Was It Useful? Multilayered Outcome of a Psychosocial Intervention with Teachers in East Greenland

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Abstract

Multilayered outcomes were found in the results of a follow-up study for an action research project conducted in East Greenland. The project was based on a community psychology approach that stresses the interdependent relations of change, structure, people, and community and emphasized the fundamental issue of grounding an intervention in local utilization. The project focused on mobilizing the resilience of vulnerable schoolchildren by advocating the students' perspectives in a collaborative intervention process with the teachers of a local school. The research question for the follow-up study was: What were the outcomes of the intervention project conducted with teachers of vulnerable students? In the intervention process, ideas for developing and changing practice were devised and articulated by the teachers themselves; however, implementation and change in practice did not happen linear to this process. The follow-up result of multilayered outcomes was analyzed in three main directional levels of implementation: a constructive externalization and implementation level, a generalized in-between level named forgetting-but-not-denying, and a resistance/rejection level (where no implementation occurred). The community psychology analysis and discussion of the results is supplemented with a cultural-historical theoretical dimension (primary from Jaan Valsiner) that focuses on individual processes of internalization and externalization and the different levels of integrating new knowledge. The paper summarizes crucial issues to consider in psychosocial intervention practice in order to implement change.

Keywords:

Local based, psychosocial, intervention, multilayered outcome, implementation, resistance, social interrelation, externalization, East Greenland, community psychology, cultural-historical psychology.

Introduction

The expression "Helicopter Researchers" is scary to psychosocial researchers who want to support local resilience in Arctic communities. This action research study was conducted in a town of approximately 2.000 citizens in East Greenland. Similar to many other towns and settlements in Greenland, the town can be reached only by helicopter or by boat, when the season and weather conditions allow it. Here, the term Helicopter Researcher is used to define a character who basically flies in with a helicopter, looks around for a while and perhaps shouts out something that does not make much sense locally, about what needs to be changed in the community, and then takes off again with the helicopter, leaving not much more behind than a tarnished reputation for researchers in general.

Perturbed by the prospect of becoming "yet another Helicopter Researcher", this researcher strove to become useful in local practice. The research topic was vulnerable children in East Greenland, and important in the process was the uniqueness of, and relevance for, local interdependent relations. Collaboration with the local school was established during several visits to the area, and an action research project was conducted as part of a program, already in place at the local school, called *Social Problems in the Town*. By focusing on "the town" instead of just looking inside the school areas, the school program indicated a community psychological association that emphasizes the relations between the school and community in child development (Guzzo, Moreira, & Mezzalira, 2015). The school program had implemented several activities, such as improving collaboration between parents and the school, and reward systems for extraordinary student efforts. However, the school program did not incorporate the students' own perspectives on the issues of building up the students' resilience and their motivation for school. As a result, the core of the intervention in the action research was facilitated in two workshops that focused on how the students' perspectives ("the voices of the students") could guide the teachers' pedagogical methods in supporting the resilience-building processes of especially vulnerable schoolchildren and supporting their motivation for schoolwork.

The intervention approach emerged from a community psychology theoretical foundation. This approach traditionally advocates for vulnerable groups, stresses the interdependent relations between people, community, structure, and change, and articulates a normative valuing of social justice, equality and transformation (Berliner, 2004; Berliner et al., 2009; Kloos et al., 2012; Nelson & Prilleltensky, 2010; Orford, 1999). The methodology usually consists of the establishment of alternative settings, case management, changed strategies, transformation processes, and social support in crisis situations, and the incorporation of ecological perspectives. In alignment with the values of community psychology, the process of successful implementation must be participatory (Kloos et al., 2012). An intervention program with children in Brazilian public elementary schools focused on assisting children who lived in exclusionary and unequal contexts by starting to understand their everyday life. The method of that program advocates an emancipation

process in which psychologists focus on the children's reality with the children (Guzzo et al., 2015). In East Greenland, the purpose of the intervention with the children was to produce knowledge for the teachers to develop their practice of supporting and mobilizing vulnerable schoolchildren. Thus, a large part of the project involved the teachers. This paper elaborates on the intervention with the teachers.

From the community psychology approach, the method of action research was chosen to base the study intervention on, and make it sensitive to, local needs. Action research is often defined as a broad concept covering various change-oriented research approaches all having in common that researchers and practitioners ideally collaborate to initiate change in practice and produce knowledge about practice (Greenwood, Whyte, & Harkavy, 1993; Lewin, 1963; Plauborg, 2015). The level and steps of collaboration in the project are carefully described and illustrated later in this paper. Firstly, however, an understanding of what the concept of intervention entails is presented.

Defining an intervention

The concept originates from the Latin word *intervenire* meaning to come between, interfere with, prevent, or hinder (*Free Online Encyclopedia*, 2015; *Shorter Oxford Dictionary,* 2002; *Webster's Third New*, 1961). Communication, actions, and relations are important aspects of an intervention, but what separates the definition of an intervention from the concepts of communication, actions, and relations is the inherent intention of doing something for or with someone (Argyris, 1993; Cook & Brown, 1999; Kragh-Müller, 2003; Vikkelsø, 2007). In research situations, various actions are types of interventions. Several examples are the communicative acts of describing a research focus, and the act of inquiring, or the act of communicating research results. As a result, determining where an act of communication ends and an act of intervention begins is often difficult. In the newer field of social psychology, the term intervention includes the purposeful element of an agent doing actions to affect expected development, though it is often considered more complex than a linear process of stimuli–response (Chimirri, 2015; Cole, Göncü, & Vadeboncoeur, 2014; Engeström, 2011; Mirza & Perret-Clermont, 2014).

The question of how to predict the outcome of an intervention in an open system,[1] such as human beings and their social relations, has been troubling psychologists for years, and more knowledge is needed in the field to direct and create sustainable and useful psychosocial interventions. This paper presents a contribution to that discussion, by focusing the research question of the follow-up study: "What are the outcomes of the intervention project conducted with teachers of vulnerable students?" By answering that

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[1] Concept from von Bertalanffy (1971)

question, specific approaches to the related concepts of resistance and interventions will be presented.

Interventions may vary in type and style depending on the ethics and epistemological foundation; therefore, intervention is often referred to with an adjective to direct focus on the characteristics and theoretical frame of the given intervention, for instance, experimental, formative, ameliorative, and transformative. The cultural-historical theorist Yrjö Engeström distinguishes between *experimental* and *formative* interventions based on Vygotsky's principle of double stimulation that argues for fostering learners' agency to implement change (Engeström, 2011). The project in East Greenland also relies on local agents to formulate and specify the intervention needed. However, the research was normatively directed to include the students' point of view, which was not included in the original school program Social Problems in the Town. Community psychology theorists distinguish between *ameliorative* and *transformative* intervention. The first promotes well-being and creates change within a system. A transformative intervention includes a focus on changing power relationships and strives to eliminate oppression. This type is generally the main priority of a community psychology intervention which strives to change the system itself and its assumptions (Nelson & Prilleltensky, 2010).

The East Greenland project advocating the students' perspective was intended to transform the assumptions and discourses of the teachers as well as the team management of the school that initiated the program Social Problems in the Town. The concept of transformation is also used in the theory of formative intervention (Engeström, 2011), but here the transformation is related to the work of the researcher who aims to promote and sustain an expansive transformation process, led and owned by the practitioners.

Considering the various theoretical optics, recent literature does not usually combine theoretical approaches from paradigms of community psychology and cultural-historical theory. However, the two paradigms share an interest in including dynamic approaches to cultural influences and reject a linear causality. Furthermore, the paradigms emphasize that actions appear in social relational processes, Leontiev's (1978) concept "*the social origins of intentional action*", and the community psychology nature of ecology emphasizes the influence of social systems (Nelson & Prilleltensky, 2010). The project in East Greenland strove to be flexible and sensitive to practice, and to produce psychological knowledge about practice. In the analysis, community psychology alone did not seem to provide a direction for a deeper understanding of the intra-relational human processes of implementation. Therefore, a cultural-historical angle was supplemented by including, in particular, Valsiner's (2006) model of internalization and externalization and the theoretical concepts of bricolage, constructive internalization, trajectories, and life courses.

First, this paper outlines the stages and aims of the action research project and its background concerns in East Greenland. This overview demonstrates the interventional

aspect of the research and the levels of collaboration. Second, the paper focuses on analyzing the follow-up study of the intervention. The results of the follow-up study analysis are presented and elaborated in describing how the multiple intervention outcomes can be characterized in directional levels of implementation. Third, a deeper exploration and a discussion of these results focus on intervention processes in open systems. Here, the cultural-historical concepts supplement the community psychology and thus frame and illustrate the point of the paper and the research question. Fourth, the conclusion summarizes points from the discussion and includes concrete methodical suggestions for successful psychosocial intervention.

The action research workshops

The background for the workshops lies in statistical data on the high rates of social challenges in Greenland (Ghosh, 2013; Karsberg, Lasgaard, & Elklit, 2012; Kirk, 2013; Naatsorsueqqisaatarfik, 2013; Olsen & Lind, 2011; Skovmand, 2009). In the eastern region of Greenland, the number of students who complete higher education is lower than that in the rest of the country. In addition, the number of people who experience alcohol abuse, poverty, compulsive gambling, domestic violence, suicide, and sexual offenses is higher than the national rate (Naatsorsueqqisaatarfik, 2013; Olsen & Lind, 2011). The lack of Greenlanders with a post-secondary education, especially those on the east coast, is visible in the workforce where most jobs that require a higher level of education are held by foreigners, particularly Danes.

The aim of the action research was to support, supplement, and develop the social work already created by teachers by asking for students' opinions and perspectives in order to identify how teachers could support the resilience-building processes of vulnerable students in particular. Furthermore, by identifying the students' interests the teachers should share and develop ideas to make the learning material fit the local circumstances and the students' everyday lives. The specific steps in the action research are illustrated in the cycle shown in Figure 2.
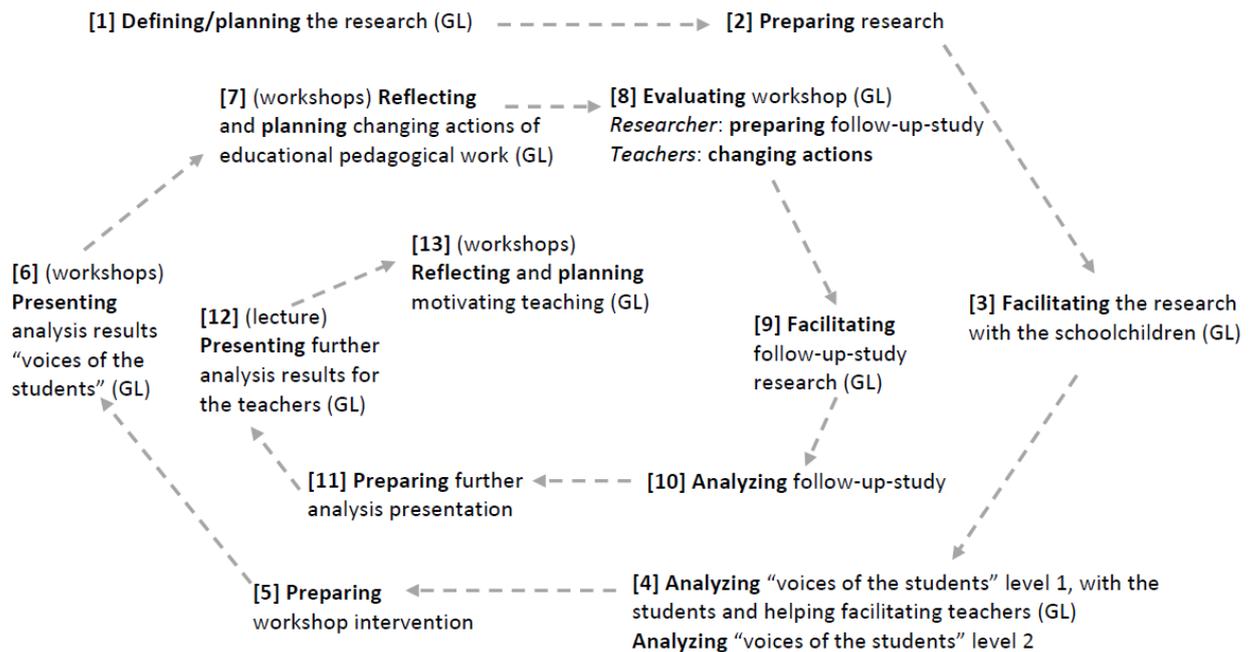
[1] Defining/planning the research (GL) – – – – – – – ⟶ **[2] Preparing** research

[7] (workshops) **Reflecting**
and **planning** changing actions of
educational pedagogical work (GL) – – – ⟶ **[8] Evaluating** workshop (GL)
Researcher: **preparing** follow-up-study
Teachers: **changing actions**

[6] (workshops)
Presenting
analysis results
"voices of the
students" (GL)

[12] (lecture)
Presenting further
analysis results for
the teachers (GL)

[13] (workshops)
Reflecting and **planning**
motivating teaching (GL)

[9] Facilitating
follow-up-study
research (GL)

[3] Facilitating the research
with the schoolchildren (GL)

[11] Preparing further ⟵ – – – **[10] Analyzing** follow-up-study
analysis presentation

[5] Preparing ⟵ – – – – – **[4] Analyzing** "voices of the students" level 1, with the
workshop intervention   students and helping facilitating teachers (GL)
                                    Analyzing "voices of the students" level 2

Figure 2: Action research cycle of community psychology intervention with local school in East Greenland.

To illustrate the steps of the action research that were produced on location in Greenland with participants from the school, a "(GL)" is inserted after the description of the step [1, 3, 4, 6, 7, 8, 9, 12, 13] in the cycle. Based on an agreement with the school's team management (consisting of the head principal, the deputy manager, and four teachers who acted as coordinators), a study of approximately 10% of the students between the age of 8 and 14 years was defined and planned, step [1].

The focus of this study was on social resilience-building aspects in the students' lives, such as experiences of happiness, security, social networking, as well as expectations, hopes, and dreams for their future. The data were gathered, step [3], through classroom-based processes with a qualitative questionnaire in the form of drawing templates with structured areas for different kinds of questions. The students could choose to draw images or write stories or statements that were elaborated into narratives during the classroom sessions. During the classroom process, the researcher and the local teacher facilitators were present and wrote down social observations and supplemental student verbal statements. Following the classroom process, some of the students participated in individual qualitative interviews about their lives and their opinions of the school (for more details on the data-gathering process and analysis, step [4], see Glendøs, in progress).

The workshops – the core of the intervention

Four months later, an analysis of the study with the students was presented to the school's teachers[2] in two workshops titled *Voices of the Students*. This part of the action research is when the core of the intervention took place. Each workshop had two agendas, illustrated in the circle (Figure 2) as step [6] and step [7]. The first agenda [6] was to present the students' analyzed perspectives. The students' concrete evaluations of the pedagogical approaches to schoolwork were normatively emphasized together with the students' narratives about supporting components in life and wishes for the future. The second workshop agenda [7] was designed for the teachers to explore and reflect on how this analysis could guide them in developing pedagogical approaches and educational practices at the school.

The aim of the project was not to produce a fixed model of action for the teachers. An important feature of the workshops was that after the analysis of the students' perspectives was presented, time was spent in the workshops to further interpret the students' voices. This became an additional step in the analyses in which the researcher and the teachers collaborated. It provided more knowledge about the students, and the participation of the teachers became relevant for suggestions for useful pedagogical methods in practice. A "new knowledge" was thus created in collaboration between the researcher and the teachers.

Immediate response of meaningfulness

At the end of each workshop, the teachers were asked to evaluate its content. Additionally, several days after the workshops, the teachers filled out an anonymous evaluation questionnaire created by the school's management team. The comments from the end of the workshops were written down and collected with results from the anonymous evaluation in an analysis of the teachers' immediate responses. The majority of the participating teachers evaluated the workshops positively and as relevant for their daily practice and concerns with vulnerable students. As a result, the overall teachers' opinion of meaningfulness was defined. No direct comments, after the workshop or in the evaluation notes, suggested changes, dislikes, or irrelevance.

Teacher A said: "*It's so nice that you present something from OUR students, something they have said, and not just generalize information about schoolchildren*".[3] This comment

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[2] In all, 46 teachers voluntarily participated in the workshops. The teachers represented different ages, genders, teaching experience, and ethnicities from West Greenland, East Greenland, and Denmark.

[3] All quoted teachers are anonymous.

emphasizes that the material "the Voices of the Students" presented in the workshop made sense because it concerned a current local situation. The comment also indicates that specific local-based initiatives are appreciated over generalized material. The schoolchildren in East Greenland and their specific lives and circumstances are important to be aware of in order to support mobilization. Hearing the voices of students in the capital Nuuk on the west coast would not be as relevant for local teachers. Another teacher (Teacher B) indicated that the material also presented a concrete and specific evaluation of their work and ideas for how to progress: "*When I see what the students have told you, it is as if the students really reached out a helping hand to the teachers with concrete guidance in what pedagogical actions that are motivational for learning*".

In addition to the comments, the teachers came up with ideas related to their pedagogical work for supporting the students' resilience and motivation for school. An example was that lessons across the school subject areas could be conducted outside the classroom and related to the mountains surrounding the town and/or the local community. This idea was inspired by the high frequency of outdoor activities in the students' narratives about good experiences in life (see Table 1 in the appendix for the students' concrete ideas). Important for all the suggestions was that they should be incorporated into the educational and social work that the teachers were already doing.

The teachers' evaluation comments and their engagement in the workshops indicate that the teachers found the workshops meaningful for their work and interests. The community psychological approach of grounding the intervention in local circumstances seemed effective according to the teachers' immediate responses. Other psychological studies on interventions emphasize the significance of meaningfulness and personal relevance as a huge motivation for change (Chimirri, 2015; Madsen, 2009; Watson, 1971). Lawrence and Valsiner (2003) stress the point that making personal sense of new knowledge accounts for basic internalization and externalization – both considered constructive processes. This point will be addressed in greater detail later in this paper.

Follow-up study

Eight months after the workshops, a follow-up study was conducted (illustrated as step [9] in the action research cycle, Figure 2) using qualitative questionnaires supplemented by formal and informal interviews with the teachers. In community psychological research, there is a tradition of using multiple research methods (Kloos et al., 2012; Nelson & Prilleltensky, 2010; Orford, 1999; Roger Stanton, 2014). Combinations of quantitative and qualitative methods are frequently used because they yield complementary forms of knowledge. However, the method chosen must always depend on the research questions (Kloos et al., 2012). The follow-up questionnaire had a quantitative and qualitative approach. The teachers were asked to evaluate, on a scale from 1 to 8, the level of usefulness of the workshops in the teachers' daily work. The evaluation scale was determined with 8 the highest ("the workshop was very useful to me") and 1 the lowest

experience of usefulness gained from the workshop ("The workshop was not useful at all to me."). Additionally, at the bottom of the questionnaire the teachers were asked to describe in particular what part of the workshops they could still remember and had used in their daily work afterward.

The option of answering the questionnaires anonymously was provided in an attempt to avoid a friendly answer instead of an honest answer. Furthermore, it was emphasized that an honest answer was very important for the follow-up study. Participation in the formal interviews was voluntary, and informal interviews occurred when some of the teachers chose to supplement the questionnaire and verbally explain their answers to the researcher. The formal interviews were recorded and transcribed, and notes on the informal interviews were written down immediately after they occurred.

The teachers' views of the usefulness of the workshop were analysed, step [10] based on the data from all the interviews and the questionnaires. The term usefulness was defined as a phenomenological approach of the individual experience of use gained from the workshop. The individual definition of usefulness was not described in the study, but the phenomenological experience of usefulness provided an indication of implementation. The more usefulness experienced, the more implementation was indicated.

To determine the teachers' perception of the usefulness of the workshop, three implementation criteria were evaluated in the analysis: 1) Whether the teachers had experimented with the pedagogical suggestions from the workshop, for example, increased outdoor schoolwork activities, 2) whether the teachers had chosen educational topics in schoolwork inspired by the students' interests, and/or 3) whether the teachers had reflected further on handling conflicts and everyday situations keeping in mind the "voices of the students." The analytical question of "whether" indicates whether *or not* the teachers had been implementing the new knowledge from the workshop. However, the data revealed more complex information than absolute answers of "whether *or* not."

43% of the teachers insisted that the workshop had been useful in some way, but they could not give concrete examples of any of the three implementation criteria. After the period of approximately eight months between the workshops and the follow-up study, these teachers did not remember initiating any pedagogical methods inspired by the workshop, they did not remember combining educational material with a theme connected to the students' interests, and they did not recall reflecting upon the workshop afterward. Still, most of these teachers evaluated the workshop with a score of 6 out of 8 for usefulness. Teacher C said: "*I can't remember. It's probably a 6*". Given the evaluation scale for the questionnaires, a score of 6 is a perception of above-average usefulness.

The teachers' responses could not be analysed regarding whether the teachers had implemented the new knowledge created in the workshops. The teachers did not remember directly implementing the input from the workshop, but they did not completely reject the input, either. Something in between the two extremes of *whether* or *not* had to

be considered. That *something* was in the analysis categorized as "Forgetting-but-not-denying". The category was created to include responses from teachers who could not recall any specific use of the workshop yet evaluated it as having above-average usefulness. To illustrate the analysis of the follow-up study, the results are divided into three directional levels of interventional outcome, Resistance/rejection, Forgetting-but-not-denying, and Implementation, which are shown in Figure 3.
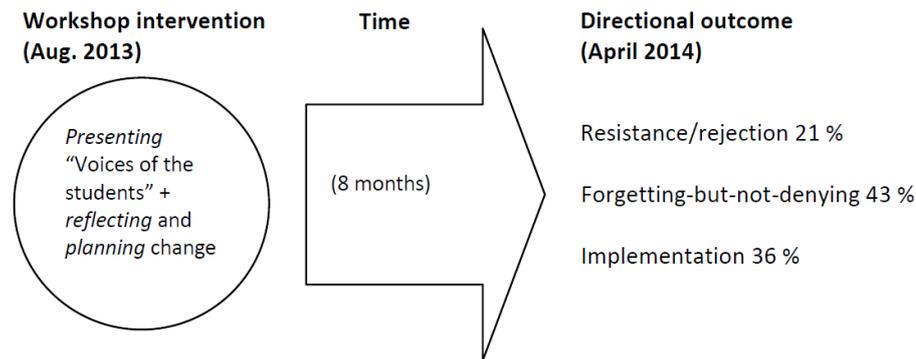
Workshop intervention
(Aug. 2013)

Presenting
"Voices of the
students" +
reflecting and
planning change

Time

(8 months)

Directional outcome
(April 2014)

Resistance/rejection 21 %

Forgetting-but-not-denying 43 %

Implementation 36 %

Figure 3: Three directional outcomes of the local-based intervention after a period of 8 months

Figure 3 outlines three phases of the intervention process, starting at the workshop intervention with the teachers in August 2013. The thick arrow emphasizes the significance of time between the research phases and the directional outcome, which is divided into three implementation directions and levels that were analysed in the follow-up study from April 2014 approximately eight months after the workshop intervention. Instead of just "outcome," the term "Directional outcome" is used to indicate an on-going dynamic perspective of intervention processes that potentially also develop after (and because of) the follow-up study. The three analysed directional outcomes should be seen as three synthesized directions in the multidirectional answers. Therefore, the three implementation levels can be understood as theoretical pin points on a much more fluid and overlapping outcome. The directional outcome labelled "Resistance/rejection" refers to how 21% of the teachers reported no change in practice and no further reflection derived from the workshops. "Forgetting-but-not-denying" was constructed to represent the fact that 43% of the teachers who could not accurately recall the specifics of the workshops but did not deny any change in practice from the intervention. "Implementation" contains 36% of the answers from the participating teachers; they reported further reflections on the analysis presented in the workshops or changed actions in practice that resulted directly from the workshops. In the following sections, the three directional categories are explored and discussed further.

Resistance/rejection

Within the field of psychology, the concept of resistance and rejection can be traced back to two main theories; the psychoanalysis of Sigmund Freud, where the concept is mostly related to an individual's defence mechanisms in resisting self-knowledge, and Kurt Lewin's articulated social resistance against organizational changes (Freud, 1990; Lewin, 1947; Madsen, 2009). Many scientists have since been engaged in the questions of resistance. In 1971, Goodwin Watson conceptualized the individual and social aspects of resistance as *the who*, *what*, *how*, and *place*. He focused analytical attention on the questions "Who brings the change?" and "What kind of change?" He formulated procedures for instituting change and the climate for change (Watson, 1971). Benedicte Madsen (2009) argues for interrelated coherence between individual and social resistance. She points out that resistance is generated by specific power constellations in social systems and is expressed as collective reactions that could not function if no individual members reacted through their own psychological field (Madsen, 2009, p. 412).

To avoid conflicts of power in the workshops, the *new knowledge* was created from the teachers' own reflection upon the presented "voices of the students." No authority asked the teachers to change their practice or formulate new ways of engaging with the students. The teachers themselves did that. They were given time to collaborate, reflect, and consider how to deal with the students' perspectives, and the teachers came up with ideas directly related to their own specific practices. Still, 21% of the teachers rejected their own ideas of change in practice or attitude toward their students. One of the Danish teachers resisted answering the follow-up questionnaire with the comment: "*I cannot recall that I participated. Maybe I have used some of it indirectly, but I've had plenty of other things to attend to*" (Teacher D).

Immediately after the workshop, the same teacher evaluated the new knowledge as relevant and meaningful for practice. Therefore, the lack of recollection seemed peculiar. However, an important element of understanding this phenomenon lies in the amount of time that passed between the workshops and the follow-up study. The longer the time period, the more interference must be expected. Various elements could explain Teacher D's inability, or unwillingness, to recall participating in and evaluating the workshop. The resistance to act upon the new knowledge could reflect a deliberate choice by the teachers. This choice could have been made for good reasons in the period between the workshops and the follow-up study. However, the aspect of time still interferes in a process of attenuation, which prevents the teachers from arguing this choice in the follow-up study or, for example, makes Teacher D deny ever participating in the workshop. The matter of time is also connected to the lack of recalling but not denying the new knowledge from the workshops.

Forgetting-by-not-denying

The Forgetting-but-not-denying directional outcome can be exemplified in the comment: "*I cannot say that I specifically used anything from the workshop, but it expanded my perception and understanding of 'the world of children'. And that/my understanding is the one that I use all the time in my daily work with the students*" (Teacher E). Teacher E obviously is not denying that participating in the workshop might have led to some reflection that expanded his understanding of the students; however, he has forgotten specific reflections or thoughts related to the workshop.[4] Half of the teachers who had forgotten the workshops' specific content stated that although they could not remember precise details, they thought they had gained something useful from the activities in the workshops.

From a cultural-history theory of constructive internalization (Lawrence & Valsiner, 1993, 2003; Valsiner, 2006), implementation of new ideas and actions happens through an individual's integration of the social suggestions. Nonetheless, the results of the follow-up study indicate that even if such integration is absent the intervention is not completely rejected. The outcome is directed toward an analysed middle between rejection and implementation. The term forgetting is an indicator of non-integration. The new ideas were not described as integrated in an individual's experience. They were not externalized but had been forgotten eight months later; still, the intervention was perceived as relevant and meaningful for daily work. The perception of meaningfulness was found not only in the immediate responses and evaluation of the workshops but also in the follow-up study when 79% of the teachers remembered the intervention as useful for practice: 36% describe acts of implementation, and 43% evaluate the usefulness of the workshops as above average and/or describe the workshops as having undefined meaningfulness (categorized as forgetting-but-not-denying).

Implementation

36% of the teachers who participated in the follow-up study reported implementing ideas that came up during a workshop. Teacher F describes one example of an idea implemented:

> I am using the thing about breathing... almost like meditating. Telling the students to get the "bad" out in the exhale and the "good" in with the inhale [...] I place them in a circle, and we start by doing a few body exercises and massage each other trying to be nice to one another. So,

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[4] Compared to Teacher D, who has forgotten even participating in the workshop, which makes her answer fit the criteria of the Resistance/rejection direction.

finally I let them sit in a circle, like when you meditate, telling them how to do it […] Sometimes it helps. Many of the students have so much anger inside.

This teacher explained the use of massage and meditation in the classroom. The teacher came up with this idea during the reflection process of the workshops and has used this method since. Neither the students nor the researcher had suggested the use of massage and meditation, but the teacher drew on her own experience and knowledge from other events in her life combined with information from the students' perspectives and her colleagues' reflections on the workshop. To understand the implementation of the results of the workshops, the concept of bricolage is appropriate.

Lévi-Strauss (1966) presented bricolage as a hybrid that is created out of whatever materials happen to be available. To understand why Teacher F uses her knowledge of meditation and massage to make her pedagogical practice more supportive for the vulnerable students, bricolage brings in an implicit inventory of the total means available. The means emerge from associations in a reflective process that combines new knowledge in relation to that which already exists.

Discussing the outcome directions

When intervening with open systems such as human beings, the outcome is expected to be influenced by aspects other than the intervention (Engeström, 2011). This can be explained by the dynamic nature of the open system that is essential for living organisms (von Bertalanffy, 1971). A living organism is maintained in a continuous exchange of components because metabolic changes are basic characteristics of living systems (von Bertalanffy, 1971). An open system is thus defined as a system that exchanges matter with its environment, by building up and breaking down its material components. Using theories of the open system, an unexpected outcome of a locally based intervention can be explained. For open systems, an intervention can create processes that lead to development and constructive internalization (Valsiner, 2008).

The influence of time and experience is explicit in the example of Teacher F, when experience and knowledge gained during the period before the intervention are included in the reflection upon practice development. Therefore, Figure 3 must be expanded by the range of time in the life of the teachers before the intervention representing the teachers' own experience material. Figure 4 expands on Figure 3 with the addition of arrows that illustrate the teachers' individual trajectories in the time before and after the workshop and the related different experiences, social pathways and individual life courses.
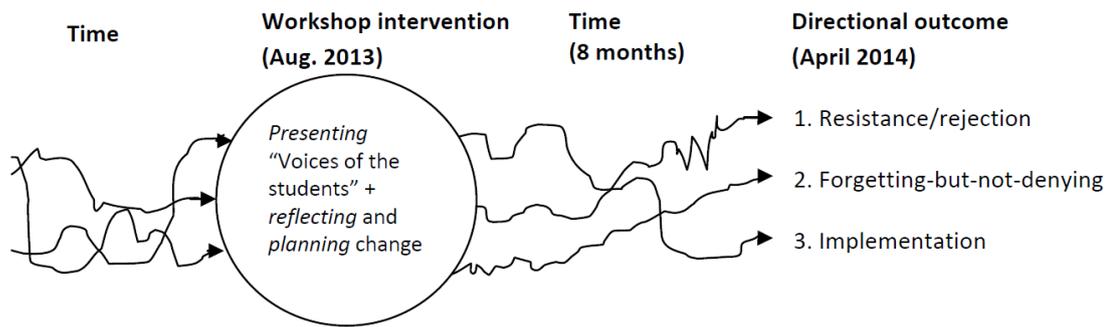
Figure 4: Expanding Figure 3 with the teachers' own experience material

Trajectories and life courses are connected to the theory of open systems and a broad theoretic orientation that encourages the study of changing lives in changing contexts (Elder & Shanahan, 2006). According to this perspective, an individual's life course is determined over time by the general and specifics of social pathways. This perspective correlates very well with the community psychological theory of interdependent social relations of change, structure, people, and community. The outcome and the constructive externalization of any intervention process are obviously affected by a dynamic view of life in the constant movement of time. Considering the perspectives of life courses provides a more complete understanding of individuals' choices and actions, and additional developmental suggestions can be made (Elder & Shanahan, 2006). The teachers' experience before the workshop intervention leads to varied expectations and perceptions. The implicit inventory of knowledge is used in the process of coming up with new ideas for school practice. Studying the trajectories in everyday life is central to psychology, as the trajectories provides an intermediate link between society, the individual, the historical context, and the components of a particular time and space (Guzzo et al., 2015). The perspectives propose an attention to the coherence between individual capacity and circumstantial restriction.

Constructive externalization

The three directional levels of the outcomes of the follow-up study can be analysed further by using Valsiner's (2006) model of internalization/externalization. Valsiner (2006) emphasizes that the person-in-context is constantly internalizing and externalizing meaningful life experiences and that there is a need to elaborate the specific mechanisms of that process (Valsiner, 2006, p. 14). His internalization/externalization model shows three levels for integrating new knowledge. He points out that the theorizing is done through multi-layered attention although only three layers are shown in the model (Valsiner, 2006, p. 15).
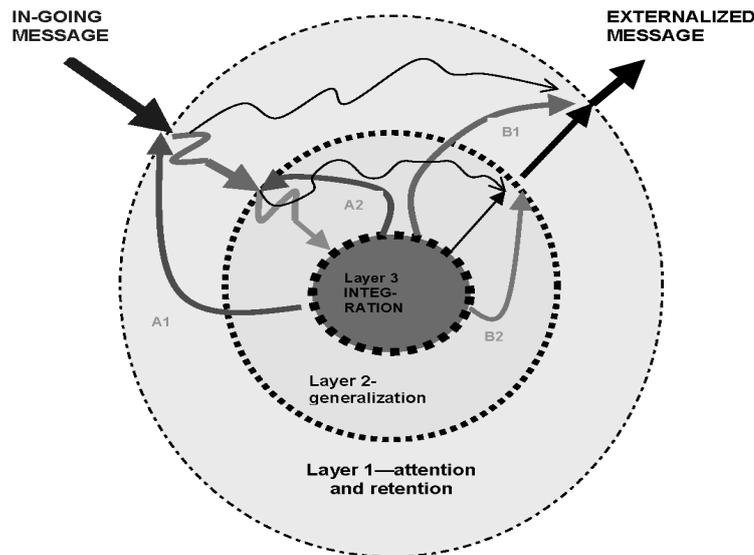
Figure 5: A multilayer model of internalization/externalization from Valsiner (2006, p. 14).

The three layers in the model shown in Figure 5 correspond to the directional outcome of the follow-up results. "Layer 1: Attention and retention" corresponds to "Resisting/rejection", "Layer 2: Generalization" corresponds to the "Forgetting-but-not-denting", and "Layer 3: Integration" corresponds to "Implementation." Thus, the model provides a theoretical image of the teachers' answers in the follow-up study and provides a deeper theoretical understanding of the implementation processes.

Valsiner's model focuses on the boundary crossings between layers as it shows how a hypothetical incoming message becomes modified at each boundary, illustrated as arrows becoming a lighter shade of grey after each passing. The inner core of the boundary contains a landscape of obstacles that depicts the incoming message in gradations (Valsiner, 2006). The arrows A1 and A2 illustrate that the boundaries are provided with emerging signals from Layer 3 that regulate the boundary buffering processes. When input is fully internalized in Layer 3, it is explained as being hyper-generalized as an affective field and turned into a value and an intrinsic motivation that directs future actions (Valsiner, 2006). The term "hyper-generalized" indicates a more adapted generalization compared to Layer 2, where the generalization is not integrated as a value that directs actions. In the internalization process, most social input messages become attenuated in Layer 1. There, the attention processes screen non-noticed suggestions, and forgetting mechanisms eliminate the ones that fail to penetrate the boundary between Layer 1 and Layer 2 (Valsiner, 2006). This could explain how Teacher D has no recollection of participating in the workshop. When input is fixed in Layer 2, a generalization of the new knowledge is being made, but no personal integrated externalization and further actions has been made.

The generalized "halfway there"

Through the internalization/externalization model, Forgetting-but-not-denying becomes an intermediate result of the internalization process. The teachers have kept the "in-going messages" from the workshops in the generalized Layer 2 without an individual construction of integration (Layer 3). Kept in Layer 2, a concrete externalized action in a teaching practice (implementation) is blocked. Still, the generalization could be thought of as nuancing the level of knowledge about practice. Thus, the teachers, who reported a Forgetting-but-not-denying answer in the follow-up study, could be more open to further integration of the new knowledge given the right stimulating opportunities.

When the teachers are "forced to" recall the workshops in the follow-up interviews, an unblocking process is established. The teachers in the category of Forgetting-but-not-denying express a generalized incorporation of the workshops that the teachers still considered meaningful for practice. Even though there was no report of teachers rushing out to their classes to implement the remembered suggestions after the teachers participated in the follow-up study, the school team management invited the researcher back to the school for an additional presentation of the findings from the inquiry with the students. Not in the form of workshops practice, but in a three-hour lecture setting for the entire teaching staff for all schools in the area. The management team hoped that repetition and a larger number of participants would increase the teachers' motivation to incorporate the "voices of the students" into practice.

Social structured opportunities

In the internalization/externalization model, the arrows of the externalized message get thicker in each layer on the way from the centre and out. This illustrates the process of an intention, a motivation, a value, or an abstract idea that becomes more concrete and integrated with an action in practice. The arrows named B1 and B2 illustrate the boundary buffering signals coming from Layer 3 (Lawrence & Valsiner, 2003) and affect the boundary material within each layer.

The inner core of the boundaries in an externalization process should be seen as dynamic areas created through interdependent social and environmental relations. This is illustrated in the model as the thin black wavy arrows from the in-going message boundaries to the externalized message boundaries and can be seen as perceived opportunities for change to happen in practice. The internalization process thus co-creates the externalization process in these boundary areas. However, by using the community psychological approach, more focus could be placed on the social or structured processes in the community, in this case the work related communities of the teachers and teams in the local school. Structured and practical settings, such as meetings that focus on discussing new actions, provide a space for opportunities and a more direct influence on the becoming of an action. To illustrate the attention on social structured opportunities, I added two arrows, C1 and C2, to the model.
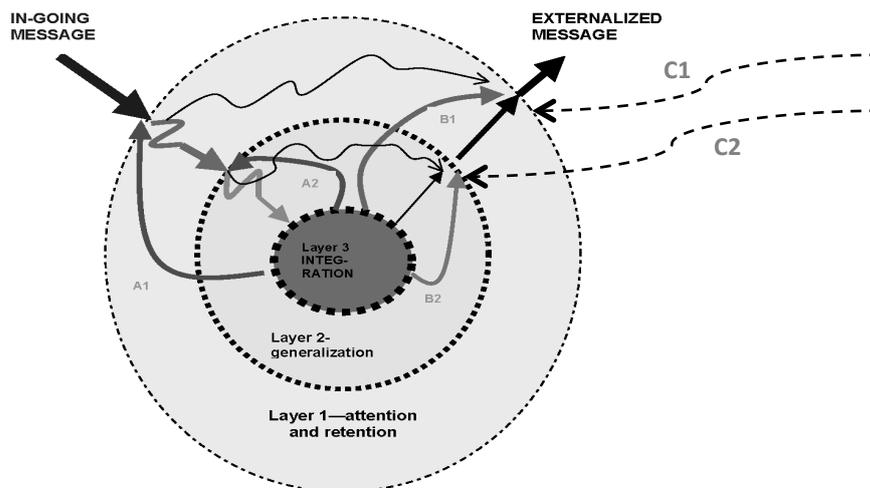
Figure 6: The multilayer model of internalization/externalization from Valsiner (2006, p. 14) expanded with arrows of perceived opportunities for action

The internalization part of the original model illustrates how the externalization boundaries are affected by the perceived achievability for the new behaviour to occur. The added arrows, C1 and C2, are intended to emphasize that the externalization process is related to social, relational, or community structured circumstances, which create opportunities for new action. Externalization depends not only on the subjects' internalization process but also upon other people, the social structure, and practical created opportunities for action. For example, when the teachers in the follow-up study were interviewed regarding the usefulness of the workshops, the follow-up interview situation itself provided an opportunity for reconsidering a future development of actions. If the eight-month period from the workshops to the follow-up study were structured with social reflections on how to use and implement the new ideas in everyday practice, this initiative would probably produce another follow-up result, in which the number of teachers who forgot about the activities and knowledge from the workshops would be lower.

Theories of change always incorporate the aspect of time, but articulated reflections are also present when people have to recall elements of a given situation. Wagoner and Gillespie (2013) demonstrate how imagery, narrative coherence, deduction, repetition, gesture, questioning, and deferring contribute to the transformation and conventionalization of remembering information. They argue that self-reflection is a social and a psychological process and that it occurs when participants respond to their own utterances in the same way as to the utterances of other people (Wagoner & Gillespie, 2013). This point correlates with the community psychological approach in the intervention process as a process that requires the structural incorporation of on-going support (Kloos et al., 2012). In the workshops with the teachers, the collaborative reflection method on the analysis of the students' perspectives was designed to incorporate

the teachers' own words, utterances, and ideas of practice development, but a follow-up supportive feedback process on the incorporation of change in practice and a social structure for continuous elaboration of the reflections was missing in the intervention design.

When there was no structured reconsideration or reflection practice, the teachers could have been isolated in their implementation process. Feedback and social communicative practice will support the development of new ways of behaving and integrate the change with a local, dynamic cohesion. The lack of social support and professional feedback from colleagues could have prevented some of the teachers from implementing or developing the new ideas in their practice. In time, an attenuation of the new ideas occurred, when no feedback effect was organized to support the intervention and the implementation process.

Time and transformation

Instead of a structured on-going dialogue with the teachers about implementing the new knowledge, other issues during the eight-month period affected the directional outcome. Investigation of the processes of developing and externalizing new actions requires the integration of time (Valsiner, 2008). Integration of time includes attention to attenuation, and experiences. In school life, teachers' time is often affected by other interventions by all kinds of agents (politicians, municipal partners and counsellors, the school principal, the team management, parents, students, and colleagues). Many issues other than the workshops' presentation of student voices occupied the teachers' attention during the eight month period[5] that could explain some of the teachers' lack of recollection. Furthermore, the time of year, including the seasons and weather conditions, is an important situational agent in implementing more outdoor schoolwork, for example.

Community psychology studies often conceptualize change as a transformational process as communities are constituted through multi-aspect processes that transform each other in a dynamic interaction over time. This point correlates well with the cultural-history studies that explain how transformational activities occur through the synthesis of activities of the person's mind with the continual guidance of the social world (Lawrence & Valsiner, 1993). In both theoretical disciplines, people are perceived as inseparably related to the world around them. Human beings are social not because they conform to "external social expectations" but because they transform these expectations into their own personal-cultural, intra-psychological inventions that are functional for additional encounters with the world (Lawrence & Valsiner, 2003). The human mind is social and personal because it is active in internalizing social material, with the aid of social institutions and people. By

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[5] Some of the teachers' colleagues had left the school because they had moved to other places, and during this period, two teachers from the school died (one was a suicide).

internalizing and externalizing experience, the human mind actively creates personal meaning out of social materials (Lawrence & Valsiner, 2003). The comment from Teacher E, ("*I cannot say that I specifically used anything from the workshop, but it expanded my perception and understanding of 'the world of children'. And that/my understanding is the one that I use all the time in my daily work with the students*") illustrates how a possible transformation of the reflection has clouded the specific memory of the workshop.

Conclusion

This paper presented results and analysis from an intervention in East Greenland designed as an action research project conducted with teachers of vulnerable students. Contributing to the recent research and theoretical knowledge about intervention processes and their not-so-linear outcomes, the paper demonstrates a methodology for an intervention that offers a normative, dynamic, psychosocial and intra-relational understanding of the processes of implementing, or resisting, new knowledge.

The results of the follow-up study of the project revealed multilevel outcome directions, which were analysed and discussed through a new combination of a community psychology intervention approach and cultural-historical theoretical concepts. The cultural-historical approach, especially Jaan Valsiner's internalization/externalization model, contributed to the community psychological analysis by focusing on the intra-relational processes of integrating new knowledge. The cultural-historical theories were supplemented by a community psychological dimension that emphasizes the importance of transforming socially structured circumstances in order to implement change.

Local sense-making of an intervention in relation to practice is extremely important and should be incorporated before, during, and after the core of an intervention. The intervention methodology of the project specialized as a form of action research, where a collaborative element is fundamental and the teachers themselves produced ideas for change in their work practice. Yet the researcher angled the research focus through a normative choice of advocating perspectives from the students in the school-initiated program for mobilizing vulnerable students.

The key premise for successful implementation lies in how the participants are given opportunities to co-conduct the intervention. Resistance or implementation in any psychosocial intervention should be analysed as interrelated with recollection and depends on three aspects: Time, other interventional inputs, and the intervention process itself. During the process, the intervention should be grounded in everyday practice and contain a following structured social feedback and opportunities for reconsidering, discussing, and planning change action in professional practice.

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Appendix

Table 1: The teachers' ideas about outdoor activities and integrating students' interests and resources in the educational work:

Lessons	Integrating games and play in the education - Teaching outside (on tour)	Training in extending students' interests and resources
Mathematics	- Things from nature or the city can be counted and calculated together - Crowberries can be weighed and recipes can be multiplied up so everyone gets a jar of crowberries jam - Spatial and kilometer measurements	- Geometry of a soccer field - Geometry about the house they live in
Greenlandic	- Seek out words when you walk (inspired by the landmark) and write them down; then write a story (essay) based on the words - Orienteering race	- The students create stories about things they like (topics that interest them)

	(*orienteringsløb)* between the street names in the city	
Personal development		- Doing meditation, mindfulness, or physical activities to help the students relax and focus
History/social studies/ geography	- Use nature to recall and tell Greenlandic stories, myths, and legends - Knowledge about stars, the universe, and space is interesting in winter	- Topics in genealogy/family history, using their own family stories
Music lessons	- Using nature to recall and learn Greenlandic songs	- Using popular music and music about themes the students like, such as football songs
Language lessons	- Naming the things you see in Spanish, Danish, German, English	- Using topics in Spanish about Spanish soccer clubs
General, in all disciplines	- Versatile teaching - Involving the family (for example, at exhibitions and social events) - Let the students work in groups - "Workshops lessons" in groups in which the group makes various assignments on different stations in classroom or outside - Physical activity can lift a tense mood or fatigued mood	- Remember to praise the students, including those who do not comply well - Sensing the student premises, the time of the week, the level of fatigue - Initiated student life in themes and activities - When you hand over school schedules, talk to the students about why we have it - Start every school year talking about what should be done - Evaluate with the students what they have done - Include more student participation