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From the Editor...

The third issue of INTERNATIONAL JOURNAL of ADVANCED MULTIDISCIPLINARY RESEARCH and REVIEW (IJAMRR) is ready.

After the second issue, we managed to get indexed under the most reputable international indexes. Especially, in 2014, we managed to be indexed in European indexes such as Elektronische Zeitschriftenbibliothek (EZB), Social Science Research Center Berlin (WZB) and Zeitschriftendatenbank (ZDB). Also, IJAMRR has strated to be indexed in worlds biggest university libraries such as Bibliothekssystem Universität Hamburg and Georgetown University Library.

With all efforts, we are waiting for new researches for our next volume that will be published.
Thanks...

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Incentives and Risks in Relationships Between the Principal and the Agent

Vigen Minasyan¹

The paper addresses a basic model of moral hazard (risk) [Gibbons, 2010; Gibbons, 2005] and suggests some of its modifications. In the basic model of moral risk, questions are put and examined that have not been considered in the previous researches. In particular, it is proved that the level of agent's efforts that maximizes its expected utility coincides with the level of efforts that minimize the risk of obtaining this maximum utility. Modifications of the moral risk model are considered where the optimal behavior of the principal and the agent considerably differ from the respective behavior in the moral risk model.

The paper introduces moral risk measures VaR for the principal and VaR for the agent that specify the qualitative assessments of risk on the part of the principal and the agent in their relationships.

Keywords: model of moral hazard (risk), expected utility, VaR for the principal, VaR for the agent, measure of the utility risk, lognormally distributed random variable.

1. Basic model of moral risk

With the agent not inclined to risk, the principal's (employer's) choice of the incentives' force is defined by a tradeoff between the incentives and the insurance.

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The basic model of moral risk considers interaction between the principal and the agent (employee). The agent makes unobservable (hence uncontrollable) by the principal effort a aimed at obtaining result y (which is usually considered as gain). Obtaining of this result depends not only on the agent's efforts, but also on the influence of random factors leading to uncertainty of the result. The realized value y is the value observable by the principal and is a basis for building an incentive contract from the principal to the agent.

Relationships between the principal and the agent are built in the following sequence (Gibbons R., 2010; Gibbons R., 2005).

1. The principal and the agent conclude a contract $w(y)$ that fixes the pattern and value of remuneration.
2. The agent chooses an action, with real influence on the result of size a , but the principal has no information about the choice made by the agent (i.e. he "observes" neither the actual choice of the agent nor its result a).
3. Some random events take place that lead to a random contribution to the result, of value ε , not controllable by the agent.
4. As a result of the agent's actions a and a random contribution to result ε , the value of result (production function) y is defined.
5. The agent receives a remuneration stipulated in the contract.

The basic model of moral risk also makes the following additional suggestions (Gibbons R., 2010; Gibbons R., 2005).

- The production function is linear: $y = a + \varepsilon$, where ε - normally distributed random value with a zero mean and variance σ^2 .
- The incentive contract is also linear: $w(y) = s + by$, where s corresponds to the value of the fixed remuneration, and coefficient b corresponds to the force of the set incentives.
- The agent has a constant absolute disinclination to risk, i.e. his utility function looks like $u_A(x) = -e^{-R_A x}$, where x is a value of the agent's net gain, $R_A > 0$ is a constant coefficient of the agent's absolute disinclination to risk.

- Net (monetary) gain of the agent is equal to the difference between the obtained remuneration and the subjective monetary valuation (on the part of the agent) of the costs of making efforts $x = w - c(a)$, where $c(a)$ is a convex function.
- The principal is neutral to the risk and hence seeks only maximization of the expected value of his own return, $E\Pi = E(y - w)$.

The agent can maximize the expected utility for himself with the help of choosing effort a . I.e. his choice corresponds to the solution of the following optimization problem: to determine value $a = a^*$, at which $\max_a E(u_A(a))$ is reached.

As is known (Gibbons R., 2010; Gibbons R., 2005), the optimal level of the agent's efforts represented as $a^*(b)$ is the solution of equation $c'(a) = b$, and the certainty equivalent (agent's gain) CE with efforts' level $a^*(b)$ is:

$$CE(s, b) = s + ba^*(b) - c[a^*(b)] - \frac{1}{2} R_A b^2 \sigma^2.$$

The expected benefit of the principal with such a choice of the agent is:

$$E\Pi(s, b) = (1 - b)a^*(b) - s.$$

The basic model of moral risk suggests that thought the principal's aim is the maximization of his expected benefit, the company considers the aim of maximizing the total gain of the principal and the agent, defined in the form of a sum of a certainty equivalent of the agent and the expected benefit of the principal:

$$CE(s, b) + E\Pi(s, b) = a^*(b) - c[a^*(b)] - \frac{1}{2} R_A b^2 \sigma^2.$$

The company has an opportunity to solve this optimization problem with the help of choosing a parameter of incentives force in contract b . As is known (Gibbons R., 2010; Gibbons R., 2005), the optimal value of the incentives force is determined by formula:

$$b^* = \frac{1}{1 + R_A \sigma^2 c''}.$$

Since R_A, σ^2 and c'' are positive, value b^* will lie between a zero (full insurance for the agent) and a one (the agent receives the entire earning).

Moreover, value b^* is the lesser, the...:

- (1) higher is the agent's degree of disinclination to risk R_A ;
- (2) higher is the degree of uncertainty σ^2 ;
- (3) faster grow the marginal costs of making effort c'' .

It is suggested that the principal may be unaware of these values.

It is interesting to note that if the subjective monetary valuation (on the part of the agent) of the cost of making efforts linearly depended on the made effort, i.e. $c(a) = c_0 + ka$, then, first of all, from the condition $c'(a) = b$ it would follow that $k = b$, i.e. $c(a) = c_0 + ba$. Moreover, it turns out that $b^* = 1$, i.e. it is optimal to transfer the entire result to the agent (selling the business to the agent).

2. Additional research of the basic model of moral risk

A) Minimization of the utility risk for the agent

The agent, apart from the intention to maximize the expected utility for himself, may also set other aims. Let us suppose that the agent's disinclination to risk is reflected in the fact that he chooses such efforts that minimize the risk of his utility. As a measure of the utility risk for the agent may be used the variance of his utility:

$$\sigma^2(u_A(x)) = E((u_A(x))^2) - (E(u_A(x)))^2,$$

where $u_A(x) = -e^{-R_A x}$.

The net monetary gain of the agent is

$$x = w - c(a) = s + b(a + \varepsilon) - c(a) = s + ba - c(a) + b\varepsilon,$$

where ε is a normally distributed value with mean value 0 and variance σ^2 (which is usually written as $\varepsilon \in N(0, \sigma^2)$).

This is why the expected value of the agent's net monetary gain is equal to $E(x) = s + ba - c(a)$, and its standard deviation is $\sigma(x) = b\sigma$. From the above and from the

form of the utility function for the agent it follows that variable $-u_A(x)$ is a lognormally distributed random value. It follows from the fact that

$$-\frac{\ln(-u_A(x))}{R_A} = x \in N(s + ba - c(a), b\sigma).$$

But then $\ln(-u_A(x)) \in N(-R_A(s + ba - c(a)), R_A b\sigma)$.

However, for any lognormally distributed random value X are known (see, for example, (Ayvazyan S.A., Mkhitarian V.S. 2001)) the formulas for its expected value and variance:

$$E(X) = e^{\mu + \frac{\sigma^2}{2}}, \quad \sigma^2(X) = (e^{\sigma^2} - 1)e^{2\mu + \sigma^2},$$

where μ - mean value of the respective normally distributed value (i.e. $\ln(X)$), and σ^2 - its variance.

Applying these formulas in our case to random variable $-u_A(x)$, we obtain:

$$E(-u_A(x)) = e^{-R_A(s + ba - c(a)) + \frac{R_A^2 b^2 \sigma^2}{2}},$$

$$\sigma^2(-u_A(x)) = (e^{R_A^2 b^2 \sigma^2} - 1)e^{-2R_A(s + ba - c(a)) + R_A^2 b^2 \sigma^2},$$

or

$$E(u_A(x)) = -e^{-R_A[s + ba - c(a)] - \frac{R_A b^2 \sigma^2}{2}}, \quad (1)$$

$$\sigma^2(u_A(x)) = e^{-2R_A(s + ba - c(a))} (1 - e^{-R_A^2 b^2 \sigma^2}) e^{2R_A^2 b^2 \sigma^2}. \quad (2)$$

Applying the necessary minimum condition to (2), we obtain that an optimal level of the agent's efforts, represented as $a^*(b)$, is the solution of equation $c'(a) = b$, which coincides with the equation that determines the optimal level of the agent's efforts maximizing its expected utility level.

Thus, the following statement is proved.

Statement 1

The level of the agent's efforts that maximizes his expected utility coincides with the level of efforts that minimize the risk of obtaining this maximum utility. And this level of efforts $a^*(b)$ is a solution of equation $c'(a) = b$.

Thus, the agent, maximizing his expected utility, automatically minimizes the risk of failure to achieve this utility.

B) Maximization of the utility of the total result of the principal and the agent and minimization of the risk of this utility

In the basic model of moral risk, the company only considers the aim to maximize the total gain of the principal and the agent presented as a sum of the certainty equivalent of the agent and the expected benefit of the principal.

Let us assume that the agent's interests coincide with the principal and company's interests.

In this case both the company and the agent are interested in the total result of the agent and the principal.

Since for the agent the result is $x = s + by - c(a)$, and for the principal it is $\Pi = y - s - by$, then the total result is

$$z = x + \Pi = y - c(a) = a - c(a) + \varepsilon.$$

Obviously, without any assumptions of disinclination to risk, the expected total result will be equal to $E(z) = a - c(a)$, and its dispersion will be σ^2 .

Thus, the expected total result turns out to be independent of coefficient b – the force of the set incentives.

If the interests of the agent and the company coincide, he will choose the effort that maximizes the total result. It is obvious that in this case the level of the agent's efforts presented as a^* is a solution of equation $c'(a) = 1$ and the risk of result doesn't depend on efforts of the agent.

Now, let us assume for the company some absolute disinclination to risk with a utility function looking like $u_c(z) = -e^{-R_c z}$, where z – the value of net total gain of the company, $R_c > 0$ – the constant coefficient of the company's absolute disinclination to risk.

From the above and from the form of the utility function it follows that variable $-u_c(z)$ is a lognormally distributed random variable. It follows from the fact that

$$-\frac{\ln(-u_c(z))}{R_c} = z \in N(a - c(a), \sigma^2).$$

But then $\ln(-u_c(z)) \in N(-R_A(a - c(a)), R_c^2 \sigma^2)$.

However, for any lognormally distributed value X are known (see, for example, (Ayvazyan S.A., Mkhitarian V.S. 2001)) the formulas for its expected value and variance:

$$E(X) = e^{\mu + \frac{\sigma^2}{2}}, \quad \sigma^2(X) = (e^{\sigma^2} - 1)e^{2\mu + \sigma^2},$$

where μ - mean value of the respective normally distributed value (i.e. $\ln(X)$), and σ^2 - its variance.

Applying these formulas in our case to random value $-u_c(z)$, we obtain:

$$E(-u_c(z)) = e^{-R_A(a - c(a)) + \frac{R_c^2 \sigma^2}{2}},$$

$$\sigma^2(-u_c(z)) = (e^{R_c^2 \sigma^2} - 1)e^{-2R_A(a - c(a)) + R_A^2 \sigma^2},$$

or

$$E(u_c(z)) = -e^{-R_c[a - c(a)] - \frac{R_c \sigma^2}{2}}, \quad (3)$$

$$\sigma^2(u_c(z)) = (e^{R_c^2 \sigma^2} - 1)e^{-2R_c(a - c(a)) + R_c^2 \sigma^2} \quad (4)$$

If the aim is set to maximize the expected utility for the company, then, again, the required condition for achieving this optimal expected utility is fulfillment of equation $c'(a) = 1$.

Disinclination of the agent (and hence, in this case, of the company as well) to risk is reflected in the fact that he chooses such efforts that minimize the risk of his utility. As a measure of the utility risk for the agent may be used the variance of his utility $\sigma^2(u_c(z))$.

Applying the necessary minimum condition, we obtain that an optimal level of the agent's efforts, represented as a^* , is the solution of equation $c'(a) = 1$, which coincides with the equation that determines the optimal level of the agent's efforts maximizing its expected utility level.

Thus, the following statement is proved.

Statement 2

In case of coincidence of the interests of the agent and the company, the level of the agent's efforts maximizing the expected utility of the total result coincides with the level of efforts minimizing the risk of obtaining this maximum utility. And this level of efforts a^* is a solution of equation $c'(a) = 1$.

Thus, the agent, maximizing his expected utility, automatically minimizes the risk of failure to achieve this utility.

C) The principal and the agent maximize the utility for themselves having agreed upon the monetary valuation of the efforts on the part of the agent

Now let us consider the case when both the principal and the agent, each attempts to maximize the expected utility for himself, having agreed upon the monetary valuation of the efforts on the part of the agent, i.e. in the form of function $c(a)$.

As we have already ascertained, when attempting to maximize the expected utility for himself, the maximally disinclined to risk agent will make effort $a^*(b)$ satisfying equation $c'(a^*(b)) = b$. At the same time, as it was shown above, the agent automatically minimizes the utility risk for himself.

The gain for the principal is $\Pi = y - s - by = a(1-b) - s + \varepsilon(1-b)$,

The expected gain of the principal is equal to $E\Pi(s, b) = (1-b)a^*(b) - s$, and the variance of this gain is equal to $\sigma^2(\Pi) = (1-b)^2 \sigma^2$.

If in this case the principal wishes to maximize the expected utility for himself, he will choose an optimal value of incentive force b^* from condition

$$(E\Pi)' = -a^*(b) + (1-b)(a^*(b))' = 0.$$

However, from $c'(a^*(b)) = b$ it follows that $c''(a^*)(a^*)' = 1$, hence $(a^*(b))' = \frac{1}{c''}$.

Therefore, the condition of optimality of the incentive force is presented in the form of equation for determining b^* :

$$a^*(b) = (1-b) \frac{1}{c''(b)}.$$

By the way, from this it is seen that if the principal wishes, in the given conditions, to minimize the risk for himself, choosing as a value risk the variance of his gain, he should choose the value of set incentives $b = 1$.

I.e. he should transfer the entire earning to the agent or, in other words, it is more profitable for the principal to sell the company to the agent.

Now, let us assume for the principal some absolute disinclination to risk with a utility function looking like $u_{\Pi}(\Pi) = -e^{-R_{\Pi}\Pi}$, where Π - the value of net total gain of the principal, $R_{\Pi} > 0$ - the constant coefficient of the principal's absolute disinclination to risk.

From the above and from the form of the utility function for the principal it follows that variable $-u_{\Pi}(\Pi)$ is a lognormally distributed value. It follows from the fact that

$$-\frac{\ln(-u_{\Pi}(\Pi))}{R_{\Pi}} = \Pi \in N(a^*(1-b) - s, (1-b)^2 \sigma^2).$$

But then $\ln(-u_{\Pi}(\Pi)) \in N(-R_{\Pi}(a^*(1-b) - s), R_{\Pi}^2(1-b)^2 \sigma^2)$.

However, for any lognormally distributed value X are known (see, for example, (Ayvazyan S.A., Mkhitarian V.S. 2001)) the formulas for its expected value and dispersion:

$$E(X) = e^{\mu + \frac{\sigma^2}{2}}, \quad \sigma^2(X) = (e^{\sigma^2} - 1)e^{2\mu + \sigma^2},$$

where μ - mean value of the respective normally distributed value (i.e. $\ln(X)$), and σ^2 - its dispersion.

Applying these formulas in our case to random value $-u_{\Pi}(\Pi)$, we obtain:

$$E(-u_{\Pi}(\Pi)) = e^{-R_{\Pi}(a^*(1-b)-s) + \frac{R_{\Pi}^2(1-b)^2 \sigma^2}{2}},$$

$$\sigma^2(-u_{\Pi}(\Pi)) = (e^{R_{\Pi}^2(1-b)^2 \sigma^2} - 1)e^{-2R_{\Pi}(a^*(1-b)-s) + R_{\Pi}^2(1-b)^2 \sigma^2},$$

or

$$E(u_{\Pi}(\Pi)) = -e^{-R_{\Pi}[a^*(1-b)-s - \frac{R_{\Pi}(1-b)^2 \sigma^2}{2}]}, \quad (5)$$

$$\sigma^2(u_{\Pi}(\Pi)) = (e^{R_{\Pi}^2(1-b)^2 \sigma^2} - 1)e^{-R_{\Pi}[2(a^*(1-b)-s) - R_{\Pi}(1-b)^2 \sigma^2]} \quad (6)$$

If the aim is set to maximize the expected utility for the principal, then the required condition for achieving this optimal expected return is fulfillment of equation

$$-a^*(b) + (a^*)'(1-b) + R_{\Pi}(1-b)\sigma^2 = 0.$$

Since in our case

$$(a^*(b))' = \frac{1}{c''(b)} \text{ we receive that}$$

$$a^*(b) = \frac{1}{c''(b)}(1-b) + R_{\Pi}(1-b)\sigma^2.$$

The solution of this equation b^* will in these conditions be an optimal for the principal, from the point of view of maximizing the expected utility for himself, value of the incentive force.

D) Determining the optimal level of the agent's efforts for particular kinds of subjective monetary valuation of the costs of making efforts

1. Let us suggest that the function of subjective monetary valuation of the costs of making efforts is linear: $c(a) = c_0 + c_1 a$.

A) If the interests of the agent and the principal do not coincide, the necessary condition of optimality of the agent's actions looks like $c'(a) = b$, from which it follows that $c_1 = b$ and the function of subjective monetary valuation of making efforts looks like $c(a) = c_0 + ba$.

With such a function of subjective monetary valuation of making efforts and the agent's absolute disinclination to risk, any effort of agent a maximizes the expected utility for himself and minimizes the risk of utility for himself.

B) If the interests of the agent and the principal coincide, the necessary condition of optimality of the agent's actions looks like $c'(a) = 1$, from which it follows that $c_1 = 1$ and the function of subjective monetary valuation of making efforts looks like $c(a) = c_0 + a$.

With such a function of subjective monetary valuation of making efforts and the agent's absolute disinclination to risk, any effort of agent a maximizes the expected utility of the total result and minimizes the risk of obtaining this maximum utility.

C) If the principal and the agent, independently, attempt to maximize the expected utility for himself, then from the condition of maximizing utility for the agent $c'(a) = b$ we obtain that $c_1 = b$ and the function of subjective monetary valuation of making efforts looks like $c(a) = c_0 + ba$. And the condition of optimality of incentive force b^* for the principal, written as $a^*(b)c''(b) = 1 - b + R_{\pi}(1 - b)\sigma^2 c''(b)$, leads to the conclusion that it would be optimal for the principal to choose incentive force $b^* = 1$, i.e. it is optimal to transfer the entire result to the agent (selling the business to the agent).

2. Let us suggest that the function of subjective monetary valuation of the costs of making efforts is quadratic: $c(a) = c_0 + c_1 a + c_2 a^2$, where $c_0 \geq 0, c_1 > 0, c_2 > 0$.

A) If the interests of the agent and the principal do not coincide, the necessary condition of optimality of the agent's actions for maximization of the expected utility for himself and minimization of the risk of this utility looks like $c'(a) = b$, from which it follows that $c_1 + 2c_2 a^* = b$, and hence the value of the agent's optimal effort is $a^* = \frac{b - c_1}{2c_2}$. This

optimal solution exists when $b \geq c_1$ and does not exist otherwise. As we know, the optimal value of the incentive force on the part of the company maximizing the total gain of the principal and the agent is determined by the formula:

$$b^* = \frac{1}{1 + R_A \sigma^2 c''}. \text{ In our case, we obtain the following expression } b^* = \frac{1}{1 + 2R_A \sigma^2 c_2}.$$

B) If the interests of the agent and the principal coincide, the necessary condition of optimality of the agent's actions looks like $c'(a) = 1$, from which it follows that $c_1 + 2c_2 a^* = 1$, and hence the value of the agent's optimal effort is $a^* = \frac{1 - c_1}{2c_2}$. This optimal solution exists

when $0 < c_1 \leq 1$ and does not exist otherwise. This effort simultaneously maximizes the value of the utility of the total gain and its risk.

C) If the principal and the agent, independently, attempt to maximize the expected utility for himself, then from the condition of maximizing utility for the agent $c'(a) = b$ we obtain that $c_1 + 2c_2 a^* = b$ and hence the value of the agent's optimal effort is $a^* = \frac{b - c_1}{2c_2}$. This optimal solution exists when $b \geq c_1$ and does not exist otherwise. And the condition of optimality of incentive force b^* for the principal $a^*(b) = (1 - b) \frac{1}{c''(b)}$ leads to $\frac{b - c_1}{2c_2} = \frac{1 - b}{2c_2}$, from which it follows that $b^* = \frac{1 + c_1}{2}$. Thus, if the company knows the method of monetary valuation by the agent of his efforts, such a choice of the incentive force is optimal for the principal. Let us note that from condition $b \geq c_1$ it follows that $\frac{1 + c_1}{2} \geq c_1$, i.e. $0 \leq c_1 \leq 1$. Only with such values of c_1 the described optimizations of the interests of the agent and the principal is possible. If the principal shows an absolute disinclination to risk a condition of an optimality of power of incentives b^* for the principal

$$a^*(b) = \frac{1}{c''(b)} (1 - b) + R_{\Pi} (1 - b) \sigma^2 \text{ results in equality}$$

$$\frac{b - c_1}{2c_2} = \frac{1 - b}{2c_2} + R_{\Pi} (1 - b) \sigma^2, \text{ from where follows that}$$

$$b = \frac{1 + c_1 + 2c_2 R_{\Pi} \sigma^2}{2(1 + c_2 R_{\Pi} \sigma^2)}.$$

We will notice that from a condition $b \geq c_1$, follows that $\frac{1 + c_1 + 2c_2 R_{\Pi} \sigma^2}{2(1 + c_2 R_{\Pi} \sigma^2)} \geq c_1$ i.e.

$$(1 - c_1)(1 + 2c_2 R_{\Pi} \sigma^2) \geq 0.$$

This inequality is equivalent to simultaneous performance of two conditions. Or $0 \leq c_1 \leq 1$

$$\text{and } 0 \leq c_2 \leq \frac{1}{2R_{\Pi} \sigma^2} \text{ or } c_1 \geq 1 \text{ and } c_2 \geq \frac{1}{2R_{\Pi} \sigma^2}.$$

Only at such values c_1 and c_2 the described optimization of interests of the agent and the principal is possible.

3. Let us suggest that the function of subjective monetary valuation of the costs of making efforts is exponential: $c(a) = \alpha e^{\lambda a}$, where $\alpha > 0, \lambda > 0$.

A) If the interests of the agent and the principal do not coincide, the necessary condition of optimality of the agent's actions for maximization of the expected utility for himself and minimization of the risk of this utility looks like $c'(a) = b$, from which it follows that $\alpha \lambda e^{\lambda a^*} = b$, and hence the value of the agent's optimal effort is $a^* = \frac{1}{\lambda} \ln\left(\frac{b}{\alpha \lambda}\right)$. This optimal solution exists when $b \geq \alpha \lambda$ and does not exist otherwise. As we know, the optimal value of the incentive force on the part of the company maximizing the total gain of the principal and the agent is determined by the formula:

$$b^* = \frac{1}{1 + R_A \sigma^2 c''}$$
. Т.к. $c'' = \alpha \lambda^2 e^{\lambda a}$, то $c''(a^*) = \alpha \lambda^2 e^{\lambda \left(\frac{1}{\lambda} \ln\left(\frac{b}{\alpha \lambda}\right)\right)} = \lambda b$ In our case we obtain the following equation $b^* = \frac{1}{1 + R_A \sigma^2 \lambda b^*}$ for determining optimal value of the incentive force.

This equation is a quadratic equation of form:

$R_A \sigma^2 \lambda b^2 + b - 1 = 0$. Positive and making sense solution of this equation has the form:

$$b^* = \frac{-1 + \sqrt{1 + 4 R_A \sigma^2 \lambda}}{2 R_A \sigma^2 \lambda}.$$

It is easy to verify that this value satisfies the natural conditions: $0 \leq b^* \leq 1$.

B) If the interests of the agent and the principal coincide, the necessary condition of optimality of the agent's actions looks like $c'(a) = 1$, from which it follows that $\alpha \lambda e^{\lambda a^*} = 1$, and hence the value of the agent's optimal effort is $a^* = -\frac{1}{\lambda} \ln(\alpha \lambda)$. This optimal solution exists when $\alpha \lambda \geq 1$ and does not exist otherwise. This effort simultaneously maximizes the value of the utility of the total gain and its risk.

C) If the principal and the agent, independently, attempt to maximize the expected utility for himself, then from the condition of maximizing utility for the agent $c'(a) = b$ we obtain that the value of the agent's optimal effort is $a^* = \frac{1}{\lambda} \ln\left(\frac{b}{\alpha \lambda}\right)$. This optimal solution exists

when $b \geq \alpha \lambda$ and does not exist otherwise. And the condition of optimality of incentive force

b^* for the principal is $a^*(b) = (1-b) \frac{1}{c''(b)}$, and since $c''(a^*) = \lambda b$, we obtain $\frac{1}{\lambda} \ln\left(\frac{b}{\alpha\lambda}\right) = (1-b) \frac{1}{\lambda b}$, from which it follows that $\ln\left(\frac{b}{\alpha\lambda}\right) = \frac{1-b}{b}$. Thus, if the company knows the method of monetary valuation by the agent of his efforts, then, solving this transcendental equation numerically, the principal finds out the optimal incentive force for himself.

If the principal shows an absolute disinclination to risk a condition of an optimality of power of incentives b^* for the principal

$$a^*(b) = \frac{1}{c''(b)} (1-b) + R_{\Pi} (1-b) \sigma^2 \text{ results in equality}$$

$\frac{1}{\lambda} \ln\left(\frac{b}{\alpha\lambda}\right) = (1-b) \frac{1}{\lambda b} + R_{\Pi} (1-b) \sigma^2$. Thus, if the company knows the method of monetary valuation by the agent of his efforts, then, solving this transcendental equation numerically, the principal finds out the optimal incentive force for himself.

4. Let us suggest that that the function of subjective monetary valuation of the costs of making efforts is power function : $c(a) = \alpha + \beta a^k$, where $\alpha > 0, \beta > 0, k > 0$.

A) If the interests of the agent and the principal do not coincide, the necessary condition of optimality of the agent's actions for maximization of the expected utility for himself and minimization of the risk of this utility looks like $c'(a) = b$, from which it follows

that $\beta k (a^*)^{k-1} = b$, and hence the value of the agent's optimal effort is $a^* = \sqrt[k-1]{\frac{b}{\beta k}}$. As we

know, the optimal value of the incentive force on the part of the company maximizing the total gain of the principal and the agent is determined by the formula:

$$b^* = \frac{1}{1 + R_A \sigma^2 c''}. \text{ Since } c'' = \beta k(k-1) a^{k-2}, \text{ then } c''(a^*) = \left(\frac{b}{\beta k}\right)^{\frac{k-2}{k-1}} \beta k(k-1). \text{ In our case we}$$

obtain the following equation $b^* = \frac{1}{1 + R_A \sigma^2 \left(\frac{b^*}{\beta k}\right)^{\frac{k-2}{k-1}} \beta k(k-1)}$ for determining the optimal

value of the incentive force. This equation is a complicated irrational equation, which can be solved numerically.

B) If the interests of the agent and the principal coincide, the necessary condition of optimality of the agent's actions looks like $c'(a) = 1$, from which it follows that $\beta k(a^*)^{k-1} = 1$,

and hence the value of the agent's optimal effort is $a^* = \sqrt[k-1]{\frac{1}{\beta k}}$.

This effort simultaneously maximizes the value of the utility of the total gain and its risk.

C) If the principal and the agent, independently, attempt to maximize the expected utility for himself, then from the condition of maximizing utility for the agent $c'(a) = b$ we obtain that

the value of the agent's optimal effort is $a^* = \sqrt[k-1]{\frac{b}{\beta k}}$. And the condition of optimality of

incentive force b^* for the principal is $a^*(b) = (1-b) \frac{1}{c''(b)}$, and since

$c''(a^*) = \beta k(k-1) \left(\frac{b}{\beta k}\right)^{\frac{k-2}{k-1}}$ then we obtain $\left(\frac{b}{\beta k}\right)^{\frac{1}{k-1}} = (1-b) \frac{1}{\beta k(k-1) \left(\frac{b}{\beta k}\right)^{\frac{k-2}{k-1}}}$, from which, with

the help of simple reductions, it follows that $b^* = \frac{1}{k}$. Since b^* should satisfy natural

condition $b^* \leq 1$, then if the company knows the method of monetary valuation by the agent of his efforts, this optimal for the principal choice of the incentive force is only possible of condition $k \geq 1$ is fulfilled.

If the principal shows an absolute disinclination to risk a condition of an optimality of power of incentives b^* for the principal

$a^*(b) = \frac{1}{c''(b)} (1-b) + R_{\Pi} (1-b) \sigma^2$ results in equality

$\left(\frac{b}{\beta k}\right)^{\frac{1}{k-1}} = (1-b) \frac{1}{\beta k(k-1) \left(\frac{b}{\beta k}\right)^{\frac{k-2}{k-1}}} + R_{\Pi} (1-b) \sigma^2$ or

$bk = 1 + R_{\Pi} (1-b) \sigma^2 \left(\frac{b}{\beta k}\right)^{\frac{k-2}{k-1}}$.

Thus, if the company knows the method of monetary valuation by the agent of his efforts, then, solving this transcendental equation numerically, the principal finds out the optimal incentive force for himself.

4. Risks for certain players with various relationships between the agent and the principal expressed using the risk measures VaR and ES

We have already considered the utility risks for the agent, the principal and the company (agent + principal). But of interest is considering the risk measures similar to such risk measures as VaR and ES, existing in the risk management (see, for example, (Crouhy M., Galai D., Mark R. 2011), (Hull J.C. 2007) and (Jorion P. 2007)) for assessment of asset risks, that have already found use in assessment of risks in other spheres (for example, see application of similar risk measures for project risk assessment (Limitovsky M.A., Minasyan V.B. 2011)).

Let us first consider these notions for determining the risk for the agent.

It will be recalled that a random value of the agent's gain in our model is expressed by the formula: $x = s + ba - c(a) + b\varepsilon$.

The value at risk with confidence probability p for the agent will be a value expressed as VaR_p^x , such that the probability that the agent's gain will be greater than this value is equal to p . I.e. it is the worst of all possible values of the agent's gain that may occur with probability p . I.e. $P\{x > VaR_p^x\} = p$.

As is known (see, for example, (Crouhy M., Galai D., Mark R. 2011), (Hull J.C. 2007) and (Jorion P. 2007)), in our suppositions, the risk measure VaR for the agent will be expressed by the formula:

$$VaR_p^x = E(x) - k_p^{0.1} \sigma(x),$$

where $E(x)$ – expected value of random result x for the agent, $\sigma(x)$ – standard deviation of value x , and $k_p^{0.1}$ – quantile of standard normal distribution.

It will be recalled that $x = s + ba - c(a) + b\varepsilon$. Therefore, $E(x) = s + ba - c(a)$, and $\sigma(x) = b\sigma$.

Hence, we obtain this expression of risk measure VaR for the agent:

$$VaR_p^x = s + ba - c(a) - k_p^{0.1} b \sigma \quad (7)$$

Having an idea of the form of function $c(a)$, depending on the relationships between the agent and the principal, we can substitute into this expression the optimal values of a^* and b^* and calculate the value of risk measure VaR for the agent.

Cases are possible when there is a significant probability of stress (catastrophic) scenarios when the results may be considerably lower than the VaR. For such situation, measure VaR is not always effective for measuring risks. In this case, the risk may be determined by measure ES. (About risk measure ES for assets see, for example, (Crouhy M., Galai D., Mark R. 2011), (Hull J.C. 2007) and (Jorion P. 2007)).

Conditional value at risk (expected shortfall) with confidence probability p .

ES_p – the mean resultant value which may be predicted in $(1-p)\%$ of the worst scenarios.

As is known (see, for example, (Crouhy M., Galai D., Mark R. 2011), (Hull J.C. 2007) and (Jorion P. 2007)), if the resultant value is normally distributed with standard deviation σ , then ES_p is calculated by the formula:

$$ES_p = \frac{\exp(-0.5(k_p^{0.1})^2)}{\sqrt{2\pi}(1-p)} \sigma.$$

It will be recalled that $\sigma(x) = b\sigma$.

Hence, we obtain this expression of risk measure for the agent:

$$ES_p^x = \frac{\exp(-0.5(k_p^{0.1})^2)}{\sqrt{2\pi}(1-p)} b \sigma. \quad (8)$$

In case of absolute disinclination of the agent to risk with utility function $u_A(x) = -e^{-R_A x}$, of interest is risk measure VaR of utility for the agent.

The value at risk with confidence probability p for the agent will be a value expressed as $VaR_p^{u(x)}$, such that the probability that the utility for the agent will be greater than this value is equal to p . I.e. it is the worst of all possible values of utility for the agent that may occur with probability p . I.e. $P\{u(x) > VaR_p^{u(x)}\} = p$.

It would be desirable to express $VaR_p^{u(x)}$ through VaR_p^x . Truth of the following absolutely general statement can be proved.

Statement 3.

For any continuously distributed random variable x and increasing function $u(x)$ holds the formula:

$$VaR_p^{u(x)} = u(VaR_p^x).$$

Proof.

By definition of value $VaR_p^{u(x)}$, true is the equation

$$P\{u(x) > VaR_p^{u(x)}\} = p.$$

Since function $u(x)$ is a increasing one, there is an inverse function expressed as $u^{-1}(y)$. Then it is obvious that the last equation is equivalent to the following:

$$P\{x > u^{-1}(VaR_p^{u(x)})\} = p. \text{ Hence, by definition of } VaR_p^x, \text{ we obtain}$$

$$VaR_p^x = u^{-1}(VaR_p^{u(x)}). \text{ Then}$$

$$VaR_p^{u(x)} = u(VaR_p^x).$$

Since the agent's utility function $u_A(x) = -e^{-R_A x}$ is a increasing one, then, applying to it Statement 3 and keeping in mind formula (7), we obtain the following formula for $VaR_p^{u_A(x)}$:

$$VaR_p^{u_A(x)} = -e^{-R_A[s+ba-c(a)-k_p^{0,1}b\sigma]}. \quad (9)$$

Let us consider risk measure $ES_p^{u_A(x)}$ of utility for the agent.

Using definition of $ES_p^{u_A(x)}$, since the agent's utility function $u_A(x) = -e^{-R_A x}$ is a increasing one, applying to it Statement 3 and keeping in mind formula (7), we obtain

$$ES_p^{u_A(x)} = E(u_A(x) | u_A(x) < VaR_p^{u_A(x)}) = E(u_A(x) | u_A(x) < u_A(VaR_p^x)) = E(u_A(x) | x < VaR_p^x).$$

Note that condition $x < VaR_p^x$ is equivalent to condition $s+ba-c(a)+b\varepsilon < s+ba-c(a)-k_p^{0,1}b\sigma$, hence $\varepsilon < -k_p^{0,1}\sigma$. Then we have:

$$\begin{aligned}
 ES_p^{u_A(x)} &= -\frac{1}{\sqrt{2\pi}\sigma} \int_{-\infty}^{-k_p^{0,1}\sigma} e^{-R_A(s+ba-c(a)+b\varepsilon)} e^{-\frac{\varepsilon^2}{2\sigma^2}} d\varepsilon = -\frac{1}{\sqrt{2\pi}\sigma} e^{-R_A(s+ba-c(a))} \int_{-\infty}^{-k_p^{0,1}\sigma} e^{-R_A b \varepsilon} e^{-\frac{\varepsilon^2}{2\sigma^2}} d\varepsilon = \\
 &= -\frac{1}{\sqrt{2\pi}\sigma} e^{-R_A(s+ba-c(a))} e^{\frac{1}{2}R_A^2 b^2 \sigma^2} \int_{-\infty}^{-k_p^{0,1}\sigma} e^{-\frac{1}{2\sigma^2}(\varepsilon+R_A b \sigma^2)^2} d\varepsilon = -e^{-R_A(s+ba-c(a))-\frac{1}{2}R_A^2 b^2 \sigma^2} N(R_A b \sigma - k_p^{0,1}).
 \end{aligned}$$

Therefore

$$ES_p^{u_A(x)} = -e^{-R_A(s+ba-c(a))-\frac{1}{2}R_A^2 b^2 \sigma^2} N(R_A b \sigma - k_p^{0,1}). \quad (10)$$

Here, $N(x)$ is a function of standard normal distribution.

Thus, if the function of monetary evaluation of the agent's efforts is known, risk measure $ES_p^{u_A(x)}$ can be calculated.

Let us deal with risk measure VaR for the principal.

The value at risk with confidence probability p for the principal will be a value expressed as VaR_p^Π , such that the probability that the principal's gain will be greater than this value is equal to p . I.e. it is the worst of all possible values of the principal's gain that may occur with probability p . I.e. $P\{\Pi > VaR_p^\Pi\} = p$

It will be recalled that the gain for the principal is $\Pi = y - s - by = a(1-b) - s + \varepsilon(1-b)$,

Expected gain of the principal is $E\Pi(s, b) = (1-b)a^*(b) - s$, and dispersion of this gain is $\sigma^2(\Pi) = (1-b)^2 \sigma^2$.

Hence, we obtain this expression of risk measure VaR for the principal:

$$VaR_p^\Pi = a(1-b) - s - k_p^{0,1}(1-b)\sigma \quad (11)$$

Having an idea of the form of function $c(a)$, depending on the relationships between the agent and the principal, we can substitute into this expression the optimal values of a^* and b^* and calculate the value of risk measure VaR for the principal.

Let us consider risk measure ES_p^Π for the principal. It is obvious that the expression for this risk measure for the agent looks like:

$$ES_p^\Pi = \frac{\exp(-0,5(k_p^{0,1})^2)}{\sqrt{2\pi}(1-p)}(1-b)\sigma. \quad (12)$$

In case of absolute disinclination of the principal to risk with utility function $u_{\Pi}(\Pi) = -e^{-R_{\Pi}\Pi}$, of interest is risk measure VaR of utility for the principal.

The value at risk with confidence probability p for the principal will be a value expressed as $VaR_p^{u_{\Pi}(\Pi)}$, such that the probability that the utility for the principal will be greater than this value is equal to p . I.e. it is the worst of all possible values of utility for the principal that may occur with probability p . I.e. $P\{u_{\Pi}(\Pi) > VaR_p^{u_{\Pi}(\Pi)}\} = p$.

Since the principal's utility function $u_{\Pi}(\Pi) = -e^{-R_{\Pi}\Pi}$ is increasing one, then, applying to it Statement 3 and keeping in mind formula (9), we obtain the following formula for $VaR_p^{u_{\Pi}(\Pi)}$:

$$VaR_p^{u_{\Pi}(\Pi)} = -e^{-R_A[a(1-b)-s-k_p^{0,1}(1-b)\sigma]} \quad (13)$$

Let us consider risk measure $ES_p^{u_{\Pi}(\Pi)}$ of utility for the principal.

Using definition of $ES_p^{u_{\Pi}(\Pi)}$, since the principal's utility function $u_{\Pi}(\Pi) = -e^{-R_{\Pi}\Pi}$ is a increasing one, applying to it Statement 3 and keeping in mind formula (7), we obtain

$$ES_p^{u_{\Pi}(\Pi)} = E(u_{\Pi}(\Pi) | u_{\Pi}(\Pi) < VaR_p^{u_{\Pi}(\Pi)}) = E(u_{\Pi}(\Pi) | u_{\Pi}(\Pi) < u_{\Pi}(VaR_p^{\Pi})) = E(u_{\Pi}(\Pi) | \Pi < VaR_p^{\Pi}).$$

Note that condition $\Pi < VaR_p^{\Pi}$ is equivalent to condition

$a(1-b)-s+\varepsilon(1-b) < a(1-b)-s-k_p^{0,1}(1-b)\sigma$, hence $\varepsilon < -k_p^{0,1}\sigma$. Then we have:

$$\begin{aligned} ES_p^{u_{\Pi}(\Pi)} &= -\frac{1}{\sqrt{2\pi}\sigma} \int_{-\infty}^{-k_p^{0,1}\sigma} e^{-R_{\Pi}(a(1-b)-s+\varepsilon(1-b))} e^{-\frac{\varepsilon^2}{2\sigma^2}} d\varepsilon = -\frac{1}{\sqrt{2\pi}\sigma} e^{-R_{\Pi}(a(1-b)-s)} \int_{-\infty}^{-k_p^{0,1}\sigma} e^{-R_{\Pi}(1-b)\varepsilon} e^{-\frac{\varepsilon^2}{2\sigma^2}} d\varepsilon = \\ &= -\frac{1}{\sqrt{2\pi}\sigma} e^{-R_{\Pi}(a(1-b)-s)} e^{\frac{1}{2}R_{\Pi}^2(1-b)^2\sigma^2} \int_{-\infty}^{-k_p^{0,1}\sigma} e^{-\frac{1}{2\sigma^2}(\varepsilon+R_{\Pi}(1-b)\sigma^2)^2} d\varepsilon = \\ &= -e^{-R_{\Pi}(a(1-b)-s)-\frac{1}{2}R_{\Pi}(1-b)^2\sigma^2} N(R_{\Pi}(1-b)\sigma - k_p^{0,1}). \end{aligned}$$

Therefore

$$ES_p^{u_{\Pi}(\Pi)} = -e^{-R_{\Pi}(a(1-b)-s)-\frac{1}{2}R_{\Pi}(1-b)^2\sigma^2} N(R_{\Pi}(1-b)\sigma - k_p^{0,1}). \quad (14)$$

Thus, if the function of monetary evaluation of the agent's efforts is known, risk measure $ES_p^{u_{\Pi}(\Pi)}$ can be calculated.

Let us consider risk measure VaR for the company.

The value at risk with confidence probability p for the company will be a value expressed as VaR_p^c , such that the probability that the company's gain will be greater than this value is equal to p . I.e. it is the worst of all possible values of the company's gain that may occur with probability p . I.e.

$$P\{z > VaR_p^c\} = p.$$

It will be recalled that the gain for the company is $z = a - c(a) + \varepsilon$,

Expected gain of the company is $Ez = a - c(a)$, and dispersion of this gain is $\sigma^2(z) = \sigma^2$.

Hence, we obtain this expression of risk measure VaR for the company:

$$VaR_p^c = a - c(a) - k_p^{0,1} \sigma \quad (15)$$

Having an idea of the form of function $c(a)$, depending on the relationships between the agent and the principal, we can substitute into this expression the optimal values of a^* and b^* and calculate the value of risk measure VaR for the company.

Let us consider risk measure ES_p^c for the company. It is obvious that the expression for this risk measure for the company looks like:

$$ES_p^c = \frac{\exp(-0,5(k_p^{0,1})^2)}{\sqrt{2\pi}(1-p)} \sigma.$$

In case of absolute disinclination of the company to risk with utility function $u_c(z) = -e^{-R_c z}$, of interest is risk measure VaR of utility for the company.

The value at risk with confidence probability p for the company will be a value expressed as $VaR_p^{u_c(z)}$, such that the probability that the utility for the company will be greater than this value is equal to p . I.e. it is the worst of all possible values of utility for the company that may occur with probability p . I.e. $P\{u_c(z) > VaR_p^{u_c(z)}\} = p$.

Since the company's utility function $u_c(z) = -e^{-R_c z}$ is a increasing one, then, applying to it Statement 3 and keeping in mind formula (15), we obtain the following formula for $VaR_p^{u_c(z)}$:

$$VaR_p^{u_c(z)} = -e^{-R_c[a-c(a)-k_p^{0,1}\sigma]} \quad (16)$$

Let us consider risk measure $ES_p^{u_c(z)}$ of utility for the company.

Using definition of $ES_p^{u_c(z)}$, since the company's utility function $u_c(z) = -e^{-R_c z}$ is a increasing one, applying to it Statement 3 and keeping in mind formula (7), we obtain

$$ES_p^{u_c(z)} = E(u_c(z) | u_c(z) < VaR_p^{u_c(z)}) = E(u_c(z) | u_c(z) < u_c(VaR_p^z)) = E(u_c(z) | z < VaR_p^z).$$

Note that condition $z < VaR_p^z$ is equivalent to condition $a - c(a) + \varepsilon < a - c(a) - k_p^{0,1}\sigma$, hence $\varepsilon < -k_p^{0,1}\sigma$. Then we have:

$$\begin{aligned} ES_p^{u_c(z)} &= -\frac{1}{\sqrt{2\pi}\sigma} \int_{-\infty}^{-k_p^{0,1}\sigma} e^{-R_c(a-c(a)+\varepsilon)} e^{-\frac{\varepsilon^2}{2\sigma^2}} d\varepsilon = -\frac{1}{\sqrt{2\pi}\sigma} e^{-R_c(a-c(a))} \int_{-\infty}^{-k_p^{0,1}\sigma} e^{-R_c\varepsilon} e^{-\frac{\varepsilon^2}{2\sigma^2}} d\varepsilon = \\ &= -\frac{1}{\sqrt{2\pi}\sigma} e^{-R_c(a-c(a))} e^{\frac{1}{2}R_c^2\sigma^2} \int_{-\infty}^{-k_p^{0,1}\sigma} e^{-\frac{1}{2\sigma^2}(\varepsilon+R_c\sigma^2)^2} d\varepsilon = -e^{-R_c(a-c(a)-\frac{1}{2}R_c\sigma^2)} N(R_c\sigma - k_p^{0,1}). \end{aligned}$$

Therefore

$$ES_p^{u_c(z)} = -e^{-R_c(a-c(a)-\frac{1}{2}R_c\sigma^2)} N(R_c\sigma - k_p^{0,1}). \quad (17)$$

Thus, if the function of monetary evaluation of the agent's efforts is known, risk measure $ES_p^{u_c(z)}$ can be calculated using formula (17).

Conclusion

In contractual relationships between any two or more persons, of importance is the specification of private rights that determines how costs and remunerations will be distributed among the participants of these relationships. The role of contracts as a vehicle for voluntary exchange is brought out in paper (Alchian A. A. and Demsetz H. 1972). We, following (Jensen M.C., Meckling W.H. 1976) and (Jensen M.C. 1998), consider the agent relationships as a contract, which, on the part of one or more persons (principal(s)), is concluded with the other person (agent) for rendering some service on their behalf, which includes delegation of some decision making authorities to the agent. If both the parties in relationships maximize the utility for themselves, then the agent will not always act to the best interests of the principal. The monetary equivalent of reduction of the principal's well-being from this

divergence is the cost of the agent relationships. The principal may limit the divergence of the agent's actions from his interests setting respective incentives through concluding additional contracts with the agent. An example of modeling the agent relationships is the moral risk model this research is based on. The paper considers relationships between the principal and the agent of various degrees of closeness and studies the possibility to optimize the expected utility and risk for each party.

For various kinds of relationships between the principal and the agent there were obtained computational formulas for introduced risk measures VaR and ES both for the principal and the agent.

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Employment Enhancing Integrative Graduate Education Model

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ABSTRACT

There is a strong call to look for approaches to integrate business and engineering education across disciplines to provide a more coherent system for students with the job market. As graduates fail to find satisfying employment, the value of college education is questioned. The unemployment of the highly educated has economic, social and political ramifications. Worst is when the highly educated unemployed takes up lower status jobs, ever reducing the quality of the job market with future consequences. In this study, we concentrate on ways to enhance students' competitiveness in the post-graduate environment by proposing a curriculum to yield viable business proposals. Our model is for business or engineering students willing to pursue a master's degree without PhD. We go beyond the compartmentalization of the current educational system to increase employability, particularly self-employment. Rise in productivity is a side benefit since there is a strong correlation between productivity and welfare.

Keywords: Integrated business education, Graduate business-engineering curriculum, Team teaching, Course design

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INTRODUCTION

Unemployment has long been one of the most challenging problems to tackle for any government in any country. As education has been suggested to increase potential employability, the surge in demand for education has been on the rise all over the world. While education over time is found to increase one's value at the workplace, it is natural to suppose that the marginal contribution of education to one's earning wanes as competition gets stiff in countries where we have high participation in the educational endeavor. That, as well as failure to attain satisfactory employment opportunities would also exacerbate frustration among the rookie graduates, with even political consequences for sitting governments. The educational institutions are not spared from the blamed for the ineffectual job hunt in the market, eventually leading to a serious soul searching exercise questioning the value added of a college degree.

The issue is accentuated within the framework of Turkey where higher ladders of educational structure does not necessarily bring about relief in the job market. Unfortunately, just the opposite seems to be the case. In this study, we first briefly review the unemployment problem in relation to the educational attainment, for the special case of Turkey. Then we suggest that perhaps the observed phenomenon in the unemployment crisis is an indicator in the inadequacy of the education. Consequently, we propose an employment enhancing employment model, which integrates components of business and engineering curricula. The paper will conclude in the last section with final thoughts.

UNEMPLOYMENT IN TURKEY

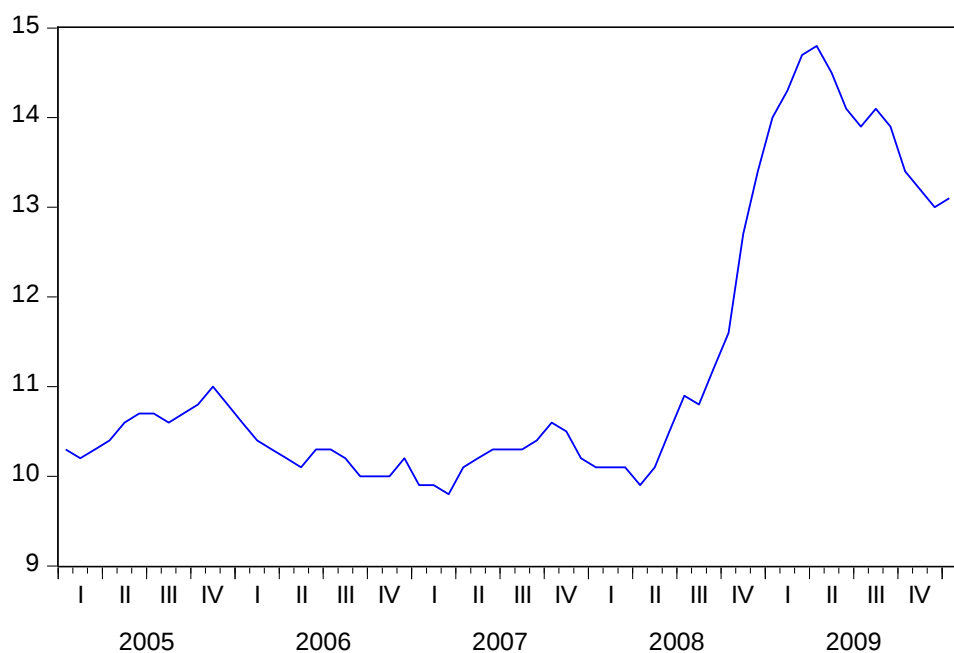
Turkey has been envy of the whole world with its tremendous success in coming out of the recent economic crisis of 2008 relatively unscathed. What is even more commendable is that the recent growth in GDP is accompanied by a record decline in inflation. Nevertheless, unemployment has long been an intractable quandary in the country. As shown in Figure 1, the initial effect of the current economic crisis is a rapid jump in the unemployment rate, which has taken a reverse course, especially since mid-2009.

Table 1. Turkish Youth Unemployment Rate According to Education Levels

year	primary	Middle	high	vocation	college
2000	8.3	13.7	20.6	20.8	28.3
2001	10.6	17.7	24.0	25.5	30.7
2002	12.4	20.7	26.8	28.0	38.3
2004	13.4	19.6	26.6	29.3	39.8
2005	14.1	19.2	25.3	25.6	30.5
2006	14.7	17.9	25.2	21.1	27.2
2007	14.7	19.3	23.5	22.6	28.5
2008	14.3	18.7	25.0	20.8	29.8
2009	17.9	21.6	30.6	27.6	33.2
2010	14.9	10.9	27.2	23.1	32.5

Unemployment with respect to the educational attainment over time for person at the age group of 15-24. Source: TUIK.

Figure 1. Overall Turkish Unemployment Rate



Seasonally adjusted unemployment rate for people of 15+ age. Source: TUIK.

However, what is worse for the unemployment problem of the country is the inconsistency between unemployment and the educational attainment for the young people, who are the most concerned about the said relationship. Table 1 reveals that among the holders of a degree, the highest portion of the unemployed is college graduates. As a matter of fact, there is a positive relationship between the level of the degree held and unemployment rate; the higher the degree, the higher the unemployment! A curious observation in Table 1 is that vocational school graduates are much more successful than their counterparts among ordinary high schools. Even more curiously, vocational school graduates have achieved lower unemployment rates than college graduates. To put the issue in perspective, we observe in Table 2 that the unemployment rate declines in the US as level of the degree held. Additionally, Turkey seems to be lagging behind in many aspects compared to the European Union countries (Genc, 2008).

Table 2. US Unemployment Rate for February 2011

Less than a high school diploma	13.9
High school graduates, no college	9.5
Some college or associate degree	7.8
Bachelor's degree and higher	4.3

Source: Bureau of Labor Statistics.

In sum, there is a peculiar employment situation in Turkey with respect to the educational attainment. Bleak prospect for higher degree holders may discourage young people from pursuing more and more education, but instead they may choose to seek opportunities in the job market with less education. In Europe, however, young people may refuse to go to school as they can find jobs with less education (Funkhouser, 1999; Jacob, 2002; Ishikawa and Ryan, 2002), thus they reduce the opportunity cost of attending school where school is a “normal good,” (Tansel, 2002). It is also possible that in the future higher degree holders will be taking up the positions which were previously occupied by lower degree holders, thus further undermining the value of a certain degree. Putting it differently, an oversupply of higher degrees would reduce the “price” thereof. The problem is accentuated in a bleak employment

market, especially in the aftermath of the global economic crisis, with too many applicants for too few positions, a higher education degree serves as a common denominator instead of signaling the existence of more intensive human capital on the part of the degree holders.

Given that education is considered to be an undeniable source of economic growth and development in economic theory (Romer, 1990), young people's disenchantment with education is worrisome for the policy makers. In the meantime, this issue may bring to the forefront the significance of academia-industry-government cooperation in the globalized competitive world (Dur, Ozkul and Genc, 2009).

CALL TO INTEGRATIVE COLLEGE EDUCATION

As the aforementioned statistics make it clear, the unemployment, and particularly the unemployment problem of the highly educated stratum of society in Turkey, has economic as well as social and political ramifications. The predicament is exacerbated by the fact that highly educated unemployed becomes content with the lower status jobs, thus ever reducing the quality of the job market with future consequences.

It is not totally out of reason to think that college graduates are unable to find jobs because they are not equipped with the knowledge base to tackle the challenges of the current job market. The business world has long been calling for more cross-disciplinary education as in line with the actual business environment. This is integrative education, which combines education horizontally and cross-sectionally (vertically). The call for integration in business schools came from one of the most prestigious accreditation institutions in the US, i.e. the American Assembly of Collegiate Schools of Business, AACSB, (Smith, 1995). The mismatch between the college education and managerial positions in the business world has also brought to the attention of stake holders of business school, where the graduates of business schools are parachuted into mid-level companies with authority over people who have vast knowledge in business and customer relations, and thus creating two tier employees. In other words, what we produce is a boss with education, but not enough knowledge on one side, and an employee who knows the customers, market conditions, and business

environment on the other (Mintzberg, 1992). Ignoring all these calls to action may spell the doomsday for business schools.¹

In the same sense, the Accreditation Board for Engineering and Technology (2000) requires engineering programs to go behind mere technicalities but incorporate ways to understand ethics, communication, team-work and a number of other societal issues. The idea of cross-disciplinary functionality has already been incorporated in the business world in small as well as big companies. For example, companies such as Boeing, Coca-Cola, DuPont, Ford, Hewlett-Packard, Siemens, General Electric, Toyota, IBM and Xerox, use cross-functional teams to conduct their business (Aurand, DeMoranville and Gordon, 2001; and Malekzadeh, 1998).

Universities and research institutions have been increasingly perceived as engines of economic development by governments around the world (Al Karam and Ashencaen, 2006; and Kapur, 2007). Their impact of public health is also acknowledged (OECD, 2004). Therefore, many academic institutions as such have revised their mission statements to incorporate that emerging feature (Markman, Phan, Balkin and Gianiodis, 2005). While engineering schools lead the product development scene, business schools are regarded as the suitable venues to market the ideas materialized by the engineers (Lockett, Wright and Franklin 2003; Wright, Lockett, Tiratsoo, Alferoff and Mosey, 2004). University scientists play a significant role in productivity growth in the US and Japan (Zucker, Darby and Armstrong 1998; Zucker, Darby and Brewer 1998; and Zucker and Darby 2001).

EXAMPLES OF INTEGRATIVE EDUCATION

Therefore, to address the aforementioned demands from the business as well as academic corners, we propose here an integrative business-engineering education model. We should be quick to add that our model is not without any precedent. We propose a method in which a number of subjects/courses are taught in the form of modules. Thus, the horizontal integrative

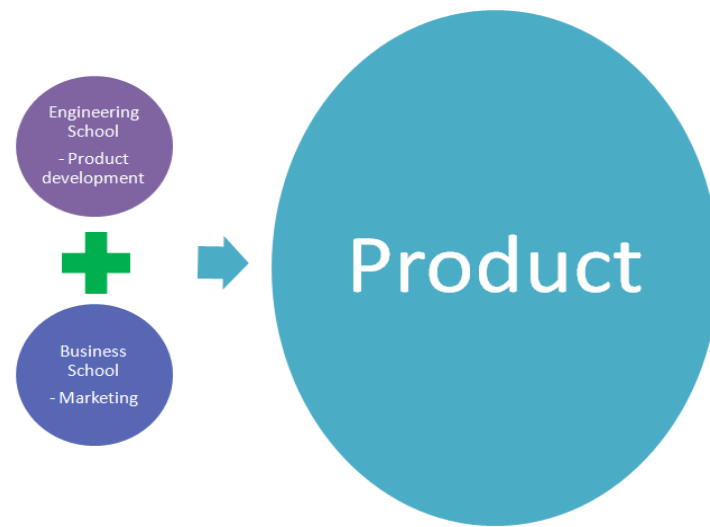
¹ The literature on the integration in business school is voluminous. See on that, inter alia, (Cotton, 1982; Jacobs, 1991; Lataif, 1992; Leonard, 1992; St. Clair and Hough, 1992; Byrne, 1993; Mason, 1996; Pharr and Morris, 1997; Stover et al., 1997; Arredondo and Rucinski, 1998; Pharr et. al. 1998; Hamilton, McFarland and Mirchandani, 2000; Miller, 2000; Braun, 2004; Genc, Bekmez and Miller, 2004; Bowett, 2005; Hawawini, 2005; Reuben and Festervand, 2005; Campbell, Heriot, and Finney 2006; McCarthy and McCarthy, 2006; Moratis and Hoff, 2006; Pharr and Lawrence, 2007; Genc and Bekmez, 2008; and Genc, 2009).

education combines a number of courses within a unified format streamlined along the general mission of the school/college. Examples are the IBC (Integrative Business Curriculum) in the College of Business and Economic at the University of Idaho (Pharr and Morris, 1997; Stover, et al., 1997; Pharr, et al. 1998; Miller, 2000; Genc, Bekmez and Miller, 2004; Pharr and Lawrence, 2007; Genc and Bekmez, 2008; and Genc, 2009). Cross-sectional education brings together cross-disciplinary subjects to repack the college education. For example, the dual degree programs at the Butte University collaborates with the Purdue School of Engineering and Technology at Indianapolis to offer engineering degrees with minors in mathematics, computer science, science technology and society, economics or one of the natural sciences (physics, chemistry, and biology). This is a 10 semester undergraduate program. Likewise, at the Ohio State University, the College of Business and the College of Engineering teamed up to offer a graduate program to lead to the Master in Business Logistics Engineering (MBLE). Additionally, a specially program called the Integrative Graduate Education and Research Traineeship (IGERT) is developed with the support of the National Science Foundation in the US aiming at enhancing interdisciplinary research culture at the doctoral level studies (Martin and Umberger 2003). Also, the University of Iowa, the University of Michigan and MIT offer integrated business/engineering graduate programs directed at certain aspects of early to mid level engineering professionals (Brown and Haynes, 2004).

Cross disciplinary education is certainly not only confined to the US. See, among others, (Winter, 2002; Aladekomo, 2004; Lubis, 2004 and 2006; Gill, Kreisel and Verma, 2009; Florea and Oprean, 2010; and Goi and Lau, 2010).

A MODEL OF INTEGRATIVE BUSINESS-ENGINEERING EDUCATION

Figure 2. Cooperation among Different Schools at a University



We propose here a graduate level integrative program to combine business and engineering across college, which can be considered as a form of vertical integration. To start with, the incoming students to this program are supposed to be firmly grounded in the fundamentals of their own fields, be it business or engineering. Engineering students are supposed have a comparative advantage in product development, and students with business backgrounds would bring in the skills required to market the product. The program itself will expose the students to several study areas of business and engineering to enable them to

- i. identify entrepreneurial opportunities for viable needs in niche markets (*need identification*)
- ii. develop technical proficiencies and abilities to comprehend complex scientific and practical business ideas and issues (*risk measurement*)
- iii. develop effective business plans for viable products in niche markets (*product development*)
- iv. communicate these ideas and issues to diverse stake holders such as suppliers, customers, investors and employees to attract financial and human resources for the long life of the present or potential company (*value generation*)
- v. work well in teams while not shying away from undertaking individual initiatives to

evolve the strategy, organization, and leadership model as the business grows
(*team building and management*)

Finally the graduates of this program will be eventually equipped with a concrete business idea for the post graduate phase. This philosophy behind the program believes that the final product (the whole), i.e. the student with familiarity with both backgrounds, is bigger than the sum of the pieces, business or engineering individually. Our program is tended for students seeking employment (paid or self employment) following graduation from the program without pursuing a terminal degree in their fields. That is why; the students in the program are exposed to practical issues of business engineering with just a satisfactory coverage of theory. The technical matters of the program can be broadly specified along the incoming students, faculty, and the program itself.

The Incoming Students

The incoming students to this program are exposed to have interest in starting and/or running viable business along the philosophy outlined above. Therefore, students with business or engineering undergraduate degrees should be selected based on their interest and/or experience in management and business projects rather than on grades or standardized tests (e.g. GRE or GMAT or purely based on GPA). Structured interviews may play a crucial role in choosing potential students. Students should be considered for interviews and/or admission after providing with a statement of purpose in which a product/project or the idea thereof is extensively discussed. Statement of purpose which includes a well structured project idea. It should also shed light on graduate study goals and plans, experience, etc. with a special emphasis on post-graduate phase career plans.

Faculty

Faculty teaching in this program should have competency in applied business and/or engineering research. Exclusive focus on teaching or pure academic research would prove inadequate to educate the students in this program. It would not be a rewarding experience for the faculty either.

It is conceivable to also think that this mode of education would necessitate co-operation/joint work among faculty across disciplines. We are naïve to deny the challenges involved in such an endeavor. Like degree programs, faculty are also housed in silos usually with little or no academic contact with each other. Coaching faculty to cooperate across disciplines in teaching and/or research could potentially take time and more resources than isolated (stand alone) teaching or research.

Because of the very nature of the model proposed here, the instruction cannot be exclusively confined to university faculty. Teaching staff should be beefed up by the support provided by experienced practitioners and business leaders. Governmental organizations can pitch in to complement the picture especially on matters pertaining to legal environment and regulations that prospective graduates will be operating in.

In sum, instructors should be willing to experience with non-conventional and less autonomous teaching schemes.

Administrators

Because faculty from different departments, and even from industry, participate in this program, the role undertaken by the administrators in different departments in the university becomes particularly important. Those who lead our program have to be versatile in communication with different stake holders, especially industry to sell the program and projects, but also with students and faculty. Like faculty, administrators, too, should be with more constraints and less autonomy than traditional educational settings.

Mentors

Industry representatives are the ideal mentors for student projects where experience is instilled in students by the mentor. Needless to say, university faculty could take part in this endeavor as well, but it is crucial that mentors champion the cause of each project.

Program

The program can be based on many existing executive MBA programs with necessary modifications required by the market. One such example is the Executive MBA in Business

Engineering program of University of St. Gallen (HSG), Switzerland. It is a part time program which rotates between campus learning and industry practice. Their program takes approximately 18 months to complete, which corresponds to 200 weeks.

On the other hand, the specialized master's program of logistic engineering at the Ohio State University, which is composed of 45 credit hours, may be completed in 9 or 12 months. In the program, innovation and entrepreneurship are stressed.

In general, in programs which can be adopted for this purpose, students are given business/economic/engineering courses during the course of the program about:

- How to develop a viable project?
- How to raise funding for a project?
- Courses related to the micro and macro environment of business

In the first half of the program, students are trained in project evaluation by considering engineering and business perspectives. This should lead to business creation and management where innovation is stressed. Students produce business projects during their education in the first half of the program. At the end of the first phase, viable projects are chosen in cooperation between industry and academia. The projects must be financially and technologically viable.

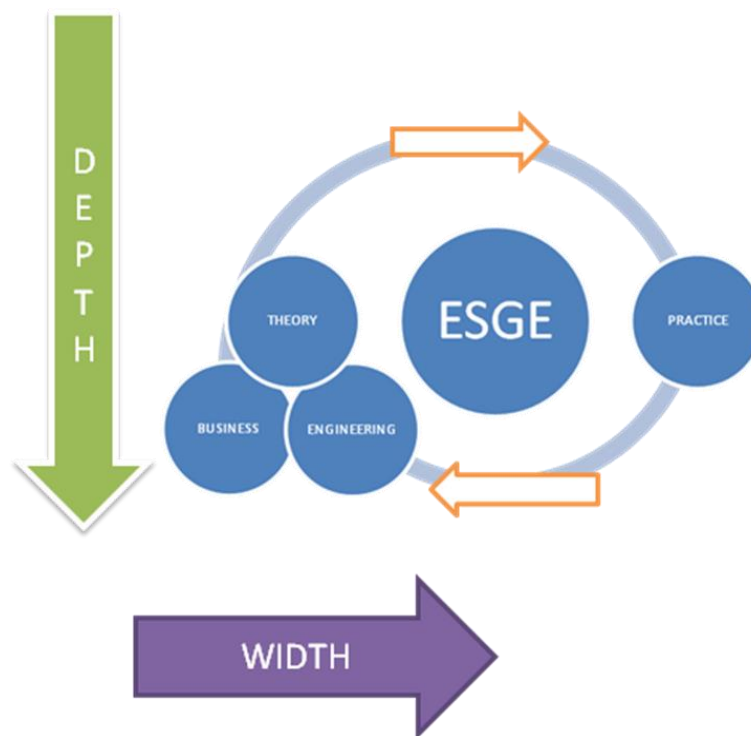
The next phase involves a professional practicum (incubation) for chosen projects either on or off campus. In case of failure to find suitable industry partners, this phase could very well be virtual instead. This phase is finalized with the defense of the projects incubated during the second phase of the education. This phase is followed by the graduation.

FURTHER THOUGHTS ON THE MODEL

The model we propose strives to equip its graduates with entrepreneurial spirit so that they can be leaders in business either working for someone else, or starting their own business. That is why, we would like to call our program the “entrepreneurial spirit in graduate

education,” ESGE. As alluded to in Figure 3, we would like to merge the theory of business and engineering to yield entrepreneurs, who are not only compelled to look for jobs in the public sector, but potentially capable of generating employment for others. As shown in the figure, our aim is not to dwell deeply on the depth of each field, i.e. business and engineering, but instead to explore more on the opportunities to expand the integration along the different fields (width axis). We also wish that there is a constant interaction between theory and practice during the program to refine skills in business management and related issues.

Figure 3. The Program Mix



In a sense, our program strives to generate a new breed of professionals who combine strong managerial and technical skills. Mixing business and engineering capabilities will turn out team-work friendly, individually confident, leaders to manage complex technical ventures in the ever growing and fast globalizing modern world. One obvious job market track for the graduates of such a program could be careers as managers operating in technology-based industries. Given the fast incursion of technology in our everyday lives demand for qualified

managers in that field could only be expected to grow. It goes without saying that the modern education needs to meet the regional, global, and national challenges of the 21st century. Hence, educational institutions, in order to avoid being aloof to changes in society, have to turn out graduates with the necessary skills to deal with the issues of the modern world. Graduates of our program are expected to be managers for the modern world.

On the other hand, if the entrepreneurship spirit rightfully is instilled in students during the program, the bigger gain will be in self employment which is going to reduce the burden on the public sector to generate employment opportunities to ever growing applicants' pool. Again the model program proposed here intends to generate people who innovate and/or utilize already available research and development in business applications in order to keep competitive new products and services coming. Enabling college graduates with skills to start their own business after graduation can greatly facilitate massive youth unemployment.

To this end, our program emphases:

- i. engineering fundamentals and practice
- ii. business fundamentals and practice
- iii. individual and team based business skills for effective management of engineering projects
- iv. innovation and entrepreneurial orientation
- v. ethics in engineering and business

Therefore, graduates of this program must be capable of conducting market research to identify the needs, and be able to conceive and propose products to satisfy the identified need in the market. Also necessary of the graduates is to foresee the future trends and preempt the rivals with products ahead of competition.

CRAFTY SKILL VILLAGE

On a side note, a similar attempt to reduce unemployment among the least educated segments of society may be organized in the form of, what we wish to call, "crafty skill village," a name

we coined after Dubai Knowledge Village (Village). Launched in 2003, Village introduces the idea of the “shared campus,” where food court, classrooms, auditorium, conference facilities, retail outlets, and sports grounds are used by all institutions in the Village, based upon the need thereof. Joint usage of a number of facilities surely saves valuable fixed cost in terms of heating/cooling, rent etc. It also reduces the cost by increasing the occupancy of the facilities. A further benefit in terms of cost saving for the incoming institutions is the fact that the infrastructure, which is already provided by the Village management, makes the launch of educational programs possible in a relatively short period of time. While Village aspires to have full-fledged universities on its site, most institutions are in the form of branches of parent institutions with the same programs abroad. On the other hand, the Dubai Academic City (City) is designed to attract larger establishments where the City will include student dormitories, a sports stadium, and accommodation for university staff, for an enhanced academic experience.

We, however, believe that such a set-up is more appropriate for vocational educational institutions as the university education has its own culture as part of the process. As such, most of the institutions established at Village are largely small professional training centers. Given that the universities aim at generating not only graduates with textbook knowledge, but also with a unique culture, Village does not render itself for such a purpose. Because in shared quarters, it is almost impossible to set your own identity as a separate institution apart from everybody else, neither theoretically not practically. You all share the same campus grounds, the same facilities, and mostly the same rules and regulations. The universities wish to have long term relationships with their student body, also after graduation, as a source of income and pride. Home-comings and mascots and the like are almost impossible to institutionalize in a Village-like environment. Even the for-profit/private universities have this broad perspective in mind.

Conversely, the training centers are mainly interested in churning out as many graduates as possible in as little time as possible to generate a stream of income for the for-profit training institutions. They are not necessarily in the “education” business, but simply in “business.”

We, therefore, believe that Village-like establishments should be considered for what they are best at, that is, the training centers which train people to learn certain skills such as secretarial jobs, legal clerks, and other apprenticeship required processions. This might be better served under the jurisdiction of the Ministry of Education. It goes without saying that these kinds of jobs are crucial for the maintenance of industry and services in any country.

CONCLUSIONS

Unemployment, especially educated youth unemployment in Turkey, which has a high young population, is an intransigent political and social challenge for decision makers. Theoretically, employment would increase one's chances of finding jobs, but it seems that, at least among the young people, the higher the educational attainment the higher the unemployment. This calls into question the value of a college degree given the costs attached to such a process in terms of time spent in pursuing the degree and financial burden involved. A college degree, under these circumstances, loses its function as a distinguishing feature in the job market, but instead becomes a must for everybody to attain as jobs turn to difficult to come by with it. It only becomes clear that college education thus could be converted into a common denominator among all job market participants where applicants would be content to take up jobs originally went to lower educated.

Also in the light of the current trends in the business and academia, we believe the observation for the Turkish job market requires rescaling, maybe upscaling, the college education. We intend to come up with an entrepreneurial project based learning scheme, which we call Entrepreneurial Spirit In Graduate Education (ESGE). Our model is designed for students with either business or engineering backgrounds willing to pursue a master's degree but no intention to go for doctoral studies. In our proposed model, students are admitted to the program after writing a statement of purpose in which a product/project is depicted. After an initial phase of covering principles of starting and running a business along the engineering fundamentals, the rest of the program is dedicated to the discussion and development of student projects into viable business proposals in collaboration with the

industry. Students graduate following the defense of a project where the evaluation committee includes business representatives, as well.

All in all, our idea is to enable students to graduate with a concrete project at hand ready to be developed. We believe this program will increase its graduates' employability, and particularly self-employment, which will hopefully reduce unemployment in the ranks of highly educated members of the labor force. One should note that the reduction of unemployment among the educated members of society would contribute more to the productivity of the country than a comparable reduction in unemployment among the less educated folks. It becomes all the more important once we consider the strong correlation between productivity and economic welfare.

This model intends to develop a theory supported – practice oriented education where students graduate with sound professional competence to increase chances of paid employment or to be capable for self employment. In the process, students learn to apply their skills in opportunity seeking, goal setting, and strategy formulation.

We did not discuss at great extend the costs and benefits of such an educational package²: Students should be ready to reorient their mind for a non-traditional educational experience. Faculty from different schools have to relearn to cooperate across disciplines and business professionals. Administrators should be flexible to accommodate faculty, and also be cheer leaders for the program in the business world. The whole process should adopt an unforgiving professional attitude to enrich the program to the utmost levels. However, similar programs around the world have successfully passed the stage of infancy, and we have to do the same to be competitive in the global market.

² See Genc, Bekmez and Miller (2004) for costs and benefits of integrative education.

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A Research On Analyzing School Executives' Inclinations Related To Movements of Education Philosophies

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Abstract;

This study analyzes perspectives of primary, secondary and high school executives affiliated to Turkish Trabzon Directorate of National Education, on ideas of education philosophy. 100 school executives officiating in the province of Trabzon participated in the research. Data were collected through a scale involving a total of 40 principles related to philosophical movements of prennialism, essentialism, progressivisim and re-constructionism. The KMO (Kaiser-Meyer-Olkin) value of the scale has been determined as 0,87 and the Cronbach alpha, 0,73. In addition, the data acquired from the research concluded the reliability coefficient of the scale as 0,78. The data were analyzed using the SPSS computer program and their frequencies and percentages were analyzed. It has been observed in the research results, that school executives held a positive attribute towards the philosophical movements of prennialism, essentialism, progressivisim and re-constructionism.

Keywords: school executives' inclinations, prennialism, essentialism, progressivisim, re-constructionism

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INTRODUCTION

It is known that, to define education as an approach which is generally accepted as the process of forming required behaviors (Ertürk, 1967). As per this definition, it is the general objective of education to form a required behavioral change. However, it is clearly known that formation of required behaviors do not occur in completely sterile conditions and environments. It is a reality that there are social, economic, psychological, historical, political, pedagogical and philosophical aspects to education. What ends education will serve, what content will it include to realize such ends, what methods and technics will be implemented in connection with such content and criteria and methods of evaluation for learned content and the process are important areas of issue. Therefore, philosophy in general, and in specific, philosophy of education, can be regarded as an area of study which guides, and teaches leads and methods for resolving such problems (Sönmez, 2012).

In a basic definition, philosophy can be expressed as "a love for wisdom (reason)". While Aristotle defined philosophy as a science of first reasons, philosophy was attributed the meanings of getting down to basics of events and researching the essence of the universe (Ergün, 2006). Philosophy is an activity of thought which aims to analyze the whole truth (reality) and various manifestations related to substance (matter) and life in terms of principles and objectives (targets/ends). Philosophy is a method of thinking which seeks openings in resolution and critics of knowledge, concepts, beliefs and theories. Philosophy is a collective and consistent whole of ideas which guides behaviors and ideas of a person. Philosophy is a wide area which generally consists of branches such as logic, ethics, aesthetics, metaphysics and the concept of knowledge.

The philosophy of education may, in a very general sense, be defined as the type of philosophy, or even applied philosophy, which discusses education in a philosophical attribute or philosophical methods. Philosophy of education, which analyzes conclusions through concepts special to the are of education and inspects structures of the arguments contained therein, approaches objectives of education while focusing on the basic methods defining education (Cevizci, 2013).

The philosophy of education emerged in a time when education became an activity of participation at a corporate level, after education began to gradually gain a universal character due to the Industrial Revolution and as part of modernization processes (Cevizci, 2013).

Education, being quite a deep-rooted activity, has a history almost as old as humanity; what is more, education, or the activity of schooling, is one of the two oldest professions of humanity. The facts that a discipline or an activity so deep-rooted and which consist one of the most important efforts of humanity was approached by various societies throughout the history and that this concept of activity was thoroughly investigated are only natural and understandable. Hence, throughout the history education was defined in various cases and approached in different perspectives by different schools of thought or philosophers in detail, being evaluated from almost all of its aspects. Moving forward from this point, it is fitting to say that the philosophy of education is as old as philosophy itself (Cevizci, 2013).

There are many elements which are involved in and which in various ways define education, which has been approached by the philosophy of education for a very long time, at least for 2500 years since the famous Greek philosophers Socrates and Plato. No doubt the primary elements are the student, or the person being schooled, teacher, or the teaching person, the content of education, or the curriculum, education activities themselves and their objectives and values and attributes gained by education. As it is understood, philosophy of education has epistemological, ontological, ethical and political aspects, just as philosophy has theoretical and practical branches such as epistemology, ontology, ethic and political science.

Regulation of education systems within the dimension of evaluation in terms of objective, content, teaching and learning requires a perspective. It can be said that such perspective is generally one which cannot be isolated from state politics. However, to what ends, for whom, where, how much and how education will be presented and how to, and compared to what the process outcome will be measured, require an approach with social, economic, psychological and educational dimensions. This concept generally brings up the education sense and

applications of the state, which is generally a sophisticated and problematic subject. This situation is also related to "philosophy of education" and education system in an aspect in its essence. The relation of education and philosophy exhibits multidimensionality. In a sense, philosophy is of the building stones of education. For whom, for what, where, how much, how education will be given and how it should be evaluated are political, social and economic problems. However, it can be said that all these questions and their answers, each, are, by their nature, philosophical questions. The who-, how- and where- to educate are political and economic decisions. The objectives of education, its types, programs and questions about methods, and its aspects of ontology, epistemology, action, ethics and logic, in short, concern philosophy. It is known that philosophy of education is in a sense, a directive teaching (Boyacı, 2013; Ekiz, 2005). Within this context the below principles are intended:

One of the basic guides of education systems is philosophy.

Education and teaching programs are a product of a philosophical work and acceptance.

Adaptation to an adopted philosophy increases corporate effectiveness and productivity.

Philosophical Movements and Education

The twentieth century, in terms of education, has been a century of discussions about increasing schooling, more widespread utilization of education technologies, democratization and more widespread utilization of more functional education technologies, democratization and presentation of more functional education technologies. Said century for a long time witnessed a history of cold war between two different socio-economic and political models, and apart from these blocks, an underdeveloped third world. Ultimately the ending of soviet applications of existing socialism and due to certain metamorphic applications, humanity entered the twenty first century with a monopolar world, in a sense.

Effects of General Philosophical Movements on Education in Turkey

The basic understanding affecting formation of the education system in Turkey during the first years of the Republic was the establishment of "new nation state". It is seen that this perspective affected the education system for many years. The education perspective of intellectual perspective, which left its mark on the Republic, which we define as "early

republic" in Turkey, finds itself in Mustafa Kemal's views. Its reflections on the field of education and philosophical effects on education, in connection with the basic view of Mustafa Kemal, can be expressed in this way. Firstly, the purpose of creating a modern national state brought about the necessity of a national education. Another basic quality is the demand for a work-centered and applied education. Secularism and scientific standing are regarded as another quality. The approach of rationalist, realist, scientific and humanist problem resolutions dominate the Mustafa Kemal system of thought. According to this perspective, it can be said that the views of Mustafa Kemal on life and education predominantly carry a rationalist, positivist and humanist content (Alkan, 1993). The affect of Kemalism on outlines of the education system was very dominant from establishment until 1950s, or even until the end of 1980s. In a philosophical sense, Ataturk's being a pragmatist, positivist and rationalist leader was a dominant factor in education philosophies. Principles such as nationality, being scientific, applications, functional secularism, respecting equality of opportunities and unity of education are the most important heading in Ataturk's understanding of education (Tezcan, 2000 pg.16-20).

The movements of education philosophy are generally reflections of general philosophical movements on the field of education. Basic emphasizes on the philosophies of education are objectives of education, perceptions on the process of education and principles and methods of teaching, while bearing certain foundational attributes of general philosophical movements. Beside, subjects such as education philosophies, education methods and roles of teachers are also dealt with.

Reflection of philosophy on education brought many currents in the education philosophy. Some of these are prennialism, essentialism, progressivisim and re-constructionism. Prennialism, of realist and idealist philosophies, advocates that the human nature does not change and therefore education models should not change either. Likewise, essentialism, influenced by realist and idealist philosophies, generally advocates that a human being is a social and cultural being, he/she does not have any knowledge from birth, therefore the duty of education is to convey the knowledge accumulated by the society directly to students.

Progressivism, accepted as the application of pragmatic philosophy on education, takes base the view "the essence of truth must continuously change", therefore advocating that education is not about social standards and stableness, but about teaching the ever-changing life to students. Re-constructionism, which is regarded as the continuation of progressivism and is based on pragmatism, advocates that humanity has come to a junction between existence and non-existence and therefore a new civilization is needed, and therefore that the objectives of education be to predetermine the social problems affecting humanity and educate qualified individuals with the ability to create resolutions (Eden, 1998).

Philosophy of education affects and shapes education systems. According to Sönmez (2002), it is not possible to mention a single philosophy of education within the Turkish Education system, because the education system bears a mixed education philosophy. In other words, the Turkish Education System is affected by various movements of education philosophy. The approach to the individual and organization of the whole education system depends on which philosophy or philosophies are taken as base in regulation and implementation of any education system. If there are idealist philosophy and prennial, essentialist education movements at the foundation of individual education, the education system will aim to grow elegant people. If there are pragmtic philosophy and progressivist, re-constructionist education movements, it will be aimed to educate every individual according to their interests, wills and abilities (Sönmez, 2002).

School System and Leadership

Leader is a person who supports the system. At the same time, a leader always has a mission and a vision (Fullan, 1991). It is recommended for a leader to assist rationality and frame formation (Jenkins, 1997). There are many findings in researches on school effectiveness that leaders have an important place in school success. Among these: formation of an open vision for school and providing unity of ideas without overseeing critical thought (Ainscow, 2000 et al.) School system and leadership are the basic processes in discussions related to re-construction of meanings related to education and school. Within these processes, policies related to school system, school management processes and leadership attributes of the school

manager are defined as the central processes in re-construction of meanings related to school. Some attributes of these processes are (Balçı, 2011; Alton, 1996, Anspaugh, 1995, Bamburg ve Andrews, 1991; Balçı, 2001; Şişman, 2005);

Policies Related To School System

There are open and transparent education programs accepted by everybody.

Education staff exhibit the attributes and behaviors that will be supported by politicians.

Realization of excellency is believed to be possible in education.

School Management Process;

- School objectives are open and transparent.
- Decisions are made as school-based, teachers participate in activities and take responsibility.
- There is future-oriented, successful academic and educational leadership.
- The direction is towards change and innovation.
- Common planning and cooperation is foundational and performance is observed and evaluated in connecting with this.
- There is no concept of "worktime" for school staff, they dedicate a big part of their time to their duties and the school.

Leadership Attributes of a School Executive

- School executive is a teaching leader.
- School provides that staff participation in decisions and assuming responsibility are adopted as social behaviors.
- It sets open rules and applies these rules.
- It develops strategies for motivating school staff and students and attaches importance on taking responsibility.
- It increases job satisfaction for school staff.
- It focuses on success and evaluates basic objectives,

- It provides that school staff are individuals who continuously professionally renew themselves and internalize lifelong learning.
- It spends its time by observation and teaching.
- It possesses the ability to represent.
- It believes in and trusts the teaching staff.
- It has high-level expectations from teachers and communicates this to them.
- It sets a situation-based leadership style.
- It has support from senior management.
- It focuses on program development.
- It has support from the society and school's board of management.
- It provides that teachers put in as much time as possible for education.
- It expresses to everybody that the most important function of school is to enable learning.

METHOD

The research was conducted with 100 school executives officiating in Primary, Secondary and High Schools affiliated to Trabzon Provincial Directorate of National Education, in 2014. Objective of the research is situation assessment using description and survey methods. Participants were determined on volunteer and of the participants, (N=38) were females and (N=62) were males.

The scale developed by Ekiz (2005) was used. The KMO (Kaiser-Meyer-Olkin) value of the scale has been determined as 0,87 and the Cronbach alpha, 0,85. In addition, the data acquired from the research concluded the reliability coefficient of the scale as 0,78. In this scale, 10 conclusions, each related to education philosophy movement and a total of 40 philosophical principles were organized sophisticatedly. These philosophical movements are sorted as beginning from the most conservative to the most progressive. As per the content of education philosophy movements, there are also similarities between principles since any education philosophy current is influenced by various philosophies (realism, idealism, pragmatism, etc). In other words, while it is quite difficult to conclusively separate the principles of education

philosophy, it is also impossible to limit them to merely four. However, only four were focused on for the purpose of limiting the field of research.

Agreeing of participants to principles were sorted from negative (Definitely disagree: 1, Disagree: 2, Undecided: 3, Agree: 4, Definitely agree: 5) to positive on a scale of 1 to 5. Agreeing level were determined by requesting a sign beside their agreed options from the participants. Analyses were done in the SPSS computer program. In this program the data were processed based on the principle of "Frequency, Percentage and Arithmetic Average".

Distribution of these principles according to their related education philosophy movements are as follows.

1. Prennialism:

7,11,13,15,25,26,31,32,37,40

2. Essentialism:

3,4,9,17,18,19,22,27,29,35

3. Progressivism:

2,6,10,12,14,16,20,33,38,39

4. Re-constructivism

1,5,8,21,23,24,28,30,34,36

Principles Related to Education Philosophy Movements:

1. In an education environment, students should be active and the teacher should be passive.
2. Since teaching will be realized through living, rich teaching lives should be presented to the student.
3. Both change and intergenerational discrepancy must be prevented by directly conveying the information acquired in the past (knowledge and values).
4. A student needs disciplining and teaching.
5. The subjects discussed in classes must not be ends for a student to reach, but tools for social change and order.

6. Since knowledge is variable, the duty of a school should be to teach critical approach to knowledge.
7. Exams should include questions that will direct students to using their minds in order to reach absolute knowledge.
8. The class environment should be organized in such a way that will require student participation.
9. Theory should be focused on rather than application, within the education environment.
10. The teacher should be a consultant and guide, rather than a conveyor of information.
11. Since all true, absolute and conclusive knowledge and values pre-exist within the human mind, the teacher must enable his/her students to utilize their minds, therefore gaining these knowledge to them.
12. Since knowledge and values constantly change, education program and applications should also be ever-changing.
13. Ideals, rather than truths of life should be presented to students in the classroom environment.
14. There should be no place for memorizing in education.
15. Due to individual differences between students, there should not be a single education program for them.
16. Exam questions should be of a type which the student may encounter in real life and which require utilization of scientific methods.
17. Since problem-solving and discussion technics take time, teachers should avoid such processes.
18. Punishment should also be applied in education, when needed.
19. Since lectures and subjects are important in education, teachers should be active and students should be passive.
20. The teacher should not try to make a student accept any thought or idea.
21. Since society changes, education programs should also be ever-changing.
22. Students should repeat, memorize and apply what their teacher says.
23. Not only life subjects, but also future subjects should be conveyed in education.

24. A school should not be an institution which conveys cultural inheritance to students, but an institution which tries to resolve social problems.
25. The teacher should interpret information for the student.
26. Since students are not mature enough to decide what is good and bad for them, their interests and demands should not be important.
27. Since knowledge is absolute (conclusively true), school's duty is to directly convey this information to students.
28. Discussion, critical thinking and problem resolving methods should be focused on in education.
29. Since a student does not possess any knowledge at birth, he/she seems like an empty plate (tabula rasa).
30. Only questions that require critical thinking should be asked in examinations.
31. Since education program is important, the teacher should try to complete all program subjects in lectures.
32. In education, students' compliance with their teacher and subjects are important rather than emphasizing of their abilities.
33. Subjects discussed in classes should be selected from within life and applications must be weighted rather than theory.
34. No punishment should be applied to students in education.
35. No subjects contained in books and discussed in classes should be asked to students in exams.
36. The objectives of an education program should be protection of world order, providing peace and happiness and gaining values such as love and cooperation.
37. The teacher should be authoritative and competent within the classroom environment.
38. The teacher should not try to complete all program subjects in lectures.
39. Teaching and education environment should be organized according to students' level of interest, need and readiness.
40. Deduction (from whole to the part) method should be used in teaching.

SAMPLE Table 1: Demographical Attributes of School Executives

Variables		N	%
Gender	Female	38	38
	Male	62	100
Institution of office	Primary school	27	27
	Secondary school	38	65
	High School	35	100
Professional seniority	1-5 years	4	4
	6-10 years	25	29
	11-20 years	32	61
	21 and over	39	100

INDINGS AND INTERPRETATIONS

Findings and interpretations of these findings are provided in ordered tables involving principles reflecting each education philosophy movement.

Table 2 : Participant Views on Prennialism Principles

PRINCIPLES	Absolutely disagree		Disagree		Undecided		Agree		Absolutely agree		$\bar{X}$
	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	
1.Exams should include questions that will direct students to using their minds in order to reach absolute knowledge.	0	0	8	8	7	15	28	43	57	100	4,34

2. Since all true, absolute and conclusive knowledge and values pre-exist within the human mind, the teacher must enable his/her students to utilize their minds, therefore gaining these knowledge to them.	0	0	36	36	14	50	28	78	22	100	3,36
3. Ideals, rather than truths of life should be presented to students in the classroom environment.	0	0	57	57	7	64	36	100	0	0	2.79
4. Due to individual differences between students, there should not be a single education program for them.	50	50	49	71	7	78	14	92	8	100	2,02
5. The teacher should interpret information for the student.	7	7	42	49	14	63	29	92	8	100	3,22
6. Since students are not mature enough to decide what is good and bad for them, their interests and demands should not be important.	22	22	49	71	7	78	14	92	8	100	2,37
7. Since education program is important, the teacher should try to complete all program subjects in lectures.	7	7	42	49	14	63	29	92	8	100	2,89
8. In education, students' compliance with their teacher	22	22	63	85	7	92	82	100	0	0	2,01

and subjects are important rather than emphasizing of their abilities.											
9. The teacher should be authoritative and competent within the classroom environment.	14	14	44	58	14	72	28	100	0	0	2,56
10. Deduction (from whole to the part) method should be used in teaching.	7	7	30	37	7	44	56	100	0	0	3,12

Table 2 displays averages of the points that reflect school executives' ideas related to the movement of prennialism. As seen in the table, arithmetic means of participants' agreeing with principles related to the prennialism movement are 4., 6., 8 and 9. While 4 principles between the points 1.00-2.59 are the highest negative (disagree and absolutely disagree), the 1st principle is compliant between the points 3.40-4.19 (agree). But the participants remained undecided in principles 2., 3., 5., 7. and 10 between the points 2.60-3.39. From here we can conclude that the participants positively opined in terms of prennialism philosophy movement.

Table 3 : Participant Views on Essentialism Principles

PRINCIPLES	Absolutely disagree		Disagree		Undecided		Agree		Absolutely agree agree		$\bar{X}$
	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	
1.Both change and intergenerational discrepancy must be prevented by directly conveying the information acquired in the past (knowledge and values)	21	21	21	42	15	57	28	85	15	100	2.95
2.A student needs to be disciplined and taught.	0	0	14	14	15	29	36	65	35	100	3,92

3.Theory, rather than application, should be focused on in the education environment.	21	21	36	57	14	71	29	100	0	0	2.51
4.Since problem-solving and discussion technics take time, teachers should avoid such processes.	21	21	71	92	0	0	0	0	8	100	2.03
5.Punishment should be applied in education when required.	-	-	7	7	28	35	58	93	7	100	3.65
6.Since lectures and subjects are important in education, the teacher should be active and students should be passive.	22	22	71	93	7	100	0	0	0	0	1,85
7.The student should repeat, memorize and do what the teacher says.	14	14	50	64	0	0	21	85	15	100	2,73
8.Since information is an absolute truth, school's duty is to directly convey this information to students.	7	7	50	57	0	0	29	86	14	100	2,93
9.Since a student does not possess any knowledge at birth, he/she seems like an empty plate (tabula rasa).	14	14	21	35	14	49	37	86	14	100	3,16
10.No subjects contained in books and discussed in classes should be asked to students in exams.	7	7	21	28	7	35	50	85	15	100	3,45

As seen in Table 3, while the arithmetic mean of participants' levels of agreeing with principles related to the essentialism movement is the most negative (disagree and absolutely disagree) between points 1.00-2.59 in principles 3, 4 and 6, in principles 1, 7, 8 and 9 there is indecision with 4 principles, between the points 2.60-3.39, while principles 2, 5 and 10 are most agreed with points between 3.40-4.19. From here we can conclude that the participants positively opined in terms of prennialism philosophy movement.

Table 4 : Participant Views on Progressivism Principles

PRINCIPLES	Absolutely disagree		Disagree		Undecided		Agree		Absolutely agree		$\bar{X}$
	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	
1.Since teaching will be realized through living, rich teaching lives should be presented to the student.	0	0	0	0	0	0	35	35	65	100	4,65
2.Since knowledge is variable, the duty of a school should be to teach critical approach to knowledge.	8	8	7	15	0	0	43	58	42	100	4,04
3.The teacher should be a consultant and guide, rather than a conveyor of information.	0	0	15	15	0	0	42	57	43	100	4,13
4.Since knowledge and values constantly change, education program and applications should also be ever-changing.	7	7	29	36	0	0	50	86	14	100	3,35
5.There should be no place for memorizing in education.	15	15	21	36	14	50	43	93	7	100	3,06

6.Exam questions should be of a type which the student may encounter in real life and which require utilization of scientific methods.	0	0	15	15	7	22	43	65	35	100	3,98
7.The teacher should not try to make a student accept any thought or idea.	8	8	7	15	7	22	63	85	15	100	3,70
8.Subjects discussed in classes should be selected from within life and applications must be emphasized rather than theory.	0	0	23	23	7	30	56	86	14	100	3,61
9.The teacher should not try to complete all program subjects in lectures.	21	21	22	43	7	50	50	100	0	0	2,86
10.Teaching and education environment should be organized according to students' level of interest, need and readiness.	0	0	8	8	0	0	70	78	22	100	4,06

As seen in Table 4, it can be concluded that since the participants are between the points 2.60-3.39 in principles 4, 5 and 9, There is indecision, and since the level of agreeing with principles 1, 2, 3, 6, 7, 8 and 10 are between the points 3.40-5.00, the participants have a positive (agree or absolutely agree) opinion on this movement.

Table 5 : Participant Views on Re-Constructionism Principles

PRINCIPLES	Absolutely disagree		Disagree		Undecided		Agree		Absolutely agree		$\bar{X}$
	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	
1.In an education environment, students should be active and the teacher should be passive.	8	8	0	0	7	15	50	65	35	100	4,04
2.The subjects discussed in classes must not be ends for a student to reach, but tools for social change and order.	0	0	8	8	14	22	42	64	36	100	4,06
3.The class environment should be organized in such a way that will require student participation.	8	8	0	0	7	15	35	50	50	100	4,19
4.Since society changes, education programs should also be ever-changing.	7	7	14	21	29	50	36	86	14	100	3,36
5.Not only life subjects, but also future subjects should be conveyed in education.	0	0	8	8	7	15	64	79	21	100	3,98
6.A school should not be an institution which conveys cultural inheritance to students, but an institution which tries to resolve social problems.	0	0	44	44	28	72	28	100	0	0	2,84

7.Discussion, critical thinking and problem resolving methods should be focused on in education.	0	0	0	0	0	0	70	70	30	100	4,30
8.Only questions that require critical thinking should be asked in examinations.	0	0	72	72	21	93	7	100	0	0	2,35
9.No punishment should be applied to students in education.	14	14	51	65	28	93	0	0	7	100	2,35
10.The objectives of an education program should be protection of world order, providing peace and happiness and gaining values such as love and cooperation.	0	0	7	7	14	21	64	85	15	100	3,87

As seen in Table 5, arithmetic means of participants' agreeing with principles related to the reconstructionism movement are, in principles 1, 2, 3, 5, 7 and 10, between the points 3.40-5.00 with 6 principles, consisting the most positive results (agree and absolutely agree), in principles 4 and 6 there is indecision with 2 principles between the points 2.60-3.39 and negativity in principles 8 and 9 between the points 1.00-2.59 (disagree and absolutely disagree). From here we can conclude that the participants positively opined in terms of reconstructionism philosophy movement.

CONCLUSION AND RECOMMENDATIONS

The research was conducted with 100 school executives officiating in Primary, Secondary and High Schools affiliated to Trabzon Provincial Directorate of National Education. The study aimed to form philosophical principles and determine the level of agreement among school executives related to these principles, taking as base subjects such as epistemology of the basic disciplines of education philosophy, objective and duty of education systems among

analyzes and subjects, duty of the school, roles and duties of teachers and students and how education and examinations should be implemented.

As seen from the results, Table 2 displays averages of the points that reflect school executives' ideas related to the movement of prennialism. As seen in the table, arithmetic means of participants' agreeing with principles related to the prennialism movement are the most negative with 4 principles between the points 1.00-2.59 in principles 4, 6, 8 and 9 (disagree and absolutely disagree), while the 1st principle is compliant with points between 3.40-4.19 (agree). However the participants remained undecided in principles 2., 3., 5., 7. and 10. with 5 principles between the points 2.60-3.39. From here we can conclude that the participants positively opined in terms of prennialism philosophy movement.

As seen in Table 3, the arithmetic mean of participants' agreeing with principles related to the essentialism movement is between points 1.00 and 2.59 in principles 3, 4 and 6 with 3 principles (disagree and absolutely disagree) in principles 1, 7, 8 and 9 ,4 principles between points 2.60-3.39, and principles 2, 5 and 10 the opinions are between the points 3.40-4.19 therefore positive (agree). From here we can conclude that the participants positively opined in terms of essentialism philosophy movement.

As seen in Table 4, in relation to the movement of progressivism, since participants are between the points 2.60-3.39 in principles 4, 5 and 9 there is indecision, and since the agreeing level for principles 1., 2., 3., 6, 7., 8. and 10 is between the points 3.40-5.00 it is understood that the participants opine positively (agree and absolutely agree) for this movement.

As seen in Table 5, arithmetic means of participants' agreeing with principles related to the re-constructionism movement are, in principles 1, 2, 3, 5, 7 and 10, between the points 3.40-5.00 with 6 principles, consisting the most positive results (agree and absolutely agree), in principles 4 and 6 with 2 principles there is indecision and there is disagreement in principles 8 and 9, points being between 1.00-2.59 (disagree and absolutely disagree). From here we

can conclude that the participants positively opined in terms of re-constructionism philosophy movement.

As per the recommendation related to this research, I am in the opinion that this research conducted in the province of Trabzon will significantly contribute subsequent researches. It is seen that the leadership understanding of school executives has an important role in social education, making use of education philosophy. In every institution of office, leadership should be directed to a certain level and objective.

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Meditation In The Emotional Intelligence Improvement Among Russian-Speaking Migrants In Germany

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Abstract

The analysis of meditation as a factor of an individual's psychological and emotional well-being as well as the comparison of main emotional intelligence quantitative measurement methods and the justification of the method used in the study were performed. Main features of the migrants' social-psychological adaptation were considered. The key role of interpersonal emotional intelligence competency in migrants' social-psychological adaptation process was identified. The interrelation between meditation practice and dynamics of migrants' emotional intelligence was found.

Keywords: social – psychological adaptation, migrants, emotional intelligence, meditation, improvement, transcendental meditation, mindfulness meditation.

Introduction

Migration problems are particularly acute on the agenda of public debate in the context of globalization. Migration in the context of migrants' social-psychological adaptation requires special attention as unresolved psychological problems arising in the process of migration have result in threats, both for migrants, and for a society in general. People contacting with a new culture can objectively consider this situation as complicated and strained, especially at

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an initial stage. Stress levels occurring on the background of cultural and religious differences can be particularly high when the culture of the country of origin is significantly different from that of the host country. On the one hand migrants experience a severe need in successful and effective socialization in a new society and culture. On the other hand a need in psychological health maintenance is important since the mentality and emotions are tensed during the migration.

In connection with the foregoing, the problem of migrants' social-psychological adaptation seems to be very relevant in cultural, social, psychological aspects which in turn affect the business and public sectors. The research subject is more significant because of a lack of researches relating to the impact of meditation on the emotional intelligence as a key factor of the migrants' social-psychological adaptation. The research aim is to investigate a role of meditation in the emotional intelligence development as a key factor of the migrants' social-psychological adaptation.

Subject area of the present study is due to the apparent lack of empirical studies of the effects of meditation on emotional intelligence, including, as a key factor in the social-psychological adaptation of migrants.

The general hypothesis of the research is the assumption of dependence between meditation practice and dynamics of migrants' emotional intelligence as a key factor of their social-psychological adaptation. On the basis of the general assumption the author formulated the following hypotheses:

1. Meditation affects dynamics of the emotional intelligence.
2. Dynamics of emotional intelligence that arises due to the practice of meditation is positive.
3. The practice of meditation enhances key intrapersonal and interpersonal competencies of emotional intelligence causing the efficiency of social and psychological adaptation of migrants.
4. The choice of a specific method of meditation does not affect significantly on the dynamics of the emotional intelligence.

The analysis of published studies shows that the success of the integration process of acculturation through dialogical mode of communication is largely driven by certain participants' certain set of intrapersonal and interpersonal skills designated as intercultural competence in models of emotional intelligence. Intercultural competency is defined as the ability to communicate effectively in cross-cultural situations and to relate appropriately in a variety of cultural contexts (Bennett and Bennett, 2004). Besides, the intercultural competence is to help to the effective interaction in the foreign environment not only at professional, business level, but also at an interpersonal, emotional level. Also in addition to increased efficiency of the cross-cultural communication, the optimization of interpersonal relations and socially-psychological adaptation should be related to the major functions of the emotional intelligence (Pankova, 2011).

It is important to understand that a skill of the effective communication on the cultural borders, an emotional balance and achievement of the creativity within the collective behavior becomes one of the most significant abilities in the today's world, including in aspect of the migrants' social-psychological adaptation, as a social group which first of all requires for searching for effective tools of impact on emotional sphere within the migration process. In connection with the aforesaid, studying of potential factors of the management and impact on the emotional intelligence as the factor of the migrants' social-psychological adaptation is very important taking into account the method optimization of estimation of the emotional intelligence dynamics.

Method

The theoretic and methodological basis of the research is presented by theoretical provisions and conceptual models of the emotional intelligence (R. Bar-On, P. Salovey, D. R. Caruso, J. D. Mayer, D. Goleman, D. V. Lyusin), modern and classical concepts of the social, plural and cognitive intelligence (D. Wechsler, E. Thorndike, S. Stein, H. Gardner, W. Payne), actual theoretical and empirical substantiations of the meditative practice efficiency (J. Kabat-Zinn,

Maharishi Mahesh Yogi, J. Teasdale, Dharma Singh Khalsa, A. Weintraub, N. Rosenthal), and key provisions of the socially-psychological approach to research of an individual's adaptation (R. Lazarus, S. Folkman, J. Zhang, M. Goodson, V.S. Ageiev, V.N. Miasishchev, A.A. Nalchadjan, T. G. Stefanenko).

The selection of the research methods was mainly due to the theoretical and methodological basis, as well as to the hypothesis of the study. The main research methods were Thematic Analysis, Interpretive Phenomenological Analysis, and interview as qualitative research methods, as well as a quantitative method of estimating the level of emotional intelligence "EmIn Questionnaire" by D.V. Lyusin. The data received during the research were statistically processed in SPSS Statistics 17.0.

The main methodological problems of emotional intelligence researches should include the selection of adequate and valid methods of its measuring and evaluation. As noted above, the present study attempted to study the impact of meditation on emotional intelligence as a factor of successful social-psychological adaptation of migrants by integrating qualitative and quantitative research methods. This research focuses on the understanding of personal subjective experiences of those who practice meditation in the context of its impact on emotional intelligence as a key factor of the migrants' social-psychological adaptation, carried out on the basis of dialogue with the participants through individual and group interviews. During the expansion of the subjective vision of the effects of meditation on emotional intelligence hermeneutical approach takes center stage, implying that personal experience is hidden and revealed through reflection, which appears to stimulate participants' interview with the researcher (Ponterotto, 2005). Thus, the qualitative approach to data collection is preferable for deeper understand the personal experience and its estimation by respondents. Thematic and interpretive phenomenological analysis are the key methods of the obtained data interpretation within the epistemological stance of the researcher stated above.

The interpretive phenomenological analysis represents the qualitative research approach to consider sensual reactions of investigated people on significant vital events (Busygina, 2009). The researcher seeking access to understanding the way in which the respondents design their

personal individual experience within the interpretive phenomenological analysis which effectiveness was confirmed in numerous research. It should be noted here that the researcher under this method can access only to personal interpretations of participants and not able to achieve the objective of understanding reality. Individual understanding of subjects experience depends on a complex set of their previous social and cultural experiences. Similarly, the researcher's own interpretations and his interpretation of participants' experience are also based on his previous experience and socio-cultural context. Thus, the data analysis will result in the reflective cooperation between the researcher and the participants (Smith, 1996).

The thematic analysis represents the analysis of the main subjects arisen in interview with the research participants, and in other sources of the qualitative data (Braun and Clarke, 2006) widely used in psychological scientific researches (Howitt, 2010). The thematic analysis is often considered as a basis in newbie researchers' papers, later they can pass to difficult qualitative scientific methods, such as a discourse-analysis, analyzing written, sign, verbal sources, and the grounded theory - a scientific method of close interaction between the data and their developing understanding unlike a traditional research method on the hypothesis construction (Zharebtsov, 2004). Revealing and coding of certain theme is a key method of all qualitative methods of the research. The scientific literature offers an opinion that the thematic analysis is not an isolated method of researches, and represents the process within other traditional qualitative scientific methods (Ryan and Bernard, 2000). One of strengths of the thematic analysis as a scientific method is flexibility in its application to various types of research parameters. The main criticism of the thematic analysis is no clearly regulated techniques with simultaneous presence of many poorly organized researches not representing the detailed data analysis procedure. At the same time this method can become a reliable tool in proper use. For purpose of this research we selected the thematic analysis, as it gives a basis for studying of new fields, focusing upon the description of what is happening and its theoretical flexibility is good with this research purpose, consequently the thematic analysis can be used in group and individual researches.

The main qualitative method in this research is the interview. Semi-structured interview with the primary use of open questions was chosen as the primary means of data collection for subsequent analysis. It promoted free and comfortable thinking of the respondents, and description of the individual experience in their own terms (Smith et al., 2009). The main purpose of the interview program development as a qualitative method of scientific research is encouragement of the participant to open conversation simultaneously with minimization of a share of statements of the researcher. In addition to these factors at the development of the interview program, ethnic and culture questions were considered in a context of the intercultural competence of the emotional intelligence (Patel, 1999). Thus, blocks of questions on the key research subjects including a personal migration experience and complexity in a context of the socially-psychological adaptation, issues of personal meditation experience as the spiritual technique developing the mental and physical health were highlighted in the interview structure, and also the block of questions on the emotional intelligence and subjective perception of its key competencies and dynamics. The balance of key themes of primary and secondary interviews differed due to objective conditions of the research and the necessity of wide discussion of questions on the meditative experience and dynamics of the emotional intelligence owing to meditation practice at the secondary interview.

Each participant was interviewed by the researcher twice. Most research participants (42 people) agreed to be interviewed in group. The researcher considered it as a positive factor since a group therapeutic influence in the advisory psychology is significant and allows to reveal some moments inaccessible in individual interviews. Six participants who preferred an individual interview were interviewed by the researcher individually.

As for quantitative measurement of the emotional intelligence it should be noted that there are some basic techniques in frameworks of the basic models of the emotional intelligence and are of particular interest due to the scientific validity. The most known and reliable method of the emotional intelligence measurement in the world is MSCEIT test (The Mayer-Salovey-Caruso Emotional Intelligence Test), SREIT was before (Self Report Emotional Intelligence Test), however its application in the Russian scientific practice is limited by the necessity of an adequate adaptation as an attempt of its adaptation by E.A.Sergienko and I.I. Vetrova

revealed some restrictions, such as a low level of certain psychometric indicators that, for sure, indicates on the necessity of the further works on adaptation and standardization of the technique for the Russian scientific practice (Sergienko and Vetrova, 2009). The technique of an emotional intelligence self-estimation developed by Nicholas Hall is known and used in the Russian scientific practice, but has some restrictions, such as certain discrepancy of meaning and scales names (Andreeva, 2004), and rather low psychometric properties (Sergienko and Vetrova, 2009).

The technique of the emotional intelligence estimation by D. V. Lyusin - "EmIn Questionnaire", based on the author's concept of the emotional intelligence has been used during the research for the quantitative measurement of the emotional intelligence and its dynamics in the participants of both experimental and control groups in the beginning and in the end of the experiment. D. V. Lyusin defines emotional as an ability to understand own and others' emotions and their management (Lyusin, 2009). The emotional intelligence as an ability to understand and to manage emotions according to Lyusin can be directed both at own and other people's emotions. Thus, the author actually differentiates concepts of intrapersonal and interpersonal emotional intelligence by actualization of different cognitive processes and skills connected with each other (Sergienko and Vetrova, 2009).

Thus, within the research, the interpersonal and intrapersonal components of the emotional intelligence were considered as dependent variables without division on subscales. A type of the participation in the experiment (control and experimental groups), a research mode (measurement of the emotional intelligence level before and after a two-month period), used meditation methods (transcendental and mindfulness meditation) were considered as independent variables.

Research Participants

The experimental part of the research took place in October - November, 2013 and involved 48 Russian-speaking migrants from the former Soviet Union at the age of 19 to 54 years,

residing in the territory of modern Germany being at the initial stage of migration (up to 5 years of stay in the host country). The choice of this group of migrants as a target one is caused on the one hand by specific issues of the social-psychological adaptation in the group, and on the other - typical problems of migrants' adaptation. It should also be noted that the limitation of the current research focus of this group of migrants was caused in order to achieve greater depth of data analysis (Smith, 1996), which also corresponds to the selected research methods. In addition, being in the initial stage of migration, contributing to the highest load on the psyche of migrants and their level of emotional intelligence, will take into account the most acute psychological problems. Thus, sample was made by the migrants in basic life changes of a social environment and experiencing significant pressing on the mentality due to objective life circumstances.

Participants of the study were divided into two groups: experimental, consisting of 32 people and includes two subgroups practicing 20 minute transcendental meditation and mindfulness meditation daily and a control consisting of 16 people. Thus, all participants in the study were actually divided into 3 subgroups of 16 people in each (9 women and 7 men) that represent age and sexual characteristics of the target group in general. Studying of dynamics of the emotional intelligence by age and gender characteristics has not been conducted, as the specified researches were not related to the thesis aim and objectives.

Twelve experimental group members Transcendental Meditation technique training was conducted by Maharishi Foundation - Deutschland certified teachers with the experience of meditation practice and teaching for over 15 years. Four experimental group members were taught the transcendental meditation technique during their short visits to Russia by a certified trainer of Maharishi Foundation - Russia with practical experience of teaching meditation and own meditative experience over 10 years. The mindfulness meditation learning was conducted on the basis of the directed mindfulness meditation and recommendations for its practice in The Art of Meditation audiocourse by Daniel Goleman (Goleman, 2001) in Russian adaptation. The author is a known scientist, the creator of one of the basic and common models of the emotional intelligence and the meditation impact researcher. These

factors allowed to avoid restrictions of previous researches of meditation influence where authors just indicated meditation type with no procedure description and trainers' qualification that allowed to doubt in their objectivity (Chiesa, 2010).

The control group representatives did not learn meditation (confirmed by the poll) and did not practice any kind of meditation that was periodically checked during the research. Their emotional intelligence was measured by the chosen technique similarly with the participants of the experimental group. Thus, the representative sample was made by randomization of the participants into experimental and control groups to minimize possible restrictions, able to result in the experiment irrelevancy.

Results

Interpretation of the interviews and "EmIn Questionnaire" data to assess the primary level of emotional intelligence.

The analysis of the primary interview data allowed to reveal that motivation is determining the degree of mental health indicators, emotional comfort, the level of development of emotional intelligence key competencies, the choice of individual coping strategies, and ultimately the efficiency of the social and psychological migrants' adaptation in general. Most of the participants have no meditation experience, which should contribute to obtaining adequate and valid assessment of the impact of meditation on emotional intelligence as a key factor in the social-psychological adaptation. The participants have significant issues of social-psychological adaptation and effectiveness of emotional intelligence competencies, ranging due to the subjective and objective factors. The existing complexity of adaptation due to the presence of psychological problems and manifests in the emotional sphere of migrants. Meditation could be potentially effective tool for influencing the emotional intelligence as a key factor in the social-psychological adaptation of migrants.

Both quantitative and qualitative methods showed higher levels of intrapersonal component of emotional intelligence in study participants with simultaneous low levels of interpersonal component. According to the researcher, it may be associated with both objective and subjective factors. It is also due to the fact that the established interpersonal communication is destroyed during the migration process. In connection with that a large part of the internal forces of man rushes to introspection, self-reflection, which leads to a greater awareness of their own feelings and emotions, what participants talked about in the interviews. Also it should be said that a significant relationship changes with simultaneous reduction of community, isolation from the indigenous population and some difficulties in dealing with other migrants, largely mediate the problem of adequate formation and positive dynamics of interpersonal component of emotional intelligence. The followed interpretation of the data led to the conclusion that the baseline of emotional intelligence on the scale of interpersonal and intrapersonal components in the experimental and control groups are similar quantities and the difference in quantitative terms is within the statistical error, which allows to use these results as a baseline for the objectives of this research and to disseminate the results to the target group as a whole.

Interpretation of the secondary interviews and "EmIn Questionnaire" application.

Interviews with participants of the experimental group, practicing mindfulness meditation and transcendental meditation, have shown some differences in subjective meditation experience. For example, respondents who practiced transcendental meditation in their responses to interview questions noted primarily the following changes: calming the thoughts during meditation; stopping of the internal dialogue in the process of meditation; perception of the meditation sessions as a rest from the stream of life and from their own problems; awareness of the meaning of life, the emergence of insight in the process of meditation; normalization of physiological symptoms of stress and anxiety (heart rate, palpitations, sweating etc.). Respondents who practiced mindfulness meditation also noted certain changes observed in the process of meditation (stopping the internal dialogue, the sudden decision of problems during the session (awareness of a possible withdrawal from the situation), the perception of the

meditation as a recreation, etc.), but primarily they noted the following changes: a greater awareness in everyday functioning; normalization of relations with relatives and friends due to a greater understanding of their needs; general "degree reduction" of emotions in relationships with others and everyday issues. Thus, we can conclude that the experimental group participants practiced transcendental meditation individually evaluated the internal changes as a priority, while respondents who practiced mindfulness meditation largely focused on external positive changes as a result of meditation practices. In general, most of the participants of the experimental group praised their meditative experience.

Most of the experimental group participants reported some improvement characteristics of interpersonal competencies of emotional intelligence. Significant differences between the answers of respondents who practiced different types of meditation, as well as significant discrepancies in the subjective assessment of the effects of meditation on the interpersonal component of emotional intelligence have not been traced. Thus, we can note the definite improvement in emotional intelligence interpersonal component that was subjectively associates by the respondents with the practice of meditation. Simultaneously the relative stability in intrapersonal competence of the emotional intelligence with a slight tendency to strengthen was demonstrated with significant positive dynamics in control emotions and expression control due to the practice of meditation.

In fact, most respondents noted a significant strengthening of effective coping strategies as the basis of social and psychological adjustment. Overall assessment of the social-psychological adaptation prospects became more positive as compared with the primary interview data that the majority of respondents associated with positive changes in their own emotional sphere due to the practice of meditation. It should be also said that the analysis of the secondary interviews with the participants of the experimental group showed a positive trend of emotional intelligence levels in the context of respondents' interpersonal and intrapersonal EI components both in subjective evaluation of participants and according to the researcher's opinion. In addition, respondents definitely associated the positive changes with the practice of meditation compared to its state at the time of the primary interview. It's important that the

choice of a specific type of meditation showed no significant correlation with the benefits of the meditation practice.

For objective assessment and mitigation manifestations of subjective factors the analysis of secondary interviews with participants in the control group which did not practice any kind of meditation throughout the experiment was performed. Control group participants did not show any significant changes in the subjective assessment of the EI levels, both in interpersonal and intrapersonal components. There were also no any significant changes in assessing the prospects of adaptation, the general prospects in life and mood in the control group participants observed as compared with the primary interview.

As a result of the analysis of the obtained “EmIn Questionnaire” values of key components of the emotional intelligence at the research termination, the following conclusions have been made. The experimental group participants showed definite growth of values of the interpersonal component of the emotional intelligence comparing to the primary measurement. Growth of these values is shown with a simultaneous drop of the share corresponding to a low level of the interpersonal emotional intelligence. Comparison of initial results of measurement of the intrapersonal component of the emotional intelligence with results of the secondary measurement in the experimental group allows to judge about their relative stability with a simultaneous tendency to positive dynamics of the intrapersonal emotional intelligence due to meditation. Additionally for comparison of influence of the transcendental and mindfulness meditations, the data have been generated by two parts of the experimental group participants, which practiced the specified kinds of meditation. Comparison of the primary and secondary measurements of levels of the key components of the emotional intelligence by meditation types, practiced by the experimental group participants allowed to make a conclusion that the choice of the certain meditation types does not affect significantly on the positive dynamics of the emotional intelligence values. Dynamics of values of the intrapersonal component of the emotional intelligence for different meditation types also is comparable. Like general sample results, by both meditation types, a relative stability with a tendency to increased average indexes of the intrapersonal component

of the emotional intelligence was observed. For the purpose of comparison experimental and control groups EI values at the end of the research components of the emotional intelligence were measured in the control group.

Dynamics of the key components of emotional intelligence in the control group was compared with the dynamics, traced in the experimental group. It need to pay attention to the relative stability of the primary and secondary EI interpersonal component levels in the control group with simultaneous slight tendency toward redistribution of low and medium shares. Comparison of measurements of the intrapersonal component of the emotional intelligence in the control group also testifies the absence of any significant changes. Thus, it should be noted absence of significant changes and dynamics of key values of the emotional intelligence in the control group during the research that confirms a hypothesis about factorial impact of meditation on the emotional intelligence as the key factor of the migrants' successful social-psychological adaptation. The obtained results of interpretation of the qualitative and quantitative techniques mutually confirm the obtained data that testifies the result validity and reliability also as research internal consistency.

Conclusions

In the empirical study the researcher's hypothesis have been confirmed and supported by the obtained data:

1. Analysis and interpretation of the data obtained in the practical part of the study revealed that meditation affects the dynamics of emotional intelligence. Findings from the application of qualitative (interviews) and quantitative ("EmIn Questionnaire") techniques clearly demonstrate the positive dynamics in the experimental group. Additional confirmation of meditation factorial influence on the emotional intelligence has been received by measuring of the emotional intelligence levels (pre and post-test) and by interviewing the control group participants, not practiced any kind of meditation and demonstrated relative stability of the key indicators of the emotional intelligence.

2. Dynamics of the emotional intelligence that arises due to the practice of meditation is positive. Results of the analysis of the primary and secondary measurements of interpersonal and intrapersonal components of the emotional intelligence in the experimental group participants and interpretation of the interviews showed significant positive changes of these parameters comparing to the data in the control group. The respondents have definitely indicated that meditation helps to bring a sense of order and stability, improves the ability to concentrate and focus on reality simultaneously suppressing negative thought forms that allows to raise the overall positive attitude. The respondents described subjective comprehension of the meditative experience in categories of consciousness, subconsciousness and calmness. The main concepts of the emotional intelligence, as ability to understand own and other's emotions, and to manage it, are based actually on the same principle of comprehension of thoughts, feelings and actions by meditation practice.

3. Meditation practice strengthens key intrapersonal and interpersonal competencies of the emotional intelligence, causing efficiency of the migrants' social-psychological adaptation. Considerable positive dynamics of the interpersonal competence of the participants' emotional intelligence has shown in the empirical part of the research at a simultaneous positive tendency in dynamics of the intrapersonal component of the emotional intelligence in the experimental group participants. The analysis of the interview with the respondents has shown certain subjective correlation between the emotional intelligence and efficiency of the migrants' social-psychological adaptation. Most participants of the experimental group noticed that the meditative practice helps to discipline the mind and to become more conscious in demonstration and expression of feelings and emotions. Positive meditation influence is expressed in decrease in the stress, adequate estimation of own forces and objective restrictions that mediates the effective social-psychological adaptation.

4. The choice of a specific method of meditation does not affect essentially on the dynamics of the emotional intelligence. The conclusion is confirmed by measurements in the experimental group regarding the practiced meditation type. The mindfulness and

transcendental meditations were offered to the participants in the research. The analysis of the interview with the participants showed some differences in estimation of the individual meditation experience (high concentration on internal factors in the transcendental meditation practioners and emphasis on external signs of mindfulness meditation impact). This trend has been shown at similar values of the dynamics of emotional intelligence in both parts of the experimental group and data interpretation of the subjective assessment of respondents' meditative experience and its impact on emotional intelligence in the context of social and psychological adaptation.

Thus, the research confirmed that meditation is an effective tool of positive influence on the migrants' emotional intelligence, mediating success and efficiency of their social-psychological adaptation, which expresses an integrated scientific novelty of this work. The obtained data about a positive influence of meditation on the migrants' emotional intelligence is especially important under globalization and growing number of cross-cultural contacts. Besides, the research results allow to consider the meditation as an effective method of influence on the emotional intelligence, including for the practical counseling psychology and psychotherapy at work with the migrants, one of groups of the modern society, experiencing the greatest psychological stress. Meditation techniques introduction in the counseling psychological practice, of course, requires the further in-depth studies of meditation as a factor of impact on emotional intelligence, but at the same time the data of the present study permit to begin practical approbation of meditation in psychotherapy of the migrants.

The obtained empirical data were confirmed by an adequate theoretic-methodological base of the research, the author used valid and reliable techniques of the qualitative and quantitative estimation of the research subject area, selected by direct conformity with a theoretical and methodological substantiation, the author's epistemological position and reflected aim, objectives and formulated hypotheses. We considered restrictions in previous researchers and tried to integrate the quantitative and qualitative techniques that allowed to raise the research relevance and reliability of the received results.

Directions for Future Research

In connection with the above the author believes that the results of the study and its key findings are scientifically proved and comply organically with the range of available research on the subject and considers it appropriate to proceed to consider the prospects of scientific research subject area based on the research data. So, numerous possibilities for improvement of the research due to its objective restrictions, which open the prospects for the further researches, have been noted during the research. Let's proceed to the analysis of potential and necessary areas of the future researches.

1. Studying of meditation impact on the migrants' emotional intelligence by subscales of its key components. The analysis of meditation influence by each subcomponent can be and should be an object of the further researches for deeper understanding of meditation effect on the migrants' emotional intelligence.
2. Increase in the sample in the researches of meditation influence on the migrants' emotional intelligence, and reasons of small samples in the previous researches of meditation, according to the author, should be an object of the further scientific researches and a source of possible discovers in problem area.
3. Increase of duration of empirical researches of meditation influence on the emotional intelligence can be a perspective scientific direction as can potentially give interesting results about dynamics of the migrants' emotional intelligence in long-term prospect and new data for the further researchers.
4. Researches of the meditation impact on the emotional intelligence of other groups of migrants can potentially provide new materials for deeper and detailed studying of the migrants' social-psychological adaptation, efficiency of which is mediated by the emotional intelligence. The data on other ethnic groups of migrants, and also on other host cultures, certainly, is important for scientific understanding of this phenomenon.
5. Focus upon studying of meditation influence on the migrants' emotional intelligence by gender and age. This aspect was not realized in the research as it would expand a subject. But

this aspect is rather important for detailed understanding of distinctions of meditation influence on representatives of different gender and age categories.

6. Studying of other meditation types impact on the migrants' emotional intelligence in a context of the target group's social-psychological adaptation since most available researches are focused upon the analysis of the transcendental and mindfulness meditation influence without other meditation type.

Because the concept of the emotional intelligence is a new scientific category, the further scientific researches of factorial influence on the emotional intelligence components are required in addition to specification of key concepts, in a context of the migrants' social-psychological adaptation, including studying of meditation impact on the migrants' emotional intelligence. The more detailed studying of meditation is required to solve this problem, as well as formation of the uniform scientific concept of the emotional intelligence by the structure and key components, development of an effective technique of the emotional intelligence quantitative measurement, able to provide valid and reliable data for the factorial influence analysis, and further deep studying of connection of the emotional intelligence with a number of personal characteristics and indicators of success in modern society.

Implications of Study

The practical value of the research is presented by possibility of application of its results for the aims and objectives of the counseling psychology, including at work with migrants as the positive impact of meditation on the emotional intelligence in a context of the migrants' social-psychological adaptation is empirically confirmed during the research. The author believes that the results of the research can promote the further studying of a role of meditation in development of the emotional intelligence as meditation can be used as one of the most effective tools focused upon increase of meditators' adaptable possibilities.

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