

**Assessment of Effectiveness of Public Integrity Training Workshops for Civil Servants - a case study,**

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One author of the article, Katalin Pallai, was the designer of the training curricula that was examined by the survey, but the survey data processing was conducted by an independent data processing firm and the analysis was conducted by an independent analyst, who is the co-author of the article.

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**TITLE: ASSESSMENT OF EFFECTIVENESS OF PUBLIC INTEGRITY TRAINING WORKSHOPS FOR CIVIL  
SERVANTS - A CASE STUDY,**

**ABSTRACT**

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The general practice of civil servant training providers in Hungary is to evaluate their products only through surveying the reaction of participants. The obvious weakness of this practice is that the variance in the level of satisfaction does not necessarily coincides with the positive professional impact that the trainings are aimed to produce. The paper presents the results of an effectiveness assessment survey of a large Public ethics and integrity training program that was delivered for civil servants in Hungary. The trainings examined were delivered by the same methodology but conducted by 26 different trainers for 7.362 participants. The assessment was not part either of the original project, or of the training design. It was run as an additional activity. The aim of the survey was to show that even with a simple method, applicable even with weak organizational capacities, information can be produced both for validation and curriculum development. The results prove that the trainings made moderate but statistically significant impact on participant's knowledge and attitudes, and most changes happened in the targeted direction. Beyond the validation of the training methodology the survey also produced information on trainers' performance and a relatively differentiated picture on participants' learning that can contribute to the further development of the methodology. Thus the results prove that even with simple quantitative survey methods evidence for both validation and learning can be produced. The results also indicate some questions for further research.

**Key words:** training evaluation, effectiveness assessment, trainer performance, integrity education, integrity training

## INTRODUCTION

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The most common method for training evaluation is that organizers ask participants whether they enjoyed the training or believed that it was valuable for them. This reaction survey is a level 1 training evaluation method according to the most widely used Kirkpatrick scale.<sup>1</sup> While it is important to know how participants feel about the training, a level 1 evaluation constitutes only a part of a sound assessment because when applied alone, it does not proof that the training served its purpose, and its contribution to the improvement of the methodology is also limited. Nevertheless, satisfaction surveys prevail in training assessment because they are obviously the simplest to implement. In some cases an additional reason for their exclusive use is, that for organizers who are not motivated to face results, the “smiley sheets” are a “noble way” to avoid producing more sound performance results. (Pallai 2015a: 6-8) Both reasons can contribute to the fact that in Hungary the civil service training practice applies only satisfaction surveys.

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<sup>1</sup> According to the most widely used four level categorization of training evaluation developed by Donald Kirkpatrick (1998) in the 1950s, and also by the five level scale by Jack Phillips (2007), level 1 is the Reaction survey where participants are asked about their opinion about the training. (sometimes referred to as the “smiley sheets”)

The starting point to our research was our conviction that “smiley sheets” do not fulfil the prudential obligation of public training providers. Organizers of civil servant trainings who are financed from public resources should be obliged to proof that their trainings have achieved the targeted impact on the participants, and when possible, should also use survey results for improving training activities. For these validation and learning purposes surveying participants’ reactions is not enough. The trainings’ impacts on participants’ learning should also be surveyed, and if possible even the impact on behaviours and organizational results. (i.e. level 2 and, if possible, higher level evaluation methods<sup>2</sup>) This claim, in principle, can hardly be challenged. The most prevalent explanation training providers give for the absence of effectiveness assessment is rather practical: they claim that it would be complicated and costly and it is often beyond their organizational capacity. The aim of the survey presented in the paper was to demonstrate that validation is possible even with the use of simple questionnaires whose management is identical to the usual satisfaction survey questionnaires. Only with the questions changed and the analysis becomes more substantive. Formulating different questions is not prohibitive in either cost or organizational capacity. Through our research, beyond setting an example for the viability of effectiveness assessment, we also wanted to see whether some further information can also be deducted from the data that can support further development of training method or organization.

The survey presented in the paper was carried out on a large Public ethics and integrity training program launched in 2013 in Hungary. The objectives of the trainings were to impact participants’ knowledge,

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<sup>2</sup>In both cases the scale of Kirkpatrick’s (1998) and Philips (2007) level 2 evaluates the learning, level 3 the behavioral impact/application of the new learning, level 4 the results/impact on the organization. Level 5, added by Philips (2007), is the ROI (Return of Investment).

attitude and behaviour towards the fight against corruption. Two types of trainings (a one-day long and a three-day long<sup>3</sup>) were delivered to some 6,692 and 670 civil servants respectively. All one-day long trainings and all longer trainings had identical content and methodology, and were conducted by 24 and 8 different trainers respectively (all together 26).

The survey was part neither of the original project, or the training design. It was organized as an additional activity. The idea to change the ‘smiley sheet’<sup>4</sup> to more substantive questions was raised only shortly before the pilot trainings started. The decision was to assemble questions for two researches in one questionnaire that is filled out by participants at the start and at the end of the trainings. Within the questionnaire 8 questions were included to validate the effectiveness of the two training methodologies. 4 were used to reveal the change in participants’ attitudes towards the fight against corruption and 4 to explore the change in their cognitive concepts.

In the paper we present the results gained from the responses to these 8 questions. We seek answers to two research questions:

1. Whether the trainings were effectively fulfilling their purpose in changing participants’ knowledge and attitudes towards anti-corruption?

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<sup>3</sup> One-day long training contains 8 contact hours and three-day long 20 contact hours

<sup>4</sup> We find the ‘smiley sheet’ term adequate because the examination of satisfaction surveys conducted on similar integrity trainings for the same target group show that all trainers are graded above 3,85 (on a 0-4 scale) – even in the case of trainers who, by our survey, could produce only minimal or zero learning impact.

2. Whether further inferences can also be drawn from the results of such a simple exercise? Whether the results can also support training methodology or program development activities, or whether they can contribute to extending our knowledge about trainings and their evaluation?

The results of the evaluation of the data give a clear answer to the first research question: the comparison of participants' pre- and post-training responses showed significant change in participant's knowledge and attitudes, and the average changes almost exclusively happened in the targeted direction. This result proves that the common methodology was effective. The detailed analysis of the data produced results regarding the second research question as well. It gave information about the difference in trainers' performance and a relatively differentiated picture on participants' learning. As we will discuss later, this information can contribute to the further development of the training methodology and the training program, and can also lead to some questions for further research.

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#### TRAINING EVALUATION THEORY AND PRACTICE

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In training evaluation theory two methodological directions can be distinguished: the quantitative school with its positivist, quantitative, conclusive analysis, and the qualitative school with a focus on improving the transfer of learning through subjective, qualitative, action oriented exploration. (Horton 2007: 4-5)

The Kirkpatrick model already introduced in footnote 1 is focused on another dimension. It classifies the type of impacts trainings can produce. Although this model has been widely criticized since the 1990s (Holton 1996) we use its levels as reference system because it is the most well-known and most widely applied tool, and as such offers a terminology that is accessible not only for academics but also for practitioners, who are an equally important target group for our results.

It was also mentioned before that the model of Kirkpatrick identifies 4 and the one of Johnson 5 evaluation levels. Although, training theorists often see higher level and more accurate analysis as the key challenge in aligning training programs with training goals and objectives, the practice lags far behind this expectation. (Hall 2006) Many practitioners involved in relatively complex fields of civil servant training see level 5 analysis as the search for the “holy grail” of evaluation (Horton 2007: 4) and the overwhelming majority of organizations even in countries with most developed practice of performance management use only level 1 and some level 2 evaluations. (Horton 2007: 7) This result is not surprising in view of the fact that higher level evaluations are more costly and complicated, can only be completed time after the training when trainees are already back in their work environments and with the cooperation of many other organizational units beyond the one responsible for trainings. (Kirkpatrick 2006 and Johnson et all 2007) The most advanced training evaluation practice can be applied where such cooperation is achievable, and where a concerted combination of qualitative and quantitative methods can be applied at different assessment levels. These combined methods can fulfil multiple objectives beyond validation. On the one hand they support training providers in training design and development (learning of providers), on the other hand the qualitative inquiries may also enhance the learning of participating individuals and organizations. Complex evaluation schemes need to be designed together with the training program, because beside the relatively

simple reaction and impact surveys they also often use sophisticated methods that facilitate individual and group reflection of a wide range of stakeholders before, during and after the actual training activity. This stakeholder involvement is a key element of the individual and organizational learning process. Notwithstanding the obvious benefits produced by such schemes, they are rarely applied in practice because they can be implemented only when the partner organizations not only support them in principle but also allocate extra resources for the collaboration of stakeholders.

#### THE TRAINING PROGRAM WE EVALUATED

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The Public ethics and integrity trainings we evaluated were implemented in the frame of a large Anticorruption Program implemented between 2013 and 2015 in Hungary in cooperation between the Ministry for Public Administration and the National University for Public Service in the frame of an EU supported project. The goal of the program was to strengthen public ethics and to introduce the concept and method of public integrity management in the Hungarian civil service. Within the frame of the program a one-day long training curriculum had to be designed for staff level civil servants, and a three days long training curriculum for civil servants in leadership positions. The potential target group was the entire Hungarian public administration at the central government level. That is some 150 organizations with some 100,000 civil servants. For the implementation trainers were trained to deliver the trainings for 6,692 staff and 670 leaders.

Public integrity, the approach we taught, is a preventive and holistic approach to anticorruption. Its key tenet is that rules and sanctions are not enough to curb corruption. The opportunities for corruption that the organizational functioning produces should also be minimized through the development of the integrity of the organization. That is, the development of professional and organizational competencies that can produce and maintain clear, consistent and applicable rules, transparent functioning and rule-consistent behaviour. In the context, where our target group works, in most organizations at least the last two components (transparency and rule-consistent behaviour) are in short supply and many deeply rooted practices clash with the principles of public integrity. Within this context the objectives of the trainings were to (1) encourage participants to reflect on the integrity-deficient organizational practices, (2) break their apathy and learned helplessness towards positive action, strengthen their trust in possible change and (3) help them see their potential role in the process, i.e. lead them to take responsibility. For all these objectives, on the one hand, we had to show that criminalization of corruption alone is not enough, i.e. the full responsibility cannot be shifted to the legal system. On the other hand, we also had to show the role of well-organized and functioning public administration in curbing corruption, and with this encouraging them to understand their own potential role in fighting corruption and to take responsibility. All this in the hope this may lead them to go back to their organizations and to encourage others as well to reflect and to change corrupt practices.

Our goal was to initiate learning on all three levels of Bloom's taxonomy, i.e. initiating cognitive, affective and behavioural learning. (Bloom et al 1956) The teaching method best suited for this purpose was a participant centred interactive, experiential method with a strong argumentative component based on facilitated peer learning. (Pallai 2014: 142-146. Pallai: 2015b: ??) In order to secure, to the degree possible,

identical content and method, a detailed methodology was elaborated with detailed schedules, learning tools, visuals, ppts, handouts. Each trainer involved had to deliver the given content and use the same training tools and method. The trainers were experienced trainers and at the same time university faculty members except for 2 out of the 26. They received unusually deep training including individual learning of the integrity approach, and 7 days of ToT (training of trainers) sessions including deeper discussions of the substantive issues and the method, and the demonstration of the process (the sequence of activities during the training).

The trainings were organized in mixed groups. Participants arriving from various organizations were mixed and an attempt was made to have diversity in other characteristics of group members as well. (professional field, background, position, civil service experience, etc)

The training program was implemented by a very small management unit established at the National University for Public Service. Organization started only a month earlier than the massive program started. The organizers worked under time pressure not only because of the late start but also because the program had to be finished before the campaigns for the national elections in 2015. There was neither time nor capacity available to establish substantive communication between the team at the university and the public organizations from where participants were recruited. Information flows were often flawed. Within such conditions the first contact between the designers/researchers and participants could be scheduled only for the time of the training. The approaching elections limited follow up possibilities after the trainings. These conditions seriously limited what could be planned.

## THE RESEARCH AIMS AND PLANS

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In Hungary the general practice of civil servant training providers is to use only level 1 evaluation (reaction survey) that explores participants' opinions about the trainings, in some cases together with trainers' reports. With our research we wanted to raise the issue within this domestic context that level 1 evaluation alone is not sufficient in the case civil service trainings. While we definitely did not want to suggest that participants' satisfaction or trainers' experience is not important, but we wanted to call attention to the fact that they are by nature subjective and as such they can present crooked mirrors about effective performance of trainers and programs in relation to training objectives. The lack of information on effectiveness is problematic because public resources are spent on civil servant training programs.<sup>5</sup> The use of public resources can be legitimized only when the training is a vehicle to implement public goals and benefit public organizations. Therefore, we need to proof that our trainings effectively implement their objectives and we also need reliable information of the implementation in order to learn from it and be able to continuously improve performance of our training activities. This means that we need to use evaluation for validation, (i.e. producing sound proof for effective impact) and also as a performance management tool to continuously improve our trainings' effectiveness. With our research, we wanted to show that even with

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<sup>5</sup> not only the financial resources but the time of civil servants as well

simple tools, surely implementable even in our environment, we can produce more reliable and substantive results both for training validation and development than the usual ‘smiley sheet’ practice.

Our program offered introductory, sensitizing trainings to integrity management. While the larger-than-usual number of participants trained during the program provided the opportunity of application of complex analytical tools, but the complexity of the theme (that was discussed above) and the introductory nature of the trainings obviously limited research possibilities. The holistic nature of the integrity approach, the complexity of the activities of integrity management and the dependence of each activity on its individual contextual characteristics and dynamics seriously limit the possibilities for impact assessment. While surveying the learning impact on individual level of participants (level 2) seemed simple and possible, behavioural (level 3) and organizational impact (level 3) seemed more challenging because of the complexity and mutual dependence of possible variables. The same complexity rendered higher level quantitative analysis hardly implementable and clearly prohibited level 5 evaluation (the calculation of return on investment in trainings).

The goals we set were to validate effectiveness on level 2 (the learning of participants), collect information for further development of the program and method (learning for providers), and explore short and medium term behavioural and organizational impact to the degree possible. The full research plan was based on a combination of qualitative and quantitative methods. It had three components that seemed implementable even within the constraints set by the lack of organizational cooperation and the limited capacities of the management team. The first component, a quantitative analysis that is the subject of this paper, was based on a questionnaire with statements that reflected attitudes towards and concepts (general knowledge)

about the fight against corruption. Participants filled up identical questionnaires at the start and end of the trainings. The role of the questionnaires was to see the change in responses and through them validate effectiveness of learning (level 2: evaluation of learning), and through the detailed analysis of individual opinions collect information for further program development (learning of providers). The second component was to repeat the questionnaires in 6 months after the trainings to see longer term effects.<sup>6</sup> The third component was an action research to explore personal (level 1-3) and organizational effects (level 4) 6-10 month after the trainings.<sup>7</sup> In sum, the plan was a combination of qualitative and quantitative methods implementable with very limited management capacities and organizational cooperation.

Only the first quantitative component, conducted during the training sessions, is the subject of this paper. Our objective was to make a level 2 evaluation of the short term learning impact on participants. Although the training method aimed to produce cognitive, affective and behavioural impact, we focused this short term impact evaluation on the cognitive and attitude impact because these are the two components that happen during the training. The behavioural effect evolves after the training when the individual applies the learning within the organizational context. As such, this effect cannot be evaluated at the time of the trainings and we had no secure possibility to go beyond. Therefore, no attempt was made to include

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<sup>6</sup> This part could not be implemented.

<sup>7</sup> The action research was started but could not be completed and its results are not included in this paper. A short report about the results that the unfinished action research could produce are available in Hungarian in Siklaki (2015)

statements regarding behaviours in the questionnaire, instead the above mentioned action research aimed to produce such results.<sup>8</sup>

#### THE RESEARCH METHOD

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A quasi-experimental, nonrandomized pre-post quantitative evaluation research design (Powell, 2006: 110) was implemented. As it was presented earlier, participants based on their organizational position were assigned to either one-day (below managerial level) or three-day long training sessions (managers and leaders). 363 one-day sessions and 44 three-day sessions were held between September 2013 and January 2014 across Hungary. As we presented earlier, all together 26 trainers were involved including 6 of them who held both one-day and three-day courses

All trainers instructed participants with standard materials. The above detailed description of the preparation of the curriculum and the training of the trainers were meant to show that trainers received unusually sound preparation for producing similar results. Acknowledging this fact, one can assume that the main difference among trainers' performance can be attributed both to systematic differences among groups in their initial attitudes and the personal individual competencies of individual each trainers.

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<sup>8</sup>The action research (although unfinished) revealed many important behavioral impacts. One was that the facilitated collaborative peer interaction that participants experienced during the trainings meant for many, especially for participants in leadership position, a model for effective interaction and collaboration and had strong behavioral impact. (Siklaki 2015)

Number of participants in training groups varied between 5 and 34 with an average group size of 18.4 in the cases of one-day trainings and 8 and 24 with an average size of 15.2 in the cases of three day trainings (for further description of participants of both types of trainings see Annex 1). 6,692 participants of shorter trainings and the 670 participants of longer courses filled out a questionnaire before the training session and right after it. Respondents were told to pick up and write the same pseudonym on both questionnaires. This technique ensured the possibility of matching precisely the pre and post surveys and tracking the changes of responses, even on individual level, along each item.

For our survey we defined 8 questions about corruption and anticorruption. In both (pre- and post-training) questionnaires these 8 questions were included in exactly the same formulation. The questionnaires included additional questions that belonged to another research plan, and in the pre-training questionnaire some additional questions were also included that mapped the demographic characteristics of the respondent (e.g. gender, type of organization, length of employment, etc.) and respondents' organizational commitment. Out of the 8 relevant questions 4 were related to attitudes and 4 to cognitive knowledge about (anti)corruption (Table 1).

As we discussed above, the objective of the trainings was to initiate reflection on corrupt practices, break learned helplessness and build trust in the possibility of changes, and show the role of well-organized and functioning public administration in curbing corruption, and with this encouraging participants to understand their own role in anticorruption and take responsibility. This is why the attitude questions revolve around apathy, helplessness and trust, and the knowledge questions check whether participants

understand better that not only legal instruments but transparency, organization and effectiveness are also key instruments in fighting corruption.

**Table 1: How do you agree with the following statements on a 1-to-5 scale?**

**(1: totally disagree, 5: totally agree)**

Questions related to <b>attitudes</b> towards corruption and anticorruption	Questions related to <b>knowledge</b> about corruption and anticorruption
A1. The corruption experienced in this country is no particular cause for concern, because it is an inherent feature of transformation.  A2. Corruption is as old as mankind and not much should be done to fight it.  A3. In Hungary, corruption has assumed such proportions that fighting it has become impossible.  A4. It is possible to change people's thinking about what's right and wrong, allowing them to apply self-criticism to previously accepted procedures from which they derive personal benefits.	K1. Corruption should primarily be fought using legal instruments.  K2. Corruption can be fought the most effectively through transparency.  K3. The best remedy for corruption is fast and efficient administration.  K4. Well organized public administration can significantly reduce external attempts at corruption.

Participants were asked to express the level of their agreement or disagreement with each statement on a 1-to-5 Likert-scale.

Because the participants of one-day and three-day sessions basically differed not just in the length of their program but also in their hierarchical position in organization it is impossible to separate these two effects on the changes of attitudes. Hence, we treat the results of the two kinds of sessions independently from each other and we present the results separately.

## RESULTS

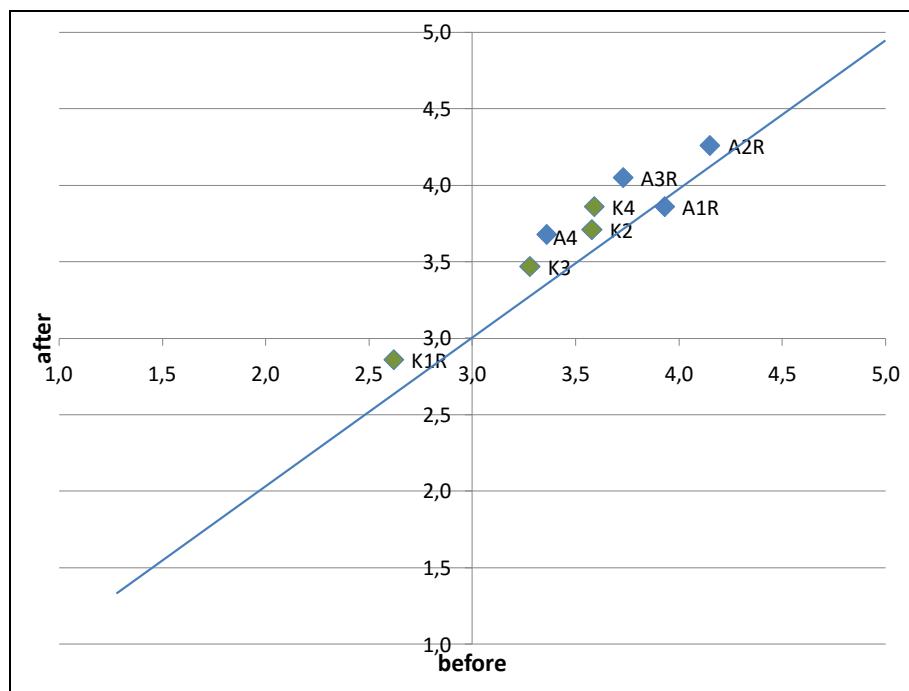
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### CHANGES IN ATTITUDES AND KNOWLEDGE ABOUT CORRUPTION AFTER THE TRAINING SESSIONS

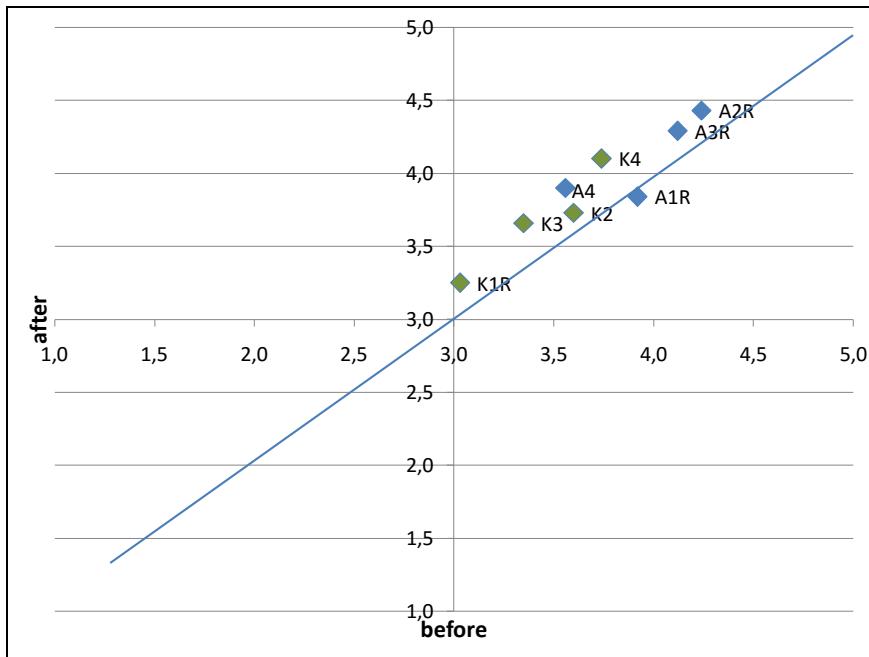
Paired sample t-tests were conducted to compare the level of agreement with the 4 attitudinal and 4 knowledge-based statements before and after the training. Results confirmed that in both training designs changes of average agreement along each items were statistically significant, however, these changes based on Cohen's d effect size measure can be interpreted as moderate at most (for detailed t-test results see Annex 3).

Figure 1 and Figure 2 present the scatter plot of before-after average scores along the examined variables in the cases of one-day and three-day designs. Rotated-scale versions of A1, A2, A3 and K1 statements indicated by an additional letter "R" were used in further parts of analysis in order to have all items with high grade (grade 5) as expected. (Blue line represents hypothetical zero difference between before and after average scores.)

**Figure 1. Average scores on a 1-to-5 scale along the examined variables (before and after training), one-day training sessions**



**Figure 2. Average scores on a 1-to-5 scale along the examined variables (before and after training), three-day training sessions**



Based on Cohen's d measures in both training types the strongest overall changes could be detected along item A4 (*It is possible to change people's thinking about what's right and wrong, allowing them to apply self-criticism to previously accepted procedures from which they derive personal benefits.*) and item K4 (*Well organized public administration can significantly reduce external attempts at corruption.*) while the weakest changes along item A1 (*The corruption experienced in this country is no particular cause for concern, because it is an inherent feature of transformation.*) and item K2 (*Corruption can be fought the most effectively through transparency.*). Agreement with all statements changed in the expected way that is, growing, except in the case of item A1R: after the training sessions participants became significantly a bit less anxious by the level of corruption in Hungary. This result might be surprising at first sight but taking into consideration that participants were not only told about the worrying prevalence of corruption but during the whole training

they were discussing related topics and gaining deeper understanding of the phenomenon, it is reasonable if their tolerance threshold towards the normality of corruption significantly increased a bit. Nevertheless, this result offers a point for reflection for curriculum development (discussed in more depth later in the Conclusions).

Moving further from one-by-one analysis, we also calculated separately the aggregated average agreement with attitudinal (A) and knowledge-based (K) items and finally a general total score of average agreement with both groups of items. Paired sample t-tests confirmed that in both cases of training designs participants on the average became significantly ( $t_{\text{one-day}}=24.555$ ,  $df_{\text{one-day}}=6,504$ ,  $p_{\text{one-day}}=0.000<0.05$ ;  $t_{\text{three-day}}=7.658$ ,  $df_{\text{three-day}}=650$ ,  $p_{\text{three-day}}=0.000<0.05$ ) more committed to fight against corruption and the level of their overall knowledge about this fight also increased ( $t_{\text{one-day}}=33.537$ ,  $df_{\text{one-day}}=6,583$ ,  $p_{\text{one-day}}=0.000<0.05$ ;  $t_{\text{three-day}}=12.797$ ,  $df_{\text{three-day}}=650$ ,  $p_{\text{three-day}}=0.000<0.05$ ). As a result of these, the overall increase in the level of total agreement was also statistically significant regardless of the length of training program ( $t_{\text{one-day}}=38.805$ ,  $df_{\text{one-day}}=6,470$ ,  $p_{\text{one-day}}=0.000<0.05$ ;  $t_{\text{three-day}}=13.978$ ,  $df_{\text{three-day}}=646$ ,  $p_{\text{three-day}}=0.000<0.05$ ). (Figure-Table 32)

**Table 2.** Figure 3. Average scores on a 1-to-5 scale before and after training along aggregated attitudinal, knowledge-based and total agreement

	Before (mean)	After (mean)	Difference (after- before)	t- value	df	p	Cohen's d
<b>ONE-DAY SESSIONS</b>							
Attitudinal	<b>3.79</b>	<b>3.96</b>	<b>0.17</b>	<b>24.56</b>	<b>6,504</b>	<b>0.000***</b>	<b>0.28</b>
Knowledge-based	<b>3.27</b>	<b>3.48</b>	<b>0.21</b>	<b>33.54</b>	<b>6,583</b>	<b>0.000***</b>	<b>0.42</b>

<b>Total</b>	<b>3.53</b>	<b>3.72</b>	<b>0.19</b>	<b>38.81</b>	<b>6,470</b>	<b>0.000***</b>	<b>0.45</b>
<b>THREE-DAY SESSIONS</b>							
<b>Attitudinal</b>	<b>3.96</b>	<b>4.11</b>	<b>0.15</b>	<b>7.66</b>	<b>650</b>	<b>0.000***</b>	<b>0.27</b>
<b>Knowledge-based</b>	<b>3.43</b>	<b>3.68</b>	<b>0.25</b>	<b>12.80</b>	<b>650</b>	<b>0.000***</b>	<b>0.51</b>
<b>Total</b>	<b>3.70</b>	<b>3.90</b>	<b>0.20</b>	<b>13.98</b>	<b>646</b>	<b>0.000***</b>	<b>0.51</b>

\*p<0.05, \*\*<0.01, \*\*\*<0.001

Paired sample t-tests were used for comparing before and after scores.

Whilst changes in the cases of attitudinal variables can be interpreted as small (Cohen's  $d_{one-day}=0.28$ , Cohen's  $d_{three-day}=0.27$ ), the general increase of agreement with knowledge-based indicators were found to be closer to moderate (Cohen's  $d_{one-day}=0.42$ , Cohen's  $d_{three-day}=0.51$ )

Figure 3 also shows that after the sessions, the average attitude and knowledge of participants of the one-day training courses increased approximately just as high as the average initial scores of three-day participants. In this sense, one-day training elevated staff level participants' attitude and knowledge, to almost exactly to the same as the initial level of leaders.

Comparing the homogeneity of opinions before and after trainings it can be found that one-day trainings significantly homogenized their participants along their knowledge about fighting against corruption ( $Var_{before}=0.52$ ,  $Var_{after}=0.49$ ,  $r=0.484$ ,  $p_{Pitman-Morgan-test}=0.000<0.05$ ) while no such change can be detected in the case of three-day training participants. Neither participants of one-day nor three-day sessions became more homogeneous in terms of their attitudes towards fighting against corruption.

All-in-all, as Table 3 shows, after the one- and three-day training courses 5 out of 10 participants became more committed towards fighting against corruption, a fifth of them remained on the same level while a quarter of them became less committed. Approximately 6 out of 10 respondents gained more knowledge about fighting against corruption, one-fifth of them did not improve their knowledge, while a quarter became less knowledgeable about the possible tools of preventing corruption. Approximately two-thirds of respondents showed signs of improvement, either along through attitudes or knowledge, and a quarter changed their opinion into the opposite of what was expected.

**Table 3. Respondent categories based on changes in the average level of attitudes, knowledge and total achievement (%)**

	Attitudinal		Knowledge-based		Total	
	N	%	N	%	N	%
<b>ONE-DAY SESSIONS</b>						
Decreased	1,751	26.9	1,516	23.0	1,578	24.4
Did not change	1,365	21.0	1,418	21.5	815	12.6
Increased	3,389	52.1	3,651	55.5	4,078	63.0
Total	6,505	100.0	6,584	100.0	6,471	100.0
<b>THREE-DAY SESSIONS</b>						
Decreased	175	26.9	134	20.6	155	24.0
Did not change	137	21.0	119	18.3	71	11.0
Increased	339	52.1	398	61.1	421	65.0
Total	651	100.0	651	100.0	647	100.0

This remarkable amount of respondents who changed their attitudes or knowledge in another, unexpected direction raised the question whether they are different in any other sense from the other groups. First, we assumed that general commitment towards making change and progress in the organizational culture might positively affect the outcome of training. Results revealed that those showing progress either along attitudes or knowledge do not differ significantly in the level of general commitment towards making change compared to those showing regression. However, leaders working for their organization for less than 2 years ( $\chi^2 = 19.854$ ,  $df=6$ ,  $p=0.003 < 0.05$ , Cramer's  $V = 0.13$ ), non-executives heading towards retirement ( $\chi^2 = 10.491$ ,  $df=2$ ,  $p=0.005 < 0.05$ , Cramer's  $V = 0.04$ ) and male non executives ( $\chi^2 = 9.797$ ,  $df=2$ ,  $p=0.007 < 0.05$ , Cramer's  $V = 0.04$ ) are weakly but significantly more likely to show regression in the level of knowledge. A result that is surely worthy of deeper investigation in later research focused on these sub-groups.

#### INITIAL RESPONSE EFFECT ON CHANGES IN ATTITUDES AND KNOWLEDGE

OLS linear regression analysis on the relationship between the average initial scores along attitudinal and knowledge-based variables and the absolute value of changes revealed that the lower initial average score someone had either along attitudinal or knowledge-based dimensions the higher amount of absolute change she or he showed in his or her opinions (see Annex 4). It means that those being initially less engaged and less informed in the topic of fighting against corruption were more likely on the average to shift their opinions further compared to those being more engaged and more informed. Thus, it proved that

initial opinions did have an effect on the outcome. There is also no significant difference between participants of one-day and three-day sessions along the average absolute value of their opinion change.

#### TRAINERS' EFFECT

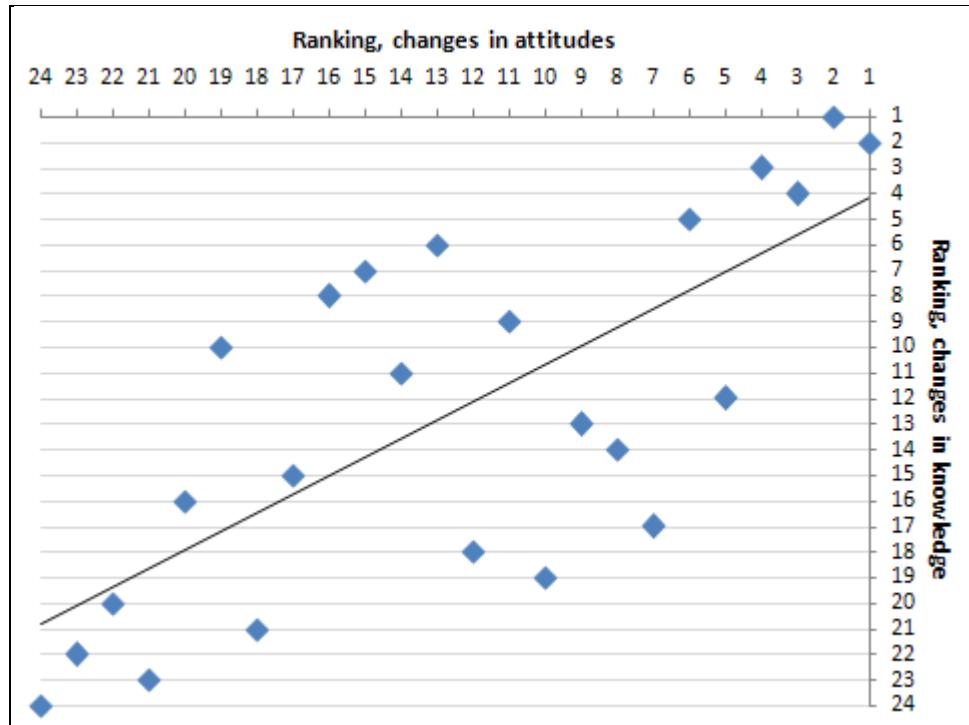
Despite all attempts to standardize the context and content of the training courses, trainers may have easily differed in their effectiveness of producing the required outcome in participants at the end of the training. The effect of trainers was analysed in order to shed light on the importance of personal factors, too. Although respondents were not randomly and uniformly assigned to trainers, the organizers attempted to construct relatively mixed groups. Because of the lack of randomization in a statistical sense, first it needs to be analysed if trainers were significantly different due to the average attitude and knowledge of participants they worked with. One-way ANOVA tests provided evidence that while trainers of one-day training sessions were significantly different both along the average attitudes of assigned participants ( $F=3.536$ ,  $df_1=23$ ,  $df_2=6526$ ,  $p=0.000<0.05$ ) and their average level of knowledge-based elements ( $F=1.913$ ,  $df_1=23$ ,  $df_2=6582$ ,  $p=0.005<0.05$ ), trainers of three-day training courses did not differ significantly from each other neither along the level of attitudes ( $p=0.353$ ) nor the level of knowledge ( $p=0.173$ ) of participants assigned.

Our aim was to examine if any kind of ranking of trainers could be detected, in respect of their effectiveness. Effectiveness can be measured as the average change in participants' attitudes and knowledge. We conducted OLS linear regression analysis in which trainers were represented with dummy (0-1) variables. In every model the trainer with the lowest average difference between pre and post training score was assigned to be the reference category. Possible effect of initial average scores were controlled by involving

the variable it measured. As a result, the descending order of standardized regression coefficients (beta) belonging to each trainer represented the ranking of effectiveness.

If we take the one-day trainers' rankings (where rank 1 belongs to the most effective trainer) along the attitude and knowledge axes we can find a strong positive correlation ( $r=0.73$ ,  $p=0.000<0.05$ ) between both achievements. The greater positive shift a trainer could achieve along attitudes, the greater achievement s/he caused along knowledge. (Figure 3)

**Figure 3. Correlation between trainers' ranking (one-day,  $r=0.73^{***}$ )**

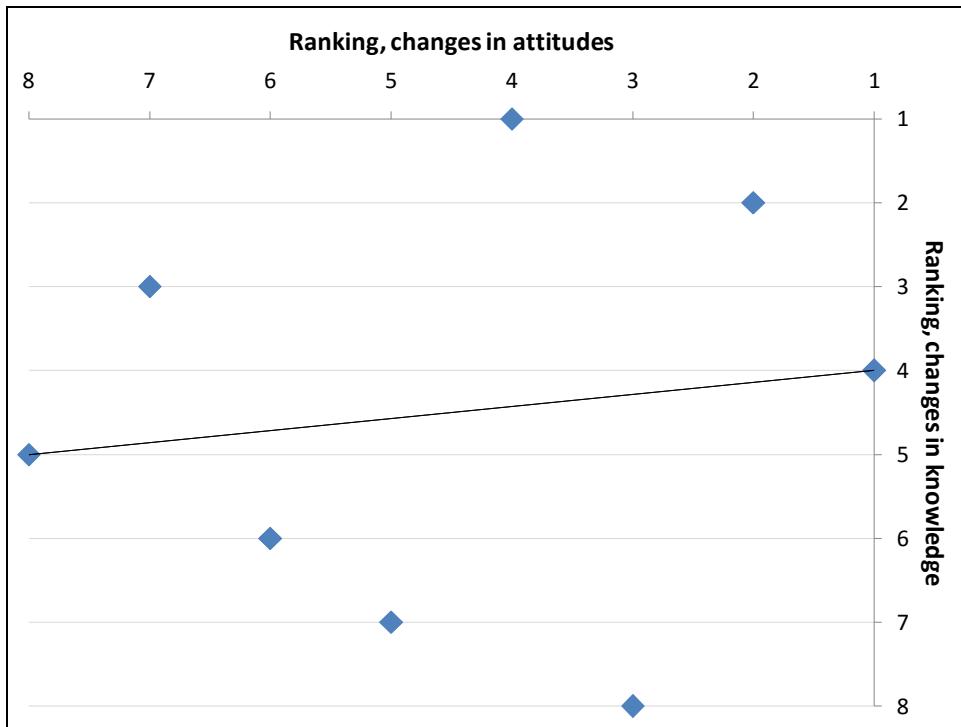


However, there is no similar relationship between the two rankings in the cases of trainers of three-day sessions. (Figure 4) When the training is longer and executives and managers participate in the session those few trainers show no clear pattern of effectiveness<sup>9</sup>.

**Figure 4. Correlation between trainers' ranking (three-day,  $r=0.14$ ,  $p=0.74>0.05$ )**

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<sup>9</sup> Although during this study we did not ask respondents about their satisfaction with the training and the trainer, 18 trainers participated in a project right after our survey in which they held nearly identical trainings for participants from identical target groups as in this study. Those participants had to fill out an evaluation questionnaire that surveyed only their satisfaction. We calculated the average satisfaction score of each 18 trainers. Later we compared their satisfaction ranking and their achievement ranking. We expected weak positive correlation between someone's satisfaction ranking and effectiveness ranking. The results proved that trainers having greater targeted impact on participants' attitude and knowledge (total achievement) were evaluated better by respondents of the other study ( $r=0.64$ ,  $p=0.002<0.05$ ). However, if trainer selection would happen on the basis of satisfaction results, 2 of the 9 most effective trainers would not be selected.



## CONCLUSIONS

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Regarding the first research question the comparison of participants' pre- and post-training responses showed significant change in participant's knowledge and attitudes, and the average changes happened in the targeted direction. This result proofs that the common methodology was effective.

The results also show that significant changes happened in the responses to each question except one. The largest change happened in the two most important questions: “*A4: It is possible to change people’s thinking about what’s right and wrong, allowing them to apply self-criticism to previously accepted procedures from which they derive personal benefits*” and “*K4: Well organized public administration can significantly reduce external attempts at corruption.*” The change in the support of the attitude question is important because it indicates increasing trust in the possibility to change the corruption tolerant attitude and it also signals decrease of the learned helplessness, and the K4 question is important because it reflects that understanding of the key tenet of the integrity approach increased. The only question where average opinion changed in the wrong direction was “*A1: The corruption experienced in this country is no particular cause for concern, because it is an inherent feature of transformation.*” This result offers important learning for the further development of the training: it indicates that the difference between sober analysis and understanding on the one hand and acceptance on the other hand should be rendered more explicit in the curriculum. At the same time, the detailed analysis of trainers’ results showed in the case of this question that the result of 6 out of the 24 one-day trainers is positive (it happens in the targeted direction), 6 have negative change and 12 have non-significant effect. In the cases of three-day trainers, 1 out of 8 trainers achieved the targeted opinion change, 1 the opposite, while the rest 6 trainers did not cause any change. This result reinforced our hypothesis that probably not major changes but only fine tuning of the related activities and messages is needed.

Some results about trainers’ performance have already been discussed. Here we mention only two more. Although the questions included in the questionnaire all related to anticorruption and no direct question

was raised about the trainers, the results give ground for the comparison of the trainers' performance. It is important to mention that in our case all trainers were obliged to deliver identical content and methodology and they had relatively similar profiles. They were not only experienced trainers but university teachers as well. They all had sound knowledge and credibility in public administration. Probably even more variance could result in performance if trainers without academic background would have also participated in the program. This results shows the importance of trainer selection.

It is a result worth mentioning that while there is significant correlation ( $r= 0.73$ ) between the performance of trainers in attitude and knowledge change of trainees during the one day long trainings, such relation does not exist between the attitude and knowledge change results of trainers of the three-day long trainings. ( $r=0.14$ ) Moreover, only three trainers produce similar results in the two domains, others have pronouncedly different performances. It is also an interesting finding that the trainer achieving the 2nd ranking in the three-day trainings has achieved one of the worst rankings (23) in the one-day long ones. This individual result is not a strong evidence but if more similar results show similar patterns they might indicate the importance of trainer-and-program-fit.

## POTENTIAL PRACTICAL APPLICATIONS AND FURTHER RESEARCH

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The aim of our research was to demonstrate that even with simple evaluation methods more relevant information can be produced than with the level 1 reaction surveys. The research component discussed in this paper was a first attempt to produce a level 2 performance evaluation of an integrity training program for civil servants. The results show that this type of analysis when conducted on such large participant groups can not only validate the effectiveness of the method but it can also deliver information for further improvement and development of the program and methodology:

- the results regarding different questions indicate which components of the training worked and which ones need to be further developed or substituted by alternative components, or maybe their delivery should be improved
- the results regarding trainers' performance can indicate areas for further preparation and training of trainers, or can support selection of trainers on more sound basis than the satisfaction survey results.
- the detailed analysis of the change of individual opinions shows that within the positive aggregate change there are minor groups who changed their opinions in the wrong direction. Further investigation of these groups including the application of qualitative research methods could produce interesting insights in the nature and process of failures to avoid.

In our case the training program was given and the research presented in this paper was only an additional activity. The program parameters could not be modified for the purpose of a better research and limited opportunity was offered for the research. Our research was an attempt to show that even in these conditions, with the application of a simple methodology some important results can be produced both for validation and for methodological and organizational learning purposes. Much more than participants' satisfaction surveys (level 1 reaction survey) could ever produce. This message is aimed to change the practice and direct attention to the importance of the survey of effectiveness.

If a similar program could be designed together with the aim of efficiency research, researchers should pay attention to a full randomization of participants in order to be able to separate the possible effect of, for instance, length of training as an impact and the effect of hierarchical position in organization. Another important further step could be if the same respondents would be asked to express their satisfaction with their trainers and fill out the attitudinal and knowledge-based questions, too. After the training sessions it is also worth asking trainers about their subjective feeling of achievement in order to analyse the possible match or mismatch between the subjective and objective indicators of their efficiency. Finally, a follow-up questionnaire after a couple of weeks or months with exactly the same attitudinal and knowledge-based questions can show if changes in attitudes and knowledge are lasting or not.

It would also be an important question to assess how good are the impacts we produced compared to other training programs, but as we do not know about any similar impact assessment of integrity trainings, we cannot find any comparative data, we cannot say anything on this. The source of the problem is not only the

lack of similar assessment but the understandable fact as well that organizations are reluctant to share program evaluation data. If more organizations would produce similar performance assessments for their integrity trainings, and would be willing to publish their results, we could compare results, assess our relative performance and learn from them. It would also be an option to launch a comparative project in countries faced with similar corruption phenomena.

#### REFERENCES

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- Bloom B.S. (Ed.). Engelhart, M.D., Furst, E.J., Hill, W.H., Krathwohl, D.R. (1956). *Taxonomy of Educational Objectives, Handbook I: The Cognitive Domain*. New York: David McKay Co Inc.
- Buckley R and Caple J (2008) *The Theory and Practice of Training*. 5th ed revised, London: Kogan Publishers.
- Gregor, Aniko (2015): Tréning hatásvizsgálat. (Training effectiveness analysis) Tanulmány a nemzeti Közszolgálati Egyetem Integritás Tudásközpontjának megbízásából. Budapest.
- Hall, B. (2006, February) Missing Link? *Training Magazine*, 22
- Holton, E. (1996), The Flawed Four- Level Evaluation Model, *Human Resource Development Quarterly*, Vol.7, No.1: 5-21.

Horton, S. (2007): Evaluation of Leadership Development and Training in the British Senior Civil Service: the Search for the Holy Grail. Paper presented at Leading the Future of the Public Sector: The Third Transatlantic Dialogue University of Delaware, Newark, Delaware, USA

Kearns, P. (2005), *Evaluating the ROI from Learning*, London: CIPD.

Donald L. Kirkpatrick and James D. Kirkpatrick (2006): *Evaluating Training Programs*. 3rd ed. Published by Berrett-Koehler Publishers

Kirkpatrick, D. (1998) *Evaluating Training Programs: The Four Levels*, San Francisco: Berrett-Koehler

Pallai, K. 2015a: Impact of culture on the results of a tender for faculty for a post-graduate education program: the role of sense making, expectations and networks of potential teachers. Paper presented at the IASIA Conference in Paris, 08.07.2015. pp. 24.

Pallai, k. 2015b: Integritásoktatása közszolgálati képzésben – építkezőoktatás a fejlődő integritásért. In: Kis N. et all eds.: *Integritás és antikorrupció Magyarországon*. National University for Public Service. Budapest, Hungary

Pallai, K. 2014: Design considerations and results of a large integrity training program for civil servants in Hungary. *Pro Publico Bono*. 2014. No. 3. pp.137-147

Phillips, J., Phillips, P., Stone, R., and Burkett, H. (2007) *The ROI Field Book: Strategies for Implementing ROI in HR and Training*, Massachusetts: Butterworth-Heinemann/Elsevier

Powell RR (2006) Evaluation Research: An Overview. *Library Trends* 55(1): 102-120.

Siklaki, I. 2015: Az ITK integritás-tréningjeinek hatása a közigazgatási vezetőkmunkájára és gondolkodására.  
 (Impact of integrity trainings on the thinking and work of public leaders). Research report prepared for the  
 Center for Excellence in Integrity at the National University for Public Service, Budapest

## ANNEXES

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### ANNEX 1: DESCRIPTIVE STATISTICS OF PARTICIPANTS OF ONE-DAY AND THREE-DAY TRAINING SESSIONS

	One-day training sessions		Three-day training sessions	
	N	%	N	%
TYPE OF ORGANIZATION				
Governmental	2917	43.6	171	25.5
Territorial administration	2569	38.4	354	52.8
Other administration	480	7.2	-	-
Other type	358	5.3	65	9.7
No answer	368	5.5	80	11.9
TOTAL	6692	100.0	670	100.0

FOR HOW LONG HAVE YOU BEEN WORKING FOR THIS ORGANIZATION?				
Less than 2 years	1719	25,7	155	23,1
2-5 years	1056	15,8	91	13,6
5-10 years	942	14,1	71	10,6
10 years or more	2549	38,1	276	41,2
No answer	426	6,4	77	11,5
TOTAL	6692	100,0	670	100,0
ARE YOU GOING TO RETIRE IN THE NEXT COUPLE OF YEARS?				
Yes, within 3 years at most	427	6,4	30	4,5
No	5836	87,2	562	83,9
No answer	429	6,4	78	11,6
TOTAL	6692	100,0	670	100,0
GENDER				
Male	1553	23,2	271	40,4
Female	4717	70,5	321	47,9
No answer	422	6,3	78	11,6
TOTAL	6692	100,0	670	100,0

**ANNEX 2: THE LIST OF THE 8 STATEMENTS IN THE QUESTIONNAIRE THAT BELONG TO OUR RESEARCH**

- |   |
|---|
| 1. It is possible to change people's thinking about what's right and wrong, allowing them to apply self-criticism to previously accepted procedures from which they derive personal benefits. |
| 2. Well organized public administration can significantly reduce external attempts at corruption.   |
| 3. The best remedy for corruption is fast and efficient administration.   |
| 4. Corruption could be reduced by openly stating the price of things for which people have been paying secretly.  |
| 5. In Hungary, corruption has assumed such proportions that fighting it has become impossible.  |
| 6. Corruption is as old as mankind and not much should be done to fight it.   |
| 7. Corruption can be fought the most effectively through transparency.  |
| 8. The corruption experienced in this country is no particular cause for concern, because it is an inherent feature of transformation.  |

**ANNEX 3: PAIRED SAMPLE T-TEST RESULTS (ONE-DAY AND THREE-DAY TRAININGS)**

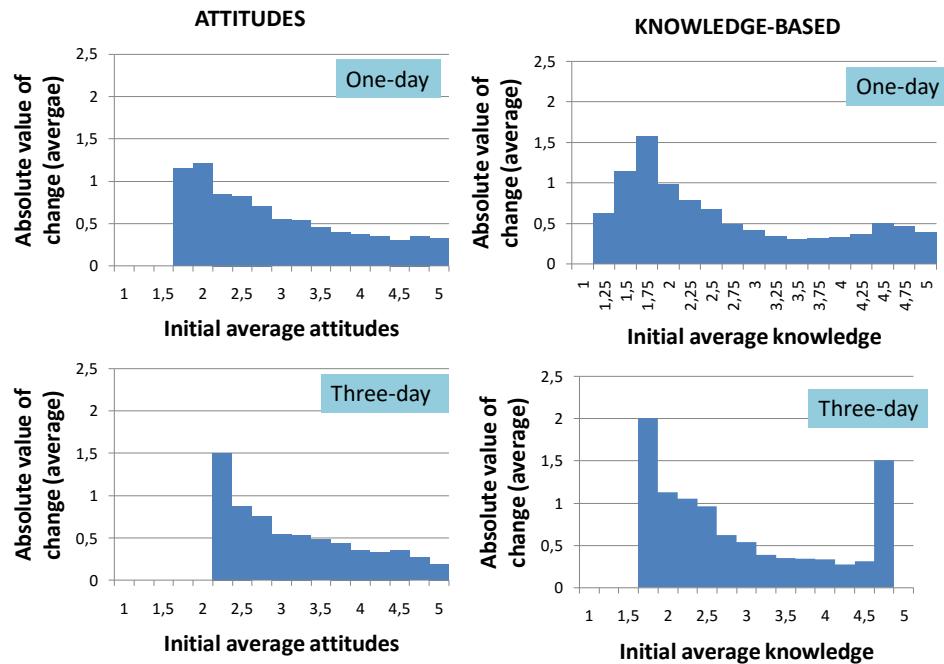
ONE-DAY TRAINING	mean (before)	mean (after)	change (after-before)	df	t (sign.)	abs(Cohen's d)
A1. The corruption experienced in this country is no particular cause for concern, because it is an inherent feature of transformation.	2.07	2.14	+0.07	6603	5.421***	0.07
A2. Corruption is as old as mankind and not much should be done to fight it.	1.85	1.74	-0.11	6644	-8.577***	0.11
A3. In Hungary, corruption has assumed such proportions that fighting it has become impossible.	2.27	1.95	-0.32	6651	-24.525***	0.31
A4. It is possible to change people's thinking about what's right and wrong, allowing them to apply self-criticism to previously accepted procedures from which they derive personal benefits.	3.36	3.68	+0.32	6587	26.769***	0.36
K1. Corruption should primarily be fought using legal instruments.	3.38	3.14	-0.24	6654	-19.374***	0.24
K2. Corruption can be fought the most effectively through transparency.	3.58	3.71	+0.13	6645	10.706***	0.14
K3. The best remedy for corruption is fast and efficient administration.	3.28	3.47	+0.19	6637	15.411***	0.18
K4. Well organized public administration can significantly reduce external attempts at corruption.	3.59	3.86	+0.27	6626	24.074***	0.32

\*p<0.05, \*\*<0.01, \*\*\*<0.001

THREE-DAY TRAINING	mean (before)	mean (after)	change (after-before)	df	t (sign.)	abs(Cohen's d)
A1. The corruption experienced in this country is no particular cause for concern, because it is an inherent feature of transformation.	2.08	2.16	+0.08	657	2.118*	0.04
A2. Corruption is as old as mankind and not much should be done to fight it.	1.76	1.57	-0.19	659	-5.408***	0.22
A3. In Hungary, corruption has assumed such proportions that fighting it has become impossible.	1.88	1.71	-0.17	659	-5.217***	0.20
A4. It is possible to change people's thinking about what's right and wrong, allowing them to apply self-criticism to previously accepted procedures from which they derive personal benefits.	3.56	3.90	+0.34	656	8.650***	0.40
K1. Corruption should primarily be fought using legal instruments.	2.97	2.75	-0.22	658	-5.640***	0.24
K2. Corruption can be fought the most effectively through transparency.	3.60	3.73	+0.13	655	3.439**	0.14
K3. The best remedy for corruption is fast and efficient administration.	3.35	3.66	+0.31	658	7.722***	0.31
K4. Well organized public administration can significantly reduce external attempts at corruption.	3.74	4.10	+0.36	656	9.670***	0.45

\*p<0.05, \*\*<0.01, \*\*\*<0.001

**ANNEX 4: RELATIONSHIP BETWEEN INITIAL AVERAGE OPINION AND AVERAGE ABSOLUTE CHANGE IN OPINION**



**ANNEX 5: RESULTS OF OLS LINEAR REGRESSIONS**

	Dependent variable: absolute value of difference (OLS)							
	one-day, attitudinal		one-day, knowledge		three-day, attitudinal		three-day, knowledge	
	B (S.E.)	beta	B (S.E.)	beta	B (S.E.)	beta	B (S.E.)	beta
Initial value	-0.192*** (0.008)	-0.299	-0.222*** (0.008)	-0.316	-0.191*** (0.024)	-0.298	-0.284*** (0.026)	-0.394
Constant	1.158 (0.029)	-	1.136 (0.027)	-	1.159 (0.096)	-	1.407 (0.090)	-
Observations	6504		6504		650		650	
R <sup>2</sup>	0.089		0.100		0.089		0.155	
Adjusted R <sup>2</sup>	0.089		0.099		0.087		0.154	
F-statistics	636.706		728.116		63.138		119.343	

$df_1/df_2$	1/6503	1/6582	1/649	1/649
p	0.000***	0.000***	0.000***	0.000***

\*p<0.05, \*\*<0.01, \*\*\*<0.001