, the authors conducted five problem-centered group discussions with educational professionals in daycare centers [12]. The sample (**Table 1**) was drawn from a wide range of daycare centers in terms of organization, size, and location [13].

Each group discussion was opened with an impulse based on results from quality research [14]. If more specific statements appeared necessary, problem-orientated follow-up questions along a guideline were

Table 1. Daycare centers information

Daycare center	Participants	Qualifications	Location	Operator	Number of children cared for
2	3 (management, deputy management, 1 paedagogical specialist)	1 nursery school teacher 1 childcarer 1 qualified social pedagogue	Big city	Free	22
3	7 (management, deputy management, 5 paedagogical specialists)	7 nursery teachers	Medium-sized city	Communal	260
4	5 (deputy head, 4 paedagogical specialists)	1 primary school teacher 1 university degree(unspecified) 2 nursery teachers 1 childcarer	Metropolis	Free	88
5	7 (management, deputy management, 3 educational specialists, 1 trainee, 1 FSJ student)	5 nursery teachers 1 in training to become an educator 1 A-levels (FSJ)	Large town	Free	up to 41
7	3 (management, deputy management, 1 educational specialist)	2 nursery nurses 1 childcarer	Rural community	Free	43

Notes: Stellvertr. = deputy; päd. = pedagogical; Azubi = trainee, FSJ = voluntary social year; Two further planned discussions (Kita 1 & 6) could not be held at short notice due to an infection with COVID-19 in the daycare center and a cancellation without further justification.

possible [12]. The open and flexible guidelines covered the following topics: pedagogical professionals' expectations of research, cooperation with researchers, reception of research findings, team conditions, and local structures.

The fully transcribed group discussions were analyzed using content-structuring content analysis to draw a thematic cross-section through the extensive data material [15–16]. Based on initiating text work for each group discussion, which allows an interpretative approach to the data material, case summaries were created with initial hypotheses and decisive lines of argumentation [15]. The subsequent development of a category system initially considered deductive main categories (MC) along the guideline, which were expanded inductively from the data material with main and subcategories (SC). Thematic, analytical, and natural categories were used, the meaning and coding rules of which were recorded in a category manual with anchor examples [15]. The data material was coded along the category system (10 HK, 59 UK) using the MAXQDA 2022 program [23]. This was done in the sense of a "subjective assessment", in which two researchers coded the data material independently of each other and then compared the codes. Consensual coding was achieved by preparing memos and comparing

disputed codes; for detailed information on the methodological approach [15, 17–18].

For the present partial evaluation of the data material, the focus was on the categories that provide information on how educational professionals assess the dialogue with researchers. These main categories and their subcategories are:

HC Description of research by practice (UK: "this" research, tasks, disciplines);

HC Gap between practice and research (UK: unrealistic research, cooperation and participation, little recognition by research, researchers do not know practice, research questions);

Consequences of research (UK: Foundation of education, Usable for action, No added value, Pressure on professionals, Pressure on parents, Optimization of childhood, Produces nothing new, Constantly sets new trends).

4. Results

In all five group discussions, the educational professionals negotiated how the relationship between practice and research can be defined from their

perspective. The content of the discussions is presented below as a cross-section along key topics and illustrated using quotes. Scenic and contextual information was added to illustrate the atmosphere and possible role conflicts within the group [12].

4.1. Unknown dialogue partners

The topics of the group discussion initially show that the respective tasks or logic of action of the potential dialogue partners are difficult to assess from the perspective of the participating professionals.

In all five daycare centers, for example, it was discussed that researchers could not easily understand the conditions under which practice takes place, the processes in the daily routine, or the pressure to act under which professionals operate. The professionals in daycare centers 3 and 7 confirmed that it was important for the researchers to experience everyday educational life, and to immerse themselves in it to find out what it means. In the group discussions, a demarcation between practical and research activities becomes clear, as the following example from daycare center 5 impressively shows. Here, there is ongoing speculation as to why the results of the quality research, which were described as the initial impulse, attest to the daycare centers being of poorer quality than the professionals expected.

B1: If the researchers perhaps do not/

B3: (quietly) Have the knowledge.

B1: Have never worked practically on the child, but only think about quality, but not

B2: Yes.

B3: Yes.

B1: About the realization of quality.

B7: And about working with the child.

B1: And that this could perhaps be organized more simply in practice than it is seen from the outside. Or is seen. I mean, that happens to us too, that parents sometimes do not see it, yes? That they still think we play all day and do not recognize the quality behind it, yes?

B7: Drinking coffee.

B3: Mhm (affirmative). (Daycare center 5, 70–83, smoothed transcript).

This excerpt shows that educational professionals are looking together for answers as to why quality can

hardly be assessed from the outside. They lack the necessary experience if they have never had to realize quality in practice. Researchers, like parents, are seen as "outsiders" who are also unable to recognize quality from the outside.

The group discussions also make it clear that the participants cannot fully understand the tasks and areas of responsibility of the researchers. The research objects and questions from different disciplines (in particular neurobiology, developmental psychology, linguistics, and medicine) associated with the term "research" in the group discussions seem unclear. This diffuseness is reflected in formulations such as "this research thing" (Kita 3, B4, 206) or "this research" (Kita 4, B3, 596). Research is "somehow" trying something out (Kita 7, B1, 612) and takes place in some "research science buildings" (Kita 3, B2, 471). The paedagogical professionals attribute tasks such as improving the staff situation or enabling free access to libraries or zoos to the researchers (Kita 3, 4 & 5). Here, different actor levels, that of politics and research, are mixed and the desire for an improvement in the work situation is clearly expressed by the professionals in all group discussions. Accordingly, research is presumably also addressed here as an actor that should contribute to such an improvement.

4.2. Dialogue relationship with obstacles

The second thematic focus of the group discussions relating to the dialogue between researchers and educational professionals bundles indications of how the participating professionals experience the relationship with researchers.

It was thematized in Kita 3 and 7 that research seeks too little contact with the practice and that practice is not listened to. The consequences of practice through the implementation of new research findings, such as support programs, are of little interest (Kita 2 & 7). In Kita 7, these statements are embedded in a discussion that is characterized by a certain resignation in various phases. Research could hardly contribute to improving the situation and neither professionals nor children would benefit from research results, also because political decision-makers would refer too little to these results. The professionals in daycare center 2, on the other hand,

fundamentally doubt the usefulness of research results and consistently lack an interest in research in feasible, real-life practice.

Researchers also give too little back to practice, as discussed in daycare center 5, which has already taken part in several research projects. Everything is provided, the children and professionals are motivated and the daily routine is adapted. However, no feedback is received from the researchers, even though the participants believe they have a 'duty to provide it'. In the discussion, this lack of feedback is also seen as a lack of appreciation. In other group discussions, too little recognition from researchers is also discussed. For example, the professionals in daycare center 3 discuss the fact that researchers do not value the skills and knowledge of the professionals enough. The educational professionals also described themselves in other phases of the discussion as pedagogical staff also described themselves as passive performers in other phases of the discussion, who are rarely listened to and hardly involved in decisions. In Kita 7, using the example of the mandatory observation forms introduced by the Ministry of Social Affairs, which the professionals regard as the result of research work, it is argued that the professionals are denied the competencies to carry out observations independently.

The professionals in daycare centers 3 and 5 not only do not feel recognized but from their point of view the field of work and their personal commitment are partially devalued by research results. This is illustrated by the following quote from daycare center 3, in which a specialist refers again to the initial impulse, the results of quality research, towards the end of the discussion about possible cooperation between practice and research. Even though the professional laughs at several points, her concern is clear.

"But the research has also told us that we are not good enough. (laughs) So we can probably stand on our heads and do all sorts of things. I actually think that is a real shame. Because you have to make such an effort and do so much and try so hard and, yes, you like doing the job. But if you then get something back from research, but it's not excellent - (laughs) (several laughs) and I have to read up again in my free time because I cannot do it at work and do something in my free time, but

it's not excellent. (laughs)" (daycare center 3, B1, 284, smoothed transcript)

In addition, the participants initially seem to hold research and its results in low regard. A common thread running through the five discussions is that research produces results that are of little use in practice. The results are produced under ideal conditions and look good on paper but have little to do with the reality in daycare centers. The results are "smoke and mirrors", as they could not be implemented by the "average teacher or child carer" (Kita 4, B3, 763) under the conditions in the daycare center. This aspect is brought into the discussion by the language support worker from daycare center 4, who describes herself as having an affinity for research and also emphasizes elsewhere that there are important research findings, but that they are difficult to implement. Kita 5 and 7 also emphasized that research results and innovations in the field of work are important. However, the results are not sufficiently applicable to the challenges of practice.

Furthermore, Kita 3 discusses that researchers have too narrow a view of educational processes and that each discipline only produces results within its boundaries. This means that the complexity of pedagogical practice cannot be taken into account and pedagogical objectives can hardly be considered. In Kita 3, it is discussed in detail and possibly in the sense of striving for consensus on how theoretical impulses from the training of professionals (e.g. saying no is forbidden) or from science (e.g. asking every child before nappy-changing whether they agree to it) are too one-dimensional and fail to meet practical requirements.

Although research findings are relevant for the foundation of training (Kita 4 & 5), research is often an end in itself. According to Kita 4, the body of knowledge in daycare centers is already very large, yet research continues without any consequences. Kita 3 criticizes the fact that it is often incomprehensible why certain research questions are formulated as such. The associated constant expectations of changes in educational practice were described in the discussion by the management, the deputy management, and also by a participating group leader as stressful. In this context, the following quote may indicate that there is a lack of appropriate moderation of change processes in this daycare center.

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"Because you just get the feeling that what often overwhelms us or what comes at us from all sides is becoming more and more and comes from a lot of clever research. There was something interesting. We still have to include THAT. And can we not perhaps? And that is what is simply putting more and more pressure on our chests. (...)" (Daycare center 3, B2, 142, smoothed transcript)

The discussion in Kita 4 must be viewed in a more differentiated way in this context. Only in this discussion — despite the phases in which the professionals take a critical stance towards research results — is the aspect of how scientific findings can be used meaningfully for their actions addressed in response to questions from the moderator. The professionals concluded that this provided security and orientation and that it made it easier to understand why children or parents act in a certain way. The acquired knowledge can be called up at the moment when it is needed in action.

4.3. Potential for and through dialogue
The group discussions include discourse on the motivation of the participating professionals to engage in dialogue with researchers and the potential they see in this.

In daycare center 2, for example, the idea is discussed that an exchange between practice and research is important so that research is informed more quickly about social developments that are noticed earlier in practice. In Kita 3, the professionals expressed the hope that the dialogue would enable them to get to know each other and that transparent information about developments could be passed on. It is possible that more impact could be achieved if research and practice were to cooperate to improve the situation in daycare centers (Kita 7). For empirical findings to bring about sustainable changes in practice, dialogue is important.

Well, also with much more communication with each other. Not just putting it over because we're now saying that's good and you're doing it down there, but really communicating on a level (Daycare center 7, B1, 493).

The educational professionals (Kita 2, 5 & 7) argue that participation in the development of new ideas for the field of work brings decisive advantages

for the practical relevance of research results. The idea of joint development of projects, programs, and so on, is described: Research and practice observe the implementation, exchange ideas, reflect together, and then — if necessary — change processes. In addition, the idea that professionals themselves (co-)research is formulated as beneficial (Kita 3). However, the time required for such active participation must be manageable given the tight staffing situation in the daycare centers (Kita 2 & 7).

5. Discussion and conclusion
The topics of the group discussions show that the participating professionals were fundamentally dissatisfied with their work situation. The cooperation with parents, which was mostly perceived as complicated, the poor staffing situation, or the lack of recognition from society characterized individual phases of the discussions. In some cases, the question of knowledge transfer seemed to act as an outlet for expressing their own frustration and excessive demands. In particular, when the professionals appeared emotionally affected, e.g. due to the pedagogically questionable wishes of parents, new, completely overwhelmed colleagues, or the noticeable devaluation of their professional competencies, a "ramping up" of this frustration cannot be ruled out despite appropriate moderation during the discussions. The professionals' view of research and its results can also be influenced by this.

Nevertheless, the group discussions revealed very serious, reflective, and controversial discussions between the professionals regarding their perception of the dialogue with research [12]. In summary, the analyses show that educational professionals particularly address the barriers to a profitable dialogue with researchers. The potential dialogue partners, their approach, and tasks are difficult to assess. The relationship between practice and research is usually described as a gap and, as Coburn and Penuel emphasize, two different cultures are emerging.

This can also be linked to the fact that the participating professionals describe empirical findings as more of a burden than support. There is hardly any indication of added value for professional action, as the consequences of research do not seem comprehensible

or are experienced as negative. It can be assumed that this critical view of research results is not necessarily an expression of their poor quality or a lack of interest on the part of the professionals. Primarily, a communication problem becomes apparent, which is caused by various barriers to communication. Professionals lack access to empirical findings as well as opportunities and places for reflection to engage with them. The available findings on the relevance of a joint dialogue are reflected in the results of the group discussions. It can be assumed that greater participation by educational professionals and regular and ongoing dialogue between researchers and professionals should have a positive effect on the ability to connect empirical findings and thus on their evaluation by professionals. The group discussion in Kita 4 shows, for example, that a link between scientific knowledge and their actions is probably not immediately apparent to educational professionals. It only becomes clear that scientific knowledge can be beneficial through intensive discussion in interactive contexts.

The group discussions were primarily, but not exclusively, attended by professionals with a qualification as an educator. It is not possible to judge whether academic training opens up a different, more natural access to scientific knowledge. Irrespective of this, the topics in the group discussions allow the conclusion to be drawn that the professionals' knowledge seems to be strongly "embedded" in their practical work and is difficult to access explicitly [19]. This points to the underlying assumption of this article that empirical findings must be transformed so that they can be integrated into the professional knowledge of the professionals and thus only become connectable through dialogue.

Even an exchange as the lowest-threshold form of dialogue presupposes that one can rely on a flow of information [20]. Based on the analyses described above, there is a clear need for action here. This becomes even clearer if one strives for a co-construction of knowledge as a form of cooperation for a knowledge transformation as a dialogue, as described above, which is characterized by joint tasks and further development as well as shared responsibility and trust [20].

If a reciprocal connection between practice and research, between professional and scientific knowledge is to be established through dialogue, this requires not only time and financial resources but also opportunities for dialogue and encounters through an appropriate infrastructure [2, 6]. Also relevant are (regional) strategies to continuously overcome this lack of exchange, which is often described as a gap [21]. Forms of participation by practitioners in research processes should be examined, as well as further moments of equal encounters between researchers and educational professionals in the form of regional, longer-term networks. Recognizing each other's knowledge is crucial for this, as is valuing the professional knowledge of professionals and practice as a place of knowledge production [22]. The discourses in the participating daycare centers, in which possible potentials are discussed, show that there are certainly starting points for stimulating or intensifying such a dialogue.

6. Limitations

The study is exploratory in nature and thus, as a first step, points to the contexts, motives, and interests of educational professionals about the dialogue with researchers. The survey took place in autumn 2021 amid the ongoing COVID-19 pandemic. This tense situation may have had an impact on the professionals' perspective, as did the increasingly noticeable staff shortage and dissatisfaction with the work situation. The influence of the problem-focused initial impulse on the topic setting cannot be clearly reconstructed. Regardless of these possible influencing factors, the group discussions show that the professionals seriously, reflectively, and controversially deal with the perception of the dialogue with research, the consequences of research, the scope of empirical findings, and their expectations — also far beyond the topic of quality research.

Disclosure statement

The authors declare no conflict of interest.

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