



HANDBOOK SECTION FOR THE SELF-DIRECTED ONLINE TRAINING PLATFORM

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1 Introduction

In order to provide efficient help for students at risk from dropping out, the team of SUnStAR project (Supporting University Students at Risk of Dropping Out) have decided to create a Self-Directed Online Training Platform which includes 6 modules aiming to enable students to obtain relevant knowledge and skills within domains important for academic life. Five modules cover the following domains in which students could experience various difficulties making them vulnerable and at risk of dropping out: Motivation, Academic Resilience, Self-Regulated Learning, Social Networking, and Career Self-Management. The sixth module, called What if? is dedicated to students who have already made a decision to leave university, or leave the program of their studies, and might need help to overcome negative emotions and become ready to explore other options and to make further choices regarding their career and education. Development of a learning platform for students at risk of dropping out is concordant with strategies of European Union (European Commission, 2011) for creating educational context which will support a minimum of 40% of young generation in completing tertiary education. Although we will later discuss all the advantages of online learning in more detail, here we will mention one, more general, reason for choosing this approach. Namely, substantial research shows that young people use computers, tablets and mobile phones very frequently and these gadgets have become an integral part of their everyday life (Kubiszewski, Fontaine, Rusch, & Hazouard, 2013; Romer, Bagdasarov & More, 2013; Twenge, Martin, & Spitzberg, 2018; Van den Eijnden, Meerkerk, Vermulst, Spijkerman, & Engels, 2008). In accordance with such familiarity with electronic devices are also the findings about high learning motivation associated with learning process relying on digital technologies (Maynard & Cheyne, 2005). Moreover, using digital media in education is a dramatically increasing phenomenon (OECD, 2016), and it is exactly at the academic level that e-learning is most present (Chow & Shi, 2014; Sharpe & Benfield, 2005).

According to Burns (2011), the main task when creating a learning course is to develop efficient *instructional design* which he defines as an extensive concept relating learners' needs, adequate contents and use of particular technological tools in order to guide students towards defined educational goals. Burns (2011) emphasizes that instructional design is particularly significant in a distance learning situation, because students' learning is almost exclusively mediated through use of technology. Consequently, he provides very detailed and specific recommendations regarding the development of successful instructional design. Here we are going to highlight some of them that we decided to abide by when constructing the learning platform. Burns states (2011) that instructional design has *to meet the needs of adult learners* meaning that they should be treated with respect and

recognition and that their previous experiences as well as various learning styles are to be integrated into programme. Besides, such programs need to address real-life challenges and enable learners to reflect on and analyse their own behaviour and experiences with six modules. This is what we exactly had in mind when targeting various problems that students could face in academic life. As already mentioned, we tried to respect students' differences and to support them in the process of reflection on the difficulties they experienced, but also scaffolding them towards building strategies for their solution. Burns emphasizes that the operationalization of mentioned principles requires clarifying learning expectations and goals which should be reached through activities meaningful for users. We have built this principle in our learning platform so that at the beginning of each module goals that users should attain at the end of the learning process within that module are explicated at the beginning of each module. Burns also claims that it is important *to provide instructional variety* through different activities and assignments and to make learners interact with the content in numerous ways engaging a variety of cognitive processes. Moreover, our learning platform relies on Dabbagh's (2005) *triangle model* of e-learning, which includes pedagogical component, based on principles of active learning. Burns (2011) also states that it is plausible to use multimedia resources, as one of the great advantages of IT, to enhance learning by influencing users' motivation in various ways. He summarizes how different media could be exploited in an efficient way. According to him, text information needs to guide a user through certain steps of the learning process. Animations, simulations and other visual stimuli enhance learners' understanding of concepts and their relations. Videos are useful as models for procedures, skills and behaviours that we intend to develop in learners. Images are particularly significant because they can support verbal instruction and comprehension in learners with reading difficulties. Audio stimuli might be helpful for people with reading and sight impairments. Use of various colours is also recommendable because they can deliver different messages and enhance memorizing. All these recommendations were followed in the process of designing learning content within six modules of our platform. Another important characteristic of efficient instructional design is its *flexibility* which is one of the great strengths of digital learning. Burns (2011) argues that learning design has to be in accordance with different users' preferences, schedules and connectivity options, and that it should also stimulate their various abilities offering a wide choice of activities. This implies that those constructing learning context should be realistic regarding time, place, and technology, and to offer simple and intuitive interface regardless of learning content complexity. Furthermore, Burns (2011) emphasizes that distance learning courses should be accessible to all learners which means that instructional design is universal covering diverse learners' needs and applying different learning approaches. Hence, designing

platform's interface and various activities, we had in mind that they should be adjusted not just for use on computers, but on tablets and smart phones as well. Smart phones are particularly important because they, as Burns claims, function almost as mini-computers. Users are familiar with them and rely on their multiple functions. They are especially useful when user is in an area poorly covered with Internet so they can access it through cellular networks having in mind that cell phones still have better coverage offering reliable connection to Internet (Burns, 2011).

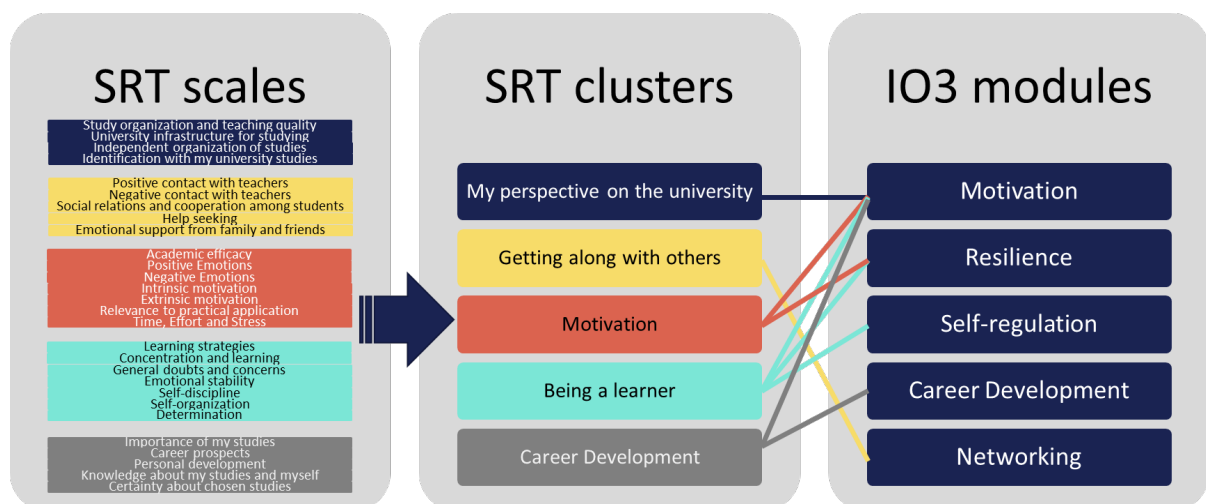


2 Connecting SRT with Online Training Platform

The first step to connect the SRT to inline learning was to reduce the SRT 26 measures to a set of 5 clusters. Figure 1 describes the clusters that emerged from this aggregation: my perspective on the university, getting along with others, motivation, being a learner and career development. The next step was to connect this group of clusters to the five self-training modules.

As can be seen in figure 1, all clusters are linked to the modules, with two (motivation and being a learner) that establish a greater number of relationships, which suggests their relevance as core modules of the training. The focus on linking SRT to online training, mediated through clusters, was reflected in the design of the contents, activities and tasks included in the modules.

Fig. 1 – Connecting SRT scales with Online Learning Platform



3 Modules – domains targeted with the online learning platform

In this section we elaborate shortly on the theoretical foundation of the six modules built in the online training platform, their didactical goals and how they are connected to SRT instrument aiming to detect students at risk of dropping out and direct them towards matching modules on the learning platform. We will also briefly refer to the content of each module. At the end of each module there is a part dedicated to students' assessment and evaluation of their experiences after completing particular module.

3.1 Module 1: Motivation

Student achievement motivation has been consistently associated with student commitment, completion of studies and academic success (Heublein, 2014; Richardson, Abraham, & Bond, 2012; Robins, Lauver, Davis, Langley, & Carstrom 2004; Tinto, 1993; Van Bragt, Bakx, Bergen, & Croon, 2011). On the other hand, motivational vulnerability and maladaptive motivational beliefs are likely to result in students' intention to abandon their studies or the occurrence of university dropout (Ruthig, Perry, Hladkyj, Pekrun, Clifton, & Chipperfield, 2008; Richardson et al., 2012; Robins et al., 2004; Troelsen & Laursen, 2014; Van Bragt et al., 2011). Several motivational beliefs have been acknowledged for their contribution to university students' adjustment and performance (Hulleman, Barron, Kosovich, & Lazowski, 2014; Hulleman, Godes, Hendricks, & Harackiewicz, 2010; Robbins et al., 2004; Troelsen & Laursen, 2014). These beliefs include intrinsic and extrinsic motivation, mastery goals, subjective task values (intrinsic/utility/attainment value vs cost), control and efficacy beliefs, attributions etc. In short, intrinsically motivated and mastery-oriented students, students with high competence beliefs and adaptive causal attributions (internal locus of control, unstable and malleable attributions of success and failure), and students who value academic learning are less likely to fail or to quit university. Evidence (Robbins et al., 2004) related to Expectancy-Value-Cost Theory of motivation showed that students' attainment value (Eccles & Roeser 2009; Eccles & Wigfield, 2002; Wigfield & Eccles, 2000) was one of the strongest predictors of their performance, alongside utility values. In the opposite direction, ambivalence regarding studies negatively predicted study continuance and positively dropout risk (Van Bragt et al., 2011). Furthermore, competence beliefs and value for STEM choices at university predicted study continuance (Perez, Cromley, & Kaplan, 2014).

Recently, achievement motivation has been associated with achievement emotions in academic settings, both positive and negative ones such as enjoyment, anxiety and boredom (Pekrun & Stephens, 2010; Respondek, Seufert, Stupnisky, & Nett, 2017). Research has indicated that positive

emotions about university studies contribute to students' successful adaptation, whereas negative ones are more likely to be associated with dropout intention and course withdrawal (Ruthig, Haynes, Stupnisky, & Perry, 2008; Respondek, Seufert, Stupnisky, & Nett, 2017).

All aforementioned suggests that any attempt to facilitate students' adaptation to higher education settings and to inhibit dropout intentions, should take into account students' motivational development and emotional well-being relevant to their studies. Based on seminal theories in the field (i.e., Expectancy-Value-Cost Theory, Self-Determination Theory, Control-Value Theory of Achievement Emotions), this module will constitute a short integrative motivation intervention (e.g., Hecht, Priniski, & Harackiewicz, 2019; Hulleman, et al., 2014; Hulleman & Barron, 2016; Hulleman et al., 2010; Jamieson, Mendes, Blackstock, & Schmader, 2010; Lazowski & Hulleman, 2015; Martin, 2008). Specifically, this module will aim to raise student awareness of their motivational beliefs and academic emotions, enhancing their motivation and emotional functioning in relation to their studies, thus facilitating their learning and achievement, as well as empowering them to confront academic challenges associated with course performance, studies completion, and university dropout. The learning content of this module will target student motivation (intrinsic, extrinsic), beliefs and values about the studies that have been acknowledged as having motivational power (certainty about their studies, personal development, self-efficacy and expectations for success, interest, utility, attainment value, cost), and achievement emotions (positive, negative) associated with academic life.

As for all SUnStAR modules, the 'Motivation' module will address students' motivational beliefs and academic emotions based on their answers in respective SRT scales. Specifically, from the SRT the following scales will be targeted: 'Importance of my Studies', 'Identifying with my University Studies', 'Positive Emotions', 'Negative Emotions', 'Personal Development' and 'Career Prospects', 'Intrinsic Motivation', 'Extrinsic Motivation', 'Self-efficacy', 'Relevance of Practical Application', 'Certainty about Chosen Studies', and 'Time, Effort and Stress'.

In accordance with previously mentioned module goals, two units have been created as integral parts of this module: the first is dedicated to motivation and the second deals with relevant emotions. As in other modules, the two avatars, in the form of comic male and female characters Oli and Ema, were used to introduce the content and goals of the module to students. The Motivation unit starts with Oli telling students about what they could expect working on its content. Hence, students are informed about the concept of achievement motivation and relevant research results showing its significance for academic success. After that students are invited to do an exercise in which they are introduced to various important notions related to achievement motivation concept. Furthermore, students are informed about distinctive characteristics of intrinsic and extrinsic motivation and their

roles in academic context. Within this unit they have opportunity to write an essay about their academic experiences related to specific motivation beliefs and to receive feedback regarding the role of such beliefs in the studying process. It is important to emphasize that all essays students write while completing different modules could be printed and collected as materials that they could show to a counsellor or other service/person in charge or willing to provide assistance.

The unit regarding academic emotions begins with Ema guiding users towards its goals and purpose. The most important positive and negative emotions associated with the learning process and broader academic context are stressed. After that, short stories describing examples of four students' experiences are presented and students have to identify various emotions associated with each story. In the next task students need to select two most intense emotions associated with their academic life in order to reflect on their related experiences. Feedback explaining particular effects of various positive and negative emotions in different academic situations (learning, passing exams, assignment deadlines....) is provided after students complete the mentioned tasks. It is important to mention here that prompt and meaningful feedback, closely related to previous students' activities, is an important factor of efficient learning on academic education level (Orrell, 2006). Moreover, since immediate feedback is often mentioned as one of the great advantages of e-learning (Burns, 2011; Ivić, 2019) in our e-platform feedback accompanies each activity (task, essay, question, quiz, test...). At the end of Unit 2 within the Motivation module students have opportunity to apply everything they learned in this module and to give advice to two students they were introduced to previously. Module 1 finishes with students' assessment and evaluation of their experiences after completing this module. Such ending is included in other modules on this electronic learning platform as well.

3.2 Module 2: Resilience

Entering university, students may find themselves in a variety of demanding situations for the very first time, therefore adaptive emotion regulation abilities in response to experiences previously appraised as upsetting or stressful are of crucial importance for these young adults. Knowing more about student resilience resources, such as adaptive emotion regulation abilities, and how they may influence positive as well as negative aspects of student adjustment during periods of stress will have important implications for supporting emerging adults undergoing a major life transition of beginning college. Resilience is suggested to play an important role as a protective factor to adverse events and it also predicts academic success (Munro & Pooley, 2009; Parker, Summerfeldt, Hogan, & Majeski, 2004) and some authors argue that coping involves both emotional intelligence and resilience

(Edward & Warelow, 2005). High self-efficacy beliefs can have a positive impact on motivational processes and being self-efficacious may be helpful to show resilience in the face of adversity. By activating affective, motivational, and behavioral mechanisms in adverse situations, self-efficacy beliefs can promote resilience and have been conceptualized as one of its components (Rutter, 1987; Werner, 1982). Individual emotion regulation practices have been addressed extensively in the literature on students' coping with stressors in university (Tamir, John, Srivastava, & Gross, 2007), with emotion regulation skills demonstrating direct associations with well-being (Gross, 1998; John & Gross, 2004). Hence, supporting students to be more resilient and to use emotional intelligence as an efficient tool for emotional regulation is the main task of this module. Namely, this module intends to help students to be aware of their emotional resources and academic self-beliefs, and their relevance to HE adaptation. As stated previously, resilience is of great importance in terms of both endurance and adaptation. By triggering affective, motivational, and behavioural mechanisms in adverse situations, academic self-beliefs can promote resilience. Emotional regulation is a significant mediator between resilience and academic adaptation and recommended training in emotion management and problem focused coping can provide students with necessary strategies for managing adversities of university life and be successful in academic settings. Cultivating HE students' academic self-efficacy (Bandura, 1994; 1997) and resilience is a worthwhile goal of this module and equipping students with the efficacy beliefs and emotional regulation skills can help them in a variety of pursuits throughout university life experiences.

During the development of the module, there was a major concern to connect the SRT scales with the proposed training content - academic resilience and academic self-efficacy. From the analysis of the SRT the 'Academic Efficacy', 'Positive Emotions', 'Negative Emotions', 'General Doubts and Concerns', and 'Emotional Stability' scales were selected. Apart from responses to these scales from SRT, students will receive feedback and those who are at risk of dropping out will be directed to a specific training available on the online platform or search for more specialized support provided through the online resources' platform.

Resilience module also consists of two units. The first unit, called Resilience and Self-Beliefs begins with the presentation of its main goals. The following audio and video files describe the self-efficacy notion and the sources of self-efficacy beliefs, as well as their importance for managing challenging situations in academic life. They are followed by exercises helping students to consolidate what they have learned in the form of drag-and-drop activity, quiz and essay asking them to recognize or formulate productive strategies appropriate for specific academic situations. As emphasized before, although this module contains various types of tasks, all of them are followed with a prompt

feedback conceptualized as specific information related to student's previous answer. Resilience and Emotions is the second unit within the Resilience module. As in the previous learning unit, at the beginning students are familiarized with the learning unit's goals and after that they watch a video about two students experiencing positive and negative emotions during studies. This is followed by a video exploring the concept of emotional self-awareness. The next video invites students to imagine one situation they could live through in their faculty and subsequently they are asked to think about given strategies and estimate how they would react to the described situation. Based on their choice they are receiving feedback which evaluates chosen strategies and their adequacy for efficient studying and good relationship with other students. Additional feedback is prepared in the form of an audio file containing the list of possible productive strategies.

3.3 Module 3: Self-Regulated Learning

Götz and co-workers (2013, p.126) define self-regulated learning as “a form of acquiring knowledge and skills in which the learners are independent and self-motivated. Learners independently choose their own goals and learning strategies that will lead to achieving those goals. It is through evaluating the effectiveness of one's learning strategies - comparing one's current state with the target state - that learning can be modified and optimized”. Azevedo and associates (2012) claim that, despite the differences between various definitions of self-regulated learning, authors agree that it implies active and efficient management of one's own learning using strategies and monitoring cognitive processes. Self-regulatory learning skills include a broad array of cognitive, metacognitive and motivational strategies such as planning, monitoring, regulation, evaluation, study/time management, effort regulation, study-leisure conflict and help seeking indicative of the active, conscious and purposeful engagement of the learner her/himself in the learning process as well as her/his personal responsibility for her/his own learning. Such learning enables lifelong learning and an adaptation of the target goals. It is established that learning approaches and use of learning strategies are important predictors of academic success and study persistence (Bernardo, Esteban, Fernández, Cervero, Tuero, & Solano, 2016; Boekaerts & Corno, 2005; Respondek et al., 2017; Richardson et al., 2012; Zimmerman & Schunk, 2011). Marton and Säljö (1976a, 1976b) started investigations regarding deep and superficial learning approaches which was a basis for the SAL (Student Approach to Learning) theory developed later by other authors (Biggs, 1979; Biggs, Kember & Leung, 2001; Entwistle, Hanley & Hounsell, 1979; Vermunt, 1996). Research mostly found negative relationship between academic success and superficial learning style, and a positive correlation with a deep one (Lazarević & Trebješanin, 2013). It is also registered that students with sensory learning

style are more aware of their own motivation, are more certain of their abilities and goals than students who apply other learning styles, especially the intuitive one (Tubić, 2003). Such findings imply that it is important to respect different learning styles and provide opportunities to students with various inclinations, as suggested by e-Learning authors.

Having in mind all the important points regarding self-regulated learning and learning approaches it is clear that the main goal of this module is to provide scaffolding to students at risk of dropping out in domains of metacognition, self-regulation and learning strategies. Respectfully, this module will address students' ability to self-regulate and monitor their own learning processes, learning strategies and concentration. Therefore, the corresponding scales of IO2 Student reflection tool (SRT) are taken into account. The topics of learning regulation, monitoring of learning processes, learning strategies and concentration are linked to self-awareness, self-reflection and the ability for self-regulation. Hence, a student will be directed to this module of the learning platform if he/she has low scores on the following scales from the SRT: 'Learning Strategies', 'Concentration and Learning', 'Self-discipline', and 'Self-organization'.

The Self-Regulated Learning module starts with a presentation of the module's goals. After that, a video shows a case of a student who experienced particular learning problems. Users of the platform are asked to define problems of the student from the video. Afterwards has and they have the opportunity to compare their definition with a few given answers, as the feedback for the task. In the new task users are supposed to give advice to the student with learning problems and again they can compare their answers with suggested strategies oriented towards help seeking, organization and time-management. Following time-management other type of learning problems are stressed i.e. difficulties with concentration and focusing on the main ideas in a learning content. The list of strategies enhancing concentration and focusing is suggested and students are encouraged to identify the most suitable learning strategies which are adjusted to their needs and preferences. Two tasks within this module are designed to guide students towards exercising and improving self-regulation and metacognitive abilities. At the end of the Self-Regulated Learning module students are asked to reflect on everything they learned while completing different activities.

3.4 Module 4: Social Networking

Many authors confirmed that strong social connections within university decrease the risk of dropping out (Heublein, 2014; Roberts, 2018; Tinto, 1975). Having in mind that peer and teacher-

student relationship represent the most intensive interactions we decided to develop a module which focuses on these two aspects.

Good relationship with peers is perceived as a remarkably relevant factor associated with a lower risk of dropping out, studying satisfaction, better adjustment and integration into university, as well as with academic achievement (Collings, Swenson, Nordstrom, & Hiester, 2008; Sanchez, Bauer, & Paronto, 2006; Swenson, Nordstrom, & Hiester, 2008; Tinto, 1975). Authors recognized various peer interactions supportive for studying. Peer-mentoring as a formal kind of peer relationship has positive effects on integration into university and lower dropout likelihood (Collings, Swanson, Nordstrom, & Hiester, 2008; Pearson, 2012). Student-centered teaching paradigm in higher education emphasizes the importance of engaging students in cooperative learning during lessons for better understanding of different phenomena and academic achievement (Bilgin, 2009; Bruffee, 1993; Hilsdon, 2014). Informal student contacts and group interaction are vital for social and academic integration since they provide support and encouragement and influence students to participate more actively in academic life (Dennis, Phinney & Chuateco, 2005; Tinto, 1997, Venuleo, Mossi & Salvatore, 2016; Wilcox, Winn & Fyvie-Gauld, 2005).

A large corpus of investigations shows that quality and frequency of teacher-student relationship is associated with students' adaptation in early part of studies (Pascarella & Terenzini, 2005; Wilcox, Winn & Fyvie-Gauld, 2005), academic performance and competence development (Yorke & Thomas, 2003), engagement and motivation (Lundberg & Schreiner, 2004; Strauss & Volkwein, 2004; Zepke & Leach, 2010), satisfaction with studies (Creasey, Jarvis, & Knapcik, 2009; Calvo, Markauskaite, & Trigwell, 2010; Dobransky & Frymier 2004; Trigwell, 2005) and with the decision to finish or to leave university (Hagenauer & Volet, 2014; Tinto, 1975; Wilcox, Winn, & Fyvie-Gauld, 2005). Authors distinguish formal (academic) and informal (casual) contacts between students and teachers (Essays, 2018; Hoffman, 2014). Formal interaction takes place in classrooms, while informal occurs inside of instructional settings (teachers' office hours, research projects) or outside (informal discussions or conversations, digital communication: e-mail and social media). By creating this module, we tried to make students aware of various modes of communication and to support them to participate in all of them.

The goal of the Social networking module is to provide an online training for students whose scores on the related scales on SRT show that they have no satisfying relationship with other students and/or teachers. These following scales were chosen from SRT: 'Positive contact with teachers', 'Negative contact with teachers', 'Social relations and cooperation between students', and 'Help seeking'.

Social Networking module consists of two units covering students' relations with other students and teachers. It starts with introduction associated with module's goals and contents. Unit 1 emphasizes the importance and potential benefits of peer relationships for different aspects of academic life. Being aware of students' interest in social networks this unit aims to emphasize their significance for academic life. Consequently, a short movie was created suggesting how social networks could be used efficiently to establish connections and share information about studying with colleagues. Communication is one of the topics considered within this unit and advice about successful communication skills are provided. After that students are invited to solve a short test whose results and related feedback show their dominant communication strategies and ways they could be improved. Teamwork and cooperative learning appear as another important issue. Students can watch a video and see a photo of the ATLAS project team illustrating the importance of teamwork in academic context and future professional life. They are suggested to solve Teamwork test and to discover which obstacles they could face in a group and how to overcome them.

A brief introduction highlighting the relevance of good relationship with teachers for successful studying opens Unit 2. An illustration of one class showing different students' behaviour is presented. Students are encouraged to think how the teacher from the picture perceives each student and how they feel about them. They can click on the professor and each student on the picture and to check their assumptions. Seeking help is a very important skill in academic context and with this short movie we tried to stimulate students to ask professors to help them with particular problems. Our intention was to encourage students to be pro-active in formal academic context reminding them to take part in various activities in the classroom (asking questions, participating in discussions, active listening, doing homework and exercises) and to reflect on the potential benefit of such engagement in the form of a short essay. After that avatar gives feedback students could relate to easily in their essays. Out-of-class interaction types with professors and their advantages are demonstrated by a video. We wanted to instruct students how to meaningfully and efficiently use communication via e-mails with professors displaying examples of typical student e-mails containing different kinds of mistakes. Hence students are proposed to identify and click on particular content of the e-mails they consider problematic. Their click is followed by the feedback explaining why that content is not appropriate and how it could be revised. Consultations and students' joint participation with professors in scientific projects are two other types of out-of-class interactions stressed within this unit. Students could take an exercise and assess given reasons for going to consultation with immediate feedback provided regarding right and wrong motives for doing that. At the end of this unit students are

encouraged to try to join professor's scientific project in accordance with their own interests and academic skills.

3.5 Module 5: Career Self-Management

Career Self-Management (CSM) is a continuous, regular, daily mode of human functioning, involving the will and ability to define short- and long-term career-life goals, the exploration of self-qualities and environment opportunities, turning intentions into action and evaluation of the results of personal options and behaviours, with consequences in future career-life choices and goals (Taveira & Rodriguez, 2010). CSM is thus a meta-competence, referring to a range of competencies which provide intended systematic ways for individuals to gather and process self, educational and occupational information and to make decisions and cope with transitions. CSM also involves making effective use of self and environment knowledge in educational and work decisions, to execute career-life plans, to manage and develop relationships that support career-life goals and choices, and management of life roles (Lent & Brown, 2013).

Alongside low academic achievement, low academic satisfaction and social isolation, career uncertainty is one of the major factors of dropout (Graunke, Woosley & Helms, 2006; Hovdhaugen, 2009; Hull-Blanks, Kurpius, Befort, Sollenberger, Nicpon, & Huser, 2005; Peterson, 1993; Price, 1993; Tinto, 1993). The mentioned attrition factors can be considered as consequences of a lack of development or its disturbance in students' CSM competences and there we see an urgent need for intentional career intervention within SUNSTAR project. Namely, supporting CSM competences we prepare students to understand and value education and work, in personal and social terms, and to be able to understand the importance and ways of learning, working and making life choices in the context of fluid, changeable and unpredictable environments. Specifically, fostering CMS with this module can equip students to: (a) effectively use specific competences and to help instruments and services at a time and place that suits their needs; (b) identify opportunities for developing their learning and employability goals and skills; (c) understand what sort of career self-management skills they need to progress in academic and occupational life; (d) understand the importance of being better able to make career decisions, manage change and uncertainty by planning, and exploring and making choices in a more confident and purposeful way. Consequently, after CSM module, it is expected that students will: view career self-management as a lifelong process (rather than a single event like choosing an occupation or job), know how they can better understand their values, goals and priorities, be able to identify opportunities to develop their learning goals and sustainable

employability skills, know what sort of social, academic and career management skills they need to progress, be able to manage change and uncertainty, know the range of career management and other helpful services at a convenient time and place.

The CSM module is related to students' difficulties based on their answers in the following SRT's scales ('Importance of my Studies'; 'Career Prospects'; 'Personal Development'; 'Knowledge about my Studies and Myself'; 'Certainty about Chosen Studies').

The framework for this module is designed on the cases of two students experiencing various problems related to the lack of CSM competences, we believe students could relate with easily. The topics and the skills that could be improved after completing the module are described at the beginning. CSM is presented as a complex set of competences relevant for academic context but also for the transition to and future professional life itself. Students are invited to reflect on manner they can adopt such competences. Afterwards the first case of 22-year-old Sociology student Oli is presented. After completing the SRT he became aware that he was unmotivated and even slightly depressed. With the drag-and-drop task activity students have to discover what happened to Oli, and to write a short essay about competences he needs to develop in order to upgrade his CSM skills. When they finish previous activities, students receive feedback. Following that, the second case is presented. Namely, Ema is a 19-year-old female student of Biology with a specific family background. The results of her SRT show that she has high academic and occupational aspirations, but low academic self-efficacy. Again, students are asked to write an essay regarding CSM competences she needs to acquire and feedback follows their activity. The module ends with a short summary of the main skills of CSM, such as initiative, goals definition, career exploration, decision-making, experimentation, and social competences.

3.6 Module 6: What If?

The decision to quit university studies is a critical life event, because it includes among other issues losing the peer group, with whom the transition from adolescence to adulthood was supposed to be experienced (Born, Crackau, & Thomas, 2008). That is why we decided to develop the specific module dedicated to students who have already made the concrete decision to leave their peer group and follow a different path.

Such a major life event is potentially accompanied by negative emotions. Appraisal theory conceptualizes the emotional event as a sequential process in which cognitive evaluation takes place between the perception of a stimulus and the subsequent emotional response as a causal step

(Pekrun, 2006). This can be either an internal or an external stimulus. External stimuli include e.g. objects, events, as well as foreign or own behaviour. Internal stimuli, on the other hand, are "mental representations" (Scherer, 1987), and refer to ideas and memories (Gross & Thompson, 2007). After the stimulus has been perceived, it is evaluated immediately. Appraisal theorists come to the conclusion: Depending on how a situation is assessed, one reacts emotionally to it. Specific constellations of appraisals determine which emotion is experienced (Frenzel, Gotz, & Pekrun, 2015).

Taking these considerations into account, a reflection on the study situation, the dropout decision and the subsequent evaluation is the initial point to enhance strategy use in order to cope with this critical life event (e.g., Pekrun, 2006). Thus, the focus of the "What if" module is about growing out of a potentially negatively assessed situation without harming self-efficacy perceptions. In order to reach this target, this module is intended to provide students with a fixed dropout decision with measures of reflection on the situation and strategies to master this transition safely and well.

One possibility to target critical life events, such as the decision to leave studies, is cognitive regulation in the form of reappraisal (new or re-evaluation). Reappraisal of dysfunctional assumptions is one of the key components of cognitive therapy in clinical settings (Beck, Rush, Shaw, & Emery, 1979; Campbell-Sills & Barlow, 2007; Goldin, Ziv, Jazaieri, Werner, Kraemer, Heimberg, & Gross, 2012; Bandura, 2004) as well as within educational processes. Two types of reappraisal strategies are mentioned by the authors. On the one hand, negative aspects of a stimulus can be reinterpreted as neutral or positive, using a negative emotion as an example. This is also referred to as situation-focused reappraisal or redefinition. On the other hand, a negative stimulus and possible subsequent emotional reaction can be classified as not personally relevant by assuming the role of a distant observer. This is referred to as self-focused reappraisal or distancing (Kalisch, Wiech, Critchley, Seymour, O'Doherty, Oakley, & Dolan, 2005; Ochsner & Gross 2007). Within this module we intended to inform students about these strategies and to encourage them to choose the most suitable type for them.

In addition to the appraisal and reappraisal approaches, the rational-emotive therapy (RET) (Baumann & Perrez, 1998) also known as Ellis method (Schwartz, 2007) is central and well-studied foundation to purposefully examine and change emotions and evaluations in a structured approach. The effectiveness of the RET was empirically investigated by Spörrle (2007) and confirmed in the context of rational decisions. The RET postulates five stages, some of which have strong similarities with the theory of reappraisal: (1) The event; (2) Beliefs, rational and irrational; (3) Consequences, including healthy and unhealthy emotions; (4) The disputation and (5) The effect, i.e. the cognitive restructuring.

Hence, the provision of measures of reflection and suggestions for reappraisals at these stages is the main goal of the “What if?” module. These measures are aimed at strengthening self-efficacy and willingness to accept social support. Self-efficacy as cognition about one's own abilities influences human actions and lead to decisions and convictions, e.g. a decision to drop out of university (Mohrenweiser & Pfeiffer, 2016) and all following (educational) decisions. It is assumed that one approach to reinforce self-efficacy is by positive role models (Bandura, 1997). The other important aim of this module is to support students leaving university to do competence evaluation i.e. to ask themselves and answer the questions: What did I learn at university and take with me despite dropping out? How can I use that now and in the future? Namely, it is important not only to discuss the events and evaluations, but also to draw some plausible conclusions about that. In our opinion this might help students to separate the gain of experience and what was actually learned from their negative experiences. In the RET this represents the disputation and, as a result, the cognitive restructuring.

Taking all mentioned theories into account What if module encourages students who already made a decision to leave their studies to reflect on their emotions and thoughts and to realize the positive consequences of such choice. The main goal of this module is to provide a new and positive perspective on such life event and to support students to explore productive ways to cope with it. In accordance with importance of positive role models from Bandura's theory, the module begins by introduction of famous and successful people who encountered such life event as well. After that users have opportunity to watch video describing the nature of our beliefs and more importantly their potential positive and negative influence on behaviour. After that they are asked to do an exercise and to brainstorm regarding their fears connected to their decision to leave university. In the next step they should divide their answers in the two groups: the one containing realistic beliefs, and the other one including the unlikely fears. In this way users become aware of different beliefs and more able to deal with them in a productive way, i.e. to disregard unrealistic beliefs and to focus on the realistic ones. Such focus saves energy and gives students a chance to think of countermeasures to their fears labelled as realistic and to cope with them in such manner. This exercise is followed by video explaining the concept of consequence closely related to decision making process. After such introduction students are invited to brainstorm again, this time on consequences of their recent decision to stop studying and to add emotions triggered by those consequences. Again, they should group their answers in the two categories, the one associated with goal-promoting behaviour or healthy emotions and the opposite one. The further content of the module is focused on emphasizing the first group of consequences and providing some strategies to deal with negative emotions and

expectations. At the end of What if module students are encouraged to think and to list all strategies, skills and knowledge they obtained during studies, which are frequently underestimated or neglected by those who leave studies. For those who can't to think in this direction we provided many examples as guidance to accomplish this task. After that module users are reminded to appreciate listed knowledge and competences as a good base for new plans regarding their future professional career. We wanted students to become aware of services which can help them with negative emotions, but with their future professional choices as well, so we invited them to consider to visit faculty counsellor, career centre or therapist. We also suggested them to try our fourth module Career self-management as a great learning opportunity to think about their professional future.

4 Conclusion

The online platform is designed and founded on e-learning models which are student-centered, adjusted to various needs and preferences and enable students' active role in the learning process. The online self-learning platform is connected with SRT aimed to detect students' specific problems and to direct them towards modules providing help regarding difficulties they experience. Intending to reach as many students as possible, we made use of the platform also possible for students who have not interacted with SRT before. One could notice that modules we created are based on contemporary theories of relevant concepts (such as motivation, resilience, learning strategies, social interaction in the learning context and career self-management) and related research results. With module six we tried to provide assistance not just for students at risk from dropping out but for those who already decided to leave the program or university. Having in mind all that is highlighted in this document, we believe that this training platform is of great importance because it addresses everyday problems students encounter in academic life and provides assistance which is in accordance not just with their needs but with their orientation towards Internet content.

To summarize, the main goal of the SUnStAR project was to design an online learning platform in order to support students at risk from dropping out. Starting from relevant theories, research findings and previous scientific projects regarding dropout phenomenon we developed SRT online tool aimed at identifying domains of academic life in which students could experience different difficulties. The intention was to enable students, based on their results after completing SRT tool, to be directed towards one or more modules within e-learning platform which meet their needs appropriately and to get adequate help. The online platform was developed in accordance with theories of learning

perceiving a learner as an individual actively participating in their own knowledge construction provided with scaffolding adjusted to his/her specific needs. Furthermore, in the process of platform designing we relied on modern theoretical approaches regarding distant learning using all its advances and multiple resources, but being aware and trying, at the same time, to overcome its potential weaknesses. The result was the development of six learning modules, to be described in the following part of the manuscript, supported by a MOODLE installation that uses dynamic data management and access.

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