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Executive Summary

The TeSTED Blueprint is strategically positioned as a core document that links to other key project outcomes, such as the Baseline Study and the Handbook Assessment Tool. The report is structured as follows:

- The first part analyzes the context of the Erasmus+ initiative called TeSTED
- The second chapter presents the purpose of the Assessment Tool for students at risk of dropping out, as well as its target group.
- The third chapter shows the research results of the Baseline study, carried out within the TeSTED project, for early detection of dropouts, mainly for students with socio-economic difficulties, key indicators and risk factors, the profile of the student at risk of dropping out, and the priority areas for the development of the Assessment Tool.
- The fourth chapter describes the Methodology for developing the Assessment Tool.
- The fifth chapter includes conclusions and recommendations for the implementation of the tool for assessing the risk of school dropout in the VET system.

1. Introduction

1.1. The TeSTED Blueprint Report- A Foundation for Success

The TeSTED Blueprint Report represents an analysis of the process of design and development of the Assessment Tool for students at risk of dropping out of school, an activity carried out within the TeSTED project, "Tackling Drop Outs Through Systematic Students Screening", a funded project by the European Union, Erasmus+ KA2 – Strategic Partnership VET program, that runs between October 2022 and October 2025.

The TeSTED Blueprint is a fundamental document designed to guide the development and implementation of the **TeSTED Assessment Tool**. Its objective is to encourage innovation through a strong mechanism in the VET environment for early detection and prevention of school dropouts due to socio-economic difficulties, transforming VET providers into a safety net for learners at risk, offering advice and alternative pathways, and ensuring their retention in education and training and their graduation (European Commission, 2023; Eurydice, 2022).

TeSTED Assessment Tool is specifically focused on identifying and preventing school dropout risk situations in Vocational Education and Training (VET). Serving as a critical first step, the report ensures clarity, alignment, and a shared understanding among all stakeholders involved in creating an effective psychometric tool (Krötz & Deutscher, 2022).

The primary purpose of the TeSTED Blueprint Report is to define goals and functions, promoting common understanding among all project partners, and to provide a solid foundation for the subsequent development phases of the tool, discussing the psychometric basis for effective assessment (Perchinunno et al., 2021).

This comprehensive guide translates the conceptual framework into actionable steps, detailing the technical requirements, methodological approaches, and quality standards to be met during the tool's construction. It provides essential information for designing assessment items, establishing scoring procedures, and defining the assessment instrument's properties. Essentially, it serves as the architectural blueprint for the entire TeSTED tool, ensuring the final product is robust, reliable, and valid. A quality target of over 70% satisfaction rate for the draft assessment tool underscores the critical importance of this foundational document's quality (TeSTED Consortium, 2023).

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Beyond its immediate role, the blueprint also supports the project's long-term sustainability. Upon completion, the project partnership is committed to maintaining its major outcomes, and this report will provide educational institutions with a comprehensive overview and guidance on "how and what needs to be done to tackle early school leaving." The project's results will thus become a sustainable resource, offering a clear framework and actionable information to effectively address early school leaving. Its lasting value lies in its ability to standardize the approach to school dropout prevention, providing a replicable and adaptable model for future interventions.

Understanding and Implementing Assessment Strategies

The TeSTED Blueprint Report serves as a comprehensive guide for understanding and implementing effective assessment strategies aimed at identifying risk factors associated with school dropouts. It supports the objectives of the TeSTED Project, which focuses on enhancing educational outcomes by proactively addressing challenges that contribute to student disengagement and dropout rates.

The document outlines the theoretical underpinnings and practical tools necessary to assess dropout risks through a multi-dimensional approach, integrating socio-economic, psychometric, and sociometric perspectives. Specifically, it provides an overview of assessment methods, describes the tools employed, and details their application within the project's context.

By offering a structured framework, this document aims to assist educators, policymakers, and researchers in the early identification of at-risk students, enabling timely interventions to foster academic retention and success. Ultimately, the blueprint intends to guide stakeholders in leveraging evidence-based assessment practices to address one of the critical challenges in education: reducing school dropout rates and promoting inclusive, equitable learning environments.

1.2. The TeSTED Project

Early leaving from education and training remains a pressing issue in Europe, with considerable costs for individuals and society. Dropout still affects one in ten young people and in some places, even more than that, with the VET sector still holding the highest dropout rates according to Cedefop. Regardless of the type of school and the course they offer, many reasons trigger students' dropout rates. Dropping out of the educational system

has negative consequences in the labor market, such as a discontinuous professional career, unemployment, holding unskilled jobs, and low wages. Within this context, TeSTED aims to tackle the dropouts in the VET sector through early detection and prevention.

The main objectives of the project are:

- Foster innovation through a powerful mechanism in the VET environment for the early detection and prevention of dropouts due to socio-economic difficulties.
- Capacity building of the VET trainers and staff on VET dropout and its social and labor market implications
- Transform the VET providers into a safety net for at-risk learners by offering consultation, alternative pathways, and securing their retention in, and graduation from, education and training
- Raise awareness about the dropout in VET and its social and labor market implications.

2. What is the Assessment for the risk of dropping out of school?

The assessment of students at risk of dropping out is a complex process aimed at identifying the social, economic, and demographic factors that may contribute to the risk of dropping out. This assessment can be used to develop targeted interventions and support programs to help students stay in school and succeed (TeSTED Consortium, 2023).

It is a well-known fact that a large number of students leave their VET studies, especially during the first years. The fight against VET dropout has been a priority for the EU since 2000 as part of the Lisbon strategy. Despite the progress so far, the EU is still away from the target, and further progress can only be achieved through a better understanding of the problem and targeted activities. The key point to tackle a problem is early detection and then targeted prevention. Usually, learners with vulnerable socioeconomic backgrounds present distress signs before they leave their education and training. If these signs are detected in time, there is a greater chance of retaining these learners with relatively simple and effective interventions (European Commission, 2023; Eurydice, 2022).

The phenomenon of school dropout in the VET system requires the need to offer valid tools to the VET teachers. Implementing early intervention programs and support systems within

VET institutions can help identify students at risk of dropout and provide them with customized assistance, mentoring, and counseling to address their needs (Beckmann et al., 2021). VET teachers play an important role in preventing dropout and ensuring the success of students in vocational education. Therefore, it's essential to provide them with valid tools and support to tackle this issue. Same time, VET teachers need specialized training and ongoing professional development to better understand the needs of at-risk students, employ effective teaching strategies, and provide appropriate support and guidance (Petrescu, 2016; TeSTED Consortium, 2023).

2.1. The purpose of the Assessment Tool for students at risk of dropping out

Each student has an individual profile with unique needs; in this context, more tools are needed to customize intervention strategies, monitor progress, and give all students a chance to succeed. Offering flexible learning pathways within the VET system, such as part-time or online courses, apprenticeships, and work-based learning opportunities, can accommodate diverse learning styles and personal circumstances, reducing the probability of dropout (Fazekas & Field, 2013; TeSTED Consortium, 2023).

We, therefore, aim to create more inclusive and supportive learning environments and ultimately improve outcomes for students in VET through useful working tools for teachers such as the Assessment Tool, able to early detect distress signs of students at risk of dropping out of school. The main purpose of this dropout risk assessment tool is to identify students who are at risk of leaving school before completing their studies. The TeSTED Assessment Tool has a digital format and focuses on specific questions that will evaluate the current psychological state of the student and recognize possible distress signs due to his socio-economic difficulties. Early identification of such situations allows the implementation of targeted interventions to support students to stay in school and complete their studies. The use of such a dropout risk assessment tool would reduce the dropout rate, by identifying students at risk and providing appropriate support, would improve the school results of students who receive additional support, and increase their chances of employment (TeSTED Consortium, 2023).

2.2. Target group

Students in upper-secondary and post-secondary VET schools come from diverse socio-economic backgrounds, with varying levels of academic preparedness, career aspirations,

and learning motivation. Many students in these levels are at critical transition points in their educational and professional development, facing decisions about further education, training, or entering the workforce.

By targeting students from upper-secondary and post-secondary VET schools to prevent dropout risk and implementing tailored support strategies, educational institutions can empower these students to overcome challenges, stay engaged in their studies, and achieve success in their educational and vocational pursuits (Cedefop, 2020; Lanford et al., 2015).

3. Research results

3.1. Key indicators& Risk factors

During the first 6 months of implementation of the TeSTED project, the partners in Romania, Greece, Austria, Bulgaria, and Germany carried out their national research, involving a desk analysis and questionnaires and interviews with the project's target groups. The findings of the following report were used to create the main deliverable of work package 2, which is the development of an assessment tool for the early detection of probable dropout (TeSTED Consortium, 2023).

The objectives of the research were identified as follows:

- To analyze the current VET dropout situation
- To collect valuable statistical and demographic data
- To identify the main reasons why students drop out
- To identify the nature of the early signs of school dropout in students with socio-economic difficulties
- To identify common patterns
- To develop a common understanding of students' needs to prevent school dropout.

The transnational report provides valuable information about the key indicators & risk factors that may explain students' intention to drop out. The research carried out within the TeSTED project activities highlighted numerous aspects that established and outlined the results of the project.

In general, the studies carried out show that the factors that contribute to school dropout are multiple and can be grouped into several categories, such as:

- **demographic and economic factors** (unemployment, low incomes, reduced living standards, migration of families)
- **social factors** (discrimination, social segregation, lack of access to quality education)
- **school factors** (inadequate teaching methods, unfavorable school climate, lack of student involvement)
- **family factors** (poverty, family conflicts, lack of parental support)
- **individual factors** (learning difficulties, mental health problems, lack of motivation) (European Commission, 2023; Eurydice, 2022).

The research results from the transnational report of the TESTED project show that, in the case of the 4 partner countries, school dropout is a complex problem with multiple causes. The main reasons for dropout identified during the first phase of research can be grouped into two main categories:

1. **The socio-economic and demographic approach:**

- **Economic:** lack of financial resources, low incomes, reduced living standards, migration;
- **Social:** parental disinterest, contradictions, conflicts, and crises in the family;
- **Demographic:** age, gender, ethnicity, social origin, geographic location;

2. **The psychological approach:**

- **Individual reasons:** lack of motivation, the perception of inappropriateness in the school environment, negative attitude of the participants in the learning process, difficulties in learning the learning content, lack of career prospects, inappropriate choice of school or profile;
- **Educational reasons:** a large number of absences, poor discipline, aggression at school, low educational results, relationships at school;
- **Institutional reasons:** insufficiently coordinated approach between different services and specialists at national, local, regional, and school levels.
- **Health status:** the risks of premature leaving of students with medical conditions or mental health problems

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The national reports and the transnational analysis report were analyzed to identify the common risk factors from the 4 countries, factors that were most frequently associated with school dropout. Risk factors that may explain students' intention to drop out of school can be grouped into distinct categories, but they often intersect and influence each other.

The results of this study helped the consortium to identify risk factors, outline priority areas, measure key conditions, and align the questions of the evaluation tool with the project objectives, before starting the design of the TeSTED assessment tool (TeSTED Consortium, 2023).

Table 3-1 The relevant risk factors selected

Austria	Lack of motivation for school
	Lack of career prospects
	Learning difficulties that isolate students and distance them from the school community
	fear/anxiety and physical problems faced by students
	Lack of family support
	Socio-economically disadvantaged environments
Bulgaria	Complex programs in VET education that generate students' lack of motivation
	Low academic performance in VET schools
	Parents' disinterest
	Almost 2/3 of respondents point to a lack of finances as the reason for dropping out of studies in Bulgaria
	Difficulties regarding the assimilation of learning content, negative attitude of students in the learning process, and lack of motivation
	The negative impact of the family environment is violence and incomplete families
	Lack of socialization in the "transnational" family in Bulgaria generates risks: behavior, emotions, aggression, substance abuse, illegal acts
	Students who are treated severely by their parents and who have disruptive behavior, commit antisocial acts
Greece	"Transnational families"
	Lack of financial resources

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	Lack of motivation for school
	Limited perception of vocational education
	Cultural perceptions: A traditional preference for academic education over vocational schooling.
	The mismatch between the skills acquired by students and labor market requirements
	Learners are not motivated and lack solid career guidance
Romania	Students' lack of motivation for the specializations to which they were assigned by the computer. Few students choose vocational schools out of passion or internal motivation or for the specializations offered at these institutions.
	Lack of career prospects or the attractiveness of specializations offered by schools leads them to work seasonally during school and drop out of school.
	The student's state of health, bullying, tense relationships between students, and anxiety.
	Students who do not have family support (with parents abroad)
	Rural environment
	Lack of financial resources
	Learning difficulties that generate frustration, failure, and anxiety.

Table 3-2 The common risk factors

Risk Factor 1	Disadvantaged environments	Austria, Romania, Bulgaria, Greece
Risk Factor 2	Lack of family support	Austria, Bulgaria, Romania
Risk Factor 3	Lack of financial resources	Romania, Bulgaria, Greece
Risk Factor 4	Lack of student motivation	Romania, Austria, Greece, Bulgaria
Risk Factor 5	Lack of career prospects	Romania, Bulgaria, Greece
Risk Factor 6	Inadequate institutional support system	Greece, Bulgaria, Romania

3.2. The profile of the students at risk of dropping out

According to the transnational analysis report, the profile of the students who are at risk of dropping out is as follows:

- students with no clear career guidance from a VET school
- students who are not motivated to continue their studies
- Students whose parents are abroad
- students who live in disadvantaged communities
- students with a low economic profile
- students feel no counseling support from the VET school
- students who were under bullying episodes
- students with learning difficulties that generate frustration, failure, and anxiety

3.3. Priority Areas for the Design of the TeSTED Assessment Tool

Risk factors for school dropout become priority areas of intervention in the process of developing an Assessment Tool on school dropout. This is because identifying and understanding these risk factors is crucial to designing effective prevention and intervention strategies to reduce dropout rates (TeSTED Consortium, 2023).

A dropout assessment tool, therefore, becomes a tool used to assess the likelihood that a student will drop out of school and consists of a series of questions that measure various indicators associated with school dropout, such as:

- **Academic indicators:** low grades, poor attendance, difficulty with homework, lack of motivation
- **Personal indicators:** low self-esteem, lack of social support, family problems, substance abuse
- **School indicators:** negative school climate, poor relations with teachers, lack of school activities
- **Economic and socio-demographic indicators:** poverty, financial difficulties, and the need to work (Cedefop, 2020; European Commission, 2023; Krötz & Deutscher, 2022).

Identifying students at risk of school dropout requires a multifaceted approach, often involving two key perspectives: **socio-demographic** and **psychometric**.

The **socio-demographic perspective** focuses on external, contextual factors influencing a student's likelihood of dropping out. These include family income, where students from low-

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income families often face higher risks due to limited resources. Parents' educational attainment is also a factor, with lower parental education levels correlating with increased dropout rates for their children. Family structure, such as single-parent households or larger families, can also present challenges. Furthermore, in some countries, specific racial and ethnic groups, or even gender (e.g., girls in certain contexts), may exhibit higher dropout tendencies. Economic factors like lack of access to basic educational resources (textbooks, computers), high schooling costs (tuition, uniforms), and limited local employment opportunities can push students towards early labor. Information from this assessment helps to identify high-risk students, develop tailored interventions for diverse socio-economic backgrounds, and monitor the effectiveness of support programs (Petrescu, 2016; TeSTED Consortium, 2023).

Utilizing information from socio-demographic and economic assessments allows us to:

- Proactively identify students vulnerable to dropping out. This ensures resources are channeled effectively to provide crucial support where it's most needed.
- Create customized interventions designed to address the unique challenges faced by students from different socio-economic backgrounds.
- Continuously monitor student progress; this helps us evaluate how well our interventions are working and make necessary adjustments.

The **psychometric perspective**, conversely, delves into the systematic measurement of internal psychological attributes using standardized tests. These assessments evaluate cognitive abilities, personality traits, attitudes, and emotional functioning. Their primary goal is to provide reliable (consistent) and valid (accurate) data for informed decisions. In dropout prevention, psychometric tools offer a comprehensive understanding of factors like academic skills, highlighting areas of struggle. Assessments of personality and emotional well-being can reveal issues such as anxiety, depression, or lack of engagement. By integrating these insights with other data, like attendance and behavioral observations, educators can design precise, individualized interventions addressing the specific needs of at-risk students, preventing isolation and fostering their success (Perchinunno et al., 2021).

Psychometric assessments are a powerful tool for dropout prevention because they help us gain a deep understanding of why students might be at risk:

- By assessing academic skills, we can identify specific areas where a student is struggling and needs help.

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- Evaluating personality and emotional functioning can reveal if students are facing challenges like anxiety or depression that impact their ability to engage and perform in school.
- When these insights are combined with other information, like attendance and behavior, schools can develop highly effective interventions that are specifically designed for the students who need them most.

Personalized interventions and strategies

The identification and evaluation of risk factors is essential for understanding the causes of school dropout; knowing the factors and indicators that increase the probability of school dropout can help identify students at risk and develop effective prevention strategies.

By identifying students who are at risk of dropping out based on their responses to the questionnaire, schools and other stakeholders can focus their interventions on addressing the specific risk factors that are most likely to contribute to dropping out. This targeted approach may be more effective than blanket prevention programs that do not take into account individual student needs.

Thus, the risk factors identified through an assessment tool regarding school dropout can be addressed through certain types of personalized interventions, focused on the student's needs:

- **Academic Interventions:** providing tutoring, after-school programs, and summer school opportunities to help students improve grades and catch up on missed work.
- **Personal Interventions:** providing counseling, mentoring, and social support services to help students develop coping skills, develop self-esteem, and address personal issues.
- **School interventions:** creating a more positive and supportive school climate, improving communication between teachers and students, and offering a variety of extracurricular activities.

4. Methodology for Design & Development of the Assessment Tool

This methodology details the process undertaken to design and develop the Assessment Tool, from initial conceptualization to interpretation of the final score. Distinct steps were proposed to ensure the validity, reliability, and ease of use of the instrument (TeSTED Consortium, 2023; Perchinunno et al., 2021).

In the conceptual stage, in which the purpose of the questionnaire was clearly defined, key research hypotheses were formulated.

The subsequent development stage focused on developing the individual questionnaire items with a clear and relevant structure.

Before wide-scale implementation, a rigorous pre-testing phase was proposed by administering the questionnaire to a small group to identify ambiguities, refine, and improve the assessment tool.

After data collection (which focuses on creating a clear, concise, and user-friendly online version of the questionnaire), the analysis stage is based on a comprehensive statistical analysis related to validity and reliability indices.

Finally, emphasis will be placed on clear guidelines and rules for interpreting scores, providing a framework for drawing meaningful conclusions from the collected data. This approach ensures that the questionnaire is a reliable and effective tool for our research (TeSTED Consortium, 2023).

Table 4-1 Design and Development

Design			Development		
1.	Conceptual stage	Defined the purpose of the questionnaire, the way of working, and the research hypotheses.	4.	Data analysis	Statistical data analysis: calculation of questionnaire validity and fidelity indices
2.	Elaboration stage	Elaborate on items with a clear and relevant	5.	The online version of the Questionnaire	Creating a clear, concise, and user-friendly format.

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		structure			
3.	Pre-testing	Pre-testing the questionnaire on a small group of people to identify problems and improve the items	6.	Interpreting the scores	Clear instructions and rules for interpreting the obtained scores have been developed.

Design

1. Conceptual stage	Who?	When?	How?
	BKCon	March 2024	The content of the Methodology ☑ established common elements to measure the risk of early school leaving according to the transnational report ☑ defining the target group ☑ presentation of the development stages of the psychometric questionnaire ☑ interpretation of the results ☑ research report
2. Research hypothesis	Who?	When?	How?
			☑ Analysis of the common factors that identify the profile of the student who has the intention of dropping out (from the transnational report) This analysis allows the establishment of a common framework for making the questionnaire valid in all countries. ☑ Formulation of the research hypothesis -The student with low school performance, coming from disadvantaged socio-economic backgrounds and showing a low level of involvement in school life, is more prone to the risk of dropping out of school.

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			Or The implementation of an individualized program of intervention, psychological counseling, educational support, and family involvement will lead to a significant increase in school motivation and a decrease in the risk of dropping out of school for students from disadvantaged backgrounds who do not benefit from an adequate institutional support system.
3. Elaboration stage	Who?	When?	How?
	All partners	March-April	Designing the questions: ☐1st variant: Information from the Transnational report ☐2nd variant: representative groups-60-120 students (Analysis of student answers from the test) 1 factor -1 battery test) ☐3rd variant: information from specialized literature (author name, work title) The format of the items in the psychometric questionnaire: ☐statements with response scales (Likert, 1-5/1-6) ☐Single-answer choice questions ☐ multiple-choice question
4. Preparing the questionnaire for pre-testing	Who?	When?	How?
	All partners	April	☐Translation into the national language ☐Google Forms/Typeform
5. Pre-testing	Who?	When?	How?

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	AKMI, USLIP, IPCenter, DAYANA	April	Pre-test on a small group of students to check the clarity and relevance of the items (in each country)- 20 students/country
6. Improvement of items	Who?	When?	How?
			- Analysis of the answers in SPSS, Statistical Package for the Social Sciences - Completion of corrections - Design of the final version of the tool
Development			
1. The online version of the tool	Who?	When?	How?
	IPCenter		- choosing the platform - data collection - data analysis
2. Distribution in schools	Who?	When?	How?
	AKMI, IPCenter, DAYANA USLIP		in the 4 countries
3. Collection of the data	Who?	When?	How?
	USLIP		
4. Data Analysis	Who?	When?	How?
	USLIP		- improvement of the questionnaire to ensure VALIDITY & FIDELITY, mandatory conditions of a psychometric questionnaire Content Validity: it is carried out through the qualitative analysis of the items by experts. Fidelity:

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			☑Test-retest fidelity: Administer the questionnaire twice at an interval to check whether the answers are consistent. Method: The questionnaire is reapplied to the same students after a while. ☑Internal fidelity: It is analyzed whether the items on a scale measure the same concept. Method: Calculation of Cronbach's alpha coefficient, interpretation of the results, by establishing acceptable values: Fidelity: > 0.7 (Cronbach Alpha)
5. Interpreting the scores	Who?	When?	How?
	USLIP		☑Hypothesis analysis ☑comparison with previous studies from the analysis report (Baseline study) ☑identifying the profile of the student at risk of early school dropout
6. Transnational research report	Who?	When?	How?
	USLIP		☑Develop a transnational report

Validity and Fidelity of Assessment Tools

To ensure the robustness of our intervention, the questionnaires designed to identify risk factors for school dropout will undergo rigorous pre-testing and validation based on established scientific criteria. This process aims to confirm the utility and reliability of these assessment instruments. The improved versions of the questionnaires, refined after pre-testing, will be further analyzed by experts to verify their validity and fidelity in assessing school dropout risk situations (Perchinunno et al., 2021; Krötz & Deutscher, 2022).

Socio-Demographic and Economic Questionnaire Validation

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Content validity for the socio-demographic and economic questionnaire will be established by field experts. They will meticulously review each item to ascertain its relevance to the concept of school dropout and to confirm that the questionnaire will comprehensively cover all its significant facets (Cedefop, 2023).

Psychometric Validation

The psychometric validation of the assessment tool will involve students from the target group within Vocational Education and Training (VET) schools. The collected data will be analyzed using SPSS 24 (Statistical Package for the Social Sciences) to verify the final form of the school dropout risk assessment tool. This statistical analysis will focus on two key psychometric qualities:

- **Fidelity (Reliability):** This will assess the degree of confidence we can place in the consistency and stability of the questionnaire's measurements.
- **Validity:** This will determine the extent to which the questionnaire accurately measures what it intends to measure – in this case, the risk of school dropout (Krötz & Deutscher, 2022).

5. Conclusions and Recommendations

This essential document details the critical need for early and effective assessment of risk factors that contribute to school dropout. This comprehensive framework, designed to identify at-risk students and implement timely interventions, is built on the integration of socio-economic and psychometric perspectives and represents a step towards mitigating the major problem of early school leaving (TeSTED Consortium, 2023; Eurydice, 2022).

Our overall vision for the assessment tool, as outlined in this plan, is to fundamentally transform the way education systems identify and support students vulnerable to early school leaving. The ultimate purpose of this tool extends far beyond simple identification; it aims to facilitate proactive, tailored, and impactful interventions that truly address the root causes of disability. By empowering educators with reliable means to identify at-risk students, we envision a future where every student, regardless of their socioeconomic background or personal challenges, has the opportunity to thrive academically and personally (Cedefop, 2023; Beckmann et al., 2021).

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The impact of such a tool will be multifaceted and profound. First, it will promote the reduction of school dropout rates, which will lead to the strengthening of the skills of a more skilled and engaged future workforce. Second, it will foster inclusive educational environments where early support mechanisms are embedded in the institutional culture. Ultimately, we aim to improve the overall well-being of students by enhancing their self-esteem, academic performance, and future life prospects. This tool is not just a data collection tool; it is a catalyst for creating more equitable and supportive educational pathways for all.

The main points addressed in this document are:

❖ *Understanding Dropout Risk Assessment*

The report emphasizes the importance of assessing the multifaceted factors that influence student disengagement. This includes a deep dive into the prevailing socio-economic challenges that often act as significant barriers to continuing education, alongside a nuanced understanding of the psychological barriers that can lead to feelings of alienation and demotivation. We emphasized a holistic view, recognizing that risk factors rarely operate in isolation.

❖ *The socio-economic approach*

The multi-faceted perspective is crucial for assessing and identifying school dropout risks in EU vocational schools. It acknowledges that educational pathways are deeply intertwined with students' backgrounds, including family income, parental education, housing stability, and access to resources. Without this perspective, interventions may overlook systemic barriers and focus solely on individual student deficits, leading to ineffective solutions. Understanding the socio-economic context allows for the identification of vulnerable groups, the development of targeted support programs (e.g., financial aid, mentoring, career counseling), and the implementation of policies that address root causes of disengagement. This holistic view ensures that vocational education remains accessible and equitable, fostering successful transitions from school to work for all students.

❖ *The psychometric viewpoint*

The psychometric approach is essential for addressing school dropout risks in EU vocational schools (Perchinunno et al., 2021). This rigorous perspective focuses on developing reliable and valid assessment tools that accurately predict the likelihood of students leaving prematurely. By providing standardized, objective measures of cognitive abilities, aptitudes, personality traits, and emotional well-being, psychometric analysis offers crucial data-driven insights. It moves beyond subjective observations to uncover factors like motivation, self-efficacy, learning styles, and psychological challenges such as anxiety or low self-esteem. This allows educators to pinpoint specific vulnerabilities, tailor interventions, and offer personalized guidance. Ultimately, by understanding individual strengths and weaknesses, vocational schools can develop targeted support programs, enhance career counseling, and adapt teaching methods, leading to increased student engagement and a reduction in early school leaving.

Therefore, this document serves as a comprehensive roadmap for educators, policymakers and all stakeholders, guiding them to proactively address the risks of early school leaving. It provides the necessary theoretical bases for practical application and for the promotion of inclusive education by significantly reducing school dropout rates and facilitating the academic and personal growth of each student.

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Annex 1. Action Plan

Immediate steps to finalize and translate this comprehensive framework into a tangible and impactful dropout risk assessment tool:

- Stakeholder engagement and feedback, by initiating a series of workshops and consultations with key stakeholders, including teachers and students. Their feedback on the practicality, clarity, and relevance of the pilot tool will be essential for its refinement.
- Planning the creation of assessment tools, their refinement, and validation. Based on the feedback, a detailed plan for the development and refinement of the instrument and subsequent validation studies should be developed. This includes identifying target populations for testing, defining validation methodologies, and establishing a clear timeline.
- The strategy for allocating the necessary resources for the development and implementation of the assessment tool, identifying the necessary technological infrastructure, and allocating human resources.
- Development and conceptualization of the training materials that will be necessary to ensure the context in which school staff educators can administer, interpret, and act effectively based on the results of the assessment tool.
- The development of a pilot version of the assessment tool based on recommendations and the results of the analysis study, by translating the key indicators and identified risk factors into applicable questions and a robust interpretation mechanism, which will facilitate the selection of appropriate and personalized strategies related to the needs of each student.

Basic recommendations for the Tool for assessing the risk of school dropout in the VET system

Our research, detailed in the reference study of the TeSTED project, provides essential insights for the development of an effective assessment tool to identify students at risk of early school leaving, especially those facing socio-economic difficulties. The main

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recommendation is to create a multifaceted tool that captures key indicators and risk factors, facilitating early intervention.

Specific design and content proposals

The tool should incorporate a diverse range of question types to address identified risk factors. This includes items assessing socio-economic status (e.g., family income, parental employment, access to resources), academic performance (e.g., grades, attendance, homework completion, engagement in class), peer and teacher relationships (e.g., feelings of belonging, bullying experiences, support from teachers), and student motivation and aspirations (e.g., plans, interest in school, perceived relevance of education). Questions should be clear, concise, and culturally sensitive. Where appropriate, a mix of multiple-choice, Likert scales, and open-ended questions can provide both quantitative data and qualitative insights.

A robust scoring system is crucial for identifying risk levels. Responses to each item should be assigned weighted scores based on their significance as risk indicators. A cumulative score will then categorize students into different risk tiers (e.g., low, moderate, high risk). Clear guidelines for interpreting these scores must be developed, linking specific score ranges to recommended intervention strategies. This will enable educators to understand the urgency and nature of support required for individual students.

To enrich the assessment and provide a holistic view, consider incorporating optional sections. Student self-assessment allows students to reflect on their challenges and aspirations, fostering a sense of agency. Parental feedback can offer valuable perspectives on the home environment and parental support for education. Teacher feedback can provide insights into classroom behavior, academic struggles, and social interactions that might not be evident otherwise. These supplementary sections, while optional, can significantly enhance the tool's diagnostic power.

The tool's format should prioritize accessibility and ease of use. Both digital and print formats should be available to accommodate various school environments and student preferences. For administration, the tool could be designed for individual completion to

ensure privacy, or in group settings where appropriate. The administration process should be standardized to ensure consistency and reliability of results.

Our assessment tool will define its success through several key criteria. Firstly, its effectiveness will be measured by its ability to accurately identify students at risk, leading to timely intervention. Secondly, we'll assess its usability and acceptance by educators and students, ensuring it integrates seamlessly into existing school frameworks. Finally, the tool's success hinges on its scalability and sustainability, demonstrating its potential for wider adoption and long-term positive impact on educational outcomes.

Maximizing the impact and benefits of using the Assessment Tool

Implementing our dropout risk assessment tool promises significant benefits, fundamentally transforming how schools identify and support vulnerable students. By providing a structured, easy-to-follow process, the tool empowers educators to proactively address potential academic disengagement.

The first major benefit lies in early and accurate identification. The questionnaires, administered individually by teachers based on direct observations and input from colleagues or parents, facilitate a comprehensive understanding of each student's risk profile. Scoring mechanisms allow for quick classification, ranging from minimal to maximum risk, enabling educators to prioritize interventions effectively.

Beyond mere identification, the tool provides clear guidance on effective intervention strategies. It promotes a supportive and inclusive classroom environment as a foundational step, encouraging open communication and differentiated teaching. For identified risks, specific recommendations are offered across key domains: academic, socio-emotional, familial, and motivational/attitudinal. This includes suggestions for academic support, counseling referrals, social skill development activities, parental engagement, and vocational guidance.

The tool also streamlines the referral process for complex cases, clearly outlining when and how to escalate a situation to school counselors, principals, or social workers. This ensures students receive specialized assistance when in-class interventions are insufficient.

Crucially, the instrument emphasizes continuous monitoring and evaluation. Educators are encouraged to track student progress after interventions and re-administer the questionnaire periodically to assess effectiveness. This iterative approach allows for adaptive strategies, ensuring interventions remain tailored to individual student needs and circumstances.

Ultimately, the estimated impact is a measurable reduction in school dropout rates. By fostering a proactive, data-driven approach to student support, the tool not only helps keep students in school but also cultivates more resilient, engaged, and successful students. This benefits individual students by opening pathways to future opportunities and strengthens the educational ecosystem as a whole.

How and when to use the school dropout risk assessment tool

Teachers play an important role in identifying and supporting students at risk of dropping out. By following some simple steps, educators can efficiently utilize the assessment tool and act effectively on its results.

Step 1. Preparation

We recommend administering the questionnaire at the beginning of each semester or whenever you notice concerning changes in a student's behavior. This proactive approach helps in early detection. Ideally, the questionnaire should be administered to all students in the class for a comprehensive overview. Alternatively, you can apply it to students you already have suspicions about.

Step 2. Completing the Questionnaire

Complete the questionnaire for each student individually. Base your responses on direct observations, interactions with the student, discussions with other teachers, and, if applicable, information from parents. Strive for maximum objectivity.

Step 3. Scoring

After completing the questionnaire for a student, sum the scores for each of the 20 items. The total score will range from 20 (minimum risk) to 100 (maximum risk), providing a clear indicator of *the student's risk level*.

Step 4. Interpreting Results and Interventions

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Understanding the scores is crucial for effective intervention. Make students feel safe, respected, and valued, fostering a climate of openness and trust. Adapt teaching methods to diverse student needs, offering varied tasks and additional support to those facing difficulties. Encourage active student participation in classes and extracurricular activities. Be accessible and open to dialogue, showing students you genuinely care.

Step 5. Monitoring and Evaluation

Identifying risk is just the first step. Ongoing monitoring of student progress is equally important. Continuously monitor behavior, attendance, and academic performance. Periodically re-evaluate using the psychometric questionnaire (e.g., every 2-3 months) to assess intervention effectiveness. Be flexible and adapt strategies as needed; every student is unique.

*Specific Strategies Based on Risk Indicators*Academic Risk

Offer extra support like consultations, tutoring, or individualized learning sessions. Create peer-mentor partnerships and provide adapted materials.

Socio-Emotional Risk

Recommend school counselor discussions, involve students in collaborative group projects, and organize sessions to develop communication and conflict management skills.

Family Risk

Tactfully contact parents/guardians to discuss concerns and collaborate on solutions. If the situation is complex (e.g., violence, neglect), refer the case to a school social worker or relevant authorities.

Motivational Risk

Provide vocational counseling, arrange visits to universities or companies, involve students in practical projects, and assign roles of responsibility to boost their self-confidence.

A call to action and shaping a brighter future!

This plan emphasizes a clear vision: to empower educators and transform the lives of students at risk of early school leaving within the VET system. The TeSTED initiative, driven

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by insights from our baseline study, will lay the foundation for a meticulously designed Assessment Tool to identify vulnerabilities and trigger timely interventions.

Our research highlights the critical need to support students, particularly those facing socio-economic challenges, by addressing key risk factors. The presented methodology ensures a robust and efficient tool. By implementing the recommendations, we can cultivate a proactive ecosystem where every student feels seen, supported, and motivated to reach their full potential. This tool is not just about identifying risk; it's about fostering resilience, unlocking opportunity, and building a brighter future for the next generation of skilled professionals. Let's embrace this plan as a catalyst for positive change.