Educational simulation: A tool for professional and personal development of new teachers

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Abstract

This study explored the contribution of educational simulation to NTs1 (new teachers in their first year of teaching). We analyzed 32 responses of Israeli NTs who attended the induction workshop at a university located at the center of Israel. The research tools comprised a semi-structured interview and focus groups. The research results illustrate that the simulation helps NTs to undergo a process of re-shaping their personal and professional knowledge: experiential-experimental, theoretical and practical. Based on the findings there is a growing chance that the NTs who have experienced a simulation will reduce dropout rates in the education system and promote their professional development.

Key words: New teachers, induction in teaching, educational simulation, teachers' professional development.

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[1] Teachers in their first year of teaching

1. Introduction

How do novice doctors become experienced doctors? How do young commanders in the army turn into experienced commanders? And how do novice teachers become experienced teachers? Teachers who are 'teachers for life', who will impact their pupils and be remembered by them throughout their entire lives?

When is the moment when novices become experienced teachers? There is apparently not just a single moment but rather a sequence of time and events which turn people into professionals. Becoming trained and qualified professionals is a process which requires time, efforts and resources allocation. At the end of the process inexperienced practitioners become professionals.

The problem is even more complex when NTs are concerned. Studies conducted around the globe (Cochran-Smith, McQuillan, Mitchell, Terrell, Barnatt, D'Souza, Jong,; Shakman, Lam, Gleeson, 2012) found that NT have left their workplace during the first five years. Moreover, Eisenhammer, Mevarech, Al-Yagor, Ziv & Rahamim (2010) indicated teachers' difficulties stemming from the gap between their education and teaching in practice. This gap is manifested by a difficulty to translate theoretical knowledge into knowledge of real-time action.

This study applies a tool which serves in the training of doctors, military personnel and others, namely a simulation. The tool facilitates simulation of real scenarios in a protected environment and assists in the acquisition of an essential practical knowledge. Teacher education programs and teachers' professional development use event analysis or role playing in class, group simulations (Shapira-Lishchinsky, 2013), computerized simulations and video inquiries (Santagata & Guarino, 2011). There are only few simulation centers in which actors simulate real educational situations under lab conditions. This study implemented the educational simulation in the case of NTs and explored whether and how the use of simulation contributes to the personal and professional development of NTs. The rationale underpinning this study was that the experience with simulation would enhance the self-confidence of NT, improve their way of coping with scenarios in the teaching practice and as a result prevent them from abandoning the teaching profession.

2. Literature review

2.1. New teachers

Numerous studies illustrate that the first years of teaching constitute a crucial period for teachers' professional development. These studies found that the first year shaped teachers' image and professional perception. This plays an essential role in making them remain in the education system for a long time as well as in their continued professional development at school and in teaching (Ingersoll & Smith, 2004). The literature stipulates that a considerable number of NTs (46%) abandon the teaching profession in the course of the first five year (Arbiv-Eliashiv& Zimmerman2013; Cochran-Smithet al., 2012).

The main difficulties in teaching which were identified among NTs are maintaining discipline and managing the class, clarifying expectations for learners, coping with pressure at work and with parents, doing administrative work, assessing pupils and dealing with conflicts as well as diversifying teaching methods and dealing with pupils' various capabilities (Moore & Swan, 2008).

There is a considerable gap between the education process and the very teaching practice. During the first year teachers find themselves deviating from their major role as teachers and investing a large part of their energy in searching for an effective response to professional challenges, e.g. class management difficulties and disciplinary problem solution. More than once, this situation makes it more complicated to find the appropriate way of teaching, namely, creating integration between subject matter knowledge and pedagogical content knowledge. Moreover teachers find it hard to build a lesson which is adjusted to the curriculum and to the learners, ensuring learning which will lead to attainments (Eisenhammer et al., 2010).

2.2. Induction in teaching

The above gap is supposed to get a response by means of an induction program. Induction is a comprehensive name for the support, tutoring and orientation programs of NTs when they start teaching and when they are absorbed in school. The year of induction in teaching is defined as a transition year from a status of pre-service teacher to a status of an independent teacher in practice. During the induction period the NTs receive professional support in their process of socialization into the profession. NTsneed time for building their capabilities as teachers and for developing their professional image (Nassar Abu Alhija,Presky&Reichnberg, 2011). During their induction teachers learn to become in-service teachers with varied areas of responsibility typical of experienced teachers (Wang,Odell &Schwille, 2008).

The rationale of the induction program is derived from the perception of teaching as a profession. The induction period enables NTs to be gradually integrated into the profession through a process of an increasingly growing socialization into teaching. During this period they function under real conditions and closely experience the teaching which consists of many unexpected elements and is characterized by numerous changing situations. Throughout this year the NTs function as teachers for all intents and purposes and they are fully responsible for planning the studies, organizing the teaching and learning as well as fulfilling educational roles just like experienced teachers. This is done although the teachers during the induction period have not yet consolidated their professional identity (Nassar Abu Alhija et al., 2011).

2.3. Induction in Israel

In Israel, every NT starts an induction year. According to the Ministry of Education (2014), the objectives of the induction program are: helping NTs to succeed at the initial stage of teaching, offering a possibility to experience teaching under real conditions and providing school with the tools necessary for a maximum absorption of the NTs.

During the induction year the NTs are required to work at school more than one third of a full

time job and receive a structured assistance setup comprising two components: support by a teacher-tutor at school and compulsory attendance at an induction workshop which takes place in an academic teacher education institution. The workshop is conducted by a lecturer who is experienced in absorbing NTs (Ministry of Education, 2014).

The NTs are assessed twice during the induction year: at the middle of the school year by a process of formative assessment and at the end of the year by a process of summative assessment. At the end of the induction year, based on the results of the school assessment and the studies at the workshop, a decision is made by the Ministry of Education whether to award the NTs a teaching license.

The induction workshop aims to support the NTs in their professional development by a professional staff member of the institution organizing the induction. The workshop assists the NTs to develop critical reflection on their work within the framework of which they are given the opportunity to raise for discussion issues and dilemmas encountered during their work at school. Moreover, the workshop facilitates a systematic handling of didactic-pedagogical, organizational and administrative events while mediating between theory and practice. All this is done in an empathic and supportive framework.

2.4. Simulation

Simulation is the imitation or representation of some situation or process from simpleto the very complex, in order to improve learning and drawing conclusions of professionals (SSH, 2014).Simulation enables to understand cognitive action in learning and shaped the process of learning and teaching. Mental simulation is mechanisms who allow us understanding of TOM (Theory of Mind). Meaning the ability of people to refer to specific mental situation especially to beliefs, wishes, also to predict and understand emotion, intention and thought of others (Landriscina, 2013**).**

Simulation is widely used in training and exercises of military and civil personnel. This method is implemented as a substitute for means which are too expensive or when it is too dangerous to allow trainees to use real equipment in the real world. The convenience of such learning resides in allowing mistakes which transpire during the training within a system the safety of which is crucial. During the induction teachers simulate difficult and authentic situations of teaching. However, this is done under "protected reality" conditions and by neutralizing 'teaching blockers' (Eisenhammer et al., 2010).Simulation education is a bridge between classroom learning and real-life experience (SSH, 2014).There are two main types of training by situation: a life simulation whereby real actors use original systems in a real environment and a virtual simulation whereby real actors use a simulation system in a virtual environment. This study focuses on live simulation. Simulation turns those taking part in it into active players. It has been empirically proven that the recollection rate of simulation participants is higher than the recollection rate following a lecture. The simulation focuses on the trainees who have a safe, supportive and lenient-to-mistakes environment**.** The simulation enables learning by observing others who are coping with a similar situation in different ways and it can be measured and assessed. Following the simulation a video-based group debriefings performed (Flanagan, 2008). The model is grounded in Harvard debriefings

which are non-judgmental and it is borrowed from flight and medicine debriefings. The debriefing is a structured group discourse focusing on competences of conflict management and of communication and is based on observation of segments selected from the simulation. The video debriefing offers trainees an opportunity of reflection and self-feedback. Moreover, it enables a constructive and sensitive feedback from the group members while relating to the points which should be maintained and improved. In addition the debriefing facilitates constructive and sensitive feedback from the actor regarding his or her experience as an employee or a learner.

2.5. Simulation during the induction workshop

Educational simulation is implemented within the framework of the induction workshop conducted by the Unit of NTs at Bar Ilan University (Bar Ilan, 2014). All NTs attend the educational simulation for four hours once a year during the first quarter of the year. The simulation takes place in a special studio with recording equipment, operational team including: video photographer, sound technician, professional simulation tutor, actors, permanent workshop tutor and of course the NTs. The objective of the simulation is to develop and construct knowledge and competences of the NTs throughout their professional careers well as improve the teaching practice. Studies show that many participants are capable of connecting their actual experiences vis-à-vis their class and those presented in the simulation. Moreover, some of them can even connect the theory of their studies with the practice of teaching both during the simulation and in the real class. Hence, experiencing the simulation in real scenarios in class could enhance the pre-service teachers' self-confidence. Consequently, this can slow down the process of abandoning the profession due to states of anxiety, lack of confidence and insufficient competences for coping with class scenarios (Salant & Paz, 2011).

The Educational Simulation program is unique in that it enables the NTsto simulate authentic situations from their world of work at school. The NTs experience three situations: 1. A conversation of a teacher with a student who encounters difficulties; 2. a conversation of a teacher with a mother who is angry with the teacher because the mother's son did not get a high score; 3. A new teacher coping with learners who disrupt the normal course of the lesson.

The NTs take part in pre-planned situations as new teachers opposite professional actors who play the role of pupils or teachers. The structured encounter allows the NTs to experience a simulation of situations of conflict in teaching but in a protected environment. Immediately following the simulation, the NTs receive a feedback from the actors, their group peers, the workshop tutor and the professional tutor of the simulation. The entire simulation is audio-visually recorded. The feedback is given through a group debriefing based on the recording. At the end of the experience, all the NTs get a file with a video clip of their experience in the simulation.

The experience takes place only once. However, throughout the year the workshop tutor connects the group discussions during the workshop and the NTs' experience. According to his judgment he can broadcast the video again in order to continue the discussion about the

simulation. Thus, the simulation and the events transpiring during it form a basis for learning and a professional discussion throughout the year.

2.6. Teachers' professional development

Researchers concur that teachers' quality is the most important factor at school which impact pupils' learning and attainments. Consequently there is a sense of real urgency associated with the need to educate teachers on a high level of quality (Hargreaves, 2013). The professional literature discusses the concept "teachers' professional development" in various contexts and its definition is not uniform. Some sources underscore teachers' empowerment and development while others use the general term "professional development" as an expression of the entirety of learning channels which teachers attend in order to improve the quality of their teaching. For example, courses, in-service training programs, workshops, learning in small groups, individual mentoring and so on. The various models which engage in teachers' professional development can be divided into three categories: psychological, professional and sociological (Fullan, 2007; Reichnberg, Kleeman, & Sagee., 2013).

Zeichner & Liston, (1996) maintain that only by reflection about their teaching can teachers become more competent, more skilled and in general better teachers.

Teachers' professional development is a continuous and constant process (Knowles, 1989). Studies of teachers' practice illustrate awareness of their development stages as adult learners. Huberman (1993) defined three stages in teachers' professional development: beginning, middle and end of their career. Teachers' life-long learning does not focus merely on the professional aspect but also on the multiple facets of their individual, social and professional personality. Good teachers are those who learn throughout their lives not only as teachers but also as informed and thinking people, active members of the community and society. Life-long teachers see to it that their pupils are also life-long learners. Teachers' professional development is mostly grounded in learning while working. All teachers are connected to their personality and previous life experience and represent a special system of pedagogical beliefs and practical conduct in teaching. In this context, professional development is considered as an individual development combined with reciprocal social and cultural relations of individuals with their environment (Kozminsky, 2011).

Research question

What can the experience of an educational simulation contribute to new teachers?

3. Methodology

This study was conducted by the qualitative-interpretive approach, case study type. Using this approach enables comprehension, description and interpretation of what transpires in the field. Moreover, it comprises the covert aspects from the viewpoints of the participants themselves. One of the important advantages of this type of study resides in its ability to provide insights about occurrences in the actual contexts and situations in which they happen. The case study is inductive since is manifests situations from various points of view (Shkedi, 2012; Shkedi,

2005).

3.1 Research population

The research population consisted of 32 NTs who attended the induction workshop at a university located at the center of Israel. The participants were divided into four age groups: 17 NTs aged 20-25 years, three NTsaged 26-30 years, six NTsaged 31-36 years and six NTsaged 36-41 years. They taught at elementary and high schools in the state and state-religious sectors.

3.2 Research tools

The research tools consisted of a focus group (Liamputtong, 2011) and a semi-structured interview (Shkedi, 2012).

Focus groups: the questions in the focus group related to the contribution of the simulation to the teachers' professional and personal development, to the experience of the simulation and to the implementation of the tool in the teaching process. Four focus groups with eight NTs were organized. The conversation in each focus group lasted between two to three hours. In each focus group the NTs were required to answer the questions asked alternatively by the two researchers. One researcher conducted the discussion and the other recorded it and vice versa.

Semi-structured interview: 11 NTs were chosen from the four age groups of the research population and a semi-structured interview was held with them. The interview questions focused on the use of simulation as a tool, the uniqueness, strengths and weaknesses of the tool and the implementation thereof in class.

3.3 Data processing

The interviews and minutes of the focus groups were typed and encoded. At the first stage, the obtained data were classified into sub-categories according to the key themes which emerged in the interpretive analysis. A large number of sub-categories were obtained. At the next stage the sub-categories were united and categorizedinto groups according to central themes. Goulding (1999) suggests uniting the ideas and exposing the theoretical explanation of the investigated occurrence. The analysis was triangulated by the two researchers (Shkedi, 2012). At the end of the process three central areas emerged. They served as the basis of the presented model which attempts to explain the contribution of the educational simulation to NTs.

4. Findings

The findings illustrate that most of the research participants perceive the simulation as an additional tool for improving their teaching competences. Furthermore, they feel they have considerably benefited from the simulation both in the professional and personal aspects (Illustration 1).

The findings presented according to the central areas emerged and the sub-categories, which attempts to explain the contribution of the educational simulation to NTs.

4.1 Educational simulation as a unique tool

The simulation was for the NTs a unique, challenging experience which reflects the reality. All of them underscored that this was the first time they had taken an active part in a simulation side-by-side with actors. According to them learning through the simulation and mainly following the post-simulation debriefing and the mutual feedback is learning in an innovative and meaningful way.

4.1.1. Simulation as a unique experience

For all the NTs the simulation was a different and special experience. One of the NTs indicated that: *"The experience of the simulation was for me something new, unknown to me until now. I played the role of the teacher and three pupils (actors) sat opposite me, each preoccupied with their own business. Every time I tried saying something they shouted and said that the lesson was unimportant and irrelevant to them".* Another NT told: "*I experienced a live transmission. It gave me criteria for understanding what it means to be a teacher. I realized that the pupils as a group are stronger than me. I constantly have to silence the disrupting pupils and at the same time teach, cover all the material and solve problems without delay".*

4.1.2 Simulation as a reflection of reality in a protected environment

Many NTs attributed great importance to the protected and appreciative environment of the simulation. They maintained that the advantage of this tool is providing an opportunity to cope with situations in real time with an emphasis on a protected environment. The interviewees attested that the tool empowered them with new ideas and thinking channels which they have never considered in the context of the teaching profession.

One NT pointed out: *"I felt that the actress was so good that it felt like a real situation".* Another NT underscored: *"I did not know what to expect. However during the simulation about managing a lesson and undisciplined pupils I entered very seriously into the role as if I was in class and the pupils were in front of me… It reflected the reality to great extent… the truth which transpires almost every day in my class and I was extremely curious to know what would my group members say about me".*

4.1.3 The simulation as stimulating and challenging

For all the NTs, experiencing the simulation was a challenging activity. None of them was passive during the process. One of the NT said: *"The discussion conducted after the simulation of a conversation between a parent and a teacher made me think a lot about the type of relationship which I have with the parents. How do I talk with them?"* Another NT told: *"The feedback which I received from everyone about my way of managing a lesson vis-à-vis undisciplined pupils gave rise to many thoughts and gave me an opportunity to understand that the teaching profession is difficult and challenging".*

4.1.4 The simulation as facilitating acquaintance with oneself and with the group

The group discussion and the feedback are an integral part of the simulation. They enable NTs to observe themselves and their peers. The conversation which followed the simulation provided a platform and legitimization to the NTs to raise personal issues without being afraid. One of the NT expressed herself: *"I could talk about myself without hiding what I was feeling and thinking. I said aloud that I have to be more assertive with the pupils. Not always I know how to solve problems, I am sometimes mistaken and do not make the right decisions. However I know that with time I will learn and become better. I have learnt to believe in myself and acknowledge my capabilities"*. Another NT realized that the problems she encounters in managing the class or in her relationships with the parents are not unique to her but rather problems which others encounter too. She claimed: *"The group responded emphatically to the problem I raised. They really understood me and supported me and made me feel that I could present my problems and difficulties and that they would always be there for me"*.

There were also some reservations about this tool. Few NTs indicated that they felt embarrassment or pressure to take part in the simulation as one of them stipulated: *"It is a bit pressuring and embarrassing that everyone is watching you and even taking pictures of you"*. Although several NTs expressed their reservations and discomfort about the simulation, none of them excluded its use.

4.2 Educational simulation as a unique tool

The simulation contributed to the personal development of the NTs by providing them with new insights in the following aspects: self-confidence and self-image, flexibility and openness as well as capability of being attentive.

4.2.1 Self-confidence and self-image

Most of the NTs felt that the simulation enhanced their self-confidence and improved their self-image. One of the NT claimed: *"Following the simulation, when I came to the class and encountered a similar situation, I felt much more confidence in myself and I knew what to answer and what to do with the pupil who disrupted the lesson"*. Another NT who took part in the simulation of a conversation with parents told: *"Right from the beginning I knew what to tell the parents and how to conduct an effective conversation in an agreeable atmosphere"*.

4.2.2 Flexibility and openness

Most of the NTs indicated that the simulation contributed to them by making them understand it is important and essential to demonstrate flexibility and openness in the teaching processes and the relationships with pupils, colleagues and parents. One NT said: *"I have learnt it is important to be more flexible and open and this helps me to plan the lessons, manage the class and talk with the pupils"*. Another NT specified*: "Flexible thinking and openness to others changed my way of thinking and behaving. I mainly realized it is important to demonstrate flexibility in my relationship with the parents"*.

4.2.3 Capability of being attentive

Most of the NTs maintain that the simulation promoted their capability of being attentive to themselves. At the same time they have learnt the importance of being attentive to colleagues, parents and of course pupils. One of the NT pointed out: *"I have learnt that one of the important points in teaching is being attentive to pupils, hearing what is bothering them, finding out why they behave in this way and so on"*. Another NT mentioned: *"My experience with the simulation taught me to listen… one can also keep quiet… understand the importance of being attentive to others from the professional aspects and in life in general"*. One NT pointed out: *"I feel that the simulation was most essential for me. The comprehension that one can leave a question open or let it stay in the air 'without panic' is important and meaningful, not less than asking the right questions in my opinion. There is a saying which elaborates this point: In life like in music periods of silence are as important as the words"*.

4.3 Professional development

The simulation contributed to the professional development of the NTs by developing new pedagogical practices and new insights from the following aspects: teaching as a complex and challenging profession, dialogue with the pupils, assertiveness and setting of boundaries, awareness of body language and systemic view of school as an educational organization.

4.3.1 Teaching as a complex and challenging profession

For most of the NTs the insight that teaching is a complex and challenging profession has become much clearer. One NT indicated: *"The simulation made me understand that teaching is multi-faceted... not only teaching a lesson, marking X in the appropriate box and continuing on. Beyond that there are different problems and different ways of coping with various situations"*. Another NT specified: *"During the simulation and mainly after receiving the feedback from my peers and the actors I realized that the teaching profession is complex, difficult but also interesting and challenging"*.

4.3.2 Dialogue with the pupils

The simulation clarified to the NTs that it was essential to conduct a fruitful dialogue with the learners. One of the NT who experienced an individual conversation with a pupil said: *"I suddenly realized how important it is to listen and not only to voice what I wanted and planned to say"*. Another NT told: *"During talks which I held with the pupils my approach was patronizing and they had to do what I said. Following the simulation I understood that I had to behave differently, build the communication through listening and attention, learning the pupils' needs, the reasons for the undisciplined behavior, what they think about their behavior and what they suggest should be done"*.

4.3.3 Assertiveness and setting of boundaries

The NTs pointed out that teachers should be assertive in their work. According to them assertiveness could be enhanced and taught by means of the simulation. One NT who experienced a conversation with a challenging pupil told: *"There are many things I failed to notice in the way I behaved while talking to him. The simulation made me attentive to this pupil but, at the same time assertive, reflecting to him the severity of his actions"*. It seems

that the simulation helped the NTs to set boundaries between them and their pupils but also among the teachers themselves. This was manifested by the words of one NT: *"If during the simulation no one had remarked to me that I was giving too much without asking anything from a pupil, perhaps I would not have managed to help her. I used to give her fish but I did not provide her with a fishing line"*.

4.3.4 Awareness of body language

The NTs were unaware of their own body language and failed to acknowledge the meanings this entailed. The simulation provided them with insights about their body language. One NT described it in her words: *"I understood from the feedback that my body language transmitted weakness, lack of confidence and stress throughout the entire conversation with the pupil. I was really in a state of defensiveness but I did not know that the others saw it… After the simulation I adopted all the recommendations given to me by the group"*.

Most of the NTs believe that a confident body language which demonstrates authoritativeness and assertiveness will improve their teaching and assist them to develop good communication between them and their learners. Moreover, they stipulated that using their voice and facial gestures as well as maintaining eye contact with all the pupils are essential and meaningful. One NT indicated: *"In the simulation I played the role of the teacher who enters a class where an undisciplined pupil keeps arguing he is bored. I noticed that when I entered the classroom with my back held upright, faced the pupils with confidence and maintained eye contact with all of them, they listened to me and cooperated with me"*.

4.3.5 A systemic view of school as an educational organization

One of the insights attained following the simulation was the importance of becoming acquainted with the class and the school as a holistic system. The simulation elucidated to the NTs that in addition to their role of educators teaching in class their role is also to learn the organizational culture of the school and its organizational, managerial and pedagogical components. One NT indicated: *"In the simulation I was for a moment a teacher talking with a parent. After receiving the group feedback I realized that a dialogue with parents should be based not only on the way their children behave in class. It should reflect the whole picture, the pupils' functioning in the other lessons, their relationships with friends, the school policy, rules and regulations and so on"*.

4.4 Development and improvement of teaching processes in class

Following the simulation and the research findings of personal and professional development, an improvement in the NTs' conduct in their classes and in their teaching processes was illustrated. They improved their performance as teachers. These findings are in fact initial but they attest to a transition from the stage of NTs' survival to the stage of professional development as teaching practitioners.
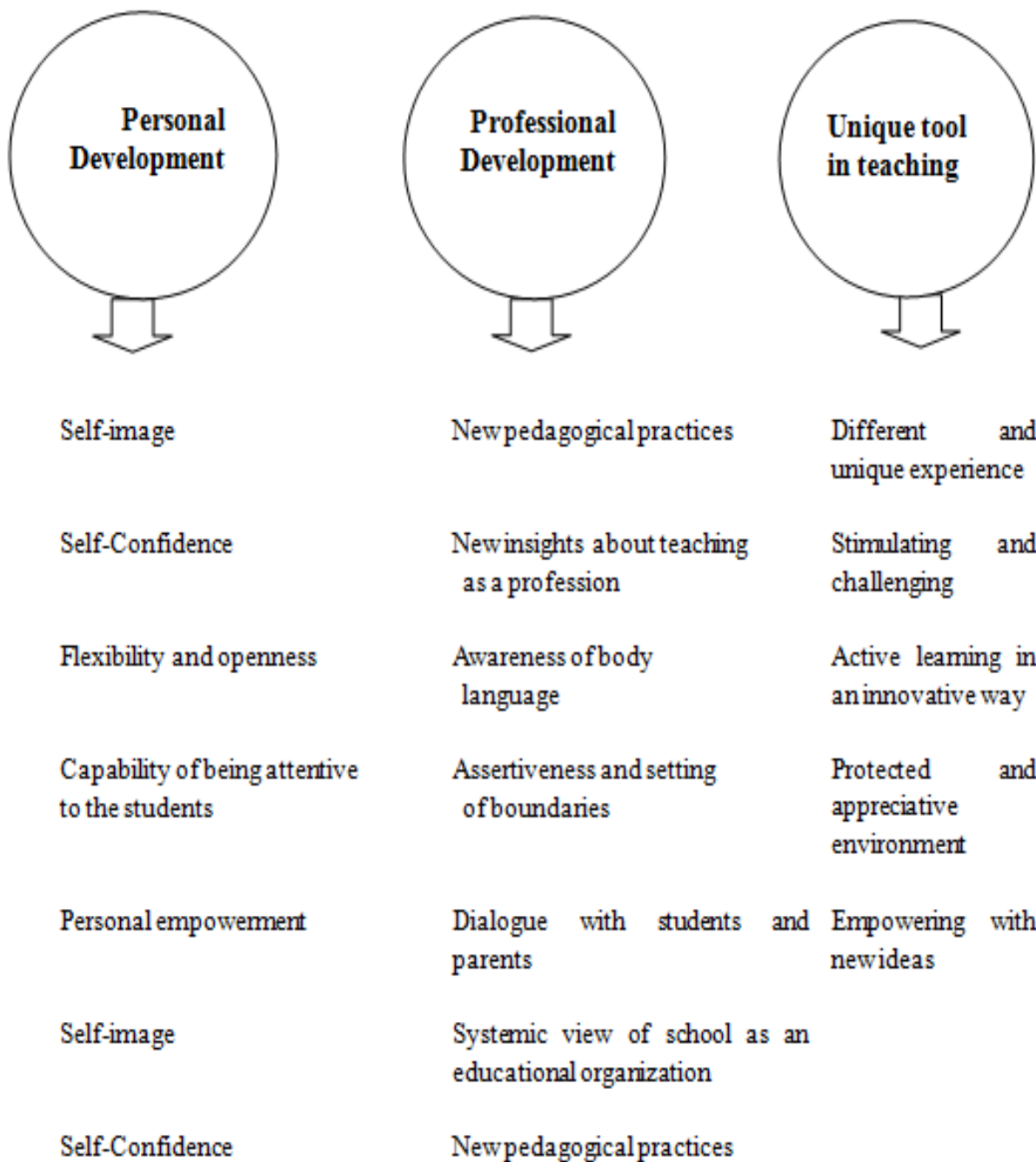
4.4.1 Transmission and implementation

Some of the NTs managed to make a 'transmission' which is beyond their personal insights. They continued forward with their thinking about implementing the simulation tool in their

classes. One NT explained: *"This is an important tool which can be used also with pupils in class. The power of this tool resides in its ability to illustrate in a good and interesting way the topics and ideas which are taught by teachers in the class. This is a good methodology to be applied at the beginning/middle of a lesson".*

Illustration 1 sums up the contribution of the simulation to the NTs in three dimensions: as a tool in the toolkit, contribution to personal development and contribution to professional development.

Illustration 1: Educational simulation as a unique tool in teaching

Personal Development	Professional Development	Unique tool in teaching
Self-image	New pedagogical practices	Different and unique experience
Self-Confidence	New insights about teaching as a profession	Stimulating and challenging
Flexibility and openness	Awareness of body language	Active learning in an innovative way
Capability of being attentive to the students	Assertiveness and setting of boundaries	Protected and appreciative environment
Personal empowerment	Dialogue with students and parents	Empowering with new ideas
Self-image	Systemic view of school as an educational organization	
Self-Confidence	New pedagogical practices	

5 Discussion

The research question explored the contribution of the tool of educational simulation to NTs. The findings illustrate a model which underscores three dimensions of the educational simulation contribution to the NTs: The simulation as a unique tool, contribution to personal development and contribution to professional development.

Regarding the first dimension, the simulation as a unique tool, all the research participants emphasized that the simulation was for them a unique and innovative experience as well as a professional tool which they had never applied in the past. This finding is supported by Shapira-Lishchinsk (2013) who found in her study of simulation in the context of ethics in education that the simulation is a meaningful tool in teacher education.

The simulation is a tool which relates also to various learning and teaching styles. The professional literature presents a variety of educators' teaching strategies versus varied learning methods of both teachers and pupils. Armstrong (2009) applies the theory of multiple intelligences conceived by Gardner (2011) to teaching and learning situations in class. The research findings expand and illustrate this approach by demonstrating that the simulation is another tool which allows teachers themselves to experience a unique tool which might comply with their style. Exposure to a new tool increases the professional capability of NTs as new teachers in the education system. Moreover, experiencing the simulation enables NTs to make a transmission of the tool also to their pupils mainly in light of the fact that their pupils to learn by different styles. This necessitates an extension and renewal of the toolkit of teaching methods in order to respond to the varied learning styles of the pupils.

In the dimension of the personal and professional development of the NTs, the contribution of the simulation is manifested by delving into and consolidating new insights. From a personal point of view, the tool enables the NTs to reinforce their self-confidence and self-image, improving their flexibility and cognitive openness. From a professional point of view, the simulation helped the NTs to develop new pedagogical practices in the following aspects: understanding the complexity of the profession and the challenges embodied in it, dialogue with pupils and parents, assertiveness and setting of boundary, awareness of body language and a systemic view of school as an educational organization.

As far as the personal dimension is concerned, studies show that at the early stages of teaching at school most of the teachers lack self-confidence and are unaware of their capabilities and skills. Wilson & Demetriou (2007) stipulate that the beginning of the teaching practice is characterized by an emotional aspect as well as by a cognitive and technical effort which affect NTs. Consequently, we have to foster their belief in themselves, support and reinforce their self-efficacy in an open and trusting environment. Without new insights about problems emerging in class many new teachers struggle, feel frustrated and even abandon the education system. This study too attests that the simulation enables NTs to increase their self-confidence and self-image and identify their capabilities and skills. This entails the insight that they are capable of successfully coping with various conflict situations in class. This insight is a function of the critical reflection which is structured in the

simulation.

In her book "Teachers as Learners", Feiman-Nemser (2012) argues that one of the challenges is developing NT' ability to perform a reflective examination of their educational practice. According to her, the approach of "apprenticeship of observation" will not facilitate reflection and more should be done in order to achieve that. In this study the teachers are active participants in the simulation rather than passive observers. Hence, using the simulation is one of the tools designed to develop a real and meaningful capability of critical reflection.

Furthermore, the literature specifies the importance of personal reflection processes for empowering individuals in general and teaching practitioners in particular. The reflection allows extensive self-observation which obliges individuals to get acquainted with themselves in-depth with relation to their strengths and weaknesses (Zeichner & Liston, 1996). Within the framework of the simulation the NTs underwent processes of personal and group reflection which enabled learning and personal empowerment. The findings illustrate that during the simulation the NTs were able to observe themselves in a structured, guided and systematic manner, better know their weaknesses and strengths develop insights and improve their conduct at a personal and professional level. To sum up, the simulation enabled the NTs to re-shape their personal-professional and experiential-experimental knowledge and thus changed and improved their conduct as NTs. As for the professional development dimension, the research findings attest to an improved the quality of teaching. This finding is in line with a study which found a positive relation between the quality of teaching and perseverance in the profession (Cochran-Smith et al., 2012). The higher the quality of teaching is, the longer the perseverance in the profession at the same school is. Thus, there are increasing chances that the NTs who attended a simulation will improve the quality of their teaching and will continue working in the education system. The simulation as a tool is suitable not only to NTs but also to pre-service teachers. It was found that NTs practiced what they had learnt in their teacher training (Hargreaves, 2013; Feiman-Nemser, 2012). Therefore the NTs who have experienced an educational simulation will reduce dropout rates in the education system and promote their professional development.

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