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A Retrospective Appraisal of Teacher Induction

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Abstract: Examination of an induction program for new teachers was undertaken from the viewpoint of induction graduates three years after participation. Their retrospective perspectives were investigated as to their satisfaction with assimilation in school in the induction year, their attitudes towards organizational aspects of the program, and the program's contribution to their professional development. Comparisons were made to beginning teachers in the midst of their induction year. Data were collected from 98 induction graduates and 390 induction participants using questionnaires. Compared to induction participants, graduates retrospectively remembered the induction year at school less positively and more often recommended extending induction support. The graduates ascribed only moderate contribution to the induction program. In general retrospective appraisals of active teachers and non-teaching graduates were similar. Implications for the use of retrospective evaluations are discussed.

Becoming a teacher is a continuous life-long process. Critical stages include pre-service preparation, entry into the school system, and continuous professional development throughout the teacher's career (Feiman-Nemser, 2001). In order to ease the entry "shock" into the school system (e.g., Kelchtermans & Ballet, 2002) and to optimize socialization into the profession, formal induction programs have been implemented (e.g., Ingersoll, 2007; Ingersoll & Smith, 2004; Wong, 2004). Programs vary across countries, and within countries (e.g., Howe, 2006; Wong et al., 2005). Variation expresses itself in duration, program components, funding sources, operation, target population, intensity, and comprehensiveness. While mentoring tends to be the most common component of induction programs, research findings have indicated that successful programs include more than one component, such as orientation, written materials, reduced workloads, classroom observations, workshops, and seminars (Ingersoll, 2007; Ingersoll & Smith, 2004; Wong, 2004). Regardless of differences among programs, all induction programs share a common goal of providing new teachers with assistance, guidance, and support to ease their gradual acculturation into the teaching profession (Howe, 2006; Stoel & Thant, 2002).

Evaluation of induction programs has focused mainly on their positive impact on teacher retention, as well as on their contribution to the development of effective instructional skills among new teachers (e.g., Rippon & Martin, 2003; Villar & Strong, 2007). For example, in a review of 15 empirical studies of the effects of new teacher induction, Ingersoll and Strong (2011) reported that induction programs positively affected three types of outcomes: teacher commitment, classroom instructional practices, and student achievement. Both objective and subjective data have been used to examine the effects of induction. Sources include official records (e.g., Ingersoll, 2007), interviews (e.g., Bickmore &

Bickmore, 2010), observation of new teachers (e.g., Stanulis & Floden, 2009), and questionnaires (e.g., Clark & Byrnes, 2012).

The evaluation of induction from the viewpoint of participants can be undertaken at different stages in the life of the program: during participation, immediately at the end of completion, and at some later point in time. Participants' appraisal of the program and its contribution are likely to be affected by the stage in which the evaluation is carried out. For example Hagger, Mutton, and Burn (2011) carried out a three-year longitudinal study that examined teachers' learning over time. Seventeen student teachers who were recruited to an induction program were examined at the end of pre-service training, at the end of the induction year, and at the end of their second year of teaching. They found that expectations changed over time and that assuming sole responsibility for classes affected the teachers' perceptions regarding their professional development and needs.

According to Brewin, Andrews, and Gotlib (1993), retrospective evaluations reflect a reconstructed appraisal of the quality of past experiences. Therefore, it is reasonable to expect that teachers, who have acquired greater professional experience and have formed and developed their perspectives on teaching, will reinterpret the path to becoming a teacher (Odell, 1986). In other words, experienced teachers may view their pre-service training and induction phase differently in light of their subsequent experience at school as compared to teachers who are in the midst of their induction year.

Appraisals given during or close to the end of participation in a program requires short-term recall, whereas retrospective appraisals are a result of long-term memory which tends to focus on meaningful and influential past events (Linton, 1986; Liddicoat & Krasny, 2013). In support of the advantages of retrospective evaluation, Pratt, McGuigan, and Katziv (2000) have argued that traditional pre-post comparisons sometimes underestimate program effects. While retrospection may be biased insofar as it is selective (Gonzales-Morganti, Lovejoy, Burke-Beckjord, Haviland, Haas, & Farley, 2013), and general as opposed to detailed (Brewin et al., 1993), it also has the potential of enhancing comprehension of complex circumstances from a more mature perspective (Cherubini, Kitchen, Goldblatt, & Smith, 2011). A recent follow-up study by Conway (2013) provides some support for this assertion. In a study of music teachers 10 years after participating in an induction program she found that their retrospective views concurred with their earlier reflections while at the same time they demonstrated a deeper understanding of the needs of inductee teachers that was related to more experience in the field. She concluded that retrospective perceptions can provide unique insights into teacher preparation while incorporating the teacher's current educational landscape.

While retrospective evaluation has been used to evaluate programs in different areas, such as programs for preparing doctors (Ochsmann, Zier, Drexler, & Schmid, 2011; Pabst & Hermann-Jose, 1997) or training programs for social workers (Cleak, Anand, & Das, 2014), few studies have examined retrospective evaluations of teacher induction programs. One of these studies was a follow-up investigation, conducted 10 years after participation in induction (Davis, & Waite, 2003). Teachers reported positive retrospective perceptions of the impact of induction on their initial teaching experiences. They recalled receiving both professional and emotional support; developing important professional relationships, especially with the mentor; developing teaching skills and knowledge such as integrating curriculum, performing action research, and creating a positive learning environment; developing professional attitudes and dispositions; and to a lesser degree developing leadership skills.

Given the dearth of retrospective evaluations of teacher induction, the present study was undertaken to examine the perceptions of graduates of an induction program three years after participation. More specifically, the study addressed the following questions:

1. To what extent do graduates of a national induction program express satisfaction with their professional assimilation in school during their induction year?
2. How do graduates view organizational aspects of the program in retrospect?
 - a. What are their attitudes towards the duration of the program and its components, and towards matching of inductees with school mentors on subject matter and grade?
 - b. What suggestions do they make for improving the program?
3. How do graduates retrospectively evaluate the professional contribution of the induction program?

In order to examine whether retrospective perceptions are influenced by teaching experience, comparisons were made, when the available data allowed, between graduates of the induction program and beginning teachers in the midst of their induction year. Furthermore, differences between induction graduates who were teachers and those who had left teaching were also examined.

Research Context

The study reported in this paper was part of a comprehensive evaluation of the national teacher induction program in Israel. The induction program was initiated to increase the professional status of teachers as well as to reduce the "reality shock" of entry into the profession. The program is obligatory for all teachers in their first year of teaching and successful completion of the one-year program is a prerequisite for obtaining a permanent teaching license. Implementation of induction is a joint venture of the schools, the national educational authorities, and the academic teacher training institutions.

The program is comprised of three components: 1) individual mentoring by a colleague in the same school, 2) weekly or bi-weekly workshops given by a teacher training department at one of the universities or colleges, and 3) formal evaluation of teaching for licensing purposes. The present study focuses on the first two components. Mentors are expected to be veteran teachers who have experience teaching the same grade levels and subjects taught by the inductee teachers. Their task is to help inductee teachers become familiar with school norms and procedures, assist them in adapting to the school culture, aid them in instructional planning and classroom management, and provide constructive feedback on their teaching through formative evaluation. Occasionally a suitable mentor cannot be found and in these cases a mentor is assigned who does not teach the same grade and/or the same subject as the new teacher.

Induction workshops operate as reflective practice groups. Their purpose is to assist inductee teachers in analyzing and reflecting upon their experiences at school while connecting theory and practice, and to provide them with a supportive professional environment. Staff members at a teacher training institution serve as workshop leaders of groups numbering approximately 15 participants each. The composition of workshops is not officially specified and previous research findings indicate that some workshops are organized such that participants have similar teaching assignments while others are made up of inductees who are teaching a variety of grade levels and/or school subjects (Fresko & Nasser-Abu Alhija, 2009).

Method

In this study a mixed-method design was employed in which the quantitative component was dominant, while the qualitative component was used to complement quantitative findings.

Participants

Retrospective evaluations in previous studies have tended to relate to a single group and reports are provided by participants at different stages of their involvement in a program (e.g., Hennissen, Crasborn, Brouwer, Korthagen, & Bergen, 2011). In the present study, the sample included two groups who were situated at different stages with respect to participation in the induction program for beginning teachers: induction graduates with three years experience since completing the one-year induction program ($n=98$), and induction participants who were towards the end of their induction year ($n=390$). A sample of induction graduates was randomly selected from records supplied by 21 teacher training institutions that responded to the request of the researchers: 74 participants were actively serving as teachers and the remaining 24 were not employed in the school system at the time of data collection. Examination of the data revealed that latter group were heterogeneous in terms of where they had studied, what they had studied (elementary versus secondary education and teaching major), and gender. The sample of induction participants was made up of the new teachers attending one induction workshop at each of the 28 academic teacher training institutions in Israel.

In order to determine the comparability of the induction graduate sample and the induction participant sample, their respective distributions on three key variables were examined. The results presented in Table 1 indicate that the two groups were highly similar with respect to their distributions on gender, type of teacher training institution, and training track. Differences regarding these variables were not statistically significant.

In addition, a comparison between the two groups with respect to age indicated that induction graduates were on the average nearly three years older than the induction participants, meaning they were at the same age when they had participated in the same induction program three years prior.

<i>Variables</i>	<i>Induction graduates (n=98)</i>	<i>Induction participants (n=390)</i>
<i>Gender</i>		
Male	16.3	19.9
Female	83.7	80.1
<i>Training institution</i>		
College	71.6	67.1
University	28.4	32.9
<i>Training track</i>		
Elementary	37.5	28.6
Secondary	62.5	71.4

Table 1: Demographic Comparison of In-service and Inductee Teachers (Percentages)

Research instruments and variables

Data were collected by means of two questionnaires, one for graduates of the induction program and one for participants. The graduate questionnaire included three main sections: background and teacher training information, characteristics of their current employment, and attitudes towards the teacher induction program and the induction year. The participant questionnaire consisted of six sections: background and teacher training information, characteristics of their employment during the induction year, mentoring, the induction workshop, the evaluation process, and attitudes towards induction. Both questionnaires included closed-ended items as well as one open-ended question. Below is a description of the variables which are relevant to the present analysis.

Satisfaction

Both induction graduates and induction participants rated their satisfaction in relation to eight aspects of their school experience during their induction year of teaching. Ratings were given on a 5-point scale ranging from 1 (*low satisfaction*) to 5 (*high satisfaction*). These aspects included assimilation into the school, support received from colleagues, relations with pupils, relations with parents, selection of teaching as a profession, general involvement at school, treatment by school administration, and non-teaching duties. Principal axis factor analysis with oblique rotation yielded one general factor accounting for 46.9% of the variance in the data. Internal consistency as measured by Cronbach's α was .89 for induction graduates and .86 for induction participants.

Attitudes

Both groups reported their attitudes in relation to organizational aspects of the induction program: the optimal duration of induction and program components and the importance of mentor-inductee matching on subjects and grades taught. Attitudes regarding duration were measured using four possible response options: "*no need at all*," "*less than one year*," "*one year*," and "*more than one year*". Responses regarding the importance of matching were given on a 5-point Likert scale from 1 "*not at all important*" to 5 "*very important*".

In addition an open-ended question was presented to both groups which examined attitudes towards the induction program. Respondents were asked: "*If you were in charge of the induction program, what aspects would you preserve and what aspects would you change? Explain.*"

Contribution

The two questionnaires addressed the contribution of the induction program somewhat differently: while induction graduates were asked to evaluate the overall contribution of the induction program, induction participants addressed the contribution of the mentoring and workshop components separately. Both questionnaires contained 21 items referring to the same facets of the teaching profession. Respondents were asked to rate the contribution of induction to their professional development in each of these areas on a scale from 1 (*low contribution*) to 5 (*high contribution*).

A series of factor analyses with principal axis factoring and oblique rotation were conducted on the induction graduate ratings and the two measures of induction participant

ratings (contribution of mentoring and workshop) and yielded three highly similar factor solutions. The three factors that were obtained reflect the emotional, pedagogical and ecological domains identified by Vonk's as relevant to novice teachers' professional development (Vonk, 1995). The emotional factor relates to coping, encouragement, and motivation; the pedagogical factor refers directly to classroom instruction; and the ecological factor pertains to adjustment to school culture and assistance with non-instructional school tasks. The high values for Cronbach's α coefficients for each domain corresponding to the three data sets can be viewed as an indication of a valid categorization (see Table 2).

<i>Domain</i>	<i>Induction graduates</i> (<i>n=98</i>)		<i>Induction participants</i> (<i>N=390</i>)	
	<i>Induction program</i>	<i>Workshop</i>	<i>Workshop</i>	<i>Mentor</i>
Emotional	.89	.93	.93	.91
Ecological	.86	.88	.88	.88
Pedagogical	.91	.90	.90	.90

Table 2: Reliability Coefficients (Cronbach's α) of Emotional, Ecological, and Pedagogical Contribution Domains

Procedure

Questionnaires were sent by mail to induction graduates. Following one reminder, 98 questionnaires were returned (25% response rate). Many envelopes were returned unopened due to name and address changes not having been updated in the records at the teacher training institutions. Although the response rate was not high, results of postal graduate surveys have been reported in the literature with similar or lower rates (e.g., Dickmann, Cooner, & Dugan, 2007; Fahy, Spencer & Halinski, 2008). The research questionnaire for induction participants was distributed by program coordinators during one workshop meeting towards the end of the induction year at each teacher training institution.

Data analysis

Quantitative data were analyzed using SPSS version 21. Data analysis included descriptive statistics (means and standard deviations), as well as both *t*-tests for independent samples (along with Cohen's *d* as a measure of effect size) and chi-square tests for group comparisons.

Thematic analysis was performed on the qualitative data generated by participants' responses to the open-ended question regarding suggestions concerning the induction program. Responses were organized into categories and sub-categories on the basis of the target, specific content, and direction.

Results

Results are presented according to the research questions that address satisfaction with the induction year, attitudes towards the induction program, and perceived contribution of the program. With regards to satisfaction and attitudes, comparisons are made between induction graduates and induction participants. Insofar as questionnaires were not identical for the two groups, results concerning contribution relate only to the induction graduates.

Satisfaction with the Induction Year

The first research question addressed teachers' satisfaction with their work in school during the induction year. Results are displayed in Table 3. Induction graduates remembered their induction year as satisfying to a moderately-high degree in relation to most aspects of their work. They recalled being most satisfied with their relations with students, followed by their assimilation in school, and the support that they received from the teaching staff. They remembered feeling least satisfied with performing non-teaching roles in school and relations with parents. At the same time, induction graduates rated their satisfaction lower than induction participants in all aspects. Significant differences between the two groups were found for assimilation in school, relations with students, selection of teaching as a career, involvement in school, and their treatment by school administration. These significant differences were featured with moderate effect sizes.

Given that induction graduates were comprised of two sub-groups (active teachers and non-teaching graduates), additional comparisons were made. Two significant differences were detected. Active teachers were more satisfied with their selection of teaching as a career ($M=3.46$, $SD=1.10$) as compared to non-teaching graduates ($M=2.50$, $SD=1.32$) with a relatively high effect size (*Cohen's d*=0.79). In addition these two groups reported significantly different levels of overall satisfaction from their work at school during their induction year. The mean score for the active teachers was 3.54 ($SD=0.79$) and for the non-teaching graduates the mean was 3.20 ($SD=0.91$); differences were reflected in a moderate effect size (*Cohen's d*=0.40).

<i>Factor & Items</i>	<i>Induction graduates</i> (<i>n</i> =87)		<i>Induction participants</i> (<i>n</i> =390)		<i>Cohen's d</i>
	<i>Mean</i>	<i>SD</i>	<i>Mean</i>	<i>SD</i>	
<i>Satisfaction</i>	3.44	0.84	3.77***	0.75	-0.41
Assimilation in school	3.76	0.98	4.13**	0.87	-0.40
Support from the teaching staff	3.74	1.05	3.92	1.05	-0.14
Relations with students	4.01	0.91	4.25*	0.82	-0.28
Relations with parents	3.07	1.08	3.20	1.17	-0.12
Selection of teaching as a career	3.25	1.25	3.62**	1.12	-0.31
Involvement in school	3.40	1.10	3.75**	1.03	-0.33
Treatment by school administration	3.35	1.35	4.02**	1.07	-0.55
Non-teaching roles in the school	2.92	1.37	3.17	1.37	-0.18

* $p < .05$, ** $p < .01$, *** $p < .001$

Table 3: Means, Standard Deviations, t-test Results, and Cohen's d: Comparison of Induction Graduate and Induction Participant Satisfaction

Attitudes towards Aspects of Induction

The second research question related to attitudes towards aspects of the induction program. Data used to answer this question were both quantitative and qualitative. Respondents were asked to rate the optimal duration for the induction program as a whole and for the mentoring and workshop components separately. As can be seen from Table 4, most induction graduates were in favor of maintaining the existing duration of the program and the mentoring (one year). A noteworthy proportion of them even recommended extending the duration for both of these aspects. Attitudes towards the workshop component were less positive than towards mentoring: only 54% favored one year or more duration of the workshops as opposed to 84% who favored one year or more of mentoring.

The comparison made between the attitudes of induction graduates and induction participants indicated similar response patterns: the program in general and its mentoring component in particular were seen as more important than the workshop component. At the same time, induction graduates tended to ascribe greater importance to the first two aspects than did induction participants.

<i>Duration</i>	<i>Induction graduates</i> (n=98)				<i>Induction participants</i> (n=390)				χ^2
	No need at all	Less than one year	One year	More than one year	No need at all	Less than one year	One year	More than one year	
Induction program	2.3	11.5	73.6	12.6	6.8	27.2	56.0	9.9	13.80**
Mentoring	2.3	13.8	66.7	17.2	5.8	24.9	50.8	18.6	8.86*
Induction workshop	15.1	31.4	46.5	7.0	15.4	34.6	42.4	7.6	0.52

*p<.05, **p<.01

Table 4: Attitudes (Distributions in Percentages) of Induction Graduates and Induction Participants Towards Duration of Induction and Its Components: χ^2 Results

Looking within the graduate group, the active teachers and the non-teaching graduates held similar views with respect to the duration of the program and the mentoring component. However, they differed with respect to the preferred duration of the induction workshop. The active teachers tended to recommend maintaining the one year duration or extending the workshop for a second year more often than those graduates who were not employed as teachers at the time of the study (58% as opposed to 39%).

Another aspect of attitudes addressed the matching of inductees and in-school mentors. Results displayed in Table 5 indicate that matching was considered relatively important by induction graduates and induction participants both with respect to subject matter and grades taught. However, in retrospect, the importance of matching on grade level was considered significantly less important by induction graduates as compared to induction participants, although the effect size is not large. It should be noted that no differences were found between elementary teachers and secondary teachers in either group with respect to their attitudes towards mentor-inductee matching. Moreover no differences were found between active teachers and non-teaching graduates.

<i>Matching</i>	<i>Induction graduates (n=98)</i>		<i>Induction participants (n=390)</i>		<i>Cohen's d</i>
	<i>Mean</i>	<i>SD</i>	<i>Mean</i>	<i>SD</i>	
Subject taught	3.97	1.07	3.96	1.10	.01
Grade level	3.66	1.09	3.96*	0.92	-.30

*p<.05

Table 5: Means, Standard Deviations, t-test Results and Cohen's d: Comparison of Induction Graduate and Induction Participant Attitudes toward Mentor-Inductee Matching (scale 1-5)

Further information about attitudes towards the induction program and its components was obtained from the written comments provided by the induction graduates and the induction participants in response to the open-ended question regarding what they would change or preserve in the program. Induction graduates wrote 86 comments and induction participants wrote 373 comments. Comments were sorted into three main categories: those relating to the induction program as a whole, those addressing the mentoring component, and those focusing on the induction workshop. Within these main categories comments were further classified by specific content and direction (positive, neutral or negative).

In general, induction graduates' comments focused more on the program as a whole than on either of the two components, whereas induction participants emphasized the workshop component. More specifically, 42% of the induction graduates' comments addressed aspects of the whole program as compared to only 26% of the induction participants' comments. The issues addressed by both groups with respect to the whole program were highly similar. However the graduates more often mentioned extending the length of the induction period and suggested providing greater assistance to inductee teachers in such areas as classroom management, collaborative work with colleagues, and learning the curriculum and new content areas.

Comments that addressed mentoring were slightly more frequent among the graduates (28%) as opposed to the participants (19%). In general attitudes towards mentoring tended to be positive in both groups. However, induction graduates tended more often to suggest improvements to the mentoring process, such as insuring matching between mentor and mentee, and ways in which the mentor could provide greater assistance to the new teacher. For example induction graduates commented: "*More intensive support and guidance*", "*Mentors should be able to assist new teachers with the subject matter*", and "*It would be nice if the mentor had been with me in class, at least at first*".

Induction graduates tended to address aspects of the workshop less frequently than did induction participants (27% as opposed to 50%) and both groups tended to be more often critical than positive. Induction graduates as compared to induction participants less often dealt with either shortening the duration of the workshop or suggesting ways for making its content more relevant. The following are examples of comments made by induction participants: "*I would have sessions once every two weeks instead of weekly, and if problems arise in the meantime that it would be possible to communicate with the workshop leader through email*", "*Often the workshop is not necessary. I would prefer courses that would help me with my students*", and "*Our workshop is boring because we each teach different grade levels and deal with different problems. It was more beneficial to hear and to solve problems that we share*".

Contribution of Induction

Results in Table 6 show that induction graduates retrospectively rated the contribution of the induction program as moderate concerning all aspects of teaching (emotional, ecological and pedagogical). Nevertheless, the induction program was remembered as contributing most to the emotional domain and least to the ecological domain. Within the emotional domain, greater benefits were reported having been accrued from the program with respect to coping with discipline problems, strengthening self-confidence, and coping with frustration, whereas dealing with parents and promoting their motivation to teach were the least benefited areas. Within the ecological domain induction graduates recalled greatest contribution with respect to familiarity with school rules and regulations and to becoming part of the school team. Finally, in the pedagogical domain, the program was remembered most as contributing to coping with emergent didactic problems and preparing teaching materials, and least in the areas of becoming familiar with the curriculum and using instructional aids. It should be noted that graduates varied considerably with respect to their retrospective ratings.

<i>Factors & Items</i>	<i>Mean</i>	<i>SD</i>
<i>Emotional Support</i>	3.13	0.86
Coping with discipline problems	3.40	1.16
Strengthening self-confidence	3.35	1.10
Coping with frustration	3.34	1.12
Motivating pupils	3.19	1.07
Creating a positive classroom climate	3.10	1.17
Dealing with pupils' personal problems	3.06	1.16
Promoting motivation to teach	2.90	1.21
Dealing with parents	2.70	1.15
<i>Ecological Support</i>	2.85	0.99
Familiarity with school rules and regulations	3.22	1.22
Becoming part of the school team	3.22	1.18
Relationships with school personnel	3.13	1.24
Carrying out additional duties	2.40	1.23
Organization of non-teaching activities	2.30	1.33
<i>Pedagogical Support</i>	3.02	0.92
Coping with emergent didactic problems	3.23	1.05
Preparing teaching materials	3.18	1.27
Time management	3.16	1.17
Learner assessment	3.15	1.01
Adapting teaching materials and strategies to pupils' needs	3.08	1.17
Mastering subject matter	3.06	1.31
Use of instructional aids	2.67	1.21
Becoming familiar with the curriculum	2.65	1.28

(*n*=98; scale 1-5)

Table 6: Means, Standard Deviations: Induction Graduates' Contribution Ratings

Comparisons between induction graduates who were teaching and those who were not teaching indicated no significant difference in their retrospective appraisal of the contribution of the induction program to the overall emotional, ecological, and pedagogical domains. At the same time significant differences with moderate effect sizes were found on three specific items: preparing teaching materials, mastering subject matter, and promoting their motivation to teach (Table 7). On all items active teachers recalled gaining greater benefits from the induction program.

<i>Item</i>	<i>Active Teachers (n=74)</i>		<i>Non-teaching Graduates (n=24)</i>		<i>Cohen's d</i>
	<i>Mean</i>	<i>SD</i>	<i>Mean</i>	<i>SD</i>	
<i>Preparing teaching materials</i>	3.44	1.24	2.74	1.32*	0.55
<i>Mastering subject matter</i>	3.19	1.34	2.65	1.19*	0.43
<i>Promoting their motivation to teach</i>	3.05	1.20	2.38	1.10*	0.58

* $p < .05$

Table 7: Means, Standards Deviations, and Cohen's d for Significant Differences in Induction Contribution between Teaching and Non-Teaching Induction Graduates

Discussion

The focus of the study was the retrospective evaluation of an induction program by its graduates. In order to have some reference point for interpretation of the results, comparisons were made when possible with the views of beginning teachers who were actively participating in the national induction program. Several findings are noteworthy both with respect to the use of retrospective evaluations of induction programs, as well as to the implication of the findings to the specific program which was evaluated.

One issue that was examined retrospectively related to satisfaction with in-school experience during the induction year. Induction graduates reported less satisfaction in retrospect as compared to teachers who were in their induction year. A possible explanation for this different outlook on the induction year may be a result of the former's more mature viewpoint on teaching and school life (a suggestion in line with Cherubini, et al., 2011), which shapes their perceptions. These perceptions are likely to be more realistic since experienced teachers have a basis for comparison and a better understanding of the needs of new teachers. Conversely, it is also conceivable that the induction participants had been anxious preceding their first year of teaching and their current reality in school with the help of the induction program is not as unpleasant as they had anticipated.

Despite the differences between the two groups in terms of satisfaction, the rank order of their ratings on the various items was highly similar, meaning both groups were relatively more satisfied with relations with students and assimilation into school, and least satisfied with non-teaching roles and relations with parents. In other words, the retrospective memories of the induction year were similar in content, but not in degree, to the concurrent evaluations of the induction participants. After three years of experience in school, teachers appear to preserve their relative appraisal of different aspects of their first teaching assignment.

Focusing on the induction program, two issues were examined: attitudes regarding the organizational features of the program and appraisals of its contribution to the professional development of beginning teachers. With respect to organization, both graduates and

participants tended to be in favor of maintaining or extending the duration of the one-year induction program as a whole, as well as the mentoring component. They were less favorable regarding the recommended duration of the workshop component. Despite this similar pattern, a greater proportion of graduates were more favorable regarding the duration of the program and its mentoring as compared to induction participants. No differences were found between the two groups with respect to the duration of the workshops. Written comments reinforced the greater value attributed to mentoring by both groups as compared to the induction workshop. This finding that indicates the perceived importance of mentoring to the induction process in this program lends support to the extensive use of mentoring in teacher induction programs in general (e.g., Ingersoll & Strong, 2011).

In light of the apparent centrality of mentoring, it is essential to understand the factors which contribute to its success. The literature indicates that matching of mentors and inductee teachers is indeed an important element of effective mentoring (e.g., Hirsch et al., 2009). Matching mentors and inductee teachers with regard to subject matter and grade levels was addressed in this study. Prior research has shown that matching in these two areas can affect the degree to which the mentor is able to provide pedagogic-specific assistance (e.g., Hobson et al., 2009; Smith & Ingersoll, 2004). In the present study both graduates of induction and induction participants similarly attributed relatively high importance to mentor-inductee matching on subject matter. However, graduates assigned less importance to grade-level matching than did induction participants. Possibly, their school experience has taught them that receiving help with the pedagogy of teaching a specific subject is more critical to successful instruction and that application of pedagogical and subject matter knowledge to different grades levels requires less assistance.

Graduates of induction provided retrospective appraisals of the contribution of the induction program to their emotional, ecological, and pedagogical adjustment at school. In general, ratings of contribution were at best moderate which could be explained in several ways. First of all, it is possible that the new teachers did not require a high degree of support in the various areas and therefore high contribution ratings could not be expected. A second possibility is that this program as currently being operated is not completely answering the needs of new teachers and should be improved. This possibility is more realistic than the first given recurrent research findings that reveal the positive impact of induction support on teacher socialization and retention (e.g., Hagger et al., 2011). Additionally their moderate ratings may have been influenced by exposure to alternative sources of support, such as colleagues or in-school professional development activities, that caused them to realize how much more contribution they could have received if the induction program had been of higher quality.

Although induction graduates reported only moderate contribution of the induction program to their professional development in the various domains, some differentiation was observed in their retrospective ratings. They attributed greatest benefits in the emotional domain and least in the ecological domain. Although the goal of this induction program was to assist new teachers' socialization into the teaching profession, which could be translated into an expectation of support particularly in the ecological and pedagogical spheres, it seems that the program was relatively more successful in dealing with the emotional transition from being a student of teaching to being a classroom teacher. This information, together with the attributed contribution to specific aspects of teaching, may be useful for guiding decisions aimed at improving the induction program.

Insofar as some graduates of the induction program were not employed as teachers, further comparisons were made between the retrospective views of active teachers and non-teaching induction graduates. With respect to satisfaction with the first year of teaching, it is significant to note that the non-teaching graduates reported less satisfaction with having

selected teaching as a career which was apparently related to their lower overall satisfaction. Less satisfaction among non-teaching graduates was also noted with respect to their appraisal of the induction program. More specifically, they were more critical of the workshop component and reported fewer benefits from the program in three key aspects of teaching: preparing teaching materials, mastery of subject matter, and promoting their motivation to teach. Their dissatisfaction in all of the above areas may be a result of several factors, among them inappropriate school placement, insufficient support from the school mentor and the induction workshop, and personal reasons. More research is needed to clarify the influence of induction programs and the first year of teaching on teacher retention.

Implications

The findings of the present study have implications both for the use of retrospection as a means of evaluating teacher induction, as well as for the content and management of the induction experience for beginning teachers.

As to the use of retrospective evaluations they were found here to be relatively reliable and highly consistent with the concurrent appraisals of induction participants. This pattern is maintained, for the most part, regardless of whether the induction graduates are employed as teachers or not. Thus, we tend to concur with Brewin et al. (1993) in concluding that the arguments against the trustworthiness of retrospective reports are over-exaggerated, and we conclude that they can be used to evaluate teacher induction programs. Consistent with the literature (Brewin, et al., 1993) the induction graduates' recall of this period in their career was more general and holistic, rather than specific and detailed, as evident in the written comments. Since retrospective evaluation is likely to focus on the most meaningful aspects of beginning teachers' experiences during the induction year (e.g., Linton, 1986; Liddicoat & Krasny, 2013), it can provide important information for improving induction practices.

In the Israeli context, several practical conclusions can be inferred from the findings. Firstly, while mentoring was perceived as relatively beneficial to the beginning teacher, some improvements should be considered. School administration should strive to maximize the benefits of mentoring by assuring mentor-inductee matching on subject matter, compensating mentors for their time, incorporating mentoring time within the schedules of mentor and new teacher, and encouraging mentors to develop professionally. Mentors need to have a more holistic perception of their role and be made aware of the fact that beginning teachers need not only assistance with pedagogical aspects of their job but also require support in assimilating to the school culture, becoming familiar with school rules and regulations, being accepted as part of the school team, and having expectations defined for them regarding non-teaching duties. Training and continued professional development for mentors should address role definition as well as strategies for effectively assisting new teachers in all aspects of school life.

Secondly, there is a clear need to improve the induction workshops with respect to content, organization, and effective use of time, in order to maximize its potential benefits to inductee teachers. The findings of this study suggest that topics addressed in induction workshops should include relations with parents as well as how to juggle teaching and non-teaching duties, and should offer suggestions and strategies that could help the new teachers deal with these seemingly marginal issues that are common to all regardless of their school placement and which may be critical for later retention in the teaching profession.

There are some implications from this study for initial teacher training programs as well. Results indicate that assistance with the use of instructional aids and becoming familiar with the school curriculum were two topics particularly lacking in the induction program.

Both are topics that could be strengthened in the pre-service training program insofar as they are natural extensions of the crux of most programs, which is generally the development of pedagogical and didactical knowledge and skills. Beginning teachers are likely to enter the school system with more confidence if the pre-service study program has insured their familiarity with the official curriculum for each grade level and each subject to be taught, as well as with the common textbooks used in the schools and various types of subject-relevant teaching aids.

Although the findings of this study have important implications, it is not without methodological limitations. First of all, comparisons were made between two different groups (induction graduates and induction participants) instead of between measures administered to the same group at different times. Although this research design was chosen as expedient, the consistency of results and the similarity between the two groups on key background variables and participation in the same national induction program, support the conclusion that the results of this study are reasonably valid. Moreover given the importance of the school context for new teachers' appraisal of the induction year, in-depth qualitative studies are needed in order to assess the impact of the school on inductees' perceptions of the induction program. Further research is also needed in order to better understand teachers' retrospective appraisals of their experiences during the first year of teaching.

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