

Göran Linde
Sweden

Quality Concept in Education

Abstract

Quality as a high political priority all over the world has to do with control over educational output in relation to decentralization and autonomy of schools. In the article, the concept of quality is analysed both in relation to original etymological meanings and the imbedded implications, and by empirical semantics as regards the present use of language and operational definitions in quality assurance practice. Findings: Original meanings can be characterized as a horizontal focus of difference in kind, classification and descriptions of properties and characteristics of objects, persons and processes. Practical and operational use of the term is vertical, attributing value and judging and it is based on matching between outcome of activity and criteria to be met. Common definitions of the quality in judgment is fitness for use or fitness for purpose.

Key words: *quality, conceptual analysis, empirical semantics, definitions, educational output, fitness for purpose, fitness for use.*

Background of this article

Vladimíra Spilková wrote in The New Educational Review, Vol 1, No 5, 2005 about the concept of quality in education. Spilková's points of departure were the concern for quality in education as a high political priority in European countries and the control of educational output in relation to increased decentralization of school governance and autonomy of schools, which prompt the responsibility of quality of education at the level of schools.

In her article, methods of internal and external evaluations are touched upon and the concept of high quality-schools is elaborated. The quality concept is in Spilková's article specified to be about "high quality school" and it is linked to the

Czech context and hosted in a research project in the Pedagogical Faculty at Charles University in Prague . The basic resources for developing the contextually bound concept of quality school are foreign theoretical approaches and research found in OECD, UNESCO and European Commission documents, and the elaborations made within the research at the Pedagogical Faculty in Prague.

The result of the conceptual analytic efforts is in Spilková's article a kind of a list of what is included in "high quality school". The list is presented in bullet points with subdivisions into smaller bullet points. It is a kind of proposal for what would be reasonable to identify as denotations of the quality concept in educational contexts.

Purpose of this article

The purpose of writing this article is to further the discourse in which Spilková's article is one intervention. The concept of quality in education is used in many different meanings and there is a growing importance of further analysing the concept, particularly as it is the key concept in practical activities of quality assurance, quality development and what follows from it in ranking, funding and other decision making all over the world. I find the discourse valuable to continue and I hope to arrive at meaningful distinctions and identifications of different aspects and meanings of the quality concept in education. I will not dwell on practical issues related to evaluation and methods of quality assurance, but pose one conclusive question about quality assurance based on my findings.

The method for this theoretical article

This is a theoretical article. The method of reasoning is a conceptual analysis of three kinds. One is to search for lexical and etymological meanings of a concept aiming at finding what the original meaning is and what is imbedded in the original meaning as implications. Another is empirical semantics where the factual language use and the meanings people as a matter of fact attribute to a concept is analysed. The third approach is to try to find out what distinctions can be found and what subdivisions appear from the two kinds of conceptual analyses.

The etymological origin of “quality”

The closest translations of the Latin word *qualitas* are properties or characteristics. It stands for properties or characteristics that persons, objects or processes have or do not have.

In English translations of Aristotle's *Organon* (Logics) the word quality is used for his *poion*, whose closest translation might be substance or even property. It is classified by Aristotle as a secondary substance that is the same as a qualification and that is relevant for classification (Michael Pukaluk 2006, on website). A secondary substance that allows for classification in Aristotle's terms is very similar to property or characteristics. Even the verb *poiein* that means to create is related to quality. *Poiein* is the act of producing and it is linked to *prattein* that is becoming. Producing carries with it a transformation of self through action. This becoming – *prattein*, is to a varying degree present in all forms of production or creation – *poiein*. The lexical meanings of quality hint to an origin that refers to what substances or properties something has, what characterizes it and to what it has become through its actions. The original meaning is closely linked to classification.

Different characteristics/properties may or may not refer to different attributions of value to those properties. We can appreciate certain properties as desirable, as good taste, as excellence etc. and there is nothing in the meaning of difference in properties that excludes the possibility of grading and inserting hierarchies of the different properties of things. On the contrary, difference in properties and characteristics can fairly well lead to differences in grading according to how we value these properties. The original meaning of difference in quality as difference in properties and characteristics, on the other hand does, not exclude equality in value but difference in kind. As a simple example: Port wine has three different colours, ruby, tawny and white, each of them coupled to a distinct flavour. As some people like one kind better than the other and as people like them differently in different situations, they cannot be put into any hierarchical order *per se*. But if we talk about different kinds of port in terms of fitness for use, it all becomes different (more on this later in connection to empirical use of language).

Even if the translations of the original meaning of *qualitas*, *poion* and *poiein* do not mention difference, it is there as an implicit aspect. There is no point in talking about certain properties or characteristics if we do not look upon them in relation to other properties or characteristics that we have experienced.

When we, as opposite to differences in quality, talk about differences in quantity, we pre-suppose that the phenomena are one-dimensional (Linde 2003). If a point that takes a position in space can move only in two directions, backwards and forwards, it is limited on a line and it is one-dimensional. A line is a collection of

continuous points that can only be moved in two directions (Clifford 1956). It is, thus, the same as linearity. When we deal with linearity, we may define the different positions by designating different numbers to them.

Differences in quantities are measured on continuous lines. Difference in quality does not allow for one-dimensionality, putting a number to the position of a phenomenon on a continuous line. Though hierarchies, valuation and grading are possible as distinctions of difference of kind, one-dimensionality is not possible. Differentiation of kind excludes the possibility of strict linearity. The description of qualitative difference calls for a *nominal* element that defines the properties and characteristics. Even if we use the terms high and low (that give associations to linearity) attributed to quality, high quality is not a bigger amount of the same as we find when we talk about low quality. It is something different in kind.

This distinction between qualitative and quantitative difference is not explicit in any definition of the original meaning of quality but it may be tentatively derived as an imbedded implication. The matter needs further investigation.

Empirical definitions of quality

Empirical definitions refer to the use of language as practice among language users. Questions in empirical semantics are, among others, how and when people use a term and what they mean and also how they perceive the meaning of terms, which denotations they will group under the term and what connotations and associations they connect to it.

One of the contexts where the term quality is widely used at present is in industry where it is used in various meanings (Tauno Kekele 2006, on website). One is *compliance with specifications*, which is a matching criterion to compare written specifications with measurements of a manufactured object. Another meaning found in industry is a two-dimensional operational definition where quality is measured according to *must be* and *attractive*, that is minimum standard accepted and added value for the market. A relational use of the term is to identify quality as *value for some person*, that is what is desirable for somebody has quality and what is desirable differs from person to person so one and the same product can be of different qualities depending on who is the prospective customer. Still another meaning is relations between costs and productivity, which is a very technical definition and rather distant from other meanings of the term, but it shows that there is a positive value load in the term that makes it attractive to use for what is desirable in the context at hand. In the standardization according to ISO 9000 a definition of quality has been developed, that is: Quality is the degree

to which a set of inherent characteristics fulfils requirements (Wikipedia 2006, on website).

The term quality assurance that originated in industry meaning matching manufactured products with standards, minimum requirements, value for customers or other matching criteria, was taken over to non-manufacturing activities such as education and health care. The matching of service provision to criteria related to what is desired is the most common meaning of quality assurance even out of manufacturing contexts, such as in education. By the building of international associations and institutions for quality assurance follows standardization of meaning and definitions. At present, the dominating operational definition of quality in educational settings is *fitness for use* or *fitness for purpose*. Specifications of what that means are such as the product (including service provision and learning outcome) is up to set standards. Questions asked are: Is the exam really an exam? Is the graduate capable of performing what is expected of a graduate and so forth. The definition fitness for use/purpose and the other definitions found in industry and service provision encompass matching criteria to desirability. That is how the quality term is empirically used and understood.

The similarities between the original etymological meaning and meaning derived from language use and the imbedded implications in both are among others:

Difference in quality refers to differences in kind and refers to properties and characteristics of objects, persons or processes. Those differences can be horizontal and descriptive without attribution of value. That is seldom the case in present language use but a possibility. Statements on quality can also, and that is most often the case, be vertical and take the forms of judgments. Judgments are made according to matching criteria. The matching criteria are expressions of something desirable. Quality has as a term a positive value load, which can make it tempting to define the term to cover what the contextual bound desirability stands for.

Distinctions derived from both etymological and empirical definitions

The ontological status of quality differs between the original meaning of properties and characteristics, and the operational meaning of fitness for use/purpose. The difference is like the sound of a lightning in a completely desert forest where no living creature can hear the noise of the lightning. Is there a noise or not? Yes, if noise or sound is defined as sonar waves but no if it is defined as those waves transformed into a sensation experienced by a living creature. Quality as properties and characteristics might be easily considered as something that belongs to the

object, person or process whether anybody perceives it or not. Quality as fitness for use/purpose is a question of matching. What is quality is matched to criteria. It is implicit in the definition that it does not exist without matching. Thus, quality does not, according to current empirical language use, exist before it is measured. If we want to say that the quality was there though nobody perceived it, then we will have to change the definitions into something like quality as detectable if measured and something that would *potentially* match the criteria set for fitness for use/purpose. Well, the ontological distinctions may not be of importance for practical use of the terms in practical activities, but it might be worth asking if an operational definition of quality, that might be useful for practical general definition of quality should be so strictly operational and ontologically different from the original meaning as it is.

Differences that are not hierarchical or expressions of valuation are horizontal differences. Differences that are expressed as higher or lower quality, good or bad quality, up to standards or not up to standards etc; are vertical differences. Properties and characteristics might be horizontal when looked upon out of context. White port is not of higher quality than ruby port or tawny port *per se*. If we apply the empirical definition of fitness for use/purpose, we may ask if one kind of port is more desirable and appreciated than another kind if the dessert served is fruity, if it is based on a chocolate or coffee flavour or if it is some kind of pastry. If so, the answer might be that in the first case the ruby is better, in the second the tawny and in the third the (chilled) white. The word *better* indicates that there is a judgment. The practical question of fitness for use/purpose refers not to the port as such but to the composition of the menu in which the port is served. When the question of quality is about the object out of context it is a value neutral question to which a *description* of quality is the answer and the differences that can be described are horizontal. When the question is moved into context and the answer is about fitness for use/purpose, the answer is value loaded. The answer is a *judgment*, not a mere description and it is transferred from a horizontal into a vertical axes.

Quality in education

As has been shown, quality can be used for describing horizontal descriptive differences of kind without making judgments.

Meaningful *horizontal descriptions* in education can be about different epistemological approaches to teaching and learning, to different styles of arranging teaching learning processes and particularly and foremost to different focuses in selection of content in teaching. All these aspects can be objects for judgments and

valuations but they can also be objects for value free horizontal descriptions. Two examples follow in the next paragraph:

The ground and origin of knowledge and what the foundations are for considering a view as knowledge, are two of the classical problems in epistemology, the theory of knowledge in Philosophy. There is a third problem that both Aristotle (reprinted 1955) and Plato dwelled on and that is which forms and shapes knowledge could take. Aristotle discerned between three forms of knowledge: *Techne*, *episteme* and *fronesis*. Plato discussed yet another form that he called *noesis*.

These forms of knowledge have, in the recent years, become more and more common to refer to in educational debate and reform work, not least the question of balance between the forms of knowledge.

Techne is about dominating the practical skills to do something. *Techne* is absolutely necessary in vocational education. You cannot train a carpenter who can describe how to go about a job but who is not able to do it with his hands. Vocational education is also about the other forms of knowledge. *Techne* is needed also in “theoretical” studies (handling instruments in laboratories, typing reports by computer, searching databases, etc.).

Episteme is knowledge about facts, relations, algorithms and concepts. *Episteme* is the “hard knowledge” that is mostly demanded in tests.

Fronesis is sound judgement based on epistemic knowledge, personal experience and ethical awareness. To develop *fronesis* you need to search for knowledge, to reflect and to train virtues (virtues are developed by training according to Aristotle). It is the form of knowledge that Aristotle seems to praise the most in his *Ethics* (1955, re-edited in English)

Noesis is the term Plato used for the philosophical reflection on knowledge. It is sometimes enough to possess some epistemic knowledge to know how to go about problem in, e.g., mathematics. It is sometimes also necessary to ask what this knowledge is based on? Are there competing ways of thinking about the problem? What is the knowledge used for? What are the societal consequences of stressing this knowledge, etc. This reflection on the knowledge is what Plato called *noesis*.

The renaissance of Aristotelian studies is among the factors that have influenced contemporary curriculum reasoning. One exponent of it is that curriculum task forces in reforms discuss the balances of the forms of knowledge in the revised curriculum. Another trend directly inspired by Aristotle is the “liberal studies” that we find particularly in the most highly ranked universities in the USA. The most well-known spokesperson for liberal education might be Martha Nussbaum at Harvard. Liberal education means that even in academic professional studies such as education for architects, lawyers, medical doctors, engineers, etc. there should

be also a space for studies of humanities such as literature, philosophy, general competence in text analysis, etc. A professional should have a wider outlook than what is instrumental in his/her profession. The world views of natural science should be valued for students of the humanities. The liberal education aims at holistic personal formation. Discussions of topical matters in seminars, aiming at strengthening the *fronesis* aspect of knowledge is an important part of liberal education.

In discussing quality in education it would be possible to exemplify the forms of knowledge that Aristotle and Plato talked about. It is absolutely possible to describe a school system, a programme or a course curriculum in terms of *techne*, *episteme*, *fronesis* and *noesis* without making any judgments about any of them as more valuable than any other or making judgments about desirable balances in a curriculum. It is so if we look at the curriculum as an object without asking further questions what requirements the curriculum should meet. If we match the curriculum to purpose and requirements, it would not be so easy to discuss the balance of forms of knowledge without making judgments.

Imagine that a vocational school is training pupils for working in a tyre workshop. Lots of customers are expected shortly as winter is on the way and many car owners need to change for winter tyres. The pupils will soon go out working in the workshops as apprentices. It would then be advisable that the instructors concentrate on *techne* for preparing the practical work the pupils are supposed to do. When the students come back from the apprentice period and there is more time, the instructors might concentrate more on knowledge about different kinds of tyres, their properties, use, production costs etc., that is *episteme*, and on environmental consequences of the use of different kinds of tyres and on business ethics and other aspects of *fronesis*.

The example of liberal education is about what is focused in the selection of content in teaching, or in other words: What counts as valid knowledge? – the central question about curriculum. This question can be answered in a descriptive value free way, characterising the content and its properties. As in the former example, as soon as we turn the interest into what the curriculum is there for, what the students are supposed to learn and for what purpose, then the characterising of the selected content turns into judgments of the vertical kind.

Quality concepts and quality assurance

Do the distinctions between two meanings of quality, one horizontal, descriptive classification of difference in kind without attributing value, and the other hierarchical, value loaded, vertical and judging, have any consequences for reasoning

about quality assurance? In order to try to qualify the question, an example (borrowed from a speech by Stephen Ball in Stockholm 2001) will follow:

A consultant firm is tasked with making a quality assessment of companies that operate suburban trains in a city. One of the criteria for quality is sticking to the timetable. One company performs a lot better than the others in this respect. Going deeper into the analysis why this company sticks better to the timetable than others shows that the method they use is to simply pass by the platform if there are delays. Prospective passengers waiting for the train are bypassed and they wait for the next train in icy winds on the platform. But leaving passengers behind or not was not anything thought of when the indicators for matching performance to criteria were developed. The problem is how the criteria were defined. If the criteria are more fine-tuned and cover more aspects, they are still discrete parameters that cannot cover all that is of interest. A company or a school or any other unit to be assessed in quality assurance will be geared by the criteria. If the criteria leave out aspects such as joy and happiness in school work or other things that people like, there might be a risk of what Stephen Ball (2002), with reference to Lyotard (1984), calls *terror of performativity*.

The question to raise (not the answer) is then: Would quality assurance gain in richness, covering important aspects and better avoid mistakes based in poor identification of matching criteria, if the vertical judgments in many cases were coupled to more de-contextualised, descriptive, classifying and horizontal analysis of the *kind* of thing it is by attributing value free characterisation of characteristics and properties of the object, person or process as a complement to judging according to matching it to criteria?

Qualities of the quality concept

I do not know if this exercise in conceptual analysis can contribute anything to practical development of quality assurance and quality development in education. I find it, anyway, valuable to try to find various meanings and distinctions of a concept that is so widely used with so many implications in real activities, and I hope that the elaborations will continue and lead to some more clarity of what the concept stands for or could stand for and what the meaningful sub-categories and distinctions are. Different kinds of quality or in other words... qualities of 'quality' have been identified as horizontal classification that is value free, and vertical judgments that is attribution of value. The two basic partly different, partly overlapping meanings of the quality concept are derived from original etymological meaning and its implications and from studies of empirical use of the concept in

practice. A final question to pose as a result of the concept analysis is which meanings are worth further elaborations and which meanings carry fitness for which use and purpose?

Bibliography

- Aristotle. (1955): *The Ethics of Aristotle*. London: Penguin Classics.
- Ball, S. (2002): "The Teachers' Soul and the Terror of Performativity". Stockholm. *Proceedings from the 26th Annual Conference of ATEE*. Stockholm Institute of Education Press.
- Clifford, W. K. (1956): "Rumspostulaten, in *Sigma/4*". Stockholm, Bokförlaget Forum. Translation and editing based on: *The World of Mathematics*. New York, Simon & Schuster.
- Linde, G. (2003): "The Use of Two-dimensional Models in Social Science: An auto-critical review". *European Journal of Teacher Education*. Vol. 26. No 1. 2003. pp. 37–45.
- Lyotard, J. F. (1984): *The Postmodern Condition: A Report on Knowledge*. (Vol. 10). Manchester. Manchester University Press.
- Spilková, V. (2005): "The Concept of Quality in Education, Quality of School in the Context of Decentralised School System". *The New Educational Review*. Vol. 5,. No 1. 2005. pp. 167 – 177.

Websites visited:

- Tauno Kekele (2006): www.geocites.com/CapeCanaveral/Lab/1983/taunodef (visited July 19, 2006)
- Micahel Pukaluk (2006): <http://dissioblogoi.blogspot.com/2006/05/meaning> (visited July 19, 2006)
- <http://en.wikipedia.org/wiki/quality> (visited July 19, 2006)

Original meanings hint at difference in quality as difference in kind as opposed to difference in amount. Difference in kind may or may not be coupled to difference in desirability, fitness, excellence or other value added hierarchical aspects. There is nothing that says that differences in properties must be described in value neutral terms and that the differences could not be focused on our different properties of the object (person or process). The original meanings are also offensive, unhelpful, or incredible as “low quality.” But quality is also used as a positive word, as in the sense of “this is a quality chair.” Its antonym can be perceived as poorness, incredibility, unhelpfulness, and a variety of other words that reflect the concept of having low quality.