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Researching and directing the hidden curriculum – a case study

Abstract: On the basis of prescribed preschool curriculum, the results of relevant domestic and foreign research, presented conceptual and methodological approaches to monitoring and evaluating the quality of educational work in a preschool in correlation with the hidden curriculum, and considering quality levels, fields, and quality indicators, we developed an education and training model for researching and directing the factors of hidden curriculum. The model, which is designed to raise the quality of educational work in a preschool and is presented in this paper, was empirically verified. The research was based on two major hypotheses: (1) the education and training model for researching and directing the factors of hidden curriculum effects on raising the quality of the pedagogical process in a preschool, and (2) the education and training model for researching and directing the factors of hidden curriculum affects children's social behavior through preschool teachers because of changes in their conduct, influenced by education. The research results have shown that this education and training model is important and efficient in supporting and improving preschool teachers' pedagogical work, particularly at a process level. The model has enabled preschool teachers to research and direct factors of hidden curriculum and consequently improve the quality of educational work in a preschool through processes of action and evaluative research as well as confrontation or critical awareness of individual concepts.

Keywords: hidden curriculum, subjective theories, quality of educational work, methodology of researching of hidden curriculum and subjective theories

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Introduction

The hidden curriculum refers to preschool education content and the organization of everyday life in preschool as a set of practices, procedures, and rituals. It is an important educational factor encompassing various elements of educational influences on toddlers and children. In the form of indirect education, it often has more of an impact than direct educational activities that the *Preschool Curriculum* (1999) defines in more detail in terms of principles and goals (Kroflič 1997; Marjanovič Umek and Fekonja Peklaj 2008). The concept of preschool education quality is a concept that also includes the subjective, personal component. In addition to the impact of the legal, educational, and socio-cultural contexts in which preschools function, they also depend on various perspectives, perceptions, values, opinions, convictions, expectations that educators¹ have in relation to children;s development and developmental abilities, the goals of preschool education, on educators' personal orientation and active engagement in educational situations that indirectly or directly affect the context and quality of preschool education. Consequently, our research study, conceived as a case study, thoroughly examined the functioning of the factors of the hidden curriculum in relation to the quality of preschool education.

The hidden curriculum is importantly defined by the factors relating to preschool education quality indicators at all three quality levels: process, structural, and indirect levels. The following factors importantly define the hidden curriculum at the quality process level: social relationships, the interaction and communication between educators and children; preschool teachers' social and emotional responses to children's needs and their understanding of individual differences among them; the social atmosphere in groups; teaching rules and principles that toddlers and children quickly adopt; educators' hidden educational expectations; educators' personal orientation; their knowledge about children's developmental capacities not stated in the Curriculum's stated goals; special ways of socializing

¹ Feminine gender pronouns are used in the text to denote both genders.

and disciplining children during directed, routine, and transitional activities and during children's play; educators and peers with whom children identify; content and methods of directed activities; monitoring educational effects and self-evaluating pedagogic practice. At the structural level of quality, the hidden curriculum is importantly defined by factors such as the space where children have or do not have a choice; daily timetables and time organization in preschools; the formation and structure of peer groups within a group; the organization of preschool teachers' work and children's stay in preschools. At the indirect level of quality, the hidden curriculum is defined by these factors: counseling and expert support provided to preschool educators; the collaboration between teachers and teachers' assistant when planning, conducting, and evaluating the curriculum; the possibilities of employees for further training and education; cooperation and teamwork in preschools, etc. (Kroflič 1997, 2005; Marjanovič Umek and Fekonja Peklaj 2008).

M. W. Apple (1979, 1992), N. R. King (1986) and A. V. Kelly (2004) believe that the hidden curriculum has always been interesting for politics and different ideologies; there have always been tendencies to instrumentalize and misuse it for purposes that are (not) educational. Therefore, it can be viewed as the "battleground" of various competing influences and ideologies, which are often met with resistance, but which consequently find their ways into preschools and schools precisely through the hidden curriculum. The authors see such invasion of ideological elements as happening through the implicit learning of rules, content, values and norms, the organization and manner of preschool children's learning, learning forms and methods of work, learning social roles, rituals and daily routines, hidden expectations, etc. A great many factors of the hidden curriculum originate in each individual preschool teacher and her subjective theories that are not adequately reflected upon or expertly substantiated. It is particularly problematic if the hidden curriculum remains hidden precisely because of manipulative intentions, based on either political and technological or academic interests, trying to preserve the existing social ideologies or developmentality (Ginsburg 1996; King 1986; Mac Naughton 2005; Moss et al. 2000). It is, therefore, even more important for each teacher to be capable of deconstructing, critically analyzing, and suitably directing the ways of (her own as well as institutional or politically and ideologically "tainted") thinking and acting (Mac Naughton 2005; Moss 2011).

M. Batistič Zorec (2005) explained that the "tacit knowledge" that can be perceived in unplanned everyday communication and social interaction that preschool teachers have with children represents the "intersection" of subjective theories and the hidden curriculum in preschools. Analyzing different definitions and examinations of the issues, she articulated a "hypothetical construct of subjective theories formulation" based on the assumptions about what factors are likely to affect their formulation (Batistič Zorec 2003): (1) the views about childhood and education in society in a particular place and at a particular time have a direct or indirect impact on personal history, experiences, and knowledge that preschool teachers acquire prior to their formal education; (2) their subjective conceptions

change partly under the influence of new expertise and practical experiences during their studies; (3) the process of their reformulation continues throughout their employment in preschools or schools as the result of (pre)school staff functioning (preschool management, prevalent views and practices in the preschool), professional education and training, acquiring new practical experiences and the experience of their own parenthood, the standpoints and expectations of (pre)school children's parents, etc.

Since the *Preschool Curriculum* moves from a strictly content-oriented toward process/developmental and goal-oriented planning curriculum, that is, toward a more open curriculum, educators are given more professional autonomy (Kroflič 2001), which can also present more danger of bringing in the factors of the hidden curriculum. Thus, some reflection on tacit knowledge and one's own personal values is a prerequisite to identifying the possibilities of introducing positive changes to the least structured elements of a child's stay in preschool. This, however, is only possible through changes and additions to the existing subjective theories, on the basis of which preschool teachers can change their actions, that is, their pedagogic practice. Both constructs, subjective theories and the hidden curriculum, overlap in the unintentional and unplanned pedagogic practices and actions reflected in preschool teachers' communication and social interaction with children. Both importantly determine the educational process. It should also be added that both constructs are part of the power relationships and socio-cultural contexts in which preschool teachers live and work as well as of their own personal histories of life and professional knowledge and experiences. The experiences of older preschool teachers have a significant impact on the "routines of the hidden curriculum" as they become part of the subjective theories of younger or recently employed preschool teachers (Jug Došler 2012; Jug 2008).

The description of the education and training model for researching and directing the hidden curriculum

Having examined the research studies (e.g., Apple 1992; Astington and Pelletier 1996; Bahovec and Kodelja 1996; Batistič Zorec 1990; Gerbner 1974; Howells 1999; Jackson 1990; Kagan 1992; Kroflič 1997; Layzer et al. 1997; Mac Naughton 2005; Olmsted and Montie 2003; Pešič 1987; Turnšek 2002, 2005, 2008; Weikart et al. 2003) carried out in the area of researching the hidden curriculum from the perspectives of the content structure, research purpose, and the methodological approach used, we came to the conclusion that almost all of the studies are based on participatory research with the noticeable elements of action and/or evaluation research and research following the method of deconstructing and redefining one's own thinking and beliefs that direct the individual's pedagogic actions on the basis of the processes of critical awareness-raising and reflection. Research results also demonstrated that the factors of the hidden curriculum cannot be dismissed; rather, they must be expertly appraised and thoughtfully situated into planning, conducting, and evaluating pedagogic work and preschool education – primarily

at the level of each individual preschool or school as an institution. Education quality through researching and directing the hidden curriculum can be guaranteed only when it starts directly from practice, from practitioners who – in addition to adequate knowledge and the help of experts – evaluate the educational process, for themselves and children participating in the process, using the processes of monitoring and reflection (Jug Došler 2012).

The findings were integrated into the conception of our model of education and training for researching and directing the hidden curriculum (an original approach devised by A. Jug Došler). Using this model and monitoring the effects of pedagogic innovation, we researched and directed the hidden curriculum and subjective theories through the introduction and monitoring of the comprehensive inductive educational approach, regularly deepening and directing teachers' activities, their subjective views, and institutional routines through the process of research reflection. The participating preschool teachers were first thoroughly acquainted with the principal characteristics of the comprehensive inductive approach (an original approach devised by R. Kroflič) and their active role in encouraging children's prosocial and moral behavior through a lecture and reflections chaired by an expert. We also foresaw a wide range of educational activities, such as inductive disciplinary procedures in conflicts, encouraging prosocial activities, reducing fear of difference, encouraging group cooperation, etc. The inductive approach was also related to the use of art activities as inductive educational practices. The preschool teachers were acquainted with the procedure of making ethnographic notes and other forms of documenting pedagogic activities. Since the introduction of the comprehensive inductive educational approach is of such nature that it requires preschool teachers to act differently in situations that are mainly unplanned (with the exception of art activities), it had a major impact on the unstructured part of the preschool teachers' educational work, the hidden curriculum. Monitoring the effects of introducing induction was constantly related to teachers' changing actions, their subjective theories, and their daily routines and, upon reflection, continually paid attention to raising awareness about the significance of the functioning of the hidden curriculum factors.

A team of experts-counselors dealing with the issue of researching and directing the hidden curriculum was led by A. Jug Došler, who developed the methodology and instruments to monitor (assess) the initial and final states. To clearly illustrate the chronological sequence of introductory and monitoring stages as well as of pedagogic innovation monitoring, a table representing the educational and training model is shown below.

	<i>Activity/intervention</i>	<i>Instruments used</i>
<i>INITIAL STATE ANALYSIS (before the education and training)</i>	<ul style="list-style-type: none"> – The development of measurement instruments to analyze and assess the initial and final states (before and after education and training). – Conducting the initial state analysis. 	<ul style="list-style-type: none"> – Questionnaire to monitor and assess preschool education quality. – Questionnaire to monitor children’s social behavior. – Ethnographic notes.
<i>INTRODUCTION of changes</i>	<ul style="list-style-type: none"> – Instructing and acquainting the preschool teachers with the new model of the comprehensive inductive educational approach (lectures). – Acquainting the preschool teachers with the use of art activities as inductive educational practices (lectures, expert-led reflection). – Acquainting the preschool teachers with the model of the comprehensive inductive educational approach (consultations, individual and group discussions) training the preschool teachers in making ethnographic notes (a lecture, expert-led reflections, consultations). 	<ul style="list-style-type: none"> – The researcher’s reflection diary (for the purposes of the regular evaluation of the preschool teachers’ pedagogic work and the introduction of changes).
<i>MONITORING the effects</i>	<ul style="list-style-type: none"> – Conducting individual and group discussions with the elements of core reflection. – Conducting expert-led reflections. – Observing the preschool teachers during their direct pedagogic work with children with immediate discussions or consultations. – Holding consultations. – Conducting group interpretations of good and less good practices. – Examining and analyzing the preschool teachers’ pedagogic documentation. – Conducting self-evaluation of art and other educational activities. 	<ul style="list-style-type: none"> – The observation form (for the purposes of the regular evaluation of the preschool teachers’ pedagogic work and monitoring the effects). – The researcher’s reflection diary (for the purposes of the regular evaluation of the preschool teachers’ pedagogic work and monitoring the effects). – The preschool teachers’ ethnographic notes (for the purposes of the regular evaluation of the preschool teachers’ pedagogic work and the monitoring of effects). – Regular evaluation questionnaires. – The researcher’s individual notes on discussions and consultations held with the preschool teachers.
<i>FINAL STATE ANALYSIS (after the education and training)</i>	<ul style="list-style-type: none"> – Conducting the final state analysis. 	<ul style="list-style-type: none"> – Questionnaire to monitor and assess preschool education quality. – Questionnaire to monitor children’s social behavior. – Ethnographic notes.

Table 1: A schematic representation of the education and training model

The education and training model for researching and directing the factors of the hidden curriculum had the following methodological, structural, and content characteristics:

- The preschool teachers were the main agents of the whole research process throughout all the stages of researching and directing the factors of the hidden curriculum. They analyzed, substantiated, reflected upon, and improved their own pedagogic practice with the help of an expert-counselor. Thus, they were constantly in the process of professional growth, recognizing and understanding their active roles in the pedagogic process in relation to children and other contextual circumstances that have an impact on the planned and school curriculum.
- The researching and directing of the hidden curriculum focused on the individual level of the pedagogic work of each individual preschool teacher.
- The research was conducted in the natural, preschool environment with regular (formative) and final (summary) evaluations of the individual action steps and stages of the (self-) research and pedagogic work.
- The research process emphasized regular insights into the preschool teachers' concrete pedagogic practices and the identification of how and why they think as they do and how and why they act as they do, for instance, when planning or conducting something or when reacting spontaneously to different educational and disciplinary practices and prosocial situations.
- On the basis of the analysis of their pedagogic practice and beliefs that direct their views, experiences, and actions, the expert-counselor encouraged the preschool teachers and developed their active reflective attitudes toward their own professional activities. The counselor faced preschool teachers with their practices and raised ("opened") their awareness of their weaknesses and/or virtues during pedagogic work (of their active role and attitudes in relation to children) during the educational process or soon after it or during the analysis of other collected data (e.g., the analysis of ethnographic notes, the interpretation of good and less good practices) and – if they were not adequate – (re)directed them.²
- An important stage in the research process – in addition to the already mentioned education and training of pedagogic staff – was interventions such as these: (1) observing the preschool teachers during their direct pedagogic work with children, with immediate discussions or consultations with each individual teacher; (2) collective interpretations of adequate and inadequate pedagogic practices; (3) core reflection of their own pedagogic actions, which was conducted during class observations, consultations, and discussions with the preschool teachers; (4) concrete mutual interactions and class observations among the teachers.

The education and training model supported the characteristics and structure of the research stages of action and evaluation research and participatory research that can be recognized in the following characteristics: (1) precisely

² The counselor relied on the method of the so-called prompted recollection, which enables the combination of the individual's subjective and scientific theories (Bizjak and Valenčič Zuljan 2007). The preschool teachers were asked to verbalize their unclear or partly conscious, intuitive beliefs. It was only their verbalization that enabled a clear consideration of the educational situation.

documenting individual action steps and project work; (2) devising the research process, planning and evaluating educational work in spirals among action, reflection and modification; (3) precisely documenting planned, spontaneous, and performed activities; (4) the research process was conducted by practitioners; (5) the preschool teachers were independent in looking for and testing methodic solutions that were part of the basic philosophy of induction, thereby contributing to the research presuppositions of the introduced model; (6) the active participation of teachers, children, and other educators; (7) taking account of concrete circumstances and situations; (8) examining and improving one's own pedagogic practice; (9) the preschool teachers collected data, interpreted them, and decided on how they would implement the findings into their own pedagogic practice, actions, and responses; (10) the importance of the very procedure and process of (self-) research; (11) the regular (formative) and final (summary) evaluation of various activities and situations with children, individual action steps, and the stages of the research process; (12) planning and reflecting on educational work in concrete educational situations; (13) combining different research methods, procedures, and techniques, and collecting different data; (14) the education and training model was a factor of the preschool teachers' professional development.

These characteristics of the education and training model reveal that we used reflection and analysis, the action deepening of intervention and different application approaches, research methods, and techniques (e.g., observations with discussions and consultations, interpretations of good and less good practices, the analysis of ethnographic notes with discussions, expert-led reflections, discussions with the elements of core reflection, pedagogic documentation analysis, project work) to research and direct the hidden curriculum. It turned out that we explicitly dealt predominantly with the preschool teachers' subjective theories, while other elements of the hidden curriculum (e.g., daily routines) were mainly approached indirectly. We "caught" the hidden curriculum in certain stages of education, training, and research through the processes of action and evaluation research and on the basis of the process of facing the preschool teachers with (and making them aware of) their own concepts. Needless to say, we do not believe that such a model of education and training is the only one that can contribute to improving and ensuring the quality of educational work in preschools. However, we do believe that this model, if realized in a good-quality manner, can be very effective.

Methodology

The research method

To study the effects of the education and training model for researching and directing the factors of the hidden curriculum, we used the descriptive and causal-experimental method of traditional empirical-analytical pedagogic research (Çagran 2008; Sagadin 1993; Vogrinc and Krek 2007). In the empirical part of the research, we predominantly used the quantitative methodology of pedagogic research and

added certain elements of qualitative research methods when analyzing open-type questions (Mažgon 2006, 2008; Vogrinc 2008).

The experimental model

The research was designed as a case study following the one-factor pedagogic research type with two modalities. Based on the goals of the research, the research questions, and hypotheses, we selected two research types or forms of research (Čagran 2008; Sagadin 1993): (1) the pedagogic experiment as a method of studying the effects of introducing innovation into the experimental group and establishing the differences between the experimental group (EG) and the control group (CG); (2) the quasi-experiment model within the experimental model to study the causal relationships between the dependent and independent variables. We found a group (ES) on which the factor that we had defined as experimental had an impact and a group (CG) on which the factor had no impact (quasi-control group). Subsequently, the condition on the dependent variable was established. The differences between the EG and the CG were ascribed to the experimental factor.

The participants³

The EG consisted of 16 preschool teachers between 27 and 53 years of age (\bar{x} = 40.5, the standard deviation was 8.9 years). The teachers' average of years of service was 18.4 years (the standard deviation was 11.2 years). Four (25%) teachers had completed secondary education, two (12.5%) post-secondary, and 10 (62.5%) had completed higher education. Seven (43.7%) preschool teachers were responsible for first-age-group children (children from nine months to three years of age) and nine (56.3%) teachers were responsible for second-age-group children (children between three and six years of age).

At the first measurement, the EG consisted of a total of 242 children, 120 (49.6%) girls and 122 (50.4%) boys. At the second, final measurement, the number of children in the EG fell from 242 to 235 due to moving, illness, and transfers to other preschools.

The CG consisted of 11 (91.7%) female preschool teachers and one (8.3%) male preschool teacher between 29 and 50 years of age (\bar{x} = 42.8, the standard deviation was 6.7 let). The teachers' average of years of service was 20.7 years (the standard deviation was 8.1 years). Two (16.7%) teachers had completed secondary education, two (16.7%) post-secondary, and eight (66.7%) had completed higher or university education. Five (41.7%) preschool teachers were responsible for first-age-group children (children from nine months to three years of age), and seven (58.3%) teachers were responsible for second-age-group children (children between three and six years of age).

³ Since the tests of demographic variables between the EG and the CG showed no statistically significant differences regarding the children's gender and age, their mothers' education, the teachers' education and years of service, we can say that according to the selected variables (children's gender, teachers' education, children's mothers' education, children's age, teachers' years of service), the sample consisted of statistically equivalent groups (Sagadin 1993).

The CG consisted of a total of 195 children, 104 (53.3%) were girls and 91 (46.7%) were boys.

Measurement instruments

The Questionnaire to monitor and assess preschool education quality consisted of 12 sections, each section comprising of questions and subquestions relating to individual quality levels, areas, and quality indicators describing educational work in preschools. The rational validation of the questionnaire was founded on the experts' assessment of the content and form suitability of the questionnaire before the experiment was carried out. Factor analysis was used for the empirical validation, and we focused on the percentage of the explained variance with the first common factor (the first factor explained 42.7% of variance). The procedure of factorization was used to determine reliability, whereby we obtained four factors, which between them explain 71.3% of variance. According to $r_{tt} \geq \sqrt{h^2}$ it is a fairly reliable instrument (the reliability of the whole instrument: $r_{tt} = 0.76$), which is also confirmed by the values of Cronbach's coefficient alpha (the coefficients of internal consistency were between 0.71 and 0.89).

The Questionnaire to monitor children's social behavior covers the areas of children's social behavior such as independence in the care for oneself, cooperation in directed and free activities or play and in daily routine activities, children's participation in conversations with peers, educators, and other adults, respecting negotiated rules, children's prosocial responses, actions, and behavior in social, playing, and conflict situations. Since the first factor explained 26.7% of the variance, we assessed the instrument to be valid. The procedure of factorization provided us with three factors, which between them explain 60.4% of the variance. The questionnaire had acceptable reliability (the reliability of the whole instrument: $r_{tt} = 0.73$, and the coefficients of internal consistency were between 0.69 in 0.80).

Ethnographic notes were made of two parts: the description of the event or situation that the preschool teachers selected out of their own initiative, and their reflection on the described event or situation. In their reflections, the preschool teachers wrote down and explained (1) their perceptions, purposes, and expectations; (2) their explanations for potential interventions in the situations or events that took place; (3) children's and their own comments about children's actions and responses that in their view led to the situation. The preschool teachers were acquainted with the procedure of making ethnographic notes in advance. The notes were also controlled during their processing by comparing their replies to similar questions.

The final discussion with the EG preschool teachers about whether they noticed any differences in themselves and their insights into their active role in the preschool group – and if so, what the differences were – was conducted at the end of the education and training, using semi-structured interviews.

Collecting and processing data

The research in the EG and the CG was carried out in three stages within one year, from September 1, 2009 to July 10, 2010. The initial state analysis in the EG and the CG was empirically tested with the Questionnaire to monitor and assess preschool education quality, the Questionnaire to monitor children's social behavior, and the preschool teachers' ethnographic notes, which were used to collect data on the teachers' responses and reactions to various educational practices and prosocial situations with children. Each preschool teacher made at least seven ethnographic notes about herself or her preschool group before the education and training and at least seven ethnographic notes after the education and training. The initial state analysis also included a one-week observation of the teachers and children in each individual group. In addition to the analysis of the pedagogic documentation of the teachers' preparation for educational work in preschool groups, the observation consisted of the same variables as those in the above-mentioned questionnaires. The observation data were used to assess the objectivity of both questionnaires, that is, as the measure of agreement among different observers' assessments.

The second stage of the education and training for researching and directing the hidden curriculum was carried out in the EG, including the introduction of changes to the preschool teachers' own pedagogic practice and monitoring their effects.

In the last stage, we used the presented instruments in the EG and the CG again to analyze the final state and the effects of the education and training model applied in the EG on the quality of educational work in preschools. At the end, we carried out individual final conversations with the EG teachers about whether they noticed any differences in themselves and their insights into their actions and their active role in the preschool group – and if so, what the differences were.

When processing the data we used the following statistical methods and procedures: the frequency distribution (f, f%) of attributive variables, basic descriptive statistics (the arithmetic mean, the lowest and the highest value, the standard deviation, variance), the Kolmogorov–Smirnov test for the normality of distribution, Cronbach's coefficient alpha, Leven's test of the homogeneity of variances, the t-test for independent samples or the approximate t-test where the condition of variance homogeneity was not fulfilled, factor analysis for the determination of the validity and reliability of instruments, χ^2 -test for hypothesis independence (where conditions for it were not fulfilled, Kullback's $2\hat{I}$ -test was used), and Pearson's correlation coefficient (as the measure of an instrument's objectivity). Statistical data processing was carried out with the SPSS 19.0 software package.

Results and discussion

The first general hypothesis presupposed that the education and training model for researching and directing the factors of the hidden curriculum would have an impact on the improvement of the quality of educational work in preschools.

Using the Questionnaire to monitor and assess preschool education quality, we sought to establish whether there were any trends in improvements in the preschool teacher's quality of educational work in specific areas following education and training. We also attempted to determine whether there were any statistically significant differences between the EG and CG preschool teachers between the first (initial) and second (final) measurement in terms of planning and conducting the curriculum, encouraging children's thinking and speech/language, organizing and conducting transitional activities and daily routine activities, organizing space and time, work and life in preschools, and cooperation among preschool educators.

The first general research hypothesis was divided into five specific hypotheses. For the second (final) measurement, we identified statistically significant differences between the EG and the CG in the preschool teachers' assessments in accordance with the first specific hypothesis, which referred to the area of planning and conducting the curriculum. The differences were in favor of the effects of the education and training model on one out of the four variables, that is, planning educational work in all the curriculum activity areas ($t = 2.097$, $df = 26$, $P = 0.046$). The identified statistically significant difference belongs to the process level of preschool education quality. For the mean values of other variables, such as planning educational work in the area of routine and transitional activities and play, we noticed a trend suggesting differences in favor of the experimental factor, as the mean values of the observed variables for the second (final) measurement were higher, but not statistically significant in relation to the CG.

Concerning the second specific hypothesis, covering the area of encouraging children's thinking and speech/language, we identified seven statistically significant differences for the second (final) measurement (out of eleven observed variables), namely, the frequency of taking account of children's wishes and suggestions in all curriculum activity areas ($t = 2.493$, $df = 26$, $P = 0.019$), food and feeding ($t = 3.157$, $df = 26$, $P = 0.004$), personal care and hygiene ($t = 3.741$, $df = 23.945$, $P = 0.001$), rest and sleeping ($t = 2.087$, $df = 26$, $P = 0.047$), free-time activities and play ($t = 3.663$, $df = 26$, $P = 0.001$) and transitional activities ($t = 3.042$, $df = 26$, $P = 0.005$). There was also a statistically significant difference for the variable "I encourage children during different activities to value their own work, creations, products, etc." ($t = 2.080$, $df = 26$, $P = 0.047$). Other preschool teachers' assessments demonstrated that after the second measurement, the EG preschool teachers more frequently read fairy tales and other literature to children, discussed the content with them as well as planned and conducted activities, which stimulated children's linguistic expression. These differences, however, were not statistically significantly greater in relation to the CG. The results showed that after the second measurement, the EG preschool teachers were to a greater extent aware of the importance of their role in encouraging linguistic understanding and expression as well as including children in linguistic interactions, although the differences were not statistically significant in comparison with the CG.

Concerning the third specific hypothesis, covering the area of organizing and conducting routine activities, that is, daily routines, we identified seven statistically significant differences for the second (final) measurement, relating

to three dependent (out of seven observed) variables: children can talk during meals ($t = 3.185$, $df = 26$, $P = 0.004$), children can choose how much they will eat ($t = 4.208$, $df = 26$, $P = 0.000$), and children participate in clearing up materials and toys ($t = 4.279$, $df = 26$, $P = 0.000$). We also found out that the EG preschool teachers claimed that after the second measurement they somewhat more rarely, although not statistically significantly, insisted on children waiting at tables until the majority of children had finished eating. After the education and training, the EG preschool teachers more frequently, although not statistically significantly, than the CG preschool teachers advised children to finish one activity before moving on to another; they also more frequently included them in preparing materials and planned peaceful activities for the children who did not rest or sleep during resting/sleeping time.

The fourth specific hypothesis included the area of organizing space, time, work, and life in preschools. Statistically significant differences between the EG and the CG in favor of the effects of the education and training for the second measurement occurred in five out of nine observed variables: the frequency of carrying out outdoor activities, both directed ($t = 2.714$, $df = 26$, $P = 0.012$) and free ($t = 3.341$, $df = 25.257$, $P = 0.003$), and the following variables: “I encourage children do work independently” ($t = 4.479$, $df = 26$, $P = 0.000$), “To attain the goals of directed activities, I offer children alternative activities and content” ($t = 3.833$, $df = 26$, $P = 0.001$), “I evaluate work in preschool groups” ($t = 7.385$, $df = 26$, $P = 0.000$). The EG data analysis for all dependent variables revealed differences in favor of the experimental factor, but for four variables (the frequency of carrying out directed and other activities outside the classroom, in other preschool spaces and outside the preschool, in less usual locations, children participate in arranging and setting up the playroom, I plan directed activities in an interdisciplinary manner) they were not statistically significant.

The fifth specific hypothesis, covering the area of cooperation among preschool educators, identified statistically significant differences in two dependent (out of seven observed) variables: the frequency of the preschool teacher’s cooperation with other teachers when evaluating work in the group ($t = 4.290$, $df = 26$, $P = 0.000$) and the frequency of the preschool teacher’s cooperation with other teachers when preparing the annual work plan ($t = 2.528$, $df = 26$, $P = 0.018$). The results also showed that after the second (final) measurement, the EG preschool teachers stated that in comparison to before, they more frequently included their assistants in planning and evaluating work in the preschool group and in preparing the annual work plan, but the differences were not statistically significant when compared to the CG. Based on the data collected, we can conclude that the education and training had such an effect on the EG preschool teachers that after the education and training – in comparison to the CG preschool teachers – they more often and statistically significantly responded by stating that they cooperated more frequently with other preschool teachers when evaluating work in the group and when preparing the annual work plan. Also more frequently, but not statistically significantly, they cooperated when planning work in the preschool group and when conducting the program/work in the group.

The second general hypothesis presupposed that through the preschool teachers, the education and training model for researching and directing the factors of the hidden curriculum had an impact on children's social behavior as a consequence of the changes in their actions that had occurred because of the education and training.

The Questionnaire to monitor children's social behavior was intended to inquire whether there were any improvement trends in children's social behavior according to the preschool teachers' assessment after the education and training in the following areas: independence in the care for oneself, cooperation in directed and free activities or play and in daily routine activities; children's participation in conversations with peers, educators, and other adults; children's participation in showing initiative and giving ideas and suggestions; children's prosocial responses, actions, and behavior in social, playing, and conflict situations; respecting negotiated rules. We also investigated whether there were any statistically significant differences in the EG and CG children's social behavior between the first (initial) and the second (final) measurements.

The second general research hypothesis was divided into four specific hypotheses. The first specific hypothesis, referring to the area of children's independence in the care for themselves, revealed that in the preschool teachers' opinion, more EG children became more independent in their care for themselves after the second (final) measurement. After the second measurement in the EG, the share of children who showed above-average independence in their care for themselves increased, whereas the share of children who showed below-average independence in their care for themselves decreased. In the CG, the state after the second measurement remained almost the same. According to the EG teachers, there had a trend of improving children's social behavior in the area of children's care for themselves.

The second specific hypothesis covered the area of children's cooperation in directed and free activities or play and in daily routine activities. Statistically significant differences between the EG and the CG in favor of the effects of the education and training for the second (final) measurement occurred in one out of three observed variables, that is, the variable, "The child cooperates in daily routine activities" ($t = 2.333$, $df = 428$, $P = 0.020$). The variables, "The child cooperates in directed activities," and "The child cooperates in free activities or play" revealed no statistically significant differences, although the results did show that according to the EG preschool teachers, children participated a bit more frequently in directed activities after the education and training program.

The third specific hypothesis studied children's participation in conversations with peers, educators, and other adults and children's participation in showing initiative, giving ideas, and suggestions. We identified statistically significant differences in two out of five variables: "The child shows initiative and gives ideas and suggestions during directed activities" ($t = 2.782$, $df = 427.925$, $P = 0.006$), and "The child participates in conversations with educators" ($t = 2.038$, $df = 428$, $P = 0.042$). The data analysis of the other variables showed that according to the preschool teachers, the mean values of the EG variables (except for the variable,

“The child shows initiative and gives ideas and suggestions during free activities or play”), were higher after the second (final) measurement if compared to the first (initial) measurement. According to the preschool teachers, the EG children – in comparison to the CG children – participated more frequently in conversations with their peers, educators, and other adults in preschools, and they more frequently showed initiative and gave ideas and suggestions during directed activities after the second measurement. Nevertheless, the differences between the compared groups were not statistically significant.

The fourth specific hypothesis, referring to the area of children’s prosocial responses and behavior in social, playing, and conflict situations – including respect for negotiated rules – revealed statistically significant differences in two out of seven observed variables: “The child acts constructively in a conflict situation” ($t = 2.694$, $df = 428$, $P = 0.007$), and “The child takes account of the wishes and interests of others” ($t = 2.136$, $df = 428$, $P = 0.033$). According to the EG preschool teachers, after the education and training, the individual child’s prosocial responses and behavior in social, playing, and conflict situations improved. This was also demonstrated by the mean values of the other observed variables in the EG (“Children help other children if they note they are having problems,” “Children share toys and materials with peers,” “Children break negotiated rules,” “Children behave aggressively,” “Children play alone”), which were higher at the second (final) measurement in comparison to the CG children, although the differences were not statistically significant. The fourth hypothesis also showed the preschool teachers’ assessments were pointing to positive shifts in favor of the effects of the education and training in the area of children’s prosocial responses and behavior.

Making ethnographic notes and going through guided reflections upon the notes, the preschool teachers were intensively engaged with directing the factors of the hidden curriculum and their own subjective theories, standpoints, and views about the educational process. The preschool teachers thought about their own thinking, and they wrote and thought about what they had written, thereby externalizing their tacit knowledge. Observing and describing educational situations and other events in the groups of children, they documented not only the course and unfolding of educational situations, but also and primarily their own knowledge, concepts, ideas, and views about education and the children in it. In addition to acquiring the knowledge of children’s prosocial and cognitive abilities, strategies of early learning and teaching, documenting the situations enabled the preschool teacher to become increasingly aware of her own personal value notions of her pedagogic role/practice and her views, knowledge, and images of children and education that are part of the hidden curriculum, together forming her implicit, subjective theories. In the next stages, these were developed further on, given expert meaning and built upon to reach a higher quality level.

The analysis of ethnographic notes confirmed the positive effect of the education and training on the quality of the preschool teachers’ educational work. Documenting and reflecting upon pedagogic practice, the preschool teachers used the analysis to change their standpoints regarding children’s prosocial abilities

and to become more aware of and have more insight into educational-disciplinary situations when encouraging preschool children's prosocial and moral development and into their own actions and responses. The key changes (see Table 2 and Table 3) that we tracked and which pointed to the improvement in the quality of educational work were as follows:

- After the education and training, the preschool teachers intervened in educational-disciplinary situations more actively and in accordance with induction.
- The preschool teachers observed children more actively and more frequently encouraged them to reflect on their inappropriate behavior.
- After the education and training, the preschool teachers more frequently supported children's experiences with active intervention and encouraged them to solve interpersonal conflicts with mediation (as well as through symbolic/artistic representation of events) after the situations had been solved.
- The fact that after the education and training, the number of notes describing children's worrying and socially inappropriate behavior decreased while the number of observed cases of true empathy increased could be a further indicator of the improvement of the quality of problem solving.

<i>The preschool teacher's active role</i>	<i>First measurement f (%)</i>	<i>Second measurement f (%)</i>
The number of situations without the preschool teacher's intervention increased.	12.4	15.4
The preschool teacher solves the situation in a completely routine way without children's active participation.	9.1	7.7
The preschool teacher redirects the child to another activity, but without any conversation.	11.6	8.6
The number of notes where the preschool teacher redirected the child to another activity merely with a question/stimulus without active dialogue decreased.	28.1	13.5
The number of notes where the preschool teacher intervened in a situation inadequately (e.g., by only labeling the act as inappropriate) decreased.	17.3	6.7
The number of notes where the preschool teacher took away some of the child's benefits because of her/his unacceptable behavior decreased.	8.3	4.8
The number of notes where the preschool teacher took on the role of the mediator increased.	7.4	23.1
The number of notes where the preschool teacher encouraged social interaction on the basis of active dialogue, paid attention to children's judgments, insisted on the careful reflection of the involved, etc. increased.	5.8	20.2
$\chi^2 = 30.836, g = 7, P = 0.001$		

Table 2: The preschool teacher's active role in educational-disciplinary situations before (the first measurement) and after (the second measurement) the education and training.

<i>The type of observed events or situations</i>	<i>First measurement f (%)</i>	<i>Second measurement f (%)</i>
The number of notes describing worrying, socially inappropriate behavior decreased.	23.7	2.9
The number of notes describing mediation in conflict solving (preschool mediation) increased.	6.5	14.7
Entering into respectful relationships through symbolic, musical-moving, or imaginative play.	20.9	13.4
Recognizing universal moral principles in fairy tale descriptions and their assertion in concrete situations.	16.5	12.3
The number of notes describing entering into respectful relationships through art practices and expressions increased.	13.0	20.6
The number of notes describing real empathy increased (understanding the distress of others, the child responds with an appropriate form of help and respect for others).	15.8	29.0
The number of notes describing a shift from spontaneous prosociality toward reflected-upon morality increased.	3.6	7.1
$\chi^2 = 89.932, g = 6, P = 0.001$		

Table 3: The type of observed events or situations before (the first measurement) and after (the second measurement) the education and training.

The results of the discussions with the EG preschool teachers also demonstrated that after the education and training, they started to observe, plan, and think about children's characteristics, themselves, and their active educational role more. They also started to ascribe higher value to more precise planning and evaluation of educational work in terms of planned and attained goals, children's active role, and the inclusion of routine activities in the process of planning and evaluating.

Since our criterion to accept hypotheses was related to the trend pointing toward educational quality improvement in the majority of the observed variables (specifically, the higher mean values of EG criteria variables), we confirmed both of our general hypotheses. The results showed that our education and training model was effective with regard to the measured characteristics. This also demonstrates that the quality of educational work is an area-specific category that is impossible to improve without constantly monitoring it, this being focused on each individual preschool teacher.

One of the weaknesses of our research could be the potential partiality in the preschool teachers' assessments of the quality of pedagogic work and children's social behavior. Therefore, it would be sensible in the future for children's social behavior to be assessed not only by preschool teachers, but also by parents and/or other experts. Any strong partiality can, however, surely be excluded, since the results of the three external observers used for the research instruments showed a satisfactory degree of objectivity of the assessors and the preschool teachers'

impartiality.⁴ In addition, it should be stressed that our education and training did not take account of all the important factors that could affect the quality of the preschool teachers' work. It is thus possible that the improvement of the educational work in the EG was also due to some further factors that we did not plan or consider in our research. Nevertheless, the conclusions of this research substantiate the significance of researching and directing the factors of the hidden curriculum, which is of utmost importance from the aspect of ensuring preschool education quality. Furthermore, this topic had not been researched on such a scale before our research study.

The research is also valuable because in it we combined more different data collecting procedures and techniques. A benefit of the research is definitely the instruments that we developed and empirically tested as a part of the education and training model. Our findings are related to the context of the experimental preschool and are therefore not generalizable. What could be transferable is the methodology of introducing and monitoring pedagogic innovation with the used instruments for the purposes of various pedagogic innovations. However, content data evaluation (except for the Questionnaire to monitor and assess preschool education quality) would depend on the research goals and hypotheses of each pedagogic innovation.

Conclusion

On the basis of the literature overview and the results of our research, we can conclude that the findings of our research study have contributed to an increased awareness of the importance of researching and directing the factors of the hidden curriculum and subjective theories. Our study is founded on the characteristics of action and evaluation research as well as the research method of deconstructing and redefining one's own thinking and beliefs. It is also based on the processes of critical awareness raising and reflection – a condition for a successful innovation of pedagogic practice, because it is difficult for changes in education introduced from the outside to become practices of both individuals and institutions if they are opposed by institutional routines and employees' subjective views.

⁴ The initial state analysis also included a one-week observation of the teachers and children in each individual group. In addition to the analysis of the pedagogic documentation of the teachers' preparations for educational work in preschool groups, the observation consisted of the same variables as those in the questionnaires: the Questionnaire to monitor and assess preschool education quality and the Questionnaire to monitor children's social behavior. The data and observation results were used as a measure of the two questionnaires' objectivity; we used the mean values of the sixteen preschool teachers and the three external experts for the first questionnaire and the mean values of the sixteen preschool teachers and the three external experts for six randomly selected children for the second questionnaire. Since the values of the Pearson correlation coefficient always exceeded 0.75, we concluded that the agreement between the preschool teachers' assessments and the external experts' assessments is sufficient.

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