Abstract

Information and communication technologies are one of the prerequisites and expressions of development of transversal reason. The use of ICT in the process of tertiary education opens up new opportunities for individualistic approach to education on the one hand and on the other hand opportunities for interconnection among students as well as students and teachers. In this context it is necessary to update and modify the content of professional codes of ethics for teachers and future graduates who are being prepared for their demanding jobs whereas these are seen not only as the application of acquired knowledge and skills, but also as an activity associated with self-realisation and social prestige. The paper presents the opinions of university students in the context of innovations in education in the sense of its computerization and formation of new foundations of professional codes of ethics and ways of their implementation and application. These views are obtained from the analysis of students’ essays devoted to this issue.

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1. Introduction

Tertiary education must reflect the socio-cultural change which is related to the perception of the world as a community of varied communities, and to, sometimes acknowledged, but very often unacknowledged, helplessness over the pluralism of approaches towards the world / life, and difficulty of study, with regard to both its content and procedure. At the same time, it is necessary to accept cultural openness and to foster and emphasize communication and communicativeness. We can say that stabilized contents are disappearing, unambiguous “certainties” are being substantially disrupted, and what is expanding, are those models of thinking which can lead to interpretation mistakes and barriers to understanding. Media are adopting primitivisation and banalisation; the information and misinformation explosion is penetrating into all areas of life. Traditional means of our thinking are not sufficient to grasp the framework of tertiary education.

2. Postmodern rationality

Postmodern rationality aspires to capture the varied world, in which the issue of relations between its individual items is formulated with new urgency (for us these relations have the global, the European, the nationalistic, the regional dimensions, as well as the dimensions of home, family, school, profession, of one’s own identity, and

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acceptance of plurality). The necessity of the coexistence of the different is related to seeking the connections between its individual varied parts. Approaches of trivialized thinking, of thinking that is realized, uncritical, traditionalists, stereotypical, conventional, naïve, as well as narrowly scientific, lead to interpretation mistakes, and basically reinforce the possibility of an increase in unproductive conflicts which can even completely paralyzed cooperation and communication. Transversal reason, which is connected with the promotion of communication paradigm as opposed to the paradigm of consciousness, seeks to develop the possibilities of coexistence of radically varied elements, dimensions of the world, life and their cognition, which can be very easily illustrated in a virtual environment. Shifts in rationality like the shifts in the clashes of the polarities of modernity and post-modernity (or post-postmodernity), which can clearly be shown in Fig. 1 (Semradova 2010: 16), are of priority interest to us especially in relation to the basis and possibilities for innovations in tertiary education, and to the penetration of these innovations into the development of professional ethics and preparation of professional codes of practice.

| modernity                     | post-modernity (post-postmodernity) |
|-------------------------------|-------------------------------------|
| unity                         | plurality                           |
| central point of view         | polycentrism                        |
| scientific knowledge          | cultural knowledge (wisdom)         |
| individual reason             | transversal reason                  |
| universal reason              |                                     |
| paradigm of consciousness     | Paradigm of communication            |
| competition                   | cooperation                         |
| work and plan                 | creativity                          |
| wholeness                     | fragmentation                       |
| universalism                  | particularism                       |

Figure 1. Shifts in rationality

Innovations in tertiary education, becoming more and more common due to its computerization, due to more and more significant incorporation of information and communication technologies, are not purposeless, and should take into account the factual situation in which we find our lives, education and professions.

3. The need for innovations in education

What is characteristic of the concept of education in the labyrinth of possibilities, both factual and fictitious needs, rational and irrational notions, in different dimensions of our lives, in seeking the sense of one’s own efforts, one’s own activities, one’s own profession, is that we cannot manage with scientific approach. This approach is dominated by the subject-object figure of Cartesian thinking, and by the accumulation of facts in the sense of the files (expanding all the time) of ready-to-use, prefabricated data, which are presented as the essential subject matter which has to be mastered. This ready-to-use knowledge, which is presented in large quantities to students, knowledge, which at first sight helps to facilitate cognition, “easily-consumable” knowledge is flat, fails to provide enough references to the wider context, leads to indolence and passivity and fails to develop human creativity. Many scholars point out that the issue of our time, as the age of media, is to motivate people to consume information and images (Belohradsky 1992), which they do not need in such overproduction. This brings about “waste”, which cannot be properly dealt with not only by students, but also by teachers.

Living in the varied world, which inherently includes “cyber culture” as its multi-level part, connected with the increasing amount of information, with the combination of new technologies, with using virtual reality, is very demanding. Communication models based on the unquestioned subjectivity of communicators are being reinforced. What prevails is a scheme of passing on information, or seeking or exchanging information. The context is not usually thematised, there is a lack of reference to both superior and parallel units and structures. The most dangerous result of this approach is the inability to deal with thematisation of the issue of the common ground on which communication is based. Therefore, very often no common ground, no common basis is looked for, and even less so found. It is difficult to grasp the issue of the common ground or media of communication, however, it is absolutely necessary, if innovations in education are to be implemented. It means making it clear whether, and if so, then how
the moments of understanding are established in this media. Thanks to the number of feedback mechanisms, the platform of electronic education is very well-equipped to facilitate seeking the common ground for communication (Havlik & Kota 2002). Teachers, however, are often insufficiently endowed to seek this, and still very rarely incorporate cooperation with students in the very process of creating electronic teaching aids. With regard to this, also the need for modification of the content of professional ethics of teachers and future graduates, who are preparing for demanding professions, is being updated. ICT used in tertiary education do not bring about only the possibilities of more and more distinctive individualization of content, strategy as well as the style of study, but also the possibilities of mutual connections between students, as well as between students and teachers, including the possibility to form creative teams.

4. Professional ethics

The Czech Republic has seen enormous development of professional ethics since the 1990s. When thinking about the ethical aspects of practicing a profession, we focus our attention on the nuances of the term profession and the term vocation. By profession we understand a certain type of activity which results from division of labour, i.e. from certain categorization of human activities. These categories of activities relate to proved qualifications. Essential characteristics of the term vocation shift the practice of a profession towards honour, towards mission. Activity, arising from a given profession, brings about the feeling of self-realisation and inner satisfaction. It is connected with social prestige, and apart from legal and qualification requirements, also significant ethical requirements are set on practising a profession. Teacher’s profession can take the form of a vocation in case that the teacher asks himself / herself questions related to the sense of his / her and his / her students’ activities, if he / she seeks the essential education which is based on key anthropina and proceeds from the human ESSE, POSSE, NECESSE.

5. Topical issues of computerization of tertiary education

The issue of the links between teachers’ professional ethics and the development in using information and communication technologies when studying was dealt with in professional ethics and hermeneutics ethics seminars in the academic years 2010/2011 and 2011/12. The outcomes of students’ reflections on this issue were recorded in their compositions and essays. (121 papers were analysed altogether). The questions which the students repeatedly replied to, and which were most significant for them, could be presented in the following order:

1. Is the teacher’s and the student’s role significantly changing due to virtual learning environment? (72 papers)
2. What makes virtualization, computerization of tuition attractive, and what are its drawbacks? (71 papers)
3. Do electronically based innovations in education result in deprivation of mutual conversation between students, students and teachers? (63 papers)
4. Is it possible to develop critical thinking in e-learning courses? (45 papers)
5. Do e-learning courses contribute to the development of innovations in tertiary education? (45 papers)
6. Do the collective tools of a particular learning environment reinforce performance formalism? (31 papers)
7. Can tuition in fact become more individualized due to using virtual learning environment? (27 papers)
8. Is classical education, which is based mainly on personal encounters closer to the essential education than e-learning? (18 papers)
9. Are students, as a result of ICT usage when studying, less and less willing to study literature? (12 papers)
10. Does using the possibilities of ICT reinforce the tendency towards facilitating and simplifying one’s studies (or, adapting, copying of resources which had been found)? (6 papers)

The outcomes are in fact of mainly illustrative nature. They show students’ perceptiveness to the topic. Mostly positive reactions arise with questions No. 1, 3, 5, 6, 7, 8, 9, 10. The second question formulates both the benefits and limitations and pitfalls of virtualization, computerization of tuition. Most students who have asked themselves this question (see Table 1) doubt the possibility to develop critical thinking in e-learning courses.
Table 1. Results of the questionnaires.

| Question | Total number of answers | Number of completely positive answers | Number of completely negative answers | Benefits | Limitations, pitfalls |
|----------|-------------------------|----------------------------------------|---------------------------------------|----------|----------------------|
| 1        | 72                      | 54                                     | 18                                    | More conceptuality in teacher’s preparation | Diversion from the essential education |
| 2        | 71                      | 26 mention attractiveness only          | Only limitations and drawbacks were mentioned by 15 | Illustrativeness, standard and above-standard, content, comprehensiveness of the course, choice of place and time to study, individualization of feedback | Certain mechanicality, interactivity instead of dialogue, simplification, primitivization, lack of personal contact, superficiality |
| 3        | 63                      | 48                                     | 15                                    |          |                      |
| 4        | 45                      | 4                                      | 41                                    |          |                      |
| 5        | 45                      | 29                                     | 16                                    |          |                      |
| 6        | 31                      | 25                                     | 6                                     |          |                      |
| 7        | 27                      | 27                                     | 0                                     |          |                      |
| 8        | 18                      | 18                                     | 0                                     |          |                      |
| 9        | 12                      | 11                                     | 1                                     |          |                      |
| 10       | 6                       | 5                                      | 1                                     |          |                      |

6. Conclusion

Teacher’s professional ethics in connection with computerization of tuition, according to students, should include mainly:
1. efforts to make students actually interested (compensating for bigger passivity on the part of students)
2. non delegating on computers what must stay personal
3. computerization of tuition should not be taken too far
4. ask for students’ permission to publish their papers and photographs or videos

An authentic comment by a second year student aged 21:
„Rules for dealing with new media should be definitely listed in a code of practice. In the same way as it is the case of rules for working with a book (citing) etc. And also it needs to be considered to what extent this trend of computerization of tuition should be reinforced.”

By considering the possibilities of innovations and consequences of innovations with his / her students, the teacher orientates them also in the direction of sharing data, values, methods of work, leads them to being cautious when using a virtual learning environment, and to netiquette, encourages them to future reflections over the ethical dimension of their own profession.

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