

# Teacher Trainees' *Perception of the Time Dimension in Practical Training*

Percepción de la dimensión temporal de las prácticas de entrenamiento en futuros profesores  
Percepção da Dimensão Temporal das Práticas de Treinamento de Futuros Professores

Reception date: JULY 25, 2008 | Acceptance date: AUGUST 19, 2008  
Find this article in <http://www.javeriana.edu.co/magis>

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## Abstract

This study compares the students' perception of their professional development in two aspects of practical training: *weekly practical training (WPT)*, and *intensive practical training (IPT)*. The objective of the research is to form a specific concept regarding the organization of the students' practical training. The research question is how trainees perceive their professional development in two aspects of training –*WPT and IPT*. The research population includes 265 trainees. The research tool is a questionnaire build for the purpose of this study. It includes 23 statements. The main findings show the trainees feel that the IPT period contributes more than the WPT period to their professional development.

## Key words author

Weekly/intensive Practical Training, Didactic and Disciplinary Knowledge, Knowledge of the School Culture and Organization, Self-knowledge and Reflective Processes, Interpersonal Communication, Professional Development.

## Key words plus

College Students, Teaching Practice, Knowledge

## Transfer to Practice

According to the findings of the study, it is recommended to adopt the Intensive Practical Training method. For first year students, it is suggested to combine both methods of Practical Training during the first semester. The weekly Practical Training will focus on visits to a variety of school systems, curricula, and didactic workshops that include simulation and Peer Teaching. During the second semester, Intensive Practical Training will take place in schools. For second and third year students, weekly Practical Training will be designed according to students' needs. For every class, there will be two periods of Intensive Practical Training.

## To cite this article | Para citar este artículo | Para citar este artigo:

Iliyan, S. (2008). Teaching trainees' perception of the time dimension in practical training. *Magis, Revista Internacional de Investigación en Educación*, 1, 127-146.

**Key words author**

Capacitación práctica semanal/intensiva, conocimiento didáctico y disciplinar, conocimiento de la cultura y organización de la universidad, autoconocimiento y proceso de reflexión, comunicación interpersonal, desarrollo profesional.

**Key words plus**

Estudiantes universitarios, prácticas pedagógicas conocimiento

**Palavras chaves**

Capacitação Prática Semanal/Intensiva, Conhecimento Didático e Disciplinar, Conhecimento da Cultura e Organização da Universidade, Autoconhecimento e Processo de Reflexão, Comunicação Interpessoal, Desenvolvimento Profissional.

**Palavras chaves descritor**

Estudantes Universitários, Práticas Pedagógicas, Conhecimento.

**Resumen**

Este estudio compara la percepción del desarrollo profesional, por parte de los estudiantes, en dos aspectos del entrenamiento práctico: el entrenamiento práctico semanal (WPT – Weekly Practical Training) y el entrenamiento práctico intensivo (IPT – Intensive Practical Training). El objetivo de la investigación es formar un concepto específico sobre la organización del entrenamiento práctico de los estudiantes. La pregunta de investigación es: de qué forma los estudiantes en entrenamiento perciben su desarrollo profesional en dos aspectos del entrenamiento –WPT y IPT. La población de la investigación incluye 265 estudiantes en entrenamiento. La herramienta de investigación es un cuestionario construido para el propósito de este estudio. Incluye 23 ítems. El principal hallazgo muestra que los estudiantes en entrenamiento sienten que el período de IPT contribuye más a su desarrollo profesional que el período de WPT.

**Resumo**

Este estudo compara a percepção do desenvolvimento profissional, por parte dos estudantes, em dois aspectos do treinamento prático: o treinamento prático semanal (WPT) e o treinamento prático intensivo (IPT). O objetivo da pesquisa é formar um conceito específico sobre a organização do treinamento prático dos estudantes. A pergunta de pesquisa é: de que forma os estudantes no treinamento percebem seu desenvolvimento profissional nos dois aspectos do treinamento – WPT e IPT. A população pesquisada inclui 265 estudantes em treinamento. A ferramenta de pesquisa é um questionário construído para o propósito do estudo. Inclui 23 itens. O principal achado é que os estudantes acham que o período IPT contribui mais para seu desenvolvimento profissional que o período WPT.

**Transference to practice**

De acuerdo a los resultados del estudio, se recomienda adoptar el método de entrenamiento práctico intensivo. Para estudiantes de primer año, se sugiere combinar ambos métodos de entrenamiento práctico durante el primer semestre. El entrenamiento práctico semanal se enfocará en visitas a diferentes sistemas escolares, currículos y sesiones de trabajo didácticas que incluyen estimulación y enseñanza a través de pares. Durante el segundo semestre, el entrenamiento práctico intensivo tomará lugar en escuelas. Para estudiantes de segundo y tercer año, el entrenamiento práctico será diseñado de acuerdo a las necesidades de los estudiantes. Para cada clase, habrá dos períodos de entrenamiento práctico intensivo.

**Transferência à pratica**

De acordo com os resultados do estudo, recomenda-se adotar o método de treinamento prático intensivo. Para estudantes do primeiro ano, sugere-se combinar os dois métodos de treinamento prático durante o primeiro semestre. O treinamento prático semanal enfoca visitas aos diferentes sistemas escolares, currículos e sessões de trabalho didáticas que incluem estimulação e ensino através de pares. Durante o segundo semestre, o treinamento prático intensivo tomará lugar nas escolas. Para estudantes de segundo e terceiro ano, o treinamento prático será desenhado de acordo às necessidades dos estudantes. Cada aula terá dois períodos de treinamento prático intensivo.

## Introduction

During the recent year, the teacher training system in Israel went through a shakeup. It is found amongst an intense discussion regarding what is desired and what exists in training, while the question of practical training, along the disciplinary studies, is found in the “eye of the storm”.

The significance of examining the time dimension, in relevance to practical training, stems from the Ministry of Education’s request for a significant reduction in studies in teacher training colleges, including practical training. The motives behind the request are both academic and budget-related (Israel Ministry of Education, 2003a).

This study contributes to teacher training in the Arab education system in Israel due to the fact that very few studies were published about practical training in this sector (*Abu Husain & Esawi, 1996*). The fields of study in teacher training colleges include two main components: Theoretical, including disciplinary areas; educational and basic college studies; (Ministry of Education, 2002) and practical training in the *appropriate* schools.

This study focuses on practical training at schools during the first three years in college. The objective is to establish a concept of practical training in a weekly, intensive, or an integrated manner between the first two, so its effects on professional development for teacher trainees can be the best possible.

## Practical training in teacher training

There are two central perceptions in the literature for teacher professional development (Katz, 2000): The perception of teaching as an applied science with a curriculum built on the approach “From theory to practice;” and the perception of teaching as a practical and reflective profession based on the approach “From practice to theory” (Katz, 2000; Schon, 1991; Kagan, 1992).

In both perceptions, practical training constitutes a central factor in teacher training colleges (Applegate, 1985; Goodlad, 1990; Grossman, 1990). Ziv (1990) defines practical training as “clinical practice”. She considers it a period of guided teaching where the student takes a growing responsibility toward a given group of learners, for a limited period of time where it is intended to create opportunities for the application of educational knowledge, practical activities, and reflective thinking.

Teacher trainees indicate that practical training is the significant part in the training process (*Franke & Dahlgren, 1996; McNamara, 1995*). Teachers also assert the importance of practical training for students (Cochran-Smith, 1991; Koerner, 1992).

Practical training is based on the following assumptions:

- Training contributes to the improvement of teaching (Applegate, 1985; Ziv, 1990).
- It is not possible to train teacher trainees without practical training (Boydell, 1986).
- It provides a “real” situation for the teacher trainees to practice and observe others and to learn from them (Stons, 1984).
- It is a method that yields a teaching-learning experience (Gore, 1984).

## Students' professional development

The professional development of the students takes place while they gain experience in a continuous process. Different factors are involved in it: Curriculum and culture of the college, the teacher-trainer, other college teachers, colleague students, the available college resources, and practical training in schools with their different systems (mentors, school organization and culture, pupils, and parents). The student's accumulation of experience also includes the time invested in practical training. This aspect relates to the total number of units of practical training and the extent of its consistency (weekly: usually once or twice a week through the school year and/or intensive for one to two whole weeks).

This study focuses on the students' perception of their professional development in the two forms of practical training. The students' professional development relates to their development in knowledge and control of the following factors:

- a. Didactic and disciplinary knowledge.
- b. Knowledge of the school culture and organization.
- c. Personal and reflective knowledge.
- d. Interpersonal communication.

### The time dimension in practical training

#### *Scope of practical training:*

On the basis of the demand of the Council on Higher Education in Israel (1981) and the Ministry of Education, Culture and Sports (2003a), the practical training in college must be 18 hours per year through the first three years in college, according to major field of study. During the fourth year, students must take part in the specialty-training period in order to qualify for a teaching certificate and license. This means actual teaching of one-third or more in one of the schools for the duration of their senior year in college with a positive evaluation of their performance. This period is not included in this study.

#### *Definitions:*

Dispersal of practical training: there are two basic concepts in the organization of practical training: weekly practical training (WPT) – known also as “spacious” or “regular” practical training – and intensive practical training (IPT) – known also as “continuous” or “concentrated” practical training–.

In WPT, students practice teaching in the school once or twice every week throughout the school year. In IPT, they practice daily for one to two weeks with two training periods every school year (Yunai, 2003).

Most colleges in Israel adopt integration between the two forms of training.

Time duration in practical training: previous studies of time dimension focused mainly on the expressions, quantity, or length of time dedicated for practical training. Very brief mentioning of dispersal of practical training was found in the literature, which makes this study quite necessary.

The widespread idea is that the longer the duration of practical training, the better the training of the students for the teaching profession (Erdman, 1983; Beyer, 1984; Wasserman, 1984; Zeichner & Tabachnick, 1985). Offering greater number of teaching opportunities in class improves the practical ability of the student (Bullough, 1991; Bullough et al., 2002). The assumption is that the expansion of practical training time improves teaching methods. This was used as a basis to expand the practical training time (Goodman, 1985; Evans, 1986).

In contrast, Yunai (2003) raises the questions: Is there a relationship between the allotted time for training and the quality of practical training? How many weekly hours must the practical training take? Does the addition of time assure better quality of training? Or, perhaps is it possible to achieve improvement in quality of training without such addition?

Ziv, Silberstein and Tamir (1994) examined the effect of adding one day per week to the WPT. They found that the expansion of weekly training is not statistically significant for practical training. In contrast, Frankel (1993) studied the responses of students and teacher trainers evaluating the expansion of practical training periods during the junior year in college. She recommended the continuation of trials of four-day practical trainings per week in the junior year. In addition, Ziv (1988) examined the effect of the time factor (Duration of practical training) on the students' progress in attaining teaching methods during the training process. She found no significant effect.

Very few studies that have dealt with the time dimension in the Arab sector focused on the insufficient time the teacher trainer has to spend with his trainees due to their wide dispersion in the schools (Abu Husain & Esawi, 1996; Ismir, 1992).

Ziv (1990) links the development of teacher trainees in practical training and the time distribution. She distinguishes between two training periods: early, followed by professional training.

Early practical training includes the first familiarity with the school, teaching in small groups and large groups, and performance in short periods of time. Professional training enables the students to train in full classes in a continuous period of time. Students take full responsibility for planning and organizing it. Applegate (1985) thinks that there is a relationship

between practical training and time organization. In his opinion, practical training includes five forms of activities leading gradually from familiarity with the school to taking full responsibility for teaching. Every activity depends on the preceding one: observation, supporting participation, training and assistance for individual pupils, teaching small and large groups, and teaching a full class. The first four forms are conducted within short time periods and the last one, in a continuous time period. Cohn (1981) examined the "situational Teaching" model. He points to the relationship between continuous weekly training, high frequency of visits by the teaching methodology instructors, and their familiarity with the class situation at school. He also points to the relationship between the trainees' ability to strengthen the relationship between theory and practice. In this model, the teaching methodology instructors meet the trainees for one day in the framework of training, where the trainees learn teaching methods and perform relevant activities in the classroom.

### Components of professional development

This study focuses on the teacher trainees' perception of their professional development in the two forms of training: weekly and intensive. Professional development deals with the development of knowledge and control of the following factors:

- a. Didactic and disciplinary knowledge.
- b. Familiarity with the school culture and organization.
- c. Self and reflective knowledge.
- d. Interpersonal communication.

These components constitute the basic knowledge of teaching leading to the students' development as part of their teaching training process (Melat, 2001; Connelly & Clandinin, 1991; Shulman, 1987). Professional (pedagogic) thinking developed in a continuous process has an effect on teacher's behavior in the classroom and is affected by it (Melat, 2001). The professional literature emphasizes the teacher's development as a continuous process that moves on a succession (Shapiriri, 1992; Melat, 1997; Darling-Hammond & Sclan, 1996). This movement on a succession changes in different circumstances (Melat, 2001). It is reasonable to assume that training linked with different time organization also has an effect on the basic knowledge of teaching. The study adopts the term "basis of pedagogic-practical personal knowledge" of the teacher (Melat, 2001). Training enables the teacher trainee to examine didactic and personal knowledge in a practical manner and to gain knowledge in the be-

havioral-operational sense. Clark et al. (1996) consider the teacher's viewpoints, during the class, as a complex part of the activities that depend on the nature of the teacher's knowledge and on the occurrences that take place during the process.

This study is based on the assumption that during the practical training period, the teacher trainees are worried by the mutual relationships between the problems of planning a lesson and their knowledge and experience. Such knowledge includes disciplinary knowledge, including all terminology for the lesson; didactic knowledge, including goals setting; and teaching methods, matching learning activities to teaching goals and materials, to the available materials, the teaching environment, the class organization, the pupils' characteristics, and how to express this knowledge practically in the classroom. Therefore, the student is aware of these questions and is capable of examining the development of pedagogic, practical, and personal teaching knowledge.

What is teaching knowledge? Melat (2001) points to six components of practical and personal teaching knowledge: professional, curricular, didactic, and personal knowledge, as well as knowing the learner and the environment. In addition to these components, this study deals with interpersonal communication, which is one of the affecting factors on the school climate in the Arab sector in Israel (Iliyan, 2000). The above components are classified to four factors:

1. Didactic disciplinary knowledge: Didactic knowledge is involved in the different teaching components: planning, performance, ability to evaluate the lesson (Ziv, Silberstein & Tamir, 1994), use of different teaching strategies (Hirsch-Lazrovitz, 1984), exercise and gain of teaching experience, "practical knowledge stemming from the teacher's action" (Zozobsky, 1998), and preparation of learning material and examinations (Melat, 2001). In addition, didactic knowledge relates to the teaching procedure – class management and organization (Goodlad, 1984), perception of time and space, and their use in the classroom (Clandinin & Connelly, 1986; Kashti et al., 1985; Kelkin-Fischman, 1988). The pedagogic practical knowledge of the student includes knowledge of the disciplinary material: the inner structure of the profession, terms, principles, basic opinions and procedures (Bloom et al., 1956; Bruner, 1960; Schwab, 1964), curricular knowledge such as familiarity with the curriculum and learning material, and the ability to use them (Melat, 1986, 1995; Shulman, 1987).

2. Knowledge of the school's culture and organization: This refers to trainees' knowledge of the school's background, patterns, norms, and also to their relationships inside it, with parents, community, and formal authority. Friedman, Horovitz and Shaliv (1988)

define the school culture as a form of life including values, beliefs, attitudes, customs, traditions, written and unwritten laws, and rituals that are not directed by the system. The importance of the school culture effect on practical training is described widely in the literature. Boydell (1986), for example, emphasizes the social context of the school culture. The school environment in its different cultures has unconcealed and concealed laws and a system of expectations from colleagues, administration, and pupils (Vonk, 1995). This constitutes a "practice place" defined as the main socialization agent regarding trainees (Lortie, 1975; Zeichner, 1980), where they deal with new areas of responsibility. Zanting, Verloop and Vermunt (2001a) point to the position and importance of the school in training. Zozovsky (1991) also points out that practical training contributed, mainly, to gaining knowledge about the school and pupils. Iliyan (2000) states that the school culture and organization in some schools in the Arab sector are characterized with a closed organizational climate, which makes it harder for the trainees, regardless that they come from the same culture, to feel that they belong to the school following the tense climate among the schoolteachers.

3. Personal reflective knowledge: Personal knowledge, including values, beliefs, and approaches that affect teaching, were examined in different studies (Connelly & Clandinin, 1991; Zanting, Verloop & Vermunt, 2001a). Bullough (1991) indicates that the personality factors of the trainees, self-perception as a teacher and the shaping of professional identity, affect teaching. Lortie (1975) points to the trainees' biography and their past experience as pupils as having an effect on their teaching methods. That is, the trainees try to imitate their teachers by conducting activities that are familiar to them. Elliot (1992) asserts that practical training leads to changes in the trainees' cognitive and emotional components. According to Zozovsky (1989), trainees' ability to learn personal lessons from practical training improves gradually through the three years of training in the college. Melat (2001) points out the practical personal philosophy of the trainees relevant to personal, emotional, moral, and aesthetic biography expressed in the reflective process. In addition, the trainees' reflective ability develops while using the portfolio in order to document teaching and improve it (Bloom & Bacon, 1995; Silva, 2000; Shiloh, Schrift & Hischrick-Amosi, 2002).

4. Interpersonal communication: Friedman and Chrongold (1993) think that the mutual relationships between the teacher and pupils are expressed by discipline and punishment. This is the same for behaviors that put teachers under pressure such as disturbance in class, gossip and noise, failure to learn the material, criticism, and embarrassment of the teacher. Fried-

man, Horovitz and Shaliv (1988) stress the role of the teacher in creating a climate in class by supporting the pupils. The teacher expresses that by assistance, affection, openness, trust, and real interest in his ideas and thoughts. In Langberg's viewpoint (1997), the analysis of the teaching situation in behavioral terms may help in teacher training by enabling the teacher to raise hypotheses regarding circumstantial factors operating in the classroom and creating a class climate. Caruso (1998) points to the mentor's internal conflict between letting go of the trainees, meaning offering autonomy and independence, and between hanging to them, meaning intervention in their work and reluctance to expose them to responsibility and independence. Meshchit y Weinstein image (2001) points to the central conflict in the trainees' thinking regarding the types of autonomy, on one hand, and the interference in the practical training process, on the other. Hotiner (1996) describes the role of the teacher-trainer and the mentor as mediating factors bridging the different systems (The academic system, the central organizational system, and the Ministry of Education) and the teacher trainees. Zozovsky (1989) indicates that the trainees' ability to work in a team in college develops through the training years.

### **Practical training in the Academic Arab College of Education in Israel**

#### *History of practical training in the college:*

The training model was based on WPT of one day per week for four to five hours, and IPT of ten days twice a year toward the end of each semester. In the WPT, the trainees visited the same class during the first semester and exchanged classes in the second semester. In the IPT, the trainees did not practice in their regular training classes, but in other classes in other schools, selected by the college, in the trainees' hometowns. In every school, one teacher-trainer coordinated the training. A school may have trainees from all fields of study practicing in all levels from kindergarten to tenth grade. All college teachers from all disciplines made observations in the trainees' classes and gave them guidance and comments. In this model, the difficulties facing the trainees in the IPT appeared in the first semester such as the lack of familiarity with the school culture, classes, pupils, and mentors or the school staff. In order to overcome such difficulties, the first two days of the IPT period were dedicated for observation only. In addition, in the WPT a distant mutual relationship was observed between the trainees and the school pupils and faculty for about half a year. The college used this model for almost three decades. In the mid 1990's, following the Council on Higher Edu-

cation's recognition of the B.Ed. program in the college and the doubling in enrolment, the IPT model was cancelled due to the organizational difficulty, leaving only the WPT model in effect.

In a framework of reevaluation of practical training, the college found it necessary to bring back the IPT and integrate it with the WPT. We indicate here that the participating students in this study took part in the WPT only; and the IPT was examined during its first trial.

The model used for training in the college is the following:

**First year:** The training takes place once a week for four to five hours through the school year (WPT). Emphasis is directed toward observation and gradual training according to established activities under the guidance and supervision of the teacher-trainer. Along with this, every trainee maintains a portfolio.

Trainees practice in their appropriate field. For example, students in the early childhood field practice in kindergartens during their first year; special education students (inter-disciplinary studies) practice in regular elementary classes; and students specializing in middle school education practice in middle schools.

**Second Year:** It is similar to the WPT in the first year. Trainees in every discipline practice in their appropriate school levels. The early childhood trainees practice in the first and second grades. The trainees majoring in middle education constitute the largest number. They practice their two major fields of study; one field during the first semester and the other field during the second. In this discipline, the WPT takes place in two models: a) The trainee observes and teaches in the same class under the guidance of several mentors from different disciplines, where the trainee's interaction is in one class but with several mentors; and b) The trainee joins one mentor, observes and teaches in the mentor's different classes. In this model, the trainee's interaction is with one mentor and a greater number of pupils.

The selection of the training model is made by the trainee in conjunction with the teacher-trainer and the school staff.

**Third Year:** It is also WPT but twice a week instead of once. Middle education trainees dedicate one day for each one of their two major fields of study. The early childhood trainees dedicate one day for kindergarten training and the other day for first and second grades in school. Special education trainees practice one day in regular schools where special education children are integrated, and the second day in special education institutes.

During their years in college, the trainees visit different schools in different communities in order to know a variety of different institutions and projects.

Practical training takes place along a two-hour weekly workshop that is conducted by the teacher-trainer in the college or in the mentoring school or a combination of the two depending on the teacher-trainer's decision with his trainees.

During the WPT, the trainees prepare lesson plans guided by the mentor, teacher-trainer, and other teachers focusing on objectives and means of teaching. The trainees document their training in portfolios. The teacher-trainer examines such portfolios during the visits to the schools and at the end of the semester. For the IPT, the trainees present their portfolios to their teacher-trainers prior to, and after the IPT. We assert here that the IPT includes higher frequency of trainee consultation with their mentors, teacher-trainers, and other teachers due to the intensity of the IPT.

This study compares the trainees perception of their professional development in the two forms of training the WPT and IPT. One of the limitations of this study is linked to the target population. It is assumed that broadening the target population and including teacher-trainers and disciplinary teachers improves the objectivity level of the study. During the IPT, all the college teachers go out to the school in order to observe and supervise the practicing trainees. Compared to the WPT, only the teacher-trainers participate. Following random conversations with college teachers, we are aware of the difficulties facing them as they travel to the schools during the IPT, which may have an effect on their perception of this practical training. It was also possible to use additional research methods such as portfolio analysis, feedback from the didactic workshops, interviews, random questioning, and more.

The objective of the study is to establish the most suitable concept for the organization of practical training in the college with respect to spacing of training units of the trainee.

The study question is: How do teaching trainees perceive their professional development in the two forms of training WPT and IPT?

The study deals with the following more detailed questions:

a. How do teaching trainees perceive the development of the didactic and disciplinary knowledge in the two forms of training?

b. How do teaching trainees perceive the development of the relevant knowledge of school culture and organization in the two forms of training?

c. How do teaching trainees perceive the development of the personal and reflective knowledge in the two forms of training?

d. How do teaching trainees perceive the development of the interpersonal communication in the two forms of training?

### Hypothesis

There is a statistically significant difference ( $p < 0.05$ ) between the WPT and the IPT in all the following factors: a) Didactic and disciplinary knowledge; b) School culture and organization; c) Personal and reflective knowledge; and d) Interpersonal communication.

### Design

It is a quantitative descriptive study based on data collected by a questionnaire distributed among the target population.

### Target population

The study included 265 participants from the first three years of college trainees. The sample was randomly selected constituting one third of the total number of the trainees reflecting the real distribution of the trainees by the different grouping.

Table 1  
Sample distribution by background data

Variable	Category	N	%
Gender	Male	29	10.9
	Female	236	89.1
College year	1st	90	34.0
	2nd	99	37.4
	3rd	76	28.6
Discipline	Early Childhood	93	35.1
	Primary Educ.	7	2.6
	Middle Educ.	116	43.8
	Special Educ.	49	18.5

### Research tool

A questionnaire that was built for the purposes of this study was utilized.

### The process of building the questionnaire

A number of teacher-trainers and professionals in education were invited for a meeting. The idea of the study was introduced. Every participant was asked to write a number of statements relevant to the study questions.

In a second meeting, we collected all statements, made a list of all of them and distributed such list to the participants in order to review them and to classify them to groups. In the third meeting we selected the statements that were common among the participants. Based on that, four major factors were identified. Afterwards, the participants met in smaller groups of 3-5 persons in each one and worked on breaking down the statements by the four factors. At the end, we found a good match of the groups' classifications and a questionnaire was built that was accepted by all participants.

The final form of the questionnaire was presented to five experts for review and comments. The answers were based on a scale of 1-6 degrees. Following factor analysis, the final structure of the questionnaire was determined. The questionnaire was written in Arabic. The following are examples representing the four factors in the questionnaire:

1. Development of didactic disciplinary knowledge:  
 a. Practical training enables me to use variety of teaching methods.  
 b. Practical training enables me to develop professional terminology.

2. Knowledge of the school's culture and organization:  
 a. Practical training enables me to know the concealed and unconcealed laws of the school.  
 b. In practical training, I understood the nature of the different roles in school.

3. Personal reflective knowledge:  
 a. Practical training enables me to benefit from the use of portfolio.  
 b. Practical training enables me to examine my educational philosophy in reality.

4. Interpersonal communication:  
 a. Practical training enables me to develop interpersonal relations with my pupils.  
 b. Practical training enables me to establish relations with the school faculty.

The participating trainees were asked to respond to the statements with relevance to the WPT and IPT.

### The research procedure

The questionnaires were distributed at the end of the IPT period to the trainees in a meeting, where they learned about the study and the response manner to the statements. The trainees were asked to fill out the questionnaires selecting one answer on the 1-6 point scale representing the extent of agreement with each one of the 23 statements in the questionnaire, where 1=Never agree, 2=Rarely agree, 3=Sometimes agree, 4=Agree often, 5=Agree almost always, and 6=Agree always. The two forms of training (WPT and IPT) were evaluated.

Every variable that represents each one of the factors was constructed by calculating the measured average of the trainees' responses to the statements relevant to the proper factor. The variables were built relevant to WPT and IPT separately. Based on that, a comparison between them was made.



Table 2  
Components and values of internal consistent validity of all factors

Factor	Components	Training	Cronbach Alpha
Development of didactic disciplinary knowledge	9, 15, 16, 17, 18, 20	WPT	0.84
		IPT	0.85
Knowledge of school's culture and organization	2, 10, 13, 19	WPT	0.72
		IPT	0.71
Personal reflective knowledge	3, 7, 21, 22	WPT	0.68
		IPT	0.69
Interpersonal communication	1, 4, 5, 6, 8, 11, 12, 14, 23	WPT	0.84
		IPT	0.81

Table 3  
Means and standard deviations for the four study dimensions

Factor	Training	N	Mean	SD	t
Development of didactic disciplinary knowledge	WPT	262	4.26	0.927	12.92**
	IPT		5.12	0.848	
Knowledge of school's culture and organization	WPT	264	4.06	0.904	9.34**
	IPT		4.64	0.932	
Personal reflective knowledge	WPT	265	3.89	0.800	10.36**
	IPT		4.52	0.924	
Interpersonal communication	WPT	265	4.13	0.895	10.42**
	IPT		4.74	0.854	

\*\* p<0.01

Table 4  
Means and standard deviations for the trainees' perceptions of the four study dimensions by year in college and MANOVA values.

Factor	Year	N	Mean & (SD)		t
			WPT	IPT	
Development of didactic disciplinary knowledge	1st	90	4.08 (0.91)	4.94 (0.94)	7.14**
	2nd	99	4.22 (0.87)	5.15 (0.80)	8.77**
	3rd	76	4.54 (0.97)	5.27 (0.80)	6.04**
	f-value		5.26*	3.27*	
Knowledge of school's culture and organization	1st	90	3.96 (0.97)	4.50 (1.02)	4.76**
	2nd	99	4.10 (0.84)	4.67 (0.91)	5.87**
	3rd	76	4.14 (0.91)	4.78 (0.84)	5.61**
	f-value		0.95	2.08	
Personal reflective knowledge	1st	90	3.80 (0.80)	4.34 (0.91)	5.08**
	2nd	99	3.81 (0.75)	4.51 (0.97)	7.10**
	3rd	76	4.1 (0.82)	4.75 (0.84)	5.72**
	f-value		3.52*	4.19*	
Interpersonal communication	1st	90	4.12 (0.85)	4.70 (0.90)	5.55**
	2nd	99	3.98 (0.96)	4.68 (0.84)	7.58**
	3rd	76	4.34 (0.83)	4.88 (0.82)	4.84**
	f-value		3.71*	1.38	

\* p<0.05 and \*\*p<0.01

Note: MANOVA, Multivariate Analysis of Variance

## Findings and discussion

### *Analysis and hypothesis testing*

The gap between the trainees' perception of the above factors in the two forms of training was tested using t-test for two dependent samples.

### *Factor 1. Development of didactic disciplinary knowledge*

Table 3 shows that the average of this factor in the WPT was 4.26 on the 1-6 scale compared to 5.12 in the IPT. Using t-test, there is a statistically significant difference ( $p < 0.05$ ). In other words, the trainees perceived their development of didactic and disciplinary knowledge more positive in IPT than in WPT. In addition, the trainees' perception of this factor by year in college was significantly different. Trainees in the 3rd year perceiving this

Table 5  
Means and standard deviations for the trainees' perceptions of the four study dimensions by discipline.

Factor	Discipline	N	Mean & (SD)		T
			WPT	IPT	
Development of didactic disciplinary knowledge	Early childhood	93	5.27 (0.71)	4.44 (0.83)	8.88**
	Primary Education	7	5.41 (0.58)	5.41 (1.03)	3.454*
	Middle School	116	4.85 (0.98)	4.04 (0.95)	7.05**
	Special Education	49	5.40 (0.65)	4.51 (0.92)	6.64**
	f-value	5.20*	7.16*		
Knowledge of school's culture and organization	Early childhood	93	4.74 (0.85)	4.14 (0.84)	6.10**
	Primary Education	7	4.89 (0.64)	3.36 (1.10)	3.10*
	Middle School	116	4.43 (1.00)	3.90 (0.91)	5.20**
	Special Education	49	4.91 (0.85)	4.37 (0.88)	4.57**
	f-value	4.94*	3.97*		
Personal reflective knowledge	Early childhood	93	4.66 (0.80)	4.02 (0.74)	6.64**
	Primary Education	7	4.97 (1.20)	3.64 (0.48)	3.27*
	Middle School	116	4.35 (0.98)	3.75 (0.81)	6.15**
	Special Education	49	4.61 (0.91)	4.00 (0.85)	4.34**
	f-value	2.60*	2.87*		
Interpersonal communication	Early childhood	93	4.80 (0.86)	4.22 (0.88)	5.75**
	Primary Education	7	4.69 (0.81)	3.68 (1.18)	3.31*
	Middle School	116	4.63 (0.90)	4.00 (0.88)	6.80**
	Special Education	49	4.92 (0.72)	4.35 (0.86)	4.78**
	f-value	2.76*	1.52		

\* $p < 0.05$  and \*\* $p < 0.01$

factor more positively than the other two years (Table 4). With respect to discipline, trainees in special education and primary education perceived this factor more positively than the others (Table 5).

This means that the trainees' perception of their development of didactic and disciplinary knowledge depends on their cumulative experience in a concentrated process including the curriculum in college and the mentoring schools. This fact is supportive to finding in other studies (Zozovsky, 1989; Tamir, 1989 & 1998; Melat, 1986 & 1995; Goodlad, 1984; Shulman, 1987).

The findings of Frankel (1993) go a little too far by recommending the continuation of the trial of the model of 4 days of training per week during the third year of college. Our findings contradicts that of Ziv (1988) and Ziv, Silberstein and Tamir (1994) who reported that the expansion of the weekly training is not significant. Esmir (1992) emphasizes that training in teaching improves the didactic knowledge of the teacher only to a limited extent and less than the guided learning in the college. Klunder (1984)

asserts that the institutions must avoid being carried away in the direction of expanding the practical training, which has no proven effectiveness.

#### *Factor 2. Knowledge of school's culture and organization*

Table 3 shows that the average of this factor in the WPT was 4.06 on the 1-6 scale compared to 4.64 in the IPT. Using t-test, there is a statistically significant difference ( $p < 0.05$ ). In other words, the trainees perceived their development of knowledge of the school's culture and organization more positive in IPT than in WPT.

In addition, no significant difference was detected in the trainees' perceptions of this factor by year in college whether in WPT or in IPT (Table 4). In contrast, the difference was significant by discipline in both trainings. Trainees in special and primary education perceived this factor more positively than other disciplines in the WPT, while in IPT, trainees in special and early childhood education showed a more positive perception to this factor (Table 5).

This means that the school culture's effect on the trainees in the IPT is positive and contributes more to the trainees' recognition of the importance of such factor. Furthermore, it enables the trainees to identify the school's strengths and weaknesses. This can help the trainees to adapt to the school climate and understand its types of culture (Esmir, 1992), which makes it easy for them to avoid conflicts and cope with pressure that is characteristic of teacher trainees. One may conclude also that an improvement has taken place in the trainees' perception of the school's culture and organization in the IPT compared to the WPT. This finding concurs with the study results of Zanting, Verloop and Vermunt (2001b), Lortie (1975) and Zeichner (1980) on the importance of the trainees' recognition of the school culture, values and norms. Boydell (1986) indicates that the training place constitutes the main agent of socialization toward trainees – given that the school climate is open. This means that the relationship systems between the principal and the teachers and among the teachers themselves are proper; and also illustrate tolerance toward one another.

Importantly, the trainees graded this factor very high in the two trainings. That is, they think that in the two forms of training, they have the opportunity to know the school culture and organization (Clandinin & Connelly, 1986). This finding contradicts with that of Iliyan (2000), where he describes the majority of the schools in the Arab sector for being characterized with closed and rigid cultural and organizational climate. The reasonable explanation for this is that the closed and rigid culture and climate do not necessarily permeate to the trainees and mentors' privilege of mediation.

#### *Factor 3. Personal reflective knowledge*

Table 3 shows that the average of this factor in the WPT was 3.89 on the 1-6 scale compared to 4.52 in the IPT. Using the t-test, there is a statistically significant difference ( $p < 0.05$ ). In other words, the trainees perceived their personal reflective knowledge more positive in IPT than in WPT. In addition, the trainees' perception of this factor by year in college was significantly different with trainees in the 3rd year perceiving this factor more positively than the other two years (Table 4). With respect to discipline, no significant difference in the trainees' perception was detected in the WPT. In comparison, we observed significant differences in IPT, where trainees in special and early childhood education perceived this factor more positively than the others (Table 5).

Therefore, in conclusion, the development of the reflective knowledge constitutes a continuous process requiring time to grow and mature, in addition to field training with a greater number of teaching and educational scenarios in order to shape up the educational and professional character. In addition, we observed more improvement in the perception of the personal and reflective knowledge in the IPT than WPT. The trainees perceive that the IPT is more beneficial and gives them a better opportunity to gain reflective knowledge and experience in teaching than the WPT.

The study brings additional aspects to studies that have dealt with the development of reflective and personal knowledge of the teacher trainees during their field practice (Melat, 2001; Connelly & Clandinin, 1991; Zanting, Verloop & Vermunt, 2001a).

#### *Factor 4. Interpersonal communication*

Table 3 shows that the average of this factor in the WPT was 4.13 on the 1-6 scale compared to 4.74 in the IPT. Using t-test, there is a statistically significant difference ( $p < 0.05$ ). That is, the trainees perceived their interpersonal communication more positive in IPT than in WPT. In addition, the trainees' perception of this factor by year in college was significantly different in the WPT, but not so in IPT. Trainees in 3rd year perceived this factor more positively than the other two years (Table 4). With respect to discipline, no significant difference in the trainees' perception was detected in WPT. In comparison, we observed significant differences in IPT, where trainees in special and early childhood education perceived this factor more positively than the others (Table 5).

Practical training leads to the creation of mutual relationships among all parties to a continuous time period constituting an opportunity for the trainees to gain, develop, and use communicational tools and experiences. In addition, trainees can understand and discuss the most suitable skills for the different situa-

tions they face. The finding shows an improvement in the perception of the interpersonal communicational skills of the trainees (Meshchit & Weinstein, 2001; Graham, 1997) in the IPT form of training in comparison with WPT. The trainees are exposed to experiences and events of higher frequency in the IPT than the WPT. They also attend more meetings and become more involved on the personal and social levels. The trainees can develop and build mutual relationships much faster during the IPT. Their contacts with the pupils take place in a more active manner, which enables them to introduce themselves to their pupils. This strengthens the interpersonal relations and bridges the gap between the teacher trainees and their pupils. These findings are in agreement with Friedman and Congold (1993) who point out that mutual bonds between the teacher and pupils are expressed in a manner of humanity, intimacy, trust, and mutual respect.

MANOVA in Table 4 shows no effect for the year in college or for the discipline on the trainees' perceptions of the four factors of the study regardless of the training form.

#### *Content analysis of the open question*

the questionnaire included the following open question: "What is your opinion of the WPT compared to the IPT?" Content analysis was utilized to explain the responses. The analysis included the categories discussed earlier. The content analysis is based on understanding the content and the meaning of the description. It cites several responses of the trainees to the open question and qualitatively analyzes them. This raised a number of components that were classified to categories relevant to some of the factors we have discussed. For example:

### **Knowledge of the school's culture and organization**

#### *Trainees' reference to IPT*

*"I experience the difficult situations in the classroom and I understood them much better in the IPT than the WPT;" "In the IPT, the trainee has a stronger feeling of belonging to the school, he/she adapts and can deal with all kinds of problems, while, in the WPT, he/she ignores such problems due to the lack of feeling of belonging to the school."*

#### *Trainees' reference to WPT*

Trainees indicated that the WPT "does not allow them to integrate in the school;" they feel "certain disconnection;" "once a week is not enough. Every time we arrive at the school, I find many new things. We feel we are not involved and it is none of our business,

*while in the IPT, we practically live the real life of a school teacher."*

The study points out that trainees emphasize that during the WPT, they "know the school and its surroundings;" "they know what is happening at school and in the educational system." These responses show that WPT constitutes a framework of general familiarity or phase one (Ziv, 1990; Applegate, 1985) of gaining knowledge about the school culture and organization, which grow and improve afterwards in the IPT.

The reports reinforce the approach in the planning of the training framework. IPT must be taken in consideration, where the trainees are integrated at school, discover knowledge about the school and its surrounding, and understand the relationships and norms in the frameworks of school, community, parents, and authorities (Friedman, Horocitz & Shaliv, 1988; Zeichner, 1980; Lortie, 1975; Boydell, 1986).

### **Didactic and disciplinary knowledge**

#### *Trainees' reference to IPT*

Trainees indicate that the IPT helped them to develop their knowledge of the disciplinary material. *"I gave the pupils all learning material they need in order to succeed"; "The intensive work I invested in preparing a teaching unit particularly the map of terms, I succeeded to pass it completely;" "For the IPT, I searched more sources to prepare the learning material and the terminology map;" "In the IPT, you teach a complete unit rather than a portion of one."*

#### *Trainees' reference to WPT*

Most trainees indicate that the WPT presents a difficulty for them to update the teaching material. *"It is possible to be always up to date with the teaching material you offer to the pupils;" "As we return to school the following week, the pupils already advanced enough in the subject matter. We, in turn, must catch up alone in order to teach them and to know how to manage the class and how the teacher has managed it. This is necessary for continuity of the learning process".* In addition, the trainees stress the problem that they "are not able to teach a full unit, compared to the IPT." One student raised a single advantage in the WPT "I can prepare the lessons according to the regular curriculum of this class."

The trainees' statements lead to the conclusion that the IPT helps them much more in the area of disciplinary knowledge due to three components: 1) More basic preparation of the teaching unit in the disciplinary context, 2) The continuity of time enables the trainees to teach full units and 3) There is continuity between the lessons.

## Didactic knowledge

### *Trainees' reference to IPT*

Trainees' responses were classified into the following eight categories:

1. The lesson plan with its different components (Shulman, 1987): *"I reached a point where I can prepare a full lesson and teach a whole unit;" "My lesson plans were much better and I could link between lesson from day to day."*

2. Ability to evaluate students' achievements following the plan and execution of teaching unit by the trainee (Ziv, Silberstein & Tamir, 1994): *"It was the first time I prepared an examination of one full unit that I have taught and I developed an idea about what have the pupils learned and what have they not."*

3. The trainees know the teaching procedures and their development, they develop information and match the learning material to the need and ability of the pupils (Tamir, 1989): *"I tried to develop the thinking ability of my pupils and to pass the suitable material for them;" "I related to every boy and every girl in the class;" "I related to the specific problems of the pupils;" "I prepared an integrative plan and matched it to my class."*

4. The trainees know, match, and use different teaching strategies and diverse means (Hertz-Lazrovitz, 1984): *"I could utilize my knowledge and use different styles and methods of teaching;" "I used modern methods of teaching."*

5. Plan and organize suitable activities to achieve the lesson's objectives, preparation of learning material and tests (Melat, 2001): *"I have ideas for additional activities;" "I invested a lot in teaching aids and the improvement is obvious."*

6. Exercise and development of the trainees' teaching experience, learning by doing (Zozovsky, 1998): *"I passed certain lessons several times in the IPT."*

7. Trainees know and constitute clever consumer of curricula and learning material (Korthagen & Kessels, 1999): *"For the IPT, I familiarized myself more in the basics and gathered suitable material from different sources, not only from the library but also from the Curriculum Center in college and the pedagogic center in the village."*

8. The trainee can organize and mobilize a class (Goodlad, 1984): *"I felt myself as a good leader and I relate to every pupil in a good and encouraging manner;" "I was more active as a teacher;" "I felt the ability to do much more."*

### *Trainees' reference to WPT*

Trainees' responses point mainly to the following three categories:

1. The gradual development of the didactic knowledge (Melat, 2001): *"The WPT enables us to deal*

*with the problems and difficulties in the classroom gradually;" "It helps us to adapt to standing front of the pupils without feeling nervous;" "It helps us to enter gradually to the field, to become teachers and to learn teaching methods."*

2. Relationship between the gained knowledge in college and the application in the field (Korthagen & Kessels, 1999): *"We apply in the field what we have learned in college;" "There is a continuity and relationship between the material taught in teaching methods and what is done in the field."*

3. Possession of new teaching methods (Hertz-Lazrovitz, 1984): *"In the WPT, there is an opportunity to learn new methods of teaching and how to actually behave."* On the other hand, trainees state that it is difficult to prepare teaching aids in the WPT: *"There is pressure to prepare teaching material demanded by the mentor and teacher-trainer because, in addition to all this, we study and prepare assignments;" "There is no time to prepare enough illustration means and worksheets during the WPT because we also have to attend classes in college."*

## Personal knowledge and reflective procedures:

### *Trainees' reference to IPT*

Trainees' responses point to the following two categories:

1. The use of portfolio to document teaching and improve it (Bloom & Bacon, 1995; Bain et al., 1999; Silva, 2000): *"I learned how to learn from my own mistakes;" "I dedicated more time in the feedback."* The readiness to accept criticism also develops in the IPT: *"I was more prepared to accept criticism."*

2. Development of personal knowledge including professional perception and personal philosophy (values, beliefs and attitudes) (Connelly & Clandinin, 1991; Borko & Mayfield, 1995; Zanting, Verloop & Vermunt, 2001a): *"In the IPT, I felt that I am developing as I learn;" "I promote myself in the future in the issues relevant to the educational process;" "I succeeded to have reinforcements toward my career in education;" "I was offered the chance to advance and become a better teacher;" "I felt that I began to realize myself as a teacher and to advance as required and to achieve my potential."*

### *Trainees' reference to WPT*

Trainees' responses point to the following three categories:

1. Discovering the ego as a teacher: *"We can find and realize our capabilities to teach;" "The trainee exhibits abilities in teaching."*

2. Learning from personal experience: *"The WPT enables me to learn from my experience;" "We apply what we have learned in college and we correct our mistakes."*

3. Gradualism: *"We are offered the opportunity in the WPT to see how we are advancing."*

#### *Interpersonal communication*

##### *Trainees' reference to IPT*

The trainees assert also the ability to nurture interpersonal relations with the teacher-trainer, mentor, pupils, colleagues, school staff, parents, etc., which develop during the IPT (Friedman, Horovitz & Shaliv, 1988; Friedman & Congold, 1993; Stanulis & Russell, 2000). *"I evaluated, advised, and encouraged my pupils in a pleasant manner;" "I created very good social relationships with the school;" "I felt more cooperation, support, and encouragement from the school staff;" "I felt closer to my pupils;" "My approach was not offensive;" "I showed interest in what was offered to the pupils outside the class and help them when needed;" "I tried to relate to pupils in a humane manner and to encourage them."*

##### *Trainees' reference to WPT*

Trainees' responses relevant to WPT focus only on the disadvantages of the interpersonal communication, which reinforces their focus on the advantages of the IPT. They relate mainly to two categories:

1. Lack of contact between the trainees and their pupils following the long time period between classes: *"Long time passes between one day of practical training and the next;" "During this period, the pupils forget about our presence at school;" "The period between one day and the next is too long and there is no contact with the pupils;" "There is a great gap between us and our pupils, which makes our adaptation, as well as the pupils' adaptation, quite difficult."*

2. Degrading relationships with the school principal and teachers, on one side, and the trainees on the other: *"The treatment we received from the school principal and teachers was not so good;" "Sometimes, the school principal and teachers do not cooperate with us;" "Sometimes, the class teachers and the principal treat us in an unpleasant manner."*

## **Recommendations**

This study emphasizes the advantage of the IPT in the eyes of the trainees compared to the WPT, with respect to their development in the four factors discussed above. From here arises the need to examine a new model for practical training that includes, for example, intensive training of ten days per semester; that

is twice a year. In addition, the trainees do not agree with doing away with the WPT, which they perceived as the first phase in their professional development that takes place in a gradual manner.

Based on this, it is suggested to integrate the two forms of training. In the first semester of the freshman year, the WPT focuses on visits to familiarize the trainees with different types of school and curricula; and to hold didactic workshops in the college including simulations, etc. In the second semester the trainees practice in a specific school.

In the sophomore and junior years, the WPT is used according to the trainees' needs. It can also be cancelled. Every class in every year conducts two weeks of intensive training twice a year.

## **Summary**

This study compared the trainees' perceptions of their professional developments in the two forms of training: WPT and IPT.

The findings point to the trainees' preference of the IPT for their development including development of the following factors:

1. Didactic and disciplinary knowledge.
2. Knowledge of the school culture and organization.
3. Personal knowledge and reflective procedures.
4. Interpersonal communication.

The MANOVA analysis shows no significant effect for the year in college or the discipline on the difference between the trainees' perceptions of the four factors when the two forms of training were compared.

The findings of this study are in line with other studies such as Bullough et al. (2002), Zeichner and Tabachnick (1985), and Beyer (1984). It also raises the importance of the time dimension with respect to the concentration/dispersion levels of the training. Based on that, there is a need to establish a new model that takes in consideration the importance of intensive training for the trainees and to focus on it. And due to the demand of reducing the number of hours in the teacher training colleges, the need, phase, and frequency of weekly training must be examined.

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