

# Balance between formal and informal learning - experience and challenges of civil servants training in Serbia

Milan Radaković<sup>1</sup>

Snežana Antonijević<sup>2</sup>

## Abstract

The Professional Training Centre of the Human Resource Management Service achieves its goals regarding the improvement of knowledge, skills and capabilities of public servants according to the reform processes through various types of training with highly competent trainers.

This paper will describe experiences of The Professional Training Centre in developing and delivering training. Methods of civil servants improvement that are used so far are: formal training, mentoring, coaching, e-learning. Examples will be given for each of these methods, as well as the influence that they have on improvement of knowledge in public administration. Paper will describe advantages and disadvantages of formal training and informal learning and why these elements not be treated as self-sufficient or sole form of civil servants development, but complementary and compatible among each other. This is important having in mind the process of reforms and accordingly the need for appropriate, systematic and result oriented learning.

## 1. Introduction

With the development of information society and modern teaching methods, learning opportunities became larger, without borders and instantaneous. Professionals can learn and acquire new skills and competencies in a vast amount of ways comparing to the traditional ways (formal learning). Important part of learning happens at the workplace, in organizations specialized for trainings and on-line through internet, mobile devices and e-learning portals.

Adult education is based on lifelong learning. It can be formal, non-formal and informal. Today, lifelong learning concept is essential for individuals who want to stay up to date with rapid economic and technological changes. Formal education which today represents a ticket to the world of employment, especially in the Serbian public administration is no longer sufficient if an individual wants to build a successful career.

**Formal learning** is defined by the CEDEFOP Glossary (2008) as:

“Learning typically provided by an education or training institution, structured (in terms of learning objectives, learning time or learning support) and leading to certification. Formal learning is intentional from the learner’s perspective.”

In other words, it includes courses, classes, face-to-face workshops, other training or educational events that lead to some “certification” or validation. Informal learning is therefore:

“Learning resulting from daily work-related, family or leisure activities. It is not organised or structured (in terms of objectives, time or learning support). Informal learning is in most cases unintentional from the learner’s perspective. It typically does not lead to certification.”

**Non-formal learning** is:

“Learning which is embedded in planned activities not explicitly designated as learning (in terms of learning objectives, learning time or learning support), but which contain an important learning element. Non-formal learning is intentional from the learner’s point of view. It typically does not lead to certification.”

Non-formal adult learning means organized learning processes aimed at capacitating adults to work and their training for different social activities or personal development. Some examples are:

- programmes to impart work-skills, literacy and other basic skills for early school-leavers;
- in-company training;
- structured online learning;
- courses organized by civil society organizations for their members, their target group or the general public.

**Informal learning** is considered as a lifelong process in which we acquire information, attitudes, skills and knowledge. It can be intentional and unintentional and it can be encouraged by the development of techniques and technologies. We live in an information society that gives us endless opportunities for informal learning. It is not necessarily intentional learning, and because of that it can go unnoticed by individuals in terms of acquiring knowledge and skills. Informal learning is acquired through life and work experience, from the experts and colleagues at work, in project groups, using the internet, manuals and guidelines, through network of professionals etc. Informal learning can be in form of:

- project-management or IT skills acquired at work;
- languages and intercultural skills acquired during a stay abroad;
- IT skills acquired outside work;
- skills acquired through volunteering, cultural activities, sports, youth work and through activities at home (e.g. taking care of a child).

According to Tissot (2008) informal learning is the result of daily activities, it is not organized and intentional from the perspective of one who learns and so does not lead to certification."

According to the EU Commission (2000) "Informal learning is a natural companion of everyday life. Unlike formal and non-formal learning, informal learning is not necessarily intentional and thus may be unrecognized even by individuals themselves as contributing to their knowledge and skills. "Therefore, informal learning is characterized by being "non-institutional" versus "learning outcomes" that formal and institutional learning has. All this makes informal learning can hardly suitable to define or analyze.

Below we will discuss the formal and informal learning in the context of public administration and improving the competence of civil servants.

---

<sup>1</sup> PhD student, Faculty of Organisational Sciences, Republic of Serbia

<sup>2</sup> Head of Professional Training Center, Human Resource Management Service, Government of the Republic of Serbia, Republic of Serbia

## 2. Formal and informal learning – pros and cons

Formal and informal learning are both learning. They both involve building new neural connections in the brain and adapting to new conditions. They are very much the same. (Cross, J, 2007)

In terms of the INTENTION of the learner; both formal and non-formal learning is **intentional** (i.e. the individual sets out with the intention of learning something), whereas with informal learning it is (mostly) **unintentional** (i.e. it happens as a consequence of doing something else). With informal learning, the learner may be **aware** s/he has learnt something, but in many cases may be totally **unaware** of it.

From a business point of view learning/training outcomes may produce a normal range of expected and intentional learning. But if we are talking about non-intentional learning, it is difficult to establish a targeted group of customers / consumers and appropriate solutions.

Various sources suggest that 70-90% of learning activities is informal. Table 1 presents some differences between these two types of learning.

**Table 1 Table of differences between formal and informal learning**

<b>Formal learning</b>	<b>Informal learning</b>
Learning through institutions	The result of daily activities related to work, family and leisure time
Structured in terms, names, purposes, goals and learning support	Flexible, unstructured in terms of goals, objectives and learning support
Results with a certificate	Usually does not lead to a certificate
Intentional	It may be intentional but in most cases the non-intentional

The both, formal and informal learning, have certain advantages and disadvantages and benefits for different participants in working a and learning environment.

### Benefits of Formal Learning:

- Large numbers of employees will learn the same information and/or processes at the same time;
- If properly designed, the course content should be accurate and up to date;
- Employees learning through formal training programs come up to speed faster once they start their jobs;
- Properly designed formal training programs can include a variety of methods to appeal to all learning styles and conform to adult learning principles.

### Benefits of Informal Learning:

- Creating informal learning situations can be less costly and more time efficient given all of the social media technologies and electronic devices we have today;
- Learning informally can be more personal and less intimidating for some people;
- Subject-matter experts may be more willing to share their knowledge with others this way;
- Since learning this way happens more naturally during the flow of someone’s work day, employees may be less likely to resist learning new things.

There are lot of methods and tools for informal learning. Results of research conducted by ASTD (2008) in Figure 1 indicate that employees mostly as a means of informal learning use internet (Google, e-mail, Facebook, MySpace, intranet) and coaching, mentoring, meetings, communities of practice, network etc.

**Figure 1 Usage of Informal Learning Tools/Processes (percent responding to High or Very high Degree, Top 15)**



Concept of lifelong learning connects individual parts of education and particular forms of education (formal, non-formal, informal) into a single composition.

Informal learning is also becoming increasingly important in a global and interconnected world where technology allows individuals to learn in vast amount of ways through for example open educational resources and at a distance. Engaging and empowering all learners with learning experiences is essential in order to cope with rapid economic and technological changes, more frequent job transitions throughout an individuals' lifetime and pushing individuals to acquire higher and more relevant skills to increase employability, productivity and economic growth.

Cross (2007) states that “Companies already use informal learning in employee development. It’s an inevitable aspect of human behavior. Companies just don’t do as good a job of it as they might. Employees already learn more from one another than they do from formal programs” He also thinks that informal learning as of something that comes in programs. Generally, informal learning is more spontaneous than that. An enlightened enterprise can benefit substantially from improving its learning ecosystem”.

### 3. 70/20/10 model

During 1980s McCall, Eichinger and Lombardo (1996) proposed that leaders develop best through other means than formal training. During 90s Eichinger and Lombardo (1996) suggested that lessons learned by managers roughly divide into 70:20:10 ratio where:

- about 70% of knowledge and skills comes from on-the-job experiences, tasks, and problem solving;
- about 20% comes from coaching, mentoring, developing through others;
- about 10% is a result of formal learning interventions and structured courses.

Companies often use variations on the defined model so we can see examples like 40:30:30 or 50:30:20 which employers use to suit their business needs. Table 2 describes definition of education types that different companies uses based on international research conducted by Kelly Kajewski and Valerie Madsen (2012).

**Table 2 Examples for 70/20/10 model**

70%	20%	10%
of learning comes from constant on-the-job encouragement and stimulation such as delegation and job rotation.	of learning comes from daily contact with colleagues and management.	of learning comes from formal methods such as e-learning, the classroom, external courses
of learning comes from on-the-job training, projects, short term assignments and taskforces.	of learning comes from exposure to managers, functional advisors/mentors, coaches, network and online communities.	of learning comes from learning curricula, online resources, books and articles, and external resources.
of learning is on the job such as stretch, projects, problems solving, client interaction, rotation assignments.	of learning is undertaken through others such as social networking, performance conversations, work shadowing, communities of practice and social activities.	of learning is formal or prescribed.
of learning happens while doing the actual work.	of learning happens through self-reflection and self-study such as mentoring and coaching; reference material/reading needs to be available to help people come to insights.	of learning is traditional training which has a formal structure and an explicit, expected outcome .

Kajewski and Madsen (2012) state that companies use proposed model in different ways. There are examples where 70/20/10 is used to create a learning culture by reinforcing that learning can occur every day and not solely at formal training events. That is through leadership development program in which participants work on real business-impact projects. Other example is using prescribed model for creating personal development plans and conducting half-yearly appraisals. By doing that company changes organization's "training mentality" and increases awareness that learning can take place outside formal courses. Finally there is an example of company which includes 70/20/10 in their performance management software by giving examples and suggested activities for each component.

Most important fact that needs to be noticed about 70/20/10 model is that it is more of a guideline, and not a "must" approach. It depends on the objectives, resources, organizational culture, and companies training function level of development. Company has to clarify expectations and create sharing understanding among their employees and to specify how the model will be used so everyone across the business understands their opportunities and their responsibilities. Also company has to be prepared on the resistance towards implementation of model because a lot of employees have strong desire for traditional approaches to learning and development.

### 4. Practice and experience in professional development of civil servants in 2012

The Professional Training Centre of the Human Resource Management Service (HRMS) achieves its goals regarding the improvement of knowledge, skills and capabilities of public servants according to the reform processes through various types of training with highly competent trainers. In delivering the training HRMS uses a wide range of methods and techniques in order to contribute implementing and improving participative approach and collaborative methods in learning, sharing the experiences and knowledge among participants, support them in achieving goals according to their needs and follow the process due to improvement their individual potential.

General Training Programme which is continuously for seven years prepared by HRMS (and Government adopt) consists of more than 15 thematic areas of trainings. In accordance to General Programme for Professional Training for 2012 Serbian Government has adopted, HRMS organized 221 training with a total number of 3715 participants in 847 days of training and 3085 school lessons with the support from a total of 201 lecturers/trainers. Table 4 lists training thematic areas.

**Table 3. General Programme for Professional Training areas**

TO	Thematic area	Number of Training	Training days	Participants
TO 1	Constitutional order and state administration	13	21	239
TO 2	Public Policies	7	7	87
TO 3	Drafting of legislation	20	36	254
TO 4	Civil servants system	15	15	201
TO 5	Public Policies	10	14	159
TO 6	European integration	14	29	136
TO 7	Public Finance	22	26	487
TO 8	Decentralized management of EU funds	21	36	563
TO 9	Programming international assistance and projects	9	15	261
TO 10	Fight against corruption	13	13	226
TO 11	Management in State Administration	15	18	225
TO 12	Training of trainers	1	2	8
TO 13	Protection of human rights and the confidentiality of data	11	11	150
TO 14	Business communication	11	15	211
TO 15	Foreign language	18	500	275
TO 16	Computer literacy	21	89	233
<b>TOTAL</b>		<b>221</b>	<b>847</b>	<b>3715</b>

With the aim of quality assurance the system of professional training, the feedback regarding various aspects of the quality of held training is gained, amongst other, through the evaluation questionnaires which participants complete at the end of each training. Some of the results of quantitative and qualitative processing of evaluation questionnaires (2523 of them) are shown in Table 4 and Table 5.

**Table 4 Overview of evaluation results January – December 2012 part1/2**

	Number of completed evaluation questionnaires	Participants expectation met in full	Usefulness of training material	Turnout of participants	Overall mark
Thematic area	Total	Average	Average	Average	Average
<b>01 - Constitutional order and state administration</b>	208	70.73%	4.09	70.65%	4.33
<b>02 - Public Policies</b>	78	73.20%	4.64	75.10%	4.51
<b>03- Drafting of legislation</b>	233	84.09%	4.61	85.51%	4.59
<b>04 - Civil servants system</b>	180	82.02%	4.52	69.18%	4.48
<b>05 - Public Policies</b>	145	74.35%	4.40	72.15%	4.43
<b>06 - European integration</b>	154	83.39%	4.53	61.13%	4.70
<b>07 - Public Finance</b>	368	69.32%	4.36	70.68%	4.47
<b>08 - Decentralized management of EU funds</b>	45	73.85%	3.98	84.66%	4.11
<b>09 - Programming of international assistance and projects</b>	189	65.70%	4.17	66.31%	4.52
<b>10 - Fight against corruption</b>	192	65.55%	4.12	68.74%	4.28
<b>11- Management in State Administration</b>	197	75.28%	4.47	67.27%	4.58
<b>12 - Training of trainers</b>	6	100.00%	4.67	57.14%	4.73
<b>13 - Protection of human rights and the confidentiality of data</b>	122	63.11%	4.28	73.01%	4.45
<b>14 - Business communication</b>	170	83.40%	4.63	73.10%	4.82
<b>16 - Computer literacy</b>	10	87.50%	4.92	94.44%	4.83
<b>Total</b>	<b>2523</b>	<b>77.02%</b>	<b>4.44</b>	<b>72.41%</b>	<b>4.53</b>

The results suggest that public servants have very high opinion on the applicability of the acquired knowledge and skills in training (4.18) in their work environment. Usefulness of the material in terms of its further use in solving specific tasks on the job and the possibility of their sharing with colleagues is highly appreciated (4.44). This supports the thesis that the acquisition of knowledge and skills does not end with training. Participants have a role of multiplier in transferring knowledge and acquired skills to their colleagues. The difference in self-assessment of knowledge before and after training (gap = 1.41) of the participants is a prerequisite for the success of the process. For more than 75% of participants expectations from training are fully realized.

**Table 5 Overview of evaluation results January – December 2012 part1/2**

	Applicability of the newly acquired knowledge	Self-estimated level of knowledge - before	Self-estimated level of knowledge - after	Self-estimated level of knowledge - before/after	Duration 'long enough'
Thematic area	Average	Average	Average	Difference	Average
<b>01 - Constitutional order and state administration</b>	3.98	2.65	4.09	1.45	74.65%
<b>02 - Public Policies</b>	4.00	3.14	4.41	1.27	57.91%
<b>03- Drafting of legislation</b>	4.27	2.74	4.17	1.44	80.17%
<b>04 - Civil servants system</b>	4.18	2.97	4.29	1.31	79.47%
<b>05 - Public Policies</b>	4.00	2.74	4.14	1.39	71.16%
<b>06 - European integration</b>	4.31	2.76	4.30	1.54	82.34%
<b>07 - Public Finance</b>	4.13	3.11	4.16	1.05	78.96%
<b>08 - Decentralized management of EU funds</b>	3.68	2.38	3.88	1.50	81.85%
<b>09- Programming of international assistance and projects</b>	4.02	2.43	3.89	1.46	78.43%
<b>10 - Fight against corruption</b>	3.79	2.80	4.11	1.31	85.64%
<b>11- Management in State Administration</b>	4.34	3.03	4.38	1.34	74.21%
<b>12 - Training of trainers</b>	4.83	3.33	4.50	1.17	83.30%
<b>13 - Protection of human rights and the confidentiality of data</b>	4.14	2.99	4.31	1.32	67.83%
<b>14 - Business communication</b>	4.41	2.83	4.41	1.58	62.54%
<b>16 - Computer literacy</b>	4.50	2.84	4.33	1.50	54.15%
<b>Total</b>	<b>4.18</b>	<b>2.80</b>	<b>4.21</b>	<b>1.41</b>	<b>73.74%</b>

Realizing the significance of written materials, training materials are uploaded on the Service web page. From 2013 HRMS recognized need for e-learning support platform based on Moodle platform and some of the materials are placed on e-learning portal. Table 6 shows trainings with highest overall marks.

**Table 6 Trainings with highest overall marks**

Topic title	Overall mark
Public relations	4.93
German language – Intermediate course - lower level (B1)	4.90
Building interpersonal relations	4.88
Advanced Database	4.83
Job analysis and planning HR needs	4.83

It is interesting to notice that some trainings with the highest marks (Public relations and Building interpersonal relations) come from areas where knowledge is traditionally gained from informal and non-formal means of education.

According to the results of researches that the HRMS conducted every year (in May for training delivered last year) with the aim of identification of outcomes of training, it's recognized that around 80% of tested civil servants participated on formal training had the opportunity to share their knowledge acquired in training with their co-workers,. This trend arises regarding the increase of the number of established professional contacts between the participants, during and after the training.

During the trainings participants have been supported to be better in informal education, through encouragement of using and improving of acquired knowledge and skills in everyday work, as well as usage of information technologies in the process of acquiring knowledge.

From 2008, HRMS has electronic announcement on all HRMS training through official web-site for all interested civil servants. Few years later on-line course on Social inclusion is included. In order to give contribution to better preparation of further IPA trainers (as an added value to Training of Trainers programme for IPA in 2008)HRMS involved platform for e-learning as a mean complementary to training modules. Platform had a purpose of exchanging materials and tasks between participants and experts. Goal was getting the feedback for improving training design and materials, as well as coaching support in process of strengthening participant's capacities. After the implementation of pilot trainings future trainers were given additional support to strengthen their capacity in professional and trainer competencies through individual and group coaching/mentoring process.

In the 2012HRMS gave assistance to training as the dominant learning form, and developed the capacity and prerequisite for implementation of other non-formal methods such as training forums, coaching, mentoring, etc.

## **5. Professional development of Civil Servants - trends and achievements in 2013**

HRMS continues to implement new General Training programme for 2013 which has new thematic area - Personal Development which consist of Coaching and Mentoring training and Self-assessment training. It is expected that these trainings contribute to the development of informal learning for civil servants as well as raising awareness of managers about their role in daily support to employees to develop their potential.

At the beginning of 2013 programs of Training of Trainers for different areas (performance appraisal, Self-assessment for Career and Personal Development, Introduction to coaching, Competencies and career development) were completed. A number of other capacity building measures for improved HR-management and development within the Civil Service in Serbia are delivered. One of them is basic coaching skills competencies programme for enhancing the basic coaching skills among civil servants and MANFOP methodology implementation programme.

In all project activities formal (workshops, trainings, seminars, presentations) and informal methods of learning (coaching, counseling, mentoring, on-line forums, etc.) were used. By using the participative approach through face-to-face group discussion among expert and civil servants, participants had a chance to develop their capacity through e-learning platform for sharing the group products, completing tasks and getting the feedback from international expert. In this way formal training was intersected with informal learning because participants had a chance to use newly acquired knowledge in everyday work. After that feedback was given back to experts so they could adapt new elements of training to participant's experience. By doing this combination of formal learning and informal experience experts created some sort of personalized training.

All above mentioned participants - future trainers have delivered pilot trainings and presentations under supervision of one or more international experts as well as a team of local supervisors. Each training and trainer performance has been evaluated jointly with the trainers and feedback was given for further development of trainer skills.

The development of capacity in applying new competency approach in performance appraisal comprised a generic introduction on developmental aspects of annual performance appraisal as well as a train-the-trainer session on how to deliver this to specific target groups. ToT comprised two components - 1 for training of appraisers and 1 for training of appraises. The development of capacity for self-assessment consisted of several steps. First step was a generic introduction to personality typology and team dynamics - including individual typology tests and profiling. This was followed by a 2-day seminar for 12 future trainers in which additional skills and competencies were provided. The final curriculum and syllabus was adapted during 2 additional ToT-sessions. The final step was delivering 2 supervised pilot-trainings in teams.

Process of developing the training curricula and syllabus for Training of Trainers for Self-assessment for Career and Personal Development was supported by using e-learning platform as a tool for sharing documents, revising them, completing tasks and discussion between pilots.

The introduction of the concept of coaching as a HR-measure in public sector comprised of several seminars and workshops as well as individual coaching. The training module was developed in close cooperation between participants and the expert. The ToT comprised of both the development of the module in terms of curriculum and syllabus - including substantial as well as didactic topics. Pilot delivery with supervision support was organized twice by 10 trainers. At the end of the program coach developed intro-webinar Power of coaching which is in pilot stage.

The capacity building for delivery of trainings on the competency framework comprised both a series of seminars and workshops introducing to-be trainers to the generic concept and its application in best practice. In addition an intensive trainer workshop was conducted - addressing both substantial and didactic issues. Experts and trainers developed and adapted exercises and assignments - as well as materials to support delivery. The supervised pilot trainings were delivered three times by 11 trainers in total.

During the Basic coaching skills competencies programme basic coaching skills were developed through coaching team by external expert. The programme was consisting of several workshops and group and individual sessions with expert. The group was supportive and the members developed their basic coaching competencies through participative process.

The activities entire MANFOP methodology implementation programme comprised both an introduction to MANFOP methodology per se and a pilot project alternating between applying the MANFOP methodology to HRMS and acquisition of in depth understanding of the various steps in the MANFOP-methodology through tailored and targeted seminars based on an inductive approach allowing for both blended and active learning. In this pilot project were involved 9 employees from different organizational units of HRMS. In realization the activities of this mini-project group conducted on-line research of transversal competencies in HRMS. Some sessions with participants and international expert were organized through video-conference.

In order to contribute improvement of mentoring process in public administration and training also, HRMS staff developed the Mentoring training program. Before this process there was a one-day pilot training about mentoring for all interested civil servants. Based on feedback from participants and through the participative process among HRMS staff curricula and syllabus for three trainings were developed: for mentees, mentors and coordinator of mentoring programmes. The local expert developed the Mentoring guideline for newcomers which can be adopted and used in public administration.

As part of the supervision participants feedback was analyzed. It should be mentioned that feedback from participants was very positive - generally over 4 on a scale from 1 to 5 - 5 being the highest score.

Beyond the qualifications to act as trainers on the new, modules all of the above staff have acquired important new knowledge, skills and competences that enable them to address issues related to development, organizational development, management development and career development in the public sector.

This trained staff may serve also as counselors, coaches and experts for further development of public sector HR. They are highly motivated and dedicated to contribute to the continued reform of the public sector and in particular to the development of modern HR standards.

With initial support of ARCAD project HRMS developed a program for career development of young HR professionals (12 of them) that combines different formal and informal learning methods (training, coaching, mentoring, mobility, networking, e-learning). These civil servants will share their acquired knowledge and experiences in their departments during the entire process.

## **6. Conclusion: Formal and informal learning - balance is needed**

For formal learning programs, there are several prominent evaluation approaches. The two most widely recognized and used are Kirkpatrick's 4 Levels of Evaluation (2002) and Phillips's ROI Methodology (1998). Both assess attitudes about training, knowledge, and skill acquisition; application of learning; and performance improvement. The question for informal learning is: Should a similar approach be used? The answer is both yes and no. Yes, because stakeholders want to know whether informal learning provides knowledge and skills that will improve performance. No, because the various types of informal learning do not align well with either evaluation approach.

The application of formal learning (training) is an essential way of learning when it is necessary to systematically and with guidance adopt a set of knowledge and skills or specific methodology to be used in the work (e.g. Medium-term planning, Program budgeting and programming of IPA). Regardless of that, in support of the adopted competencies in the workplace informal methods are also important (coaching, networking, mentoring, job-shadowing, on-the-job training, e-learning etc.) in order to ensure the sustainability of the acquired knowledge.

Numerous advantages of informal learning (individual, voluntary, self-guided, economical), as well as disadvantages in the sense of absence of the possibility to plan, are reasons why this aspect of education may not be treated as self-sufficient or sole form of education, but complementary and compatible with formal and non-formal education. Especially, when having in mind the process of reforms and accordingly the need for appropriate, systematic and result oriented learning.

According to Cross (2007) "All learning is also shared. It's co-creation. Knowledge is born in the interplay of what's in our heads and belief systems with everything else that's out there. Everything is connected to everything else. Learning is what humans do. I wouldn't want to limit it with any qualifiers".

The challenge for policy makers and for practitioners is to find the right balance between formal and informal learning in coherent lifelong learning framework.

## **References**

Tissot, Philippe. 2008. Terminology of vocational training policy – A multilingual Glossary for an enlarged Europe. Thessaloniki: CEDEFOP

Cross, Jay. 2007. Informal Learning: Rediscovering the Natural Pathways that Inspire Innovation and Performance. San Francisco: Pfeiffer.

ASTD. 2008. Tapping the Potential of Informal Learning. Alexandria, VA: ASTD

Lombardo, Michael and Robert Eichinger. 1996. The Career Architect Development Planner (1st ed.). Minneapolis: Lominger

Kajewski, Kelly and Valerie Madsen. 2012. Demystifying 70:20:10 White Paper. Melbourne: DeakinPrime

Phillips, Patricia P. and Jack J. Phillips. 2002. The Bottomline on ROI. Atlanta, GA: CEP Press

Donald L. Kirkpatrick. 1998. Evaluating Training Programs (2nd Edition), San Francisco, CA: Berrett-Koehler Publishers.