

## Sweden

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This report was prepared as part of the Country Contribution Process (CCP) conducted by the DeSeCo Project (*Definition and Selection of Competencies: Theoretical and Conceptual Foundations*). The CCP was designed to identify and describe national initiatives regarding the measurement and relevance of competencies in different areas of society--among them, policy, business, civil society, and education.

Further information on the CCP can be found on DeSeCo's web page: <http://www.deseco.admin.ch>

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## 1 Introduction

At the request of DeSeCo, the National Agency for Education arranged a workshop in June 2001. The purpose of the meeting was, on the basis of a wide social perspective, to find indicators and qualifiers of key competence. An invitation was sent to potential interested parties, but, unfortunately, not all could come. At the meeting, apart from those from the National Agency for Education, there were representatives from the Swedish Trade Union Confederation, the National Board for Industrial and Technical Development and the National Agency for Higher Education. Others invited were representatives from research, the National Labour Market Administration, the National Board for Youth Affairs and Swedish Trade and Industry. As far as possible, the National Agency for Education has, since then, attempted to add material/ideas from these sources. Here is a summary of some lines of development about competence work which emerged at the meeting and from a study of the literature available on this subject. We have not organised the text according to “guiding questions”. After a general overview of the area, the report is divided into three main areas where the emphasis lies on:

1. Schools
2. Schools – Working Life
3. Working Life, Free Time and Further Education

## 2 Background – a nation-wide view of matters concerning competence

The Swedish view of learning and the organisation of that learning as well as how it is assessed is undergoing change. In order to reinforce the development of individual competence, efforts are being made in several areas and within different sectors and several committees, relevant to this area, have been set up. This is just a brief, overall view of the situation.

A new view of learning, which entails learning through life rather than for life, has had a great impact. Furthermore, education has become the responsibility of several different sectors and the traditional dividing lines between formal and informal learning environments are not as clear as before. The municipalities organise training course at the working place and the unions and trade and industry recommend further training and learning organisations. Education has new frameworks and the freedom of choice and validity, which were previously represented by qualifying and formal education, are questions being looked in to by government committees. The development of the individual and his responsibility for his own competence development are being emphasised more and more. Local interests are in the foreground and the function of the nation is more co-ordinating than unifying.

One example which throws light on some aspects of this development is the so-called Adult Education Initiative which is the largest investment ever in adult education in Sweden. The Adult Education Initiative is mainly aimed at unemployed adults who, either totally or partially, lack three-year upper secondary school competence. The fundamental idea is that those adults with the greatest need for education should be able to complement their existing knowledge with new

knowledge. By means of increased competence and better self-confidence, these people can attain a stronger position on the labour market. The aim is to produce new and reformed adult education, better suited to the requirements of the individual, working life and society in the 2000s.

The responsibility of the individual for his own education and individualised forms of learning through new IT media are being emphasised and we are talking about “career portfolios” and “merit portfolios”. Due to IT, the range of courses on offer will be less dependent on the volumes to be dealt with and learning can be adapted to the individual. IT can offer more varied and interactive learning, IT increases the number of teachers on the market. In addition, IT is accessible. Knowledge of IT-based learning is still small. There is a need for research into what, for example, makes people choose net-based courses, how the teaching should be developed in order to make the best use of the chances of adaptation to the individual and how e-learning can stimulate people’s learning. At the same time, it has been suggested that we should increase investment in IT training in adult education, for example, what we call “Surfborgamärket”, basic IT competence, should constitute an integrated part of adult education (see the IT commission 2000).

Study guidance will become an even more important factor, with demands for access to career guidance and IT-based information systems. The purpose of qualified guidance both before and during studies is to give everyone a good chance of making well-founded choices. Guidance leads to individual study plans. A special committee on the subject of guidance in schools presented, in the spring of 2001, a final report – “karriärvägledning.se.nu” (Swedish Government Official Report 2001:45) to the Government. At the same time, a collection of Good examples (Swedish Government Official Report 2001:46) of local activities within the area of study guidance in Sweden was also presented.

One area which is being looked into concerns the validifying/assessing of the competence which, to a greater and greater extent, is being gleaned from outside the formal education system. Validifying means judging and approving, in various ways, the proficiency and competence achieved via studies, social life and working life. In other words, both formal and informal merits are taken into consideration (see the National Agency for Education 2000). The Government set up a special committee in 2000-2001 to map the efforts and models of validifying. (Dir. 2000:84: Supplementary directive for the committee on validifying adult knowledge and competence (U 1999:06)). The committee will present its results in October 2001.

One problem is that, today, there are no developed instruments with which to assess social competence, for example. Validifying can also have a counter-productive effect for both the individual and the organisation. From an individual’s perspective, we do not always want to be judged and graded, and from the perspective of the organisation, validifying may lead to competition within an organisation which may be the opposite of the organisation’s fundamental idea (compare with schools). The reverse problem certainly exists within schools, for example. What are basic skills, for example, and is it always certain that students only acquire these basic skills at school? Then, how should these basic skills be measured? Some people are concerned that education based on free-will and a thirst for knowledge runs the risk of being harmed when it is assessed and governed.

Another area which cuts between matters of education and employment is adapting the level of education to the demands of the labour market. More and more students have basic qualifications from the country's colleges of further education and, since 1990, there has been an increase of 35%. At the same time, the level of qualification has increased (the National Agency for Higher Education 2001). Despite this fact and a further increased demand for a highly educated labour force, unemployment exists among people with higher education. This suggests sluggishness on the labour market and that the matching processes are not working satisfactorily (the National Board for Industrial and Technical Development 1999). According to a study carried out by the Central Bureau of Statistics, the increase of those with engineering degrees appears to match the demand while, at the same time, there may be a surplus of economists and a radical surfeit of teachers (Central Bureau of Statistics 1998). In a report produced by the National Agency for Higher Education, it appears that the prerequisites of forecasting, in the long term, supply and demand for people with higher education, are affected by a number of factors, the consequences of which are hard to see. These factors include internationalisation and the rapid changes in various branches and professional structures. The number of Swedish students who apply to universities abroad is on the increase. It is a question of a student population equivalent to that at one of Sweden's largest universities which studies abroad every year.

All in all, we can establish that a large number of discussions are being held concerning how to better utilise the competence developed in working life, free time and higher education. It is a matter of individual competence development as well as a matter of better utilising group structures in order to achieve satisfactory collective competence. There is also a line of development towards accepting competence more than formal merits and that there is a need of actually validating what the individual can do. More individual qualifications and a need for more specialised competence make it even more difficult than before to forecast supply and demand.

### **3 Schools**

To start with, we can say that the way of looking upon knowledge, which permeates the Swedish school system, if properly manifested, could provide a good foundation for an attractive and flexible attitude to the outside world. The organisation of Swedish schools creates further opportunities for active participation in society and working life.

The view of knowledge which forms the basis of the Swedish school system is related, in many ways, to DeSeCo's view of key competence. In the educational school (Swedish Government Official Report 1992:94), knowledge is discussed from three different aspects. First of all, the constructive aspect of knowledge. Knowledge is not a mirror of the world but a way of making the world understandable. Secondly, the contextual aspect of knowledge. Knowledge is dependent on its context. And thirdly, the functional aspect of knowledge, knowledge as a tool. The Swedish curriculum (Lpo 94), stipulates four forms of knowledge: facts, understanding, proficiency and familiarity. It is also stated in the curriculum that schools must find a balance between these forms of knowledge, since they complement each other and are dependent on each other. In brief, these forms of knowledge can be described thus:

- Facts are knowledge because they provide information
- Understanding is knowledge because it helps you find meaning
- Proficiency is knowledge because it leads to accomplishment
- Familiarity is knowledge because, with it, you can make judgements

If you relate the concept of knowledge and the various forms of knowledge to the students' learning, the task of the school cannot simply be reduced to a matter of knowledge to be passed on. Knowledge should not be seen as a final product which can be understood, isolated from the context in which it developed. Students' development of knowledge is influenced by how the activities of the school are organised.

The view of knowledge held by schools matches society's need for competence, according to DeSeCo's definition. School as an organisation can also be said, in many ways, to support "an independent and reflective way of things", in the teaching of several subjects, "work interactively with different kinds of tools", and students are "forced", every day "to participate and work in different heterogeneous groups". Naturally, the Swedish school houses many prerequisites for the development of competence, or key qualifications if you prefer.

The new curricula constitute an important screwing point in the comprehensive reforms of the schools undertaken in the 1990s. The curricula for compulsory schooling (Lpo 94) and for the voluntary forms of schooling (Lpf 94) came into force on 1<sup>st</sup> July 1994. During the spring term 1998, when the first batch of students graduated from upper secondary school according to the new curriculum and the new grade system, the National Agency for Education carried out a major assessment based on the new curricula (the National Agency for Education 1999). The assessment is based on three leading ideas; 1) to proceed from the curricula's overall and more qualitatively aimed goals, 2) to study the students' competence development during their school years (progression) and 3) to develop and apply new methods of assessing this type of overall goal and area of knowledge. The (competence) areas which were chosen for assessment were: to see connections and be able to find one's way in the outside world, to make conscious ethical decisions, to understand and apply democracy, creative ability and communicative skills.

The Swedish school also includes more planned features of developing competence. Sweden has had, for a long time, a tradition of vocational training and study and professional orientation. There will be more about vocational training in the next part. As far as study and professional orientation is concerned, since the 1960s, all pupils at compulsory school have had a chance to meet working life during periods of working practice.

Adult education is also available in the Swedish school system. Those people who enter working life without complete compulsory school grades or upper secondary school education are able, at a later stage in life, to complete their education by means of municipal adult education courses run by Komvux. All municipalities take part in a five-year project, the Adult Education Initiative, which was started in July 1997 and will carry on until the year 2002. The Adult Education Initiative covers adult education at upper secondary school level. The education may appear in different ways; flexible solutions are sought and education organisers with different profiles engaged. In order to achieve as wide a range of courses as possible, municipalities, county

councils, state schools for adults, adult education associations, folk high-schools and educational companies all work together. Komvux's traditional range of general theoretical courses has been complemented by a dramatic increase in vocational courses. Parts of the education can be carried out in the working place. It is also possible to combine upper secondary school level courses with studies at a more basic level, or with a programme arranged by the Job Centres for unemployed people. Preparatory courses for colleges of further education which provide special qualifications can be arranged in the form of a base year. For those who have not studied for a long time and are unsure of which level would suit them, there are orientation courses.

## 4 Schools – Working Life

In 1996/97, the National Agency for Education carried out a pilot study on the subject of upper secondary schools and the competence of young people (the National Agency for Education 1997). One important result of the study was that employers very often had an unclear picture of young people's competence. On the other hand, the interviews showed that employers could often give a concrete description of the knowledge and skills they believed were important to have. When asked how the young people mastered the basic skills, the employers found it difficult to give an opinion. It appeared that the way the question was asked could be decisive as to how competence was described. One explanation could be that the ability to describe competence is certainly, to a certain extent, dependent on the kind of work in question. However, a reasonable assumption is that a task can be dealt with in many different ways and various alternatives may all be satisfactory solutions. Various kinds of competence are mixed with each other and the possibility of saying what is decisive if a task is to be completed well may surely, in many cases, be hard to determine.

In general, it can be said that the result indicates that upper secondary schools cope with the task of developing basic theoretical skills quite well. The young people thought the school developed their basic skills better than their personal characteristics, those characteristics which the employers involved in the study considered were important, and more important, than the more theoretical basic skills. In relation to the importance which the employers ascribed to the young people's personal skills, the need for basic knowledge was found to be relatively little in the work carried out by the young people.

The basic skills which most of those interviewed had an opinion about and which some eight out of ten employers considered most important were the ability to look after one's health and exercise regularly, to be able to appear and talk in front of others and the ability to follow and discuss current social affairs, i.e. general knowledge. Some basic skills were considered of low importance by the employers. The least important skill of all was the ability to speak languages other than English, six out of ten thought this. It is also notable that a large number, as many as a third, felt that such skills as being able to use English, express oneself in writing and use computers were less important to master in order to carry out the work in question. Maybe this says more about the work the young people in this limited study came up against than of the requirements of the labour market in general. But it is also illustrates, very clearly, the

differences between the demands of the upper secondary schools and of working life, as it would appear to young people starting their very first job after leaving school.

Skills such as the ability to co-operate and a sense of order, accuracy and punctuality were considered by more or less all the employers involved in the study as important if the young people were to do a good job. But other personality-related characteristics such as being able to adapt and be flexible, the ability to take the initiative and be creative, a feeling of service and self-confidence were considered by a large number of employers as important, practically none of them considered these skills unimportant.

The study provides us with a number of interesting indicators as to what kinds of competence are considered important by employers and what upper secondary schools teach and do not teach. Skills such as accuracy, punctuality and flexibility may be thought to be included in a “hidden curriculum” (compare Jackson 1968) and are important characteristics in a place of work, but the question is how this harmonises with the schools’ overall aims and whether, in that case, schools can more openly contribute to achieving competence in these areas. Another important result is that the prerequisites of harmonising the expectations of working life with the work of the upper secondary schools seem insufficient. The lack of contact between these two is striking. The National Agency for Education continues to study the kind of competence the upper secondary schools consider relatively necessary in order to get/cope with a job.

In an assessment project, the National Agency for Education is trying to identify the importance of various types of competence in relation to employment. On the basis of a total appraisal of formal education, important basic competence, important professional competence and important social/personal competence, the purpose of the study is to throw light on education’s formal and informal effects on the future career of the individual. The study is still in its early stages and is expected to be ready in the spring of 2002 (the National Agency for Education, memo 4.4.2001).

The relationship between school and working life is a problematic topic in several ways. Efforts have been made to open up a dialogue between the two areas. In this connection, there is some tension in the question of reciprocity. The characteristics which the modern Swedish school encourages, influence, critical thinking and a large amount of personal responsibility, may strike back in working life. Young people who have learnt to take these rights for granted will probably not demand less of their place of work than what they could have demanded, and obtained, from the school days. Therefore, it is important that there should be a close relationship between school and working life. In many ways, schools and young people represent a more up-to-date reality than working life and there is a risk that the meeting of the two will take place at the expense of theoretical education – something which, in the future, can strike back on corporate innovative ability.

In a study carried out by the National Institute for Working Life, researchers claim that industry does not meet young people’s expectations of working life. As early as the end of the 1980s, industry realised the difficulty of attracting young people. During the recession of the 1990s, there was little need of new manpower in industry. Young people are not attracted by industry. As the economic climate turned, problems recruiting staff appeared. Researchers on this subject ask themselves whether young people know too little of industry and that is the reason why they



do not apply for jobs there or whether they actually do not want to work in industry. Results suggest the latter. Young people are well-informed about what it entails to work in industry but do not believe that industry can satisfy their demands/expectations of a good place of work (see [www.niwl.se](http://www.niwl.se) about the research programme, Development of Development Processes).

Working life must be able to lean towards, and accept, the kind of competence offered or produced by schools. At the same time, the schools must be able to meet the requirements and expectations of working life. Those efforts made concerning the relationship between school and working life usually concern the latter.

Employers need to increase their competence when it comes to analysing the companies'/organisations' competence requirements and to creating the prerequisites of competence development. Today, formal education has a short life-span and, in working life, there are demands for changeability, individually and organisationally. It is also a matter of being able to use the competence existent within the organisation, in a limited sense and, in society, in a wide sense. Today, there are many groups of immigrants with interesting qualifications to offer but who lack employment. An integrated organisation can provide more opportunities for learning. Competence can also be a collective characteristic.

## 5 The Unions

When young people and adults have completed their upper secondary school studies, they no longer come within the responsibility of the National Agency for Education. Then, the concept of competence becomes, instead, relevant for a number of different sectors and players, such as, for example, the unions, interested organisations, trade and industry and colleges of further education. It is unreasonable to presume we can include what is going on in these areas in this work, but something can be said about the initiatives and thoughts which exist concerning competence outside young people's schooling and municipal adult education, i.e. in working life, free time and further education.

In 2000, a working group was set up, in which some of the major Swedish unions were represented, in order to start work on drawing up joint standpoints and forms of work on matters concerning life-long learning and competence development. The Swedish Trade Union Conference, the Swedish Confederation of Professional Employees and the Swedish Confederation of Professional Associations produced a memorandum as an attempt to find a joint platform for these questions (the Swedish Trade Union Conference et al, 2001). The purpose was to establish the "learning working place" at the centre of the matter.

The unions consider life-long learning as a matter of "individually related competence development" and of "organisationally related competence development". The former is a question of the individual's personal driving forces, abilities and ambitions. Individually related competence development is dependent on whether the range of courses and programmes can meet people's demands. From the point of view of the unions, this becomes a matter of creating the right conditions and good chances for the individual to become educated and expand his

experiences. For example, being able to pay for yourself during your studies and, at the same time, carry out your studies satisfactorily, without losing your ties to the labour market. It is also a question of a comprehensive range of courses and of finding systems with which to assess both formal and informal competence.

The latest, organisation-related competence development, is based on company, business and regional requirements when it comes to workable competence supply. The key to success, they say, lies in being able to clarify the need for competence in the companies and their activities and to invest in practical solutions in order to develop the competence of employees (page x). A prerequisite for this can be found in the co-operation within the company and between the company and the customer. A working organisation which is open, aware of the outside, flexible and willing to change creates continuous opportunities for learning. A so-called teaching organisation, the National Institute for Working Life, has carried out some research on the subject of learning organisations (see, e.g. Docherty).

The unions describe their arguments, concerning life-long learning, not as a matter of rights and obligations but as an outlook which requires nourishment in the form of stimulating incentive; “working infrastructures and economic conditions which provide companies and their employees with freedom of action” (page x). For the parties, the consequences of this outlook is to be supportive and not governing, on the basis of the understanding that not everything can be planned, and to carry out development work and not to regulate development. The first step is to manifest a common framework, concerning an approach to life-long learning and how it should be transformed into action in the concrete sense (page x).

If the above-mentioned joint-party opinions recommend life-long learning as an approach, the Swedish Metal Workers’ Union (a union within the Swedish Trade Union Confederation) has a clearer perspective of rights. They, in their policy, consider knowledge and education as important factors if people are to have a good and rich life and that this is a civil right which is not connected with the approval of the employers (Swedish Metal Workers’ Union 2000, page 10). The aim of the Swedish Metal Workers’ Union is to create the right conditions for everyone to obtain the kind of learning in which the needs and abilities of the individuals are central to the learning process (page x).

The Swedish Metal Workers’ Union’s description of competence is a combination of what one knows, what one can do, what one wants and what one dares to do. Know means theoretical knowledge, can practical knowledge and informal knowledge, want ambition, attitude, goals and outlook and dare self-confidence and self-esteem (page x). Being competent means having what is necessary to cope with a specific task. It is a question of having sufficient theoretical and practical knowledge and experience. But also a question of will, courage and possibility/power to carry out a specific task.

The Swedish Metal Workers’ Union indicates a number of components on the organisation level which promote competence development. A few examples; a group-oriented working organisation with work rotation and job development, the well thought-out composition of working teams who take their own and others’ backgrounds, experience, competence and

interests into consideration and a manager who has a positive attitude to the development of the employees.

## 5.1 Free Time

However, it is not just working life which provides extra curricula competence. You cannot avoid learning. What is often referred to as life-long learning is also very much a question of accepting the competence acquired outside school and outside working life. This applies both to young people and adults.

The National Board for Youth Affairs is, in its report “Assessment knowledge” (the National Board of Youth Affairs 2000), of the opinion that informal learning and formal teaching offered by various associations are important for society. By becoming involved in the activities of an association, non-formal and informal learning, citizens are created with such types of competence as the ability to co-operate, to solve problems, to communicate, to be tolerant and show respect for others etc. They give the example of experience from organisations in Norway of how this kind of competence can be accepted and validated. In Norway, for example, young people can include involvement in non-profit making associations when applying for higher education (the so-called Competence Reform). The authors of the report also mention a “study book” in which the young people themselves can write down the different kinds of courses they have attended and create a list of qualifications gained from the associations they have taken part in, a kind of “merit portfolio”. Reference is made to the scout movement as an example of an association which has, for many years, had validating features.

## 5.2 Colleges of Further Education and Universities

Colleges of Further Education and Universities produce what is usually called “peak competence”. In that case, it is often a question of researchers/engineers/developers within intensive growth areas but colleges/universities also provide the state and municipalities with officials in the public sector.

In a report from the National Agency for Higher Education, it is stated that the chances of forecasting, in the long term, the supply and demand of people graduating from further education are influenced by a number of factors the consequences of which are hard to see. Examples of these factors include internationalisation and the rapid changes within various businesses and professional structures.

New areas of knowledge or combinations of different kinds of knowledge which are, more and more, in demand; IT education, entrepreneurial training and courses which deal with the multiplicity of culture. These different kinds of educational courses correspond to a great demand from the labour market, from students or are considered vital from a wider social point of view. They are undergoing great expansion and can be found within several subjects. Other examples of new educational courses can be found within design and journalism, media and

communications. Both designers and journalists are experiencing an upheaval within their traditional fields and by their respective professional areas.

## 6 Areas of Competence

From the exposition presented in this report and on the basis of the meeting the National Agency for Education arranged, some areas of competence can be specified for the sake of DeSeCo.

- Basic skills are most fundamental. However, what exactly basic skills are is not a clear and unproblematic question. For example, what should schools evaluate? What they have taught or what the student knows? From the point of view of equivalence, this becomes a vital question.
- Personal characteristics are stressed by the employers. It is a question of punctuality, the ability to adapt, a feeling of service, the ability to take the initiative, self-confidence, good health, creativity, the ability to solve problems, the ability to communicate, the ability to cooperate, flexibility, the ability to change etc.
- Among the personal characteristics there is one “competence” which is emphasised. The competence to develop competence. It is a question of having the ambition and the motivation to develop oneself and one’s interests. It also contains another competence which is stressed, to be able to identify what needs to be done and the best resources/contacts needed to do it. In other words, a combination of being able to solve problems and “network competence”. Network competence is, in its turn, built on the competence to become involved. A rich free time and activities in associations make valuable contacts possible and stimulate the individual’s social skills.
- The competence to be able to develop competence is also emphasised as an important component in the view represented by the various players. What is the point of having competence on the individual level if society does not know how to use it? There are, in the report, a number of indications that employers could become better at using and developing the competence which exists within the organisation. It is a question, for example, of creating time and space for interaction, of taking care of collective competence but it is also a question of being able to buy education programmes and the new types of competence. Another way of explaining this is to clarify the competence requirements of the working place, to make analyses of competence. Then, management will show the individual what is encouraged and it will also be possible to have demands/expectations on the education organiser. Apart from competence analyses, a meeting is requirement between school – working life and further education and not a one-sided meeting for the school to adapt to the demands of trade and industry but also for trade and industry to get an insight into the developments taking place within the education system.
- Another type of competence which is emphasised is IT competence, both having it and developing it. The IT medium is accessible and can meet individual requirements. Therefore, IT can be seen as an important ingredient in life-long learning. At the same time, we lack knowledge about the IT medium as a learning environment. What are IT-acquired knowledge and competence for?

## 7 Indicators

- In what could be called “the staging of life as a working place”, perhaps the most humanistic alternative is to work with indicators on the requirement level. Otherwise there is a risk, and this is emphasised during the meeting with the various organisations and authorities, that the behaviour of the citizens will be too rationalised – we do what can be measured and assessed – which, in the long run, strikes back on growth factors as a creative and innovative climate. The same argument also says that indicators should be comparable nationally and not internationally (but internationally enriching). It is a question of indicators which focus on the prerequisites for the origin and development of the various types of generic competence, in school, working life and society. What is more, in discussions on the subject of competence, it is emphasised that the different types of competence are not static and not universal which also speaks for indicators on requirement level.
- On school level, it could be a question of whether the prerequisites exist to create desire and the power to learn, participate in heterogeneous groups, have time for discussion and meetings, creativity, responsibility and influence. Indicators could be the working environment (both psycho-social and physical/aesthetical), number of staff, the size of the group and its composition, the number of creative features in the course plans and the Education Act’s regulations concerning influence and responsibility. The openness and accessibility of the education system where few blind alleys constitute an overall goal.
- Other indicators can catch the relationship school – working life. Are there any organised meeting places? Are they based on mutuality and symmetry etc?
- In working life, it can be a question of the rights the employees have with regard to further education. Is there job rotation? Do the employees work in teams and are there any meeting places between the employer and further education? Do the employers have the chance of meeting other employers?
- On the social level, it may be a question of the kind of infrastructure the country has for study circles and adult education, sports movements, cultural life, the IT medium etc:

To sum up, these are the prerequisites which, on good grounds, even if more research and inquiries are necessary, can be said to contribute to the kind of competence which promotes both the individual’s health and general well-being as well as growth. The simplest alternative is to develop new ways of measuring results but, without better analyses of the effects of such measurement, it appears better to stick to these prerequisites. Otherwise, there is a risk that the solution will become the problem itself, i.e. the measurement of competence will block the way of developing competence.

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