		Linguistics
Methods for Measuring the Level of Organizational Learning		

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Abstract

A large number of companies nowadays believe that the key to acquiring and maintaining a competitive advantage is the intellectual capital; therefore they dedicate funds for various training programs of the employees. Learning covers a much wider scope of the training and refers to all our daily efforts to understand, adjust to and respond to the world around us. There are many levels of learning, but the organizational learning represents a highest level of learning and exchange of knowledge and experience. Organizational learning is linked with a couple of disciplines, the most important being the systematic learning. The things which should be embedded deep into our memory during the process of organizational learning are the words: mutual communication, flow of intelligence, synergy, connection, long-term detachment, cooperation, shared vision – on all fields, on every level of the organization.The idea of this study is to give a theoretical framework to the organizational learning, to find the way of determining the organizational learning and to define the points of necessary intervention.

1. Methods for measuring the level of organizational learning

There are many "measurement instruments" available in the literature that can determine the level of the organizational learning. One of those instruments is the Learning Assessment Map. It is one of the eighteen instruments for assessment, described by Van Buren and Lucadamo (1996) in a recent research by the American Society for Training and Development (ASTD) concerning the instruments for learning organizations' assessment. The instrument is a result of a decade of research by a group of researchers at the Richard Ivey School of Business, University of Western Ontario, whose aim was to measure the perception of the organizational learning at three levels: individual, group and organizational level.

The analysis was done by the Learning Matrix, which is represented by a structure composed of 9 cells, and the three levels of learning (individual, group and organizational) are represented on a horizontal and vertical axis. The levels of learning on the vertical axis represent causes or inputs, while the levels of learning on the horizontal axis represent results or outputs. The organizations usually devote the highest attention on the individual learning and its impact as well as on the individual's achieved result. It is especially important to review the leadership group, as that can have a significant impact on the organizational learning. Even though, the cell that represents the organizational learning appears as part of a structure that apparently doesn't have human elements, it represents the impact of the systems, structures and procedures for learning, as well as their individual and group learning institutionalization.

1.1. Feedback and Feed forward learning

Feedback is a common and frequently used term by the managers. Providing feedback about the completed task is usually directed downwards, i.e. from the managers to the employees, but the employees can also give feedback about the managers' work (e.g. 3600). However, there is one fundamental problem concerning all types of feedback information: they are focused on the past, on what has already emerged – and not on the infinite spectrum of possibilities that can happen in the future. In that way, the feedback can be limited and static, which is the opposite of exclusive and dynamic.

Unlike feedback, the term feed forward is directed upwards, i.e. it is focused on providing directions and answers for the future, and not on the mistakes made in the past. Although both terms are exclusively important, the term feed forward is not as common as the term feedback. However, Marshall Goldsmith not excluding the importance of giving feedback is an advocate of the application of the term feed forward and provides ten reasons for doing so[1]:

The future can be changed, unlike the past. People need ideas so that they can be more successful in the future. It is more productive to help people being right, that to prove them that they are wrong.

The feed forward is especially convenient for successful people – Successful people have a positive reaction to this kind of information, but a tendency to refuse feedback information.

Feed forward can be given by anyone who is familiar with the task –While you need to know the individual in order to give feedback, feed forward can be given by anyone with good ideas for completing the task.

People don't take the feed forward personally like the feedback – Usually, the professionals, devoted and successful people, take the feedback informationpersonally, even though they don't refer to them personally. Unlike this, feed forward cannot contain personal critique, having in mind it refers to future events.

The feedback can reinforce the personal stereotypes and the negative self-fulfillments of the predictions – The feed forward is based on the premise that people can make positive changes in the future, while the critical feedback can acknowledge and reinforce the deficiencies in an individual.

We should face the fact that most of us hate receiving feedback information and don't like to accept them –In big part of the organizations' 360^0reports, the assessmentslike "encourages and accepts constructive critics" are at the lowest level.

The feed forward can cover almost the whole material covered by the feedback - Concerning the negative performances (e.g. badly conducted presentation), instead of taking critical judgment for the bad experience, proposals for future success can be given with a positive attitude.

The feed forward has a tendency to be faster and more efficient than the feedback – When providing more ideas for completing the tasks, there is no place for discussion if the ideas are good or not, but the ideas considered most convenient need to be chosen.

Feed forward can be a useful tool for the managers, the colleagues and the members of the team – The feedback is associated with judgment, which no matter correct or not correct, can bring negative consequences on the interpersonal relationships of people. Feed forward, on the other side, is focused on being useful fellow traveller for successful future.

1.2. Learning Assessment Map

The Learning Assessment Map is a questionnaire composed of large number of questions that refer to the process of learning and correspond to the cells of the Learning Matrix. The answers of the questions range from (1) Strongly agree to (7) Strongly disagree. [2]The Learning Assessment Map is represented like a questionnaire, because of the following reasons:

1. The questionnaire guarantees that the same group of questions will be answered by each respondent;
2. Allows inclusion of large population;
3. It is more efficient for administering than other forms of measuring like for example, individual interviews.

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[1]Adapted according: Marshall Goldsmith "Want to Give Feedback? Rather Try Feedforward!" www.marshallgoldsmith.com
[2]Lorraine S. Nemeth, Measuring Organizational Learning, The University of Western Ontario London, Ontario, March 1997, page 57

The questionnaire measures the casual behavior from the perspective of the cells in the Learning Matrix. It also has additional categories embedded, like leadership and management, that haveexceptional influence on the organizational learning. Furthermore, questions for determining the individual perception of the organizational performances and the climate of the organizational learning are embedded. All of the questions which are part of the questionnaire are represented in six categories: Individual level, Group level, Organizational level, Leadership, Cognition, Performances.

2. Research conducted among the employees in "Makedonski Telekom" – AD Skopje

Based on the previously elaborated Learning Assessment Map, a research concerning the opinions of the employees in "Makedonski Telekom" – AD Skopje, has been conducted. The research was composed of 90 employees at "Makedonski Telekom" – AD Skopje, employed at the Ohrid Regional Center, whose organizational scheme encompasses the cities of Ohrid, Struga, Kichevo, Gostivar, Resen, Bitola and Prilep. The investigation covered employees from all organizational levels, positions and work places, including technicians, assistants, specialists, administrators and managers.

The questionnaire, that has 70 questions in total, contains six categories of questions: **Individual level, Group level, Organizational level, Leadership, Cognition and Performances**. The respondents were asked to choose among 5 possible answers: **1 –** Strongly disagree, **2-** Disagree, **3 –** Neutral, **4 –** Agree and **5 –** Strongly agree.

Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Low (%)		Medium (%)	Top (%)	
The distribution of the responses is done in percentages.				

2.1. Assessment of learning at individual, group and organizational levels

• **Individual level** - The following table shows the answers to questions of the individual level category

I	Learning at individual level	Answers given under:				
		1	2	3	4	5
1	I generate many new insights in my work	0	2	17	55	16
2	Employees undertake experimental activities	3	19	40	24	4
3	Employees may deviate from the traditional views and see things in different and new ways	2	14	44	22	8
4	I can develop throughout my work	0	2	12	46	30
5	I am aware of the critical issues that affect my work	0	2	7	47	34
6	I accept negative feedback without becoming defensive	0	7	16	44	23
7	I have a clear sense of direction in my work	0	0	13	42	35
8	I have a sense of achievement in what I do	1	2	8	46	33
9	I have the capacity to change and grow through my work	0	1	5	33	51
10	I have a sense of pride in what I do	1	0	9	29	51
11	I have a sense of ownership in what I do	1	4	18	32	35
12	look for new and better ways of doing my work	0	0	4	40	46
13	My ability and knowledge are appropriate to my field of work	0	2	14	35	39
14	I have a high level of energy at work	0	2	8	40	40
15	I feel confident in my work	0	4	13	37	36
16	When I make a mistake I usually try to hide it	51	25	6	5	3

		1	2	3	4	5
	(**Note:** Reversely scaled question)					
17	Employees show a high level of expertise in their work	1	6	27	42	14
18	Most innovative ideas originate from the employees	1	7	40	31	11

As it can be seen from the table, the average value of the answered questions or the assessment of learning at individual level, has a high-value = 4.0, while the standard deviation is 1.64. The questions 9 and 12 have the highest value whose average is 4.5. The indicated questions have the lowest standard deviation, which means that the employees share the same view on these matters. **The received answers proof that the individual perception of the employees is at extremely high level, i.e. their belief in their capacity to change and grow at work, their sense of confidence, achievement and pride in their work, are very high.**

• **Group level** – The following are the answers to the 12 questions from the group level category of which two questions are reversely scaled.

G	Learning at group level:	The answers given under:				
		1	2	3	4	5
1	Teamwork in our organization is highly valued	0	0	13	49	28
2	Other departments of the organization cooperate with us in order to exchange relevant information	0	8	32	39	11
3	Different points of view are encouraged in my department	0	4	30	30	26
4	Conflicts in our department are addressed effectively	1	3	20	46	20
5	When we work as a team, ideas come up that do not rise individually	0	4	26	33	27
6	We do **not** know how to work effectively in a group (**Note:** reversely scaled question)	43	22	18	6	1
7	When we work as a group, we have the right people involved in addressing the issues	0	3	18	49	20
8	We share our success with others	0	4	24	45	17
9	We share our failures with others	1	12	47	22	8
10	At meetings, we are willing to rethink decisions when presented with new information	4	2	23	46	15
11	We have too many unproductive meetings (**Note**: reversely scaled question)	25	25	29	10	1
12	At meetings we try to understand everybody's viewpoints	1	2	24	47	16

As it can be seen, the learning assessment at group level is 3.8, while the standard deviation is 1.64. The highest rated question in this category is question 1(4.2) and 6 (4.1**) which indicate the employees' are high awareness of the value of teamwork.**

A higher percentage of neutral responses can be noticed in the category of group learning, but still the percentage of negative answers is low. 86% of the employees answered positively to question No. 1: Team work in our organization is highly valuable, while the percentage of negative responses is 0. Question No. 9 related to sharing failures with others scored the lowest grade of 3.3 and the highest proportion are negative (14 %) and neutral (52 %) answers. Unlike this question, the staff answered positively to question no.8 (69 %): they share their success with others. Question 11, concerning the number of unproductive meetings, has the highest standard deviation (1.91), that is, the highest dispersion of the answers. Meetings were mentioned as an important form of exchanging information, team learning and formation of collective mental models. Therefore, the recommendation for improvement will be to review and eliminate causes of discrepancy among the received answers.

• **Organizational level** - We come to the category of organizational learning and the assessment of degree of institutionalization and storage of knowledge in the organization. The following are the answers to 10 questions of this category.

We can draw a conclusion that according to the given answers and received high (3.7) evaluation, the

O	Learning at organizational level	Answers given under:				
		1	2	3	4	5
1	Organizational structure supports our strategic direction	3	1	29	51	6
2	We have a strategy that is well positioned for the future	4	10	28	34	14
3	We have a realistic but challenging vision for the organization	0	6	27	40	17
4	We have an organizational structure that is characterized by high degree of confidence	0	2	26	49	13
5	The organizational culture can be characterized as innovative	1	5	32	43	9
6	We are an organization that learns	0	4	13	48	25
7	Our information technology systems are of leading quality	0	2	14	36	38
8	We have relevant business performance indicators	1	1	23	43	22
9	Our organizational structure should be reconsidered (**Note:** reversely scaled question)	8	17	46	12	7
10	Our physical resources (e.g. buildings, furniture…) are inadequate (**Note**: reversely scaled question)	13	28	35	11	3

organizational learning is at about the same level as the group learning category. The surveyed employees gave top score (average point 4.2) to question No.8 or in their opinion, the organization has leading quality IT systems. In the opinion of the employees form all segments, the level of organizational culture, strategy, familiarity with and perusal of the organization's vision is at a remarkable level.

The answers to question No. 6 are of particular importance: **"We are an organization which learns."** As it is vividly shown, 81% of the responses are positive, 15% neutral and only 4 % of the responses are negative, which directly supports the auxiliary hypothesis that Makedonski Telekom - AD Skopje fits into the definition of an organization that learns".

2.1.1. Assessment of cognition, leadership and performance categories

Cognition – Within the cognitive (learning) category, thesurveyed were given a total of 10 questions to answer which belong to three subcategories of cognition: individual, feed-forward and group cognition.

O	Cognition	Answers:				
		1	2	3	4	5
1	We value creativity in our organisation	4	7	34	37	8
2	Experimenting is indispensable for learning	2	5	22	44	17
3	Making mistakes is part of the learning process	1	12	17	43	17
4	It's important to stay open	0	1	8	32	49
5	It's important to feel content with your work	0	1	6	31	52
6	Innovations means having a good idea and putting it into practice	0	0	9	41	40
7	It's important to take advantage of a good idea	0	0	4	37	49
8	It's important to be different	1	2	19	46	22
9	Open communication is truly important	0	1	7	30	52
10	Team work forms an essential part of the activities in the organisation	0	0	8	30	52

The answers point to the highest grade in the category, 4.2, and the lowest standard deviation 1,56 which reassures that **employees have a highly developed awareness concerning learning benefits.**

Some questions (5, 7, 9 и 10) have a remarkably high mean value, 4.5. It is evident that employees at "MakedonskiTelekom" - ad, Skopje, have extremely good cognitive skills, particularly with regards to enjoying and being content with one's own work, the importance of new ideas, open communication and team work.

These conclusions naturally follow from the fact that 90 % of the answers to 6 questions out of ten were positive. Standard deviation is at its highest, that is, shows greater discrepancies among answers of the first three questions. The first question had had 50 % of neutral and negative answers, meaning that half of the poll participants have doubts as to whether creativity is valued in the organisation.

Questions 2 and 3 have 32 % or 33 % that are not positive, which shows that **employees do not consider much the importance of experimenting and making mistakes in the learning process.** Hence, thesetwo aspects should be addressed further by developing and enhancing employees' cognition in this area.

- **Leadership -** In the Learning Assessment Map, the leading of the organisation is viewed as an isolated category on group level, a category with an exceptional potential for promoting and supporting the learning and defining of the organisational vision and strategy, as well as conveying the same and putting it into practice. This category includes three sub-categories: the first one is *feed-forward leadership* that includes question 1 through 7; the second one is *feed-backleadership* with questions 8 – 12 and the third sub-category, *leadership*, captured with questions 13 and 14.

	Leadership	**Answers:**				
		1	2	3	4	5
1	The management supports employees' learning process and development	2	5	24	42	17
2	The management enhances experimentation and innovation	0	6	42	33	9
3	Managerial decisions have a great influence on individual behaviour	0	4	34	37	15
4	Managerial decisions are transmitted well to all employees	3	4	28	37	18
5	I think that I contribute with information concerning key managerial decisions	4	10	47	22	7
6	Management actions are matched to the established vision of the organisation	0	7	32	40	11
7	The management exerts a leadership potential that can make the organisation shine	2	4	37	37	10
8	The managerial team provides a clear strategic guidance	3	4	28	44	11
9	The managerial team has developed a clear vision	0	5	24	47	14
10	The managerial team leads the changes in the organisation	1	3	21	45	20
11	The management understand the challenges employees face in the organisation	5	9	42	29	5
12	I understand how my work fits into managerial decisions	3	4	31	42	10
13	The management constantly makes sure that new knowledge and information reach all parts of the organisation	1	9	35	33	12
14	The management functions as a team	3	3	31	38	15

As presented in the results above, the leadership grade is 3.6, which is still a high grade in itself, while the relatively low value of the standard deviation (1.58), testifies that there is no great difference in employees' opinion concerning the role of the management in the leading process of the organisation.

Questions 9 (3.8) and 10 (3.9), have the highest grade in the feed-back sub-category. Employees believe that the leadership has a clear vision that impacts the whole organisation and leads its changes. Questions 5 and 11 have the lowest grades with a mean value of 3.2. Here, answers show that employees' are dubious as to whether their information contributes to the key managerial decisions. Moreover, they reckon that the management lacks the ability to grasp the challenges employees face.

The management as the most important group category of employees has to eliminate all barriers in the organisational learning and it should also function as a tool for improving the values and the cultural aspects of

the organisation. Employees should place their trust in the management and its actions, while the management has to convince them in turn, that experimentation, mistakes and failure are an important aspect of both the learning process and, traditional and successful working.

● **Performance** – the following table shows the answers to questions related to the performance category.

	Performance	Answers:				
		1	2	3	4	5
1	We understand and satisfy the needs of external clients	0	5	15	33	37
2	We understand and satisfy the needs of internal clients	0	2	25	33	30
3	Employees are content with their work	3	3	27	39	18
4	We provide a good gain for stockholders	1	0	11	36	42
5	Employees are generally satisfied with their performance	2	6	26	45	11
6	Employees are generally content they work at "Makedonski Telekom– ad Skopje"	2	2	15	39	32

The group of six questions in the performance category has a mean value of 4.0. Studies show that there is a strong correlation between good employee performance on the one hand with the financial performance on the other. The high grade of question 4 (4.3) is conducive to this claim as well as employees opinion that they provide a good gain for stockholders. The standard deviation regarding this question is 1.42, which confirms that employees' opinions are concurrent.

According to the statistical calculations of the mean value, we have now established that the performance category is highly valued in the organisation.

3. Conclusions

The theoretical part of this paper shows that training is an important management function of human resources and the prowess of organisational learning. This, with their close relatedness to the realisation of company strategies, have now acquired a real and concrete confirmation.

Stemming from the whole analysis, the qualitative and qualitative research, the following statement can be deduced:

● A company's vision and mission are the ideal and ambition of all employees, the foundation for defining company strategies and putting the dame into practice. The vision of "Makedonski Telekom-ad Skopje", as a member of the "Dojche Telekom" group is: **A global leader in connected living and working**, while its mission is: **The most highly valued service company.** Defining these aspects helps pave the way of the company making it the driving force for change and technology development, with an organisation and employees that will receive highest grades from clientele and will pose an example to other companies. The company's well-known brand: **Share your experiences**, complements the vision of the organisation by providing an emotional gain to the conceptual frame of the organisation strategy.

● Leading principles should be underscored as essential aspect that guide the working philosophy in "Makedonski Telekom"-ad Skopje, on the basis of which, the corporative culture is being created. The fourth principle: **The best place for work and improvement,** emphasizes the importance of employees for the organisation and its corporative culture. This principle combines management and employees dedication and it fully relies on all individuals' efforts and success.

The vision, mission and leading principles are shared through suitable training for all employees. Additionally, to employees great pleasure, online research is available each year within the "DojcheVele" group. This provides updated and important information for the management regarding the support and state of current changes in employees, with the possibility to interfere with an immediate correction if required.

● A practical application of the theoretical strategies for individual, group and organizational learning in "Makedonski Telekom" – AD Skopje has been provided: Cross-functional employee development club, Job rotation program, Employee orientation program. The applied Performance Management System is an additional tool for organization's strategy implementation. At the same time, all the employees actively participate in goal planning and implementationof the company's vision and strategic goals melt through the organization from the highest to the lowest level. The Performance Management System allows additional employee development and overall organizational strategic development.

We would like to point out that the implemented trainings were previously precisely planned and defined in accordance with the company's strategies, so that the successful implementation of new technologies was preceded by a number of external and internal trainings for managing the whole process at all levels.

● The following table, shows a summary of the results from the conducted survey for the employees' opinion, from the perspective of the Learning Assessment Map

Ordinal number	Category	Mean	Standard Deviation
1	Learning at individual level	4,0	1,64
2	Learning at group level	3,8	1,64
3	Learning at organizational level	3,7	1,63
4	Cognition	4,2	1,56
5	Leadership	3,6	1,58
6	Performances	4,0	1,63

According to the obtained results, the assessment for learning at individual level, cognition and performances are at the highest level, unlike the categories: group level, organizational level and leadership, which are assessed at a lower level (lower grade 4,0).

Having in mind the previously stated, the following has been proved:

1. The management of the company "Makedonski Telekom" – AD Skopje, encourages employees' professional development.
2. "Makedonski Telekom" – AD Skopje, with all its characteristics, fits the definition of a "Learning organization".
3. The organizational learning positively reflects on the organizational commitment to the employees.

The organizational learning is an important factor and a condition for strategy implementation in "Makedonski Telekom" – AD Skopje

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