

# Development of entrepreneurial literacy in upper secondary school with Junior Achievement tasks

Küllli Hiimäe-Metsar<sup>a1</sup>, Mervi Raudsaar<sup>b</sup>, Krista Uibu<sup>a</sup>

*Institute of Education, University of Tartu*

*School of Economics and Business Administration, University of Tartu*

## Summary

Entrepreneurship development is a natural part of the functioning of society, which enables the growth of social well-being (Lackéus, 2015; Magistro, 2020). The main feature of entrepreneurship is the entrepreneurial process, which unites different areas of entrepreneurship (Lackéus, 2015). The entrepreneurial process aims to find opportunities to start and develop a successful enterprise (Geisinger, 2016). The entrepreneurial process is followed in stages, but at the same time, it is closely intertwined with the levels of entrepreneurship or individual (incl. personality traits), group work and business environment (Mets et al. 2020; Wiklund et al., 2011).

Entrepreneurship presupposes entrepreneurial competence that begins in the family and continues through education (Grohmann et al., 2015) and varies from period to period. Entrepreneurship education is not yet based on a holistic approach to entrepreneurial competencies, and there is still a lack of knowledge on how to develop entrepreneurship education. The common understanding is that entrepreneurial competence consists of a wide variety of sub-competencies. In the theoretical framework of entrepreneurial competence, EntreComp has been developed as a system of sub-competencies, which helps to pay attention to the development of all necessary sub-competencies in entrepreneurship education. The framework is based on the entrepreneurial process, and it consists of three interconnected competence areas: ideas and opportunities, resources, and into action. Each area consists of five sub-competencies, which form a progressive model for the development of a comprehensive entrepreneurial competence. This model can be applied in education in the design and implementation of entrepreneurship education. (Bacigalupo et al., 2016).

The development of entrepreneurial competence in schools has so far not been sufficiently determined due to the lack of assessment frameworks

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<sup>1</sup> Institute of Education, University of Tartu, Salme 1a, Tartu, 50103 Estonia; kulli.hiimae-metsar@ut.ee

(Duval-Couetil, 2013). Knowledge of students' financial literacy has been assessed in the international PISA benchmarking survey (OECD, 2018), which provides teachers with guidelines for developing students' skills without providing more detailed knowledge on how to do so. Therefore, it is necessary to know which tasks help develop and assess entrepreneurial sub-competencies at the upper secondary school level (Lackéus, 2014; Seikkula-Leino et al., 2010; Ruskovaara, 2014). One option is through entrepreneurship programmes that include a variety of group work and individual tasks (McCord et al., 2018). The most common international programme is Junior Achievement, which follows the logic of entrepreneurial processes.

Due to the nature of the phenomena, entrepreneurship education can only take place if the student participates at all stages of the process and completes it. Understanding whether the respective sub-competence has been acquired and forms a whole is subjective and depends on the result (Mets et al., 2020). It is important to develop all sub-competencies in entrepreneurship education.

This study is based on the sub-competencies described in the EntreComp framework. To develop entrepreneurship education, teachers need different tasks, which should be solved with students either individually or in groups (Mwasalwiba, 2010; Schelfhout et al., 2015). In order to find out which tasks are used to develop the entrepreneurial competencies of upper secondary school students this study analyses the tasks prepared within the framework of the Junior Achievements entrepreneurship education programme adapted to Estonia. When developing students' entrepreneurial literacy, various tasks are used to develop basic entrepreneurial competencies. This study aimed to find out which tasks are included in the Junior Achievement programme and which student entrepreneurial competencies can be developed with them. With the aim to achieve this goal, two research questions were asked:

1. What are the kind of tasks in the Junior Achievement programme that would develop the entrepreneurial competence of upper secondary school students?
2. Which sub-competencies of entrepreneurial competence can be developed through different types of Junior Achievement tasks?

## Method

The study analysed the tasks of the Junior Achievement programme for upper secondary schools, which differed in the nature and purpose of the solution. Tasks with similar characteristics were classified, and task types were formed (Hodson, 2014; Nind & Lewthwaite, 2019). Based on the structure and content, a distinction was made between answering questions, creative tasks, filling

gaps, text-based tasks and combining tasks. Tasks were coded using quantitative content analysis (Bloor & Wood, 2006; Riffe et al., 2005). In the first stage of the analysis, all selected tasks were classified into individual and group work tasks (Druckman, 2005). Individual tasks were defined as tasks where the student had to develop knowledge and skills independently. Group work tasks were defined as tasks that encouraged students to collaborate, start an activity or analyse previously read texts and relate them to joint activities (Krull, 2018). To ensure the reliability of the study, the authors repeatedly read the tasks (Elo & Kyngäs, 2008). The Cohen kappa  $k$  index of agreement between the authors was calculated after the assignment of sub-competencies (varied between 0.81 and 1.0), which confirms the reliability of the study (Landis & Koch, 1977).

### Results and discussion

First, we wanted to know what types of tasks are included in the upper secondary school level Junior Achievement task set. Tasks were divided into individual ( $n = 183$ ) and group work tasks ( $n = 17$ ). Individual tasks accounted for 91.5% of the volume of tasks, and group work tasks for 8.5%. Secondly, all the tasks were analysed based on the EntreComp framework by sub-competencies, grouping them according to the three areas of entrepreneurial competence: ideas and opportunities, resources, and into action. The various sub-competencies were developed a total of 480 times, including 393 individual and 87 group tasks.

Individual tasks were found to develop entrepreneurial competence in all three areas but to varying degrees. The group work tasks developed more sub-competencies in the field of resources, and a small part of the tasks was grouped under ideas and opportunities. Among the group work tasks there were no tasks that could develop risk-taking and resource-building skills, although the importance of these competencies has been emphasised by several authors (Parboni & da Costa, 2020; Jones et al., 2020). Self-efficiency and the ability to use the resources that support the growth of the vision and growth goals are important for the companies' sustainability. It is developed through experiential learning and requires a greater need for achievement and risk-taking, which in turn, is needed to make useful decisions (McCord et al., 2018).

The analysis showed that most of the tasks were aimed at developing the sub-competencies in the field of resources – both with individual and group work tasks, which are especially necessary for the second stage of the entrepreneurial process, where the idea has to be implemented. In entrepreneurship education, this means that at the upper secondary school level, the tasks support the knowledge, skills and attitudes necessary to implement the student's

idea the most (Ruskovaara & Pihkala, 2013). The share of group work tasks was small and does not effectively develop students' communication skills, group work and cooperation skills.

When designing tasks, it would be important to keep in mind that one sub-task or group task could develop sub-competencies in several areas. If students' entrepreneurial sub-competencies are not developed at the upper secondary level, it may be difficult to achieve entrepreneurial competencies later. In the same way, it is challenging to develop sub-competencies at the upper secondary school level, towards which attitudes have developed at an earlier age. However, it is possible to create and use tasks that support those sub-competencies that are less designed. Knowing which tasks are suitable for entrepreneurship education would help reduce bottlenecks in developing students' entrepreneurial competencies.

Further research could analyse students' feedback on the use of tasks in teaching and on the development of sub-competencies. The strength of the study can be considered the result, which provides practical recommendations on which tasks are better suited for development.

*Firstly*, the tasks of upper secondary schools could pay more attention to the development of underdeveloped sub-competencies (e.g., creativity, cooperation, risk-taking and resource mobilisation) as they are suitable for the acquisition of sub-competencies in upper secondary school. *Secondly*, monitoring students' entrepreneurship development requires assessment tools that allow teachers to better plan the learning process and guide student entrepreneurship development. *Thirdly*, the development of entrepreneurial sub-competencies depends on the tasks. Given the objectives of the task, tasks can be developed that are suitable for the development of sub-competencies that have received less attention.

**Keywords:** entrepreneurship literacy, entrepreneurial competence, EntreComp framework, Junior Achievement, individual and group work tasks