Dayanıqlı inkişafda sərištə əsaslı təhsilin həlledici rolu: inteqrativ ədəbiyyat icmalı

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Annotasiya Bu məqalə Dayanıqlı İnkişaf üçün Təhsil (DİT) üzrə əsas sərištələr (bacarıqlar) və bunların tələbələrə aşılanmasında ali təhsil müəssisələrinin rolu barəsində ədəbiyyat icmalını təqdim edir. Ali təhsilin dayanıqlı inkişafa verdiyi ciddi tövhə və onun bu prosesdə həlledici rolu 21-ci Gündəliyin 36-cı Fəslində (BMT 1992), Dayanıqlı İnkişaf üçün Təhsil Dekadasında (2005-2014) və Dayanıqlı İnkişaf Məqsədlərinin 4-cü Bəndində (BMT 2015) öz təsdiqini tapıb. Dayanıqlı İnkişaf Məqsədlərinin 4-cü Bəndinin əsas hədəfi hamı üçün bərabər inkluziv təhsili təmin etmək və ömürboyu (davamlı) öyrənməni təbliğ etməkdir. Sadəcə savadlılıq dərəcəsini artırmaqla bu məqsədə çatmaq olmaz. Şübhəsiz ki, dayanıqlı inkişaf məqsədləri ilə bağlı tərəqqiyə nail olmaq üçün baza təhsilinin yenilənməsi vacibdir. Bu məqsədlə, bütün dünya üzrə dayanıqlılıqla əlaqəli bilik və bacarıqların inkişafına uyğun təhsil siyasəti və praktikalar yenidən nəzərdən keçirilməlidir. Sərištə konseptinin ədəbiyyatda bir neçə tərifi var, lakin bu araşdırma Avropa İttifaqı Şurası (2009) tərəfindən qəbul olunan tərifi əsas götürür. Avropa İttifaqı Şurası (2009) sərištənin tərifini bu şəkildə izah edir: «Sərištə iş və təhsil prosesləri zamanı bilik, bacarıq, həmçinin şəxsi, sosial və ya metodoloji bacarıqları istifadə edə bilmək bacarığıdır» (EC, 2009, 14). Dayanıqlı inkişaf üçün nəzərdə tutulan bu sərištələrdən bəzilərinə yaradıcı və analitik düşüncə, şifahi və yazılı ünsiyyət, əməkdaşlıq, münaqişənin idarə edilməsi, həmçinin qərar vermə, problem həll etmə və planlaşdırma bacarıqları daxildir (Stoltenberq, 2007). Sterlinq və Tomas (2006) da dayanıqlı inkişaf yanaşmasının vacibliyini qeyd edir

və buna nail olmaq üçün vasitə olaraq «univeristetlərdə hal-hazırda mövcud olan ənənəvi pedaqogika əvəzinə daha analitik və interaktiv pedaqogika»nı göstərir. Avropa Ali Təhsil Məkanına inteqrasiya etmək cəhdlərinə baxmayaraq, Azərbaycan hələ də bazaryönümlü təhsil sisteminə keçid etməyib (Tempus, 2012). Ali təhsil müəssisələrində tədris olunan təhsil və əmək bazarının tələbatı arasında uyğunsuzluq mövcuddur. Beləliklə, bu icmalın məqsədi Dayanıqlı İnkişaf üçün Təhsil (DİT) yanaşmasını qəbul etmiş və tələbələri iş yerlərinə uyğun adekvat bacarıqlarla təmin edən fərqli ölkələrin ali təhsil müəssisələrində tətbiq olunan uğurlu təcrübələri araşıdırmaqdır. Müəlliflər bu mövzu ilə bağlı həm praktiki, həm də tədqiqata əsaslanan mövcud ədəbiyyatın əhatəli sintezi və tənqidi təhlilini edərək mövcud modelləri, dünya təcrübəsini, dünya standartlarını və sərişdə əsaslı təhsilə keçid zamanı rast gəlinən çətinliklərin xülasəsini təqdim edirlər və onların icra edilməsi yollarını göstərirlər. Eyni zamanda, bu məqalədə hər bir cəmiyyətdə dayanıqlı inkişafın təmin edilməsində ali təhsil müəssisələrinin rolu araşdırılır. Çünki bu müəssisələr yeni bilik formalaşdıra, müvafiq sərişdələrin inkişafına töhfə verə bilərlər. Yekun olaraq müəlliflər bu ədəbiyyat icmalının nəticələrinin Azərbaycanın təhsil sistemi üçün nə məna ifadə etdiyini müzakirə edir və bu mövzuda növbəti araşdırma gündəliyini təklif edirlər.

Açar sözlər Dayanıqlı inkişaf, əsas sərişdələr, Ali təhsil, Dayanıqlı İnkişaf üçün Təhsil (DİT).

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The critical role of competence-based education for sustainable development: an integrative literature review

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Abstract This paper presents a review of the literature on the core competencies for Education for Sustainable Development (ESD) and the role of higher education institutions in developing these competencies in their students. The critical role of higher education in contributing to sustainable development has long been recognized by the global community, namely in Chapter 36 of Agenda 21 (UN, 1992), the Decade of Education for Sustainable Development (2005–2014) and Goal 4 of the Sustainable Development Goals (UN, 2015). Indeed, the main focus of Sustainable Development Goal#4 is to guarantee inclusive education of an equal standard to all, and to promote lifelong learning.

Unfortunately, this goal cannot be achieved by simply increasing basic literacy. Undeniably, if the world wants to make progress towards the sustainability goals, the basic education worldwide must be redesigned to address sustainability by re-examining educational policies and practices to align with the development of the knowledge and competencies related to sustainability. Although multiple definitions of competency exist, this paper adopts the definition provided by the European Parliament Council (2009). The European Parliament Council defines competency as the «proven ability to use knowledge, skills and personal, social and/or methodological abilities, in work or study situations» (EC, 2009, 14). Some of these competencies for sustainable development include skills for creative and critical thinking oral and written communication, collaboration and cooperation, conflict management, decision-making, problem-solving, and planning

(Stoltenberg, 2007). Sterling and Thomas (2006) also emphasize the importance of acquiring a sustainable development mindset through «a much more critical and interactive pedagogy than usually found in universities» (352).

Azerbaijan has not moved towards a market-oriented education system despite attempting to integrate into the European Higher Education Area (Tempus, 2012). The current education system does not arm students with key competencies such as critical thinking and there is a discrepancy between what higher education provides and what the labor market demands. Thus, the purpose of this review was to explore the successful practices of higher education institutions in different countries which adopt an ESD approach and which prepare students well with adequate skills and/or competencies relevant for today's workplace. A comprehensive synthesis and critical analysis of the research and practice related literature provides an overview of models, practices, guidelines, and challenges and ways to implement them. This paper seeks to determine the role of higher education institutions in shaping the future of the world's society in terms of sustainable development, since these institutions can generate new knowledge and contribute to the development of appropriate competencies and raise awareness of sustainability awareness. Finally, the implications for Azerbaijan's education system are discussed and a future research agenda is proposed.

Keywords Sustainable development, Key competencies, Higher education, ESD.

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Introduction

To start by providing background information about the history of Education for Sustainable Development (ESD), it is noteworthy that higher education institutions (HEIs) have taken measures to make contributions to sustainable development (SD) since the UN Conference on the Human Environment in 1972 (Amaral, Martins and Gouveia, 2015). The United Nations Economic Commission for Europe (UNECE) has recognized the significance of education in a sustainable world, namely in Chapter 36 of Agenda 21 (UN, 1992), the United Nations Decade of Education for Sustainable Development (UN DESD, 2005–2014), and Goal #4 of the Sustainable Development Goals (UN, 2015). The UNECE supports countries in working towards the Sustainable Development Goals (SDGs). The representatives of member states of the UNECE region adopted the 10-year Strategy on Education for Sustainable Development in Vilnius in 2005 which led to the implementation of the UN DESD (UN, 2016). This strategy mainly aims to motivate governments to create policies, to provide academic staff with ESD competences, and to promote research and development concerning ESD.

The main aim of Education for Sustainable Development (ESD) in higher education (HE) is to enable graduates to develop «competences in systemic, anticipatory, and critical thinking and handling of complexity» (Rieckmann, 2012). Rieckmann (2012) defines competences as «individual dispositions to self-organization which include cognitive, affective, volitional (with deliberate intention) and motivational elements; they are an interplay of knowledge, capacities and skills, motives and affective dispositions» (p. 5). Rieckmann (2012) states that the development of critical competencies can be facilitated through applying interdisciplinary and transdisciplinary approaches, participation and collaboration and problem-orientation at HEIs, and adaptation of HEIs to regional and cultural differences.

Overall, the authors of this paper primarily analyze the experience of different countries which adopt an ESD approach, the Azerbaijani context, and what we believe must be taken into consideration in order to successfully implement an ESD approach in the Azerbaijani higher education system. Due to the emerging nature of the topic and the fact that investigation of all the materials available to the public is beyond the scope of this study, our list of interventions is by no means exhaustive. The study aims to draw from the experiences of countries with a similar culture to Azerbaijan. The subsequent sections of the paper focus on the theoretical framework and conceptual frameworks that have informed this literature review, findings from the implementation of ESD principles in different countries, the best practices for Azerbaijani context, and the paper concludes with a discussion of the implications and recommendations for action and future research.

Theoretical and Conceptual Framework

The theoretical framework that informed our study was inspired by Vygotsky's (1964) social constructivism theory. The central premise of this theory is that it views the learner as a unique individual with particular needs, culture, and values. This theory does not only acknowledge this individuality of each learner, but it also encourages keeping this in mind and utilizing interventions accordingly to meet those unique needs. Echoing Bauersfeld (1995), in this case, instructors have a big responsibility, because they need to adopt the role of facilitators rather than teachers: instead of having one-way communication and lecturing on the subject matter, the facilitators in competency-based higher education environments should help the learners to improve their understanding of the content based on his/her background and acquire relevant competencies that were mutually agreed upon while designing the curricula (Gamoran, Secada, & Marrett, 2000).

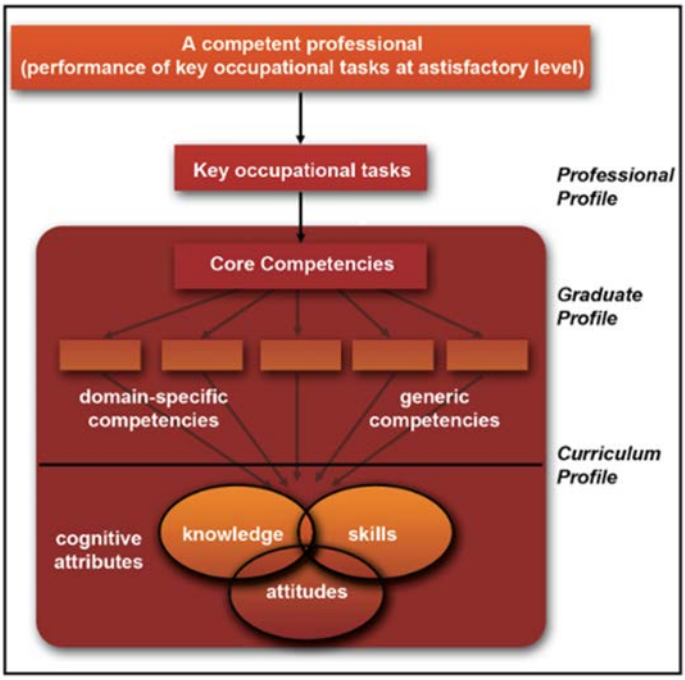
Another primary rationale behind choosing social constructivism theory as the main theoretical framework was its approach towards the context of learning. According to the social constructivist view, the context in which the learning takes place is critical (McMahon 1997): Decontextualized knowledge does not prepare students to be able to apply the competencies when they start their careers and, therefore, need to apply these competencies to real-life tasks.

As a conceptual framework, informed by an extensive literature review, this study found the model presented by Kouwenhoven (2003) to be in line with the ideology of the researchers. Considering the scope of this paper, the authors will not focus on explaining this model in detail here, but rather will discuss it comprehensively in this paper. To have a general understanding of the model, according to Kouwenhoven (2003), the development of a competency-based curriculum should follow these steps: (1) formulation of a professional profile with major competencies that have been mutually decided upon by higher education institutions and employers, (2) a graduate profile with those competencies that match those of the professional profile, (3) core competencies that include both domain-specific and generic competencies, and (4) finally, both teaching and assessment of the students that focuses on integrating knowledge, skills, and attitudes. The model for developing a competency-based curriculum is given in Figure 1.

Methodology

To accomplish the aims of this study, this paper presents an integrative review of the literature on competency-based education and Education for Sustainable Development. The literature review was conducted using online databases avail-

Figure 1. The relation between competence, core competencies, and constituting domain-specific and generic competencies (Kouwenhoven, 2003).



able at the George Washington University's Gelman library, namely EBSCO, ERIC, Academic Search Complete, Business Source Complete, PsychInfo, SocINDEX, and also, Google Scholar. The search was conducted using the following search terms in the title or abstract or keywords (subject terms) of peer-reviewed publications: competenc*, competenc* based education, education for sustainable development, higher education, and their combinations. The review spanned a variety of disciplines and fields of study including education, human resources development, psychology, cognitive science, and economics.

This search with the aforementioned keywords in the databases above yielded 260 peer-reviewed articles and reports. An initial review of the articles' abstracts was conducted to narrow this number down. The studies which focused on children or the education of anybody under 18 were excluded following this review because of this paper's focus on higher education. Excluding the articles based on these criteria led to the selection of 67 articles for in-depth analysis. Additionally, the references of the relevant articles revealed other appropriate articles, which were also reviewed in depth.

Discussion of Findings

Practices from Central and Eastern European countries

HEIs play a critical role in the development of key competencies which require «reorientation of the learning process» (Barth, Godemann, Rieckmann and Stoltenberg, 2007). A learning process can be changed based on «competence-orientation, societal orientation and individual centring» (Barth et al., 2007, p.419). Competence-orientation helps to attain key competences and identify learning opportunities (Barth et al., 2007). On the other hand, societal orientation means that individuals can learn through real-life situations (Barth et al., 2007). Finally, individual centring refers to the settings for learning that exist beyond traditional or «formal» ones (Barth et al., 2007).

Dlouhá, Vintar Mally and Dlouhý (2017) argue that as SD principles have been formally accepted only on paper but not implemented, they do not make any systemic and practical impact on the HE curricula or in practice. Therefore, Eastern countries lack best practices such as «using action learning, critical reflection, participatory learning, transformative pedagogy, mentoring systems, professional communities of learning and other innovative approaches enriching the practice of HE teaching in other parts of Europe» (Dlouhá et al., 2017, p.831). The introduction of the National Qualifications Framework for Higher Education (NQF-HER) has played a vital role in sustainable development in Turkish higher education (Katayama, Örnektekin and Demir, 2017). The NQF-HER mainly highlights the importance of raising sufficient awareness among students about «the issues of the universality of social rights, social justice, quality, cultural values and environmental protection, worker's health, and security» (Katayama et al., 2017, p.3). Furthermore, Turkish HEIs build international partnerships to achieve sustainable development goals in HE. However, in Turkey, Bosnia, and Herzegovina and Croatia, ESD mainly involves teaching courses on environmental education and protection (Dlouhá et al., 2017; Katayama, Örnektekin and Demir, 2017). Additionally, in Turkey, as the design of programs and courses are directly influenced by the political context of HE that is «constructed on solid modernity», most of the HEIs offer similar courses and programs (Katayama et al., 2017, p.12).

Only the Czech Republic and Slovakia have adopted a national strategy recognizing ESD in HE (Dlouhá et al., 2017). They also note that Bosnia and Herzegovina have integrated ESD elements into legislation regulating agriculture, forestry, water, energy, regional development, and the protection of nature (Dlouhá et al., 2017). These elements are also covered in the National Sustainable Development Strategies of Hungary, Macedonia, Romania, Serbia and Slovakia (Dlouhá et al., 2017). However, in these countries, they do not have a substantial impact on the HE curricula (Dlouhá et al., 2017).

In 2010, the Estonian Ministry of Environment adopted an Environmental Education Development Program (Henno, 2016). The main goal of was «to promote ESD and environmental education as the essential component of sustainable development, to raise student and public environmental awareness and awareness about sustainable development» (Henno, 2016). In ESD implementation, one of the goals is to achieve teacher development through practical training programs on ESD competences in HE (Henno, 2016; Dlouhá, Vintar Mally & Dlouhý, 2017).

The Azerbaijani HE system

Since gaining independence, Azerbaijan has paid attention to the development of the educational system following European standards to achieve recognition of the country in the international arena. In 2005, Azerbaijan joined the Bologna process to integrate into the European education systems (Ministry of Education, 2016). The Bologna process is often called a revolutionary process which involves cooperation in the European Higher Education Area (EHEA). The Ministers of Education and university leaders of 29 countries launched this process and signed the Bologna declaration in 1999 in order to establish a European Higher Education Area by 2010 («University Autonomy in Europe», 2009). Azerbaijan also joined the United Nations Economic Commission for Europe (UNECE) in1993. It is essential both for the UNECE Strategy for ESD and the Bologna Process to develop the competences of professionals and to nurture informed active citizens (Fadeeva and Galkute, 2012). However, «ESD is not widely recognized and referenced in the Bologna Process as an important factor in HE development» (Fadeeva and Galkute, 2012, p.92).

Although Azerbaijan attempts to integrate into the European Higher Education Area, it has not moved towards a market-oriented education system (Tempus, 2012). The current education system does not develop students' key competencies, including critical thinking. Therefore, currently, when students graduate from higher education institutions, they experience difficulties meeting the requirements of the labor market. Furthermore, the local context of the current education system was not considered in terms of the establishment of international partnerships and the implementation of the Bologna principles. Instead, Murshudova (2011) suggests the importance of local partnerships among national HEIs, «This will help to share the best practices of internationalisation efforts among the local institutions and reduce the costs of consultants from abroad» (p. 52).

Implications

The main aims of this study are to help researchers, practitioners, and higher education institutions to familiarize themselves with examples from other

countries' experiences,to describe the Azerbaijani higher education context, and finally, to recommend what needs to be considered in the Azerbaijani context.

Dlouhá et al., (2017) claim that the development of research and teaching and learning settings, sharing best practices, and building cooperation across Europe can improve the implementation of ESD principles in HE. However, it is important to consider local issues to guarantee the successful implementation of the ESD principles (Kitamura, & Hoshii, 2014). Furthermore, as stated by Kouwenhoven (2003), in developing countries, many higher education institutions face a mounting gap between their curriculum and the demands of the labor market, especially in terms of general key competencies such as problem-solving, critical thinking, systems thinking, teamwork, and project management. Azerbaijan, as a developing country experiences a similar situation. There are various potential threats to this initiative such as university rules/regulations, an old-fashioned educational approach based on assessment of memorization rather than the development of skills, and the centralistic approach to examination. A proven way to overcome this challenge is to include all responsible stakeholders who will be affected by the change and to try to come to a collective agreement. Based on the experiences of the countries examined, we can say that the problem is that the transition to competence-based education for sustainable development happens with little collaboration. To be more specific, higher education institutions decide on those competencies and design the curriculum by analyzing the best practices of countries which have successfully implemented it, without paying attention to local factors. We recommend, therefore, that there should be a partnership between educators and employers in identifying the main competencies to be developed; if the main goal is to equip students with the competencies necessary to be successful in the workplace, input from employers is crucial.

Finally, a critical analysis of the literature revealed that much of the work on this topic focuses on defining competencies, emphasizing the importance of the ESD approach, and showing its application. However, there is a lack of literature on preparing educators. Therefore, as another implication, this paper argues that it is crucial to assist educators to understand ESD, to provide them with intensive training and coaching, and to support them in this transition process in the continuous evaluation of the curriculum and making necessary adjustments.

Conclusion, Limitations, and Future Research Agenda

This paper examined the literature on Education for Sustainable Development (ESD) and competency-based education to provide a comprehensive synthesis and critical analysis of the published research, draw implications for practice, and propose a research agenda.

A few limitations of this study are worth noting. Firstly, the initial review of articles research process may have led to the elimination of some critical articles. Secondly, the majority of studies and experiments described the Western world. Since different cultures have different attitudes towards education informed by their core values and various types of local contexts, a review of the studies conducted in different cultures could have brought a new perspective to the topic. A related issue is the fact that all the literature reviewed was in English, thus potentially missing valid points presented in publications in other languages. Finally, the literature review revealed a significant number of mainly conceptual papers on this topic, but few empirical studies explored or tested the conceptual ideas related to this topic.

Thus future studies may wish to conduct empirical research to understand what kind of processes countries go through in implementing competency-based higher education which will lead to sustainable development and will meet the requirements of the organizations, and what factors help or hinder this process.

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