THE NEW PARADIGM FOR PEDAGOGY

Askerov H.G.

Baku state University, Baku, Azerbaijan

In this work new scales and criterions of assesment of value and knowledge are suggested. As the *model* there is suggested to take *the glass of some liquid.* The height of filled and empty parts of glass are marked accordingly Lk (k – know) and Ld (d – don't know). It is considered that liquid that is situated in the glass is the "*liquid of knowledge*".

As the *criterion* of knowledge assessment there is suggested to take the relation of Lk to Ld. This relation is marked by the **K** letter and is called the *factor of quality*. The dependence of quality factor on the degree of mastering of knowledge is created with nonlinear estimation scale of knowledge.

Nonlinear scale has a great potential for the objective estimation of different kind of value and the definition of truth. Among the numerous deserving scales it allows to objectively choose the most deserving person in the case of such mental and intellectual procedures as election to the senior position, awarding of the rank, academic degrees, awarding of prizes etc.

Keywords: knowledge assessment, criterion, factor of quality, acquisition, estimation scale

The picture of world's development during the last century shows that along with the successes there also occur invisible defects. Two world wars, the global warming, the breach of ecological balance and harmony between the economic and spiritual development, wide spreading of weapons of mass destruction etc testify to the presence of defects and mistakes in the development of humanity. All this cataclysms are the results of wrong decisions that are solved at the global and local level. One of the west thinker has characterized philosophy of the development of last century like this: *when the last tree is cut, when the last fish is caught, when the last river is poisoned, people will understand that money is not edible.*

All these deviations from the straight and narrow testify firstly to that fact that the educational attainment of elite stratum of the planet is not enough high for the harmonious development. Secondly old methods of knowledge assessment (and value) have lost their power, and there is the need for the new methods of knowledge assessment.

In these work there are suggested new scales and criterions of assessment of knowledge and value. Before the description of the essence of new scale it's necessary to examine the essence of old system of knowledge assessment. For this aim as the *model* it's suggested to take *the glass of liquid.* Let's mark the height of full part of glass as Lk, empty part as Ld, and the overall height as Lo. Let's suggest that liquid that is situated in the glass is the "liquid of knowledge". Apparently that the overall height of glass is equal the sum of full and empty parts:

$$Lo = Lk + Ld \qquad (1)$$

From this simple formula we can get valuable results.

1.   Classic scale of knowledge assessment. If we divide both parts of formula (1) to the Lo and the ratio Lk / Lo mark with **a** letter, we'll have a formula:

$$\mathbf{a} = 1 - Ld / Lo \qquad (2)$$

Here, **a** is the ratio of height of full part of glass to the Lo and it can be called as coefficient of *relative filling*, or more exactly, of *digestion of knowledge*. As we see from the formula (2) the meaning of this coefficient changes at the interval (0-1). Ratio Ld / Lo characterizes undigested part of knowledge, that is relative *shortage of knowledge*. It's easy to understand that the coefficient of

relative digesting (**a**) here act as criterion of knowledge assessment. As:

a) in case when **a** =1, that is when Lk = Lo, educational material has been digested to the 100%;

b) in case when **a** = 0,5 material was digested to the 50%, that is Lk = L$_o$ / 2 or Lk = Ld;

c) in case when **a** = 0, that is when Ld = Lo, educational material hasn't been digested and Lk = 0;

For example, if the knowledge can be assessment with the 100 point scale and students gather at the average 100 points (or almost 100 points), that means that the educational system is irreproachable (case a). If students gather about 50 points (40-60 points), that means that the educational system has the middle condition (b). If students gather points between 0 and 10, that means that the educational system is paralyzed (case c).

In the case of 5 point scale the height of glass Lo is dived to five equal parts and is numbered with the integers from one to five.

That students who mastered the program 100 %, are assessed with the «5». That students who mastered the program 60 % , are assessed with the «3». The dependence between the discrete marks and the degree of digesting creates the estimation scale. In that case this dependence is linear and can be called *linear estimation scale* of knowledge.

It's necessary to note that the classic scale of estimation has very big shortages. While the high meanings of **a** (0,8 -1) resolving power of the scale of knowledge assessment of individuals is very low. More exact and objective estimation scale is necessary.

2. The new scale of knowledge assessment. In contrast to the classic estimation scale, for the new scale as the criterion it's supposed to take the ratio Lk / Ld. In the previous articles [1-2] this correlation was called *the factor of quality* and was marked with **K** letter.

If we divide both sides of formula (1) to the Lk we will receive the formula:

$$Lo / Lk = 1+1 / K$$

This formula can be written like:

$$Lk / Lo = 1: (1+1 / K)$$

As the ratio Lk / Lo is the relative digestion – **a**, then the last formula can be written like:

$$a = 1:(1+1 / K) \tag{3}$$

The dependence of the **K** quality on the **a** is nonlinear, that is with the increase of **K** the relative assimilability **a** grows nonlinearly. For the reason of the formula (3), the new scale can be created. For this aim it's enough to built a dependence of **a** on **K.** Here **K** acts as a new criterion of knowledge assessment, because:

a) in case when **K >>1,** Lk >> Ld, the educational system is irreproachable.

b) in case when **K =1,** Lk = Ld, the educational system has the middle condition.

c) in case when **K <<1,** Lk << Ld, the educational system is absent or it is paralyzed.

In the first case (a) the digested part of material is much more than undigested one. In he second case (b) they are equal. In the third case (c) the digested part of material is much lesser than undigested one.

The essence of new scale is that while the approaching of the quality factor **K** to the endlessness the parameter **a** comes nearer to its max meaning. As the coefficient K changes in the interval (0- ∞), then for the differentiation of knowledge of individuals

are opened up big possibilities. The change of K meaning in the wide interval creates new possibilities for comparison and estimation of mental and intellectual abilities of individuals. For example, if one of the students has answered to 490 question out of 500, and other student has answered to 499 questions, in classic scale of estimation this difference is 9, and in new scale it is 450. As we see, by the classic scale the difference of assessment between two students is little, but in the new scale this difference is rather big.

It's clear that for intellectual people the meaning of **K** is big. There is no doubt that at the average meaning of **K** for professor is bigger than for the associate professor. Apparently, from the earthly rational beings the biggest **K** has prophets, because their decisions has the power throughout the millenniums.

In conclusion we can consider that obvious advantage of nonlinear scale over the linear creates he necessary condition for the substitution of the paradigm of pedagogy using as the estimation criterion the K factor. Nonlinear scale has a great potential for the objective estimation of different kind of value and the definition of truth. Among the numerous deserving scales it allows to objectively choose the most deserving person in the case of such mental and intellectual procedures as election to the senior position, awarding of the rank, academic degrees, awarding of prizes etc.

References

1. Askerov H.G., Knowledge assessment: the search of rational variant "National education", 2004, N 1, p. 141

2. Asgarov Sh., The philosophy of knowledge assessment, Journal of Qafqaz University, 2004, N 13, p. 63.