DO WE EQUIP TEACHERS TO DEAL WITH GLOBAL CRISIS? CASE OF INITIAL TEACHER EDUCATION IN THE REPUBLIC OF CROATIA

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ABSTRACT

Traditional teacher education focused on crisis teaching, crisis prevention and crisis management at the internal and external level changes require education to react to factors and contexts at *meso* and *macro* level. The aim of the research was to determine whether the learning outcomes of initial teacher education that prepare future teachers to deal with crises at *meso* level and *macro* level can be identified. Also, research aimed to identified learning outcomes with respect to the type of crisis they address and the level of revised Bloom's taxonomy (Anderson & Kratwohl, 2001). Content analysis of initial teacher education curriculums on a national sample of the Republic of Croatia was conducted. Curricular content analysis identified learning outcomes in a broad field of society, education, ecology, technology, but there are no learning outcomes related to economy. Most learning outcomes in the area of crises in society were at the level of evaluation (27,3%), as well as the learning outcomes in the area of crisis in education (34%). Since there is no national standard for teacher education, significant differences were found in the scope and number of learning outcomes according to the year of study as well as the university. Given the results of this research, it is necessary to revise initial teacher education curriculums and develop lifelong learning programs that would provide future teachers with the development of competencies necessary to act in various situations of crisis.

Keywords: *curriculum analysis; global crisis; learning outcomes; primary school teacher education; Republic of Croatia.*

Introduction

It is not easy to clearly define the term crisis. There are different challenges in dealing with the term: first being the *conceptual challenge* reflected in the difficulty of reaching a consensus on the various definition of the concept of a crisis; second, the *practical challenge* resulting from the difficulty of identifying the skills required at various phases of a crisis and

third, *the reflective challenge* related to the lack of knowledge with respect to the actors' behaviours, emotions, and decisions in the period immediately preceding the crisis (Lalonde & Roux-Dufort, 2013). Any crisis can be seen as a threat, danger, and disorder or an opportunity, possibility. Crises in education occur in the period when teaching process does not meet the needs of society and the economy nor does it progressively contribute to their development, and the solution to the crisis is reflected in education system reforms (Apple, 2016; Cohen et al., 2018; Mauch & Sabloff, 2018; Organization for Economic Co-Operation and Development [OECD], 2018; Pastuović, 1999; Stoll & Fink, 1996;). The paradox of the modern educational system is reflected in the fact that only the reform is permanent, i. e., under the influence of extremely rapid economic, social, economic, health changes, the educational system is constantly facing crises (Liessmann, 2008).

Crisis situations in the teaching profession are not new. Teachers regularly encounter crisis situations in their work (Apple, 2011). However, while during the twentieth century crises, i. e., situations in which teachers are expected to respond quickly and competently to various obstacles, were more significant at the level of the classroom and school environment, in recent decades there have been more noticeable external crises that (indirectly) affect teachers and pupils. With the development of globalization and informatization of society, and especially due to the presence of mass media, more and more external (global) crises, which do not have to directly affect the participants in the teaching process, affect the teaching work and the teaching process. This is corroborated by a number of studies that emerged after the 9/11 attacks when it was shown that such major disasters leave consequences on both the emotional and cognitive aspects (Honos-Webb et al., 2006; Huston & DiPietro, 2007; Silver et al., 2002).

This issue is particularly pronounced during the COVID-19 pandemic and encourages the importance of reviewing the acquisition of future teachers' competencies in such a way that it seems that it is not enough to prepare teachers only to deal with crisis situations at the classroom and school level. In other words, the professional development of teachers should be directed to three different but interrelated levels. The first level covers *micro* factors and contexts (e. g. classroom relationships, teaching content; child welfare), the second level includes *meso* factors and contexts (e. g. institutional changes and problems, school system), while the third level covers *macro* factors and contexts (cultural, societal, political, economic) (Bautista & Ortega-Ruiz, 2015; Opfer & Pedder, 2011). Therefore, the main interest of this research was to examine whether during the initial teacher education students learn about crises at *meso* level and *macro* level and are they learning how to deal with them.

Given that modern curricular and competency approaches are based on the theory of constructive alignment (Biggs, 1996), the basis of this paper is a revised Bloom's taxonomy consisting of three domains (cognitive, affective and psychomotor) as well as on six levels: remembering, understanding, applying, analysing, evaluating, and creating (Anderson & Krathwohl, 2001).

Method

The aim of this research was to determine whether teacher education course curriculums include learning outcomes that prepare prospective teachers to cope with crisis on *meso* and *macro* levels. According to this research goal the following hypotheses were made:

H1: Learning outcomes that enable prospective teachers to cope with crisis on *meso* and *macro* levels will be represented in teacher education curriculums in all relevant areas.

H2: The level of learning outcomes according to Bloom's revised taxonomy will not differ according to the categories of crisis on *meso* and *micro* level.

H3: There are significant differences in the representation of learning outcomes in teacher education curriculums that enable prospective teachers to cope with crisis according to the university or year of study.

The sample of research included 6 initial teacher education curriculums on a national sample of the Republic of Croatia (Curriculum web pages are listed in the Reference section): University of Zagreb, Juraj Dobrila University of Pula, University of Split, University of Zadar, University of Rijeka, Josip Juraj Strossmayer University of Osijek. According to their structure, teacher education is an integrated five-year study, and the research covers all five years of study. Content document analysis, a form of qualitative research, was conducted to collect and explore data. Since all teacher education curriculums are based on competence approach, with clearly stated learning outcomes, a matrix for learning outcomes was created according to learning domains and levels of revised Bloom's taxonomy (Anderson & Krathwohl, 2001). Learning outcomes were then coded and grouped according to the area of crisis they relate to. Since there is still no national standard to teacher education in the Republic of Croatia, the curriculums are often structured according to research interests and competence of university teachers and researchers employed at different universities. Also, it is reasonable to expect a significant difference between the number of learning outcomes addressing crises. Therefore, learning outcomes were

analysed at the level of the overall research sample. To answer on the second and the third hypotheses, nonparametric tests were used.

Results

For the purpose of answering the first research hypothesis, a matrix of learning outcomes related to crisis on *macro* and *meso* levels was created. Five broad categories (society, education, environment, economy, technology) and their subcategories were identified (Table 1). After dividing the learning outcomes into the main categories, their content analysis was approached and it was noticed that society, environment, technology refer to the *macro* level, while the learning outcomes in the area of education seem to relate to both *macro* and at the *meso* level. For the purpose of this paper all areas were included in further analysis.

Table 1.   Matrix of learning outcomes areas related to crisis

Society	Environment	Economy	Technology	Education
Globalisation	Sustainable development	Labour market	Digital transformation	Reform
Democracy	Ecology	Employment	E-learning	Lifelong learning
Sustainable development	Health	Sustainable development	Robotisation and AI	Professional development
Intercultural-ism	Natural disasters	Financial literacy	Digital literacy	Professional Identity

Descriptive statistics (Table 2) show that most of learning outcomes identified as outcomes that address potential crisis relate to crisis in society (globalisation, democracy, interculturalism and sustainable society; $n = 121$). The second most considered category is environment (sustainable development, ecology, health, natural disasters; $n = 77$). Technology (digital transformation, E-learning, robotisation and AI, digital literacy; $n = 76$) is the next are that can be identified in learning outcomes. Surprisingly, a lesser number of learning outcomes are related to crisis on *meso* level (reform, lifelong learning, professional development, professional identity; $n = 47$).

It is necessary to recognise that numerous learning outcomes in teacher education curricula address crisis in the area of education, but on a *micro* level (classroom). The area of economy (labour market; employment; sustainable development; financial literacy) seems to be a blind spot in teacher education curricula $n = 0$. Therefore, we can conclude that the results did not confirm the first hypothesis H1.

Table 2. Frequency of learning outcomes according to crisis area

Crisis area	Society	Education	Environment	Economy	Technology
Frequency	121	47	77	0	76

With the aim of answering to the second hypothesis (H2) the content analysis of learning outcomes according to revised Bloom's taxonomy (Anderson & Krathwohl, 2001) showed that there are differences in the levels across crisis areas (Table 3). Most learning outcomes in the area of crises in society were at the level of evaluation (27.3%), as well as the learning outcomes in the area of crisis in education (34%). Learning outcomes that addressed crisis in ecology were mostly at the level of understanding (35.1%) while learning outcomes related to crisis in education were on the level of application (26.3%). The second hypothesis was confirmed.

Table 3. Percentage of levels of learning outcomes (Bloom) across the crisis areas

Crises area LO Bloom's taxonomy	Society %	Education %	Environment %	Economy %	Technology %
Remembering (1)	17.4	10.6	6.5	0	11.8
Understanding (2)	20.7	17.0	**35.1**	0	14.5
Applying (3)	18.2	29.8	23.4	0	**26.3**
Analysing (4)	9.1	2.1	1.3	0	14.5
Evaluating (5)	**27.3**	**34.0**	28.6	0	13.2
Creating (6)	7.4	6.4	5.2	0	19.7

Next, we tried to determine whether there were differences in the representation of learning outcomes according to the year of study or university that students attended (H3). Research results show that there is significant difference between the number of learning outcomes according to the university that students attend in the area of crisis in society (H = 18.469; p = .02) and crisis in ecology (H = 13.377; p = .010). Teacher education curriculum at University of Rijeka has significantly less learning outcomes related to crisis in society in relation to all others. On the other hand, teacher education curriculum at University of Split has significantly more learning outcomes related to crisis in ecology. There are no significant differences in the distribution of learning outcomes related to education (H = 3, 010; p = ,390) and technology (H = 7.192; p = .207) according to the university. Further analysis showed that there are significant differences in learning outcomes representation according to the year of study

in the area of crisis in ecology (H = 10.605; p = .031). Students of 3rd year had statistically less learning outcomes dealing with crisis in ecology than during any other year of study. There were no significant differences in representation (distribution) of learning outcomes in the area of crisis in society (H = 7.546; p = .110), crisis in education (H = 2.609; p = .456) or crisis in technology (H = 4.760; p = .313). The results have confirmed the third hypothesis (H3).

Discussion

Research results did not confirm completely the first hypothesis (H1), since there are no learning outcomes related to the area of economy in any of teacher education curriculums in Croatia. Based on the results it can be concluded that this seems to be the common denominator and a blind spot for all teacher education institutions at universities in Croatia. There is a need for future teachers to develop understanding about the dominant challenges of the society, as well as the tension between contradictory demands of economic and cultural forms of globalisation, and between globalisation and localisation (Bates, 2008; Rieckmann, 2012). Also, research shows that COVID-19 pandemic already made an impact on higher education and the need to provide sustainable development education and competencies is only going to grow in the coming years (Leal Filho et al., 2021). Research results did not confirm the second hypothesis (H2) because the level of learning outcomes according to Bloom's revised taxonomy differ according to the categories of crisis on *meso* and *micro* level (Bautista & Ortega-Ruiz, 2015; Opfer & Pedder, 2011). It is important that future teachers develop higher levels for application, analysis, evaluation, and creation in completely new circumstances and that they are thus ready to teach their future students (Khizar et al., 2020). Not all areas of macro crisis result with the same level of learning outcomes. However, the results of this research have confirmed the third research hypothesis (H3). There are significant differences in the representation of learning outcomes in teacher education curriculums that allow future teachers to cope with crisis across different years of study or universities. This can be an issue since it is obvious that teacher education must be, very *systematic and consistent* (Apple, 2011).

Based on this research, we can determine that learning outcomes that prepare future teachers to deal with crisis on macro level exist. However, they are unsystematic, not evenly distributed in course curriculum, and have lack of categorization, since education system is constantly confronted with crisis (Liessmann, 2008). The results show that their representation depends on the university teacher competencies and interests. This

research has its limitations. There is a lack of comparison with studies in other countries. For the purpose of better understanding of this topic, the research could be expanded to get a more complete image because global crisis should be addressed on a global level. Also, the (self)perception of teachers and student's competence in managing crisis of this scope could be interesting to research and compared.

Conclusion

We stress that there is a need for systematic research on teacher education in order to investigate the extent to which we prepare educators to deal with global crises. In addition to the importance of recognizing the impact of global crises in a particular area, it is also important to know what to do when they occur. A pandemic caused by a SARS-CoV-2 virus, wars, earthquakes, floods, poverty, or a disruption of any other segment of a person's educational, social and natural life requires of teachers to manage and mitigate these situations. It is the responsibility of teacher education institutions to ensure that future teachers are educated for crises management and mitigation. We recommend the development of guidelines for the development of teacher competencies in this area, or the competency profile of educators. Based on results in this research it is essential to review teacher education curriculums in order to prepare future teachers and develop their pedagogical competencies for acting in situations of crisis on macro level. The present seems to be characterized by unpredictable situations that require teachers to adapt, plan and respond to the new crisis situations and teacher education is obliged to respond to their needs.

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