

# WP2. Requirement and opportunity analysis

## R2.3 Algorithm based on partner country specific inputs for how to score ESL risk factors

Project KALIS



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### **Introduction:**

Early School Leaving (ESL) is a critical issue that affects educational systems worldwide, with significant implications for students' future opportunities and societal well-being. To address this challenge, we have developed an algorithm tailored to assess and score ESL risk factors, incorporating specific inputs from partner countries: Romania, Spain, Norway, Bulgaria, and Germany. This document outlines the methodology and application of the algorithm, with a particular focus on its adaptation for the national context of the five partner countries involved in KALIS project.

The algorithm is designed to provide a comprehensive and nuanced assessment of ESL risk by considering a wide range of factors, including student demographics, academic performance, socioeconomic status, and school environment. By integrating country-specific inputs, the algorithm ensures that the unique educational, cultural, and social contexts of each partner country are accurately reflected in the risk assessment process.

### **Partner Countries**

The algorithm has been customized for use in Romania, Spain, Norway, Bulgaria, and Germany. Each country's version of the algorithm incorporates localized data and insights, allowing for a tailored approach to ESL risk assessment. This collaborative effort ensures that the algorithm is robust and adaptable, capable of addressing the diverse challenges associated with early school leaving across different educational systems.

### **National Context**

The algorithm for Germany has been slightly adapted, for example the ethnicity factor, that is important in other countries, was replaced by migration background. The different colorations in yellow and orange show a stronger weighting of certain factors like socio-economic status, behaviour in the classroom or family involvement in the student's education.

The algorithm for Norway has been adjusted to meet the level of information teachers legally have about students and their private situation. This includes some socioeconomic factors and factors related to students' emotional wellbeing. A question for VET students' ability to find apprenticeship is added, since this is the most risky factor for dropout.

In Romania, the algorithm has been adjusted to account for specific local factors that influence ESL risk. These adjustments include considerations for rural versus urban disparities, the impact of ethnic minority status, and the availability of educational resources. The scoring system is calibrated to reflect the realities faced by Romanian students and schools, ensuring that the risk assessment is both relevant and actionable.

The algorithm for Spain has been adjusted to consider some factors such as socioeconomic ones, student's behaviour in the classroom, attendance and performance, students' emotional wellbeing, family involvement, peer relationships and students' involvement in work or family care to be more determinant in the final score.

The algorithm for Bulgaria has been adjusted to align with the level of information that teachers legally have about students and their personal situations. This includes geographical location (urban vs. rural), access to transportation, and socioeconomic status. Given that transportation barriers and socioeconomic challenges are significant factors influencing Early School Leaving (ESL) in Bulgaria, these elements are carefully weighted in the algorithm. Additionally, rural areas are highlighted due to their associated higher risk for ESL, making these factors critical for identifying students at risk of dropping out.

### Purpose and application

The primary goal of this algorithm is to support piloting teachers and schools in identifying students at risk of early school leaving and implementing targeted interventions. By providing a clear and systematic method for scoring ESL risk factors, the algorithm empowers educators to make informed decisions and take proactive measures to support at-risk students.

This document will detail the specific inputs and scoring criteria used in the algorithm, as well as guidelines for its implementation in the schools. Through this collaborative and context-sensitive approach, we aim to enhance the effectiveness of ESL interventions and contribute to the overall improvement of educational outcomes in our partner countries.

### Methodology

The development and implementation of the algorithm to score Early School Leaving (ESL) risk factors is a multifaceted process, meticulously designed to ensure accuracy, comprehensiveness, and adaptability across various educational contexts. This section delves into the methodological framework underpinning the algorithm, highlighting the systematic approach taken to address the unique needs of Romania, Spain, Norway, Bulgaria, and Germany.

### Data Collection

The foundation of the algorithm lies in the extensive data collection process, which encompasses a broad spectrum of variables critical to understanding ESL risk. This process begins with the gathering of detailed student information, including demographic data such as age, gender, ethnicity, languages spoken at home, special education needs, and medical conditions. These variables provide a nuanced understanding of the individual characteristics that may predispose students to early school leaving.

In addition to individual demographics, the algorithm considers contextual factors that influence a student's educational experience. Data on the student's living environment, such as whether they reside in urban or rural areas, their mode of transportation to school, and the availability of school resources, is meticulously collected. These contextual elements are crucial in painting a comprehensive picture of the external influences on a student's educational journey.

Academic performance is another pivotal component of the data collection process. Detailed records of students' grades, attendance, and participation in extracurricular activities are analysed to identify patterns indicative of ESL risk. This academic data is complemented by socioeconomic factors, including family structure, parental education levels, socioeconomic status, and housing stability, which collectively provide insight into the broader social and economic context affecting the student.

Behavioural and emotional factors are also integral to the data collection process. Information on student behaviour, peer relationships, emotional well-being, and engagement with school counselling services is gathered to assess the psychological and social dimensions of ESL risk. Finally, data on the school environment, including students' perceptions of school safety, sense of belonging, relationships with teachers, and the availability of academic support services, is collected to evaluate the overall school climate and its impact on students.

### Scoring System

The algorithm employs a sophisticated scoring system to quantify the risk of early school leaving. Each factor is assigned a score based on its potential impact on ESL risk, with the scoring system designed to be flexible and adaptable to different contexts. Students are categorized into four risk levels: Low Risk (0-20 points), Moderate Risk (21-40 points), High Risk (41-60 points), and Critical Risk (61 points).



and above). This categorization allows for a nuanced assessment of ESL risk, facilitating targeted interventions for students at varying levels of risk.

### Algorithm Adjustment for national Context

The German educational system differs from the other partner countries not only because education is a matter of the individual Federal States in Germany. However, the most important risk factors in Germany are certainly the socio-economic status of the family and the individual behaviour in the classroom. Housing stability and emotional well-being are also considered important risk factors in Germany. Migration plays a huge role as many dropouts in Germany have a migratory background.

Recognizing the unique educational landscape of Romania, specific adjustments have been made to the algorithm to account for local factors. One significant adjustment is the consideration of rural versus urban disparities, reflecting the substantial differences in educational resources and opportunities between these areas. Additionally, the algorithm gives additional weight to the risk factors associated with ethnic minority status, particularly for Roma students, who face distinct challenges in the Romanian educational system. The availability and quality of educational resources in different regions are also factored into the scoring system, ensuring that the algorithm accurately reflects the realities faced by Romanian students and schools.

The adjustment of the algorithm for Spain has been done to take into account the diversity and differences between regions, giving more weight to the socioeconomic factors and the behaviour in the classroom. However, some other factors have been considered important risk factors, such as attendance and performance at school and students' emotional wellbeing. Also ethnicity, family structure, student's involvement in family care or work, family's involvement and peer relationships have been especially considered.

The adjustment algorithm used to assess the risk of Early School Leaving (ESL) in Bulgaria has been specifically measured to reflect the unique challenges within the country. This includes factors such as the geographical divide between urban and rural areas, where rural students are at a higher risk of ESL due to limited access to educational resources and transportation challenges.

### Implementation

The implementation of the algorithm involves several key steps. First, the collected data is integrated into the algorithm, which processes and scores each factor based on predefined criteria. The algorithm then calculates an overall risk score for each student, categorising them into different risk levels. Based on these risk scores, the system generates alerts and recommends targeted interventions to support at-risk students. These interventions may include academic support, counselling, and engagement with community resources, tailored to address the specific needs identified through the risk assessment process.

### Validation and Refinement

To ensure the accuracy and effectiveness of the algorithm, a continuous process of validation and refinement is undertaken. Feedback from piloting teachers and schools, along with data from ongoing assessments, is used to make necessary adjustments and improvements. This iterative process ensures that the algorithm remains robust and responsive to the evolving educational contexts of the partner countries.

The methodology underpinning the ESL risk assessment algorithm is characterized by a comprehensive and systematic approach to data collection, a flexible and context-sensitive scoring system, and a rigorous process of validation and refinement. This methodological framework ensures that the

algorithm provides a reliable and effective tool for identifying and supporting students at risk of early school leaving, ultimately contributing to improved educational outcomes across the partner countries.

### Early School Leaving Risk Assessment Algorithm and Scoring Table for German context

Questions		Scoring			Explanation
Section 1: Student Information	Student's Name:	-	-	-	
	Age:	0	1	2	Calculate the difference between the student's age and the average age of their peers in the same grade or class. No deviation or within one year: 0 points Deviation of 1-2 years: 1 point Deviation of more than 2 years: 2 points
	Grade/Class:	-	-	-	
	Gender:	0	1	1	Male gender may indicate higher ESL risk due to societal factors, if it is associated with rural areas. Female gender may indicate higher ESL risk due to societal factors, if it is associated with minority context (eg. traditions in Roma community). Other gender may indicate higher ESL risk due to prejudice and discrimination
	Migration Background	0	2		If the student belongs to an ethnic group that is underrepresented or faces discrimination within the school environment, they may receive a higher risk score.
	Languages spoken at home:	0	1		If the student speaks a language at home that is not widely spoken among their peers or is not the language of instruction at school, they may face additional challenges in communication and integration, resulting in a higher risk score.
	Special education needs (if any):	0	1	2	If the student requires special education support, they may face additional academic or social challenges, leading to a higher risk score. No Special Needs: 0 points Mild Special Needs: 1 point Severe Special Needs: 2 points

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	Any relevant medical conditions or health concerns:	0	1	2	If the student has a medical condition that significantly affects their ability to attend school regularly or participate in activities, they are at a higher risk of early school leaving.
<b>Section 2: Context</b>	Urban / Rural Area of the student's home	0	1		0: Urban area indicates lower ESL risk. 1: Rural areas suggest some ESL risk.
	Transportation to school	0	1	2	0 points: Convenient access to reliable transportation options (e.g., school bus service, public transportation, walking distance to school). 1 point: Moderate inconvenience in transportation options (e.g., limited bus routes, longer commute times). 2 points: Significant barriers to transportation (e.g., lack of transportation options, long distances to school).
	School Resources	0	1	2	0 points: Well-funded schools with a wide range of resources, including technology, extracurricular programs, and support services. 1 point: Adequate funding for basic resources, but some limitations in access to specialized programs or support services. 2 points: Limited funding and resources, leading to significant gaps in educational opportunities and support services.
<b>Section 3: Academic Performance</b>	Average grades in the last academic term/year:	0	5	10	0 points: Above-average grades consistently maintained throughout the academic term/year. 5 point: Average grades with occasional fluctuations but generally meeting expectations. 10 points: Below-average grades with consistent struggles in meeting academic standards. 0 points: Unknown Information
	Attendance record for the current academic term/year:	0	5	10	0 points: Excellent attendance, with minimal or no absences recorded throughout the academic term/year. 5 point: Moderate attendance, with occasional absences due to legitimate reasons (e.g., illness, family emergencies).

					10 points: Poor attendance, with frequent or prolonged absences impacting academic progress. 0 points: Unknown Information
	Any significant changes in academic performance or attendance? (If yes, please specify)	0	1	2	0 points: No significant changes in academic performance or attendance noted. 1 point: Minor fluctuations in academic performance or attendance observed, but not affecting overall engagement. 2 points: Major changes in academic performance or attendance, indicating potential underlying issues that require attention.
	Repetition of a school year:	0	1	2	0 points: No history of repeating a school year 1 point: Student has repeated one school year 2 points: Student has repeated multiple school years
	Involvement in extracurricular activities or clubs:	0	1	2	0 points: Active involvement in multiple extracurricular activities or clubs, demonstrating a well-rounded engagement. 1 point: Some involvement in extracurricular activities or clubs, but limited participation or sporadic engagement. 2 points: Minimal or no involvement in extracurricular activities, indicating potential disengagement from school life beyond academics.
Section 4: Socioeconomic Factors	Family structure (e.g., nuclear family, single-parent household):	0	2	4	0 points: Stable family structure (e.g., nuclear family) with consistent support and presence of both parents. 2 points: Single-parent household or non-traditional family structure with adequate support and stability. 4 points: Unstable family structure (e.g., frequent changes in caregivers, family conflict) impacting the student's well-being and support system. 0 points: Unknown Information/ Not applicable
	Education Level of the father	0	1	2	0 points: Primary or lower secondary school 1 point: High school

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					2 points: Higher education 0 points: Unknown Information/ Not applicable
	Education Level of the mother	0	1	2	0 points: Primary or lower secondary school 1 point: High school 2 points: Higher education 0 points: Unknown Information/ Not applicable
	Education Level of the older siblings	0	1	2	0 points: Primary or lower secondary school 1 point: High school 2 points: Higher education 0 points: Unknown Information/ Not applicable
	Migration:	0	1	2	No migration or stable residence for the past 3 years: 0 points Recent migration within the past year: 1 point Frequent migration (more than two moves within the past 3 years): 2 points 0 points: Unknown Information/ Not applicable
	Size of the Family:	0	1	2	1-3 dependents in the household: 0 points 4-6 dependents in the household: 1 point 7 or more dependents in the household: 2 points
	Socioeconomic status (e.g., income level, parental occupation):	0	3	6	0 points: High socioeconomic status with access to resources, educational opportunities, and financial stability. 3 points: Moderate socioeconomic status with some access to resources and financial stability, but occasional challenges. 6 points: Low socioeconomic status with limited access to resources, financial insecurity, and significant challenges in meeting basic needs. 0 points: Unknown Information/ Not applicable
	Housing stability (e.g., frequent relocation, homelessness):	0	2	4	0 points: Stable housing situation with consistent residence and minimal disruptions. 2 points: Some housing instability, such as occasional relocation or temporary housing arrangements.



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					4 points: Severe housing instability, including frequent moves, homelessness, or inadequate housing conditions. 0 points: Unknown Information/ Not applicable
	Access to resources such as books, internet, and educational materials at home:	0	1	2	0 points: Adequate access to resources at home, including books, internet, educational materials, and a conducive learning environment. 1 point: Limited access to some resources, with occasional barriers to educational materials or internet connectivity. 0 points: Unknown Information/ Not applicable 2 points: Significant lack of access to resources, such as limited availability of books, internet, or educational materials, hindering academic progress. 0 points: Unknown Information/ Not applicable
	Children Involved in Family Care Responsibilities:	0	1	2	0 points: Not responsible for any family care duties 1 point: Occasionally responsible for family care duties (e.g., helping with household chores) 2 points: Regularly responsible for family care duties (e.g., caring for younger siblings or elderly family members) 0 points: Unknown Information/ Not applicable
	Children Involved in Work:	0	1	2	0 points: Not involved in any work responsibilities 1 point: Occasionally involved in work responsibilities (e.g., part-time job during holidays) 2 points: Regularly involved in work responsibilities (e.g., part-time job after school) 0 points: Unknown Information/ Not applicable
	Early marriage in the family	0	1	2	0 points: No instances of early marriage in the family 1 point: Occasional instances of early marriage in the extended family, but not directly impacting the student

					2 points: Direct impact of early marriage in the immediate family, potentially causing disruptions in the student's academic and personal life 0 points: Unknown Information/ Not applicable
	Early pregnancy in the family	0	1	2	0 points: No instances of early pregnancy in the family 1 point: Occasional instances of early pregnancy in the extended family, but not directly impacting the student 2 points: Direct impact of early pregnancy in the immediate family, potentially causing disruptions in the student's academic and personal life 0 points: Unknown Information/ Not applicable
	Family involvement in the student's education (e.g., attending school events, helping with homework):	0	2	4	0 points: Active parental involvement in the student's education, including attendance at school events, regular communication with teachers, and support with homework. 0 points: Unknown Information/ Not applicable 2 points: Some parental involvement, but inconsistent participation in school-related activities or limited support with academic tasks. 4 points: Minimal parental involvement, with little to no engagement in the student's education or communication with school staff. 0 points: Unknown Information/ Not applicable
Section 5: Behavioral and Emotional Factors	Behavior in the classroom (e.g., disruptive behavior, participation level):	0	3	6	0 points: Positive behavior, actively engaged 3 points: Occasional disruptive behavior, moderate participation level 6 points: Frequent disruptive behavior, low participation level
	Peer relationships (e.g., conflicts with peers, social isolation):	0	1	2	0 points: Healthy peer relationships, no conflicts or social isolation 1 point: Some conflicts with peers, occasional social isolation

					2 points: Persistent conflicts with peers, significant social isolation 0 points: Unknown Information
	Emotional well-being (e.g., signs of anxiety, depression, or other emotional distress):	0	2	4	0 points: Stable emotional well-being, no signs of anxiety or depression 2 points: Occasional signs of anxiety or depression, manageable emotional distress 4 points: Persistent signs of anxiety or depression, significant emotional distress 0 points: Unknown Information
	Engagement with school counseling or support services (if applicable):	0	1	2	0 points: Regular engagement with counseling or support services, actively seeking help when needed 1 point: Occasional engagement with counseling or support services, hesitant to seek help 2 points: Limited or no engagement with counseling or support services, avoiding seeking help when needed
Section 6: School Environment	Perception of school safety and sense of belonging:	0	1	2	0 points: Strong perception of school safety, high sense of belonging 1 point: Some concerns about school safety, moderate sense of belonging 2 points: Persistent concerns about school safety, low sense of belonging 0 points: Unknown Information
	Loneliness among fellow pupils:	0	1	2	0 points: Strong social connections with peers, no feelings of loneliness 1 point: Occasional feelings of loneliness, but generally well-connected with peers 2 points: Persistent feelings of loneliness, significant social isolation from peers 0 points: Unknown Information
	High academic ambitions in relation to academic self-perception:	0	1	2	0 points: High academic ambitions matched with a strong academic self-perception 1 point: High academic ambitions with occasional doubts about academic abilities 2 points: High academic ambitions coupled with a consistently low academic self-perception 0 points: Unknown Information

	Quality of relationships with teachers and staff:	0	1	2	0 points: Positive relationships with teachers and staff, open communication 1 point: Some strained relationships with teachers or staff, occasional communication barriers 2 points: Poor relationships with teachers or staff, significant communication barriers 0 points: Unknown Information
	Emotional support from teachers:	0	1	2	0 points: Strong emotional support from teachers, responsive to students' emotional needs 1 point: Some emotional support from teachers, occasional responsiveness to students' emotional needs 2 points: Lack of emotional support from teachers, little to no responsiveness to students' emotional needs
	Availability of academic support services (e.g., tutoring, mentoring):	0	1	2	0 points: Access to comprehensive academic support services, readily available when needed 1 point: Limited access to academic support services, occasional availability when needed 2 points: No access to academic support services, unavailable when needed
	Perceived relevance and interest in academic subjects:	0	1	2	0 points: High perceived relevance and interest in academic subjects, actively engaged in learning 1 point: Moderate perceived relevance and interest in academic subjects, occasional disengagement 2 points: Low perceived relevance and interest in academic subjects, frequent disengagement

**Early School Leaving Risk Assessment Algorithm and Scoring Table for Norwegian context**

	Questions	Scoring			Explanation
Section 1: Student Information	Student's Name:	-	-	-	
	Age:	0	1	2	Calculate the difference between the student's age and the average

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					<p>age of their peers in the same grade or class.</p> <p>No deviation or within one year: 0 points</p> <p>Deviation of 1-2 years: 1 point</p> <p>Deviation of more than 2 years: 2 points</p>
	Grade/Class:	-	-	-	
	Gender:	0	2	2	<p>Male gender may indicate higher ESL risk due to societal factors, if it is associated with rural areas.</p> <p>Female gender may indicate higher ESL risk due to societal factors, if it is associated with minority context (eg. traditions in Roma community).</p> <p>Other gender may indicate higher ESL risk due to prejudice and discrimination</p>
	Ethnicity:	0	2		<p>If the student belongs to an ethnic group that is underrepresented or faces discrimination within the school environment, they may receive a higher risk score.</p>
	Languages spoken at home:	0	1		<p>If the student speaks a language at home that is not widely spoken among their peers or is not the language of instruction at school, they may face additional challenges in communication and integration, resulting in a higher risk score.</p>
	Special education needs (if any):	0	1	2	<p>If the student requires special education support, they may face additional academic or social challenges, leading to a higher risk score.</p> <p>No Special Needs: 0 points</p> <p>Mild Special Needs: 1 point</p> <p>Severe Special Needs: 2 points</p>
	Any relevant medical conditions or health concerns:	0	1	2	<p>If the student has a medical condition that significantly affects their ability to attend school regularly or participate in activities, they are at a higher risk of early school leaving.</p>
	Transportation to school	0	1	2	<p>0 points: Convenient access to reliable transportation options (e.g., school bus service, public transportation, walking distance to school).</p>



					1 point: Moderate inconvenience in transportation options (e.g., limited bus routes, longer commute times). 2 points: Significant barriers to transportation (e.g., lack of transportation options, long distances to school).
Section 3: Academic Performance	Average grades in the last academic term/year:	0	5	10	0 points: Above-average grades consistently maintained throughout the academic term/year. 5 point: Average grades with occasional fluctuations but generally meeting expectations. 10 points: Below-average grades with consistent struggles in meeting academic standards.
	Attendance record for the current academic term/year:	0	5	10	0 points: Excellent attendance, with minimal or no absences recorded throughout the academic term/year. 5 point: Moderate attendance, with occasional absences due to legitimate reasons (e.g., illness, family emergencies). 10 points: Poor attendance, with frequent or prolonged absences impacting academic progress.
	Any significant changes in academic performance or attendance? (If yes, please specify)	0	1	2	0 points: No significant changes in academic performance or attendance noted. 1 point: Minor fluctuations in academic performance or attendance observed, but not affecting overall engagement. 2 points: Major changes in academic performance or attendance, indicating potential underlying issues that require attention.
	Repetition of a school year:	0	1	2	0 points: No history of repeating a school year 1 point: Student has repeated one school year 2 points: Student has repeated multiple school years
	Involvement in extracurricular activities or clubs:	0	1	2	0 points: Active involvement in multiple extracurricular activities or clubs, demonstrating a well-rounded engagement. 1 point: Some involvement in extracurricular activities or clubs, but limited participation or sporadic engagement.

					2 points: Minimal or no involvement in extracurricular activities, indicating potential disengagement from school life beyond academics.
<b>Section 4: Socioeconomic Factors</b>	Family structure (e.g., nuclear family, single-parent household):	0	1	2	0 points: Stable family structure (e.g., nuclear family) with consistent support and presence of both parents. 1 point: Single-parent household or non-traditional family structure with adequate support and stability. 2 points: Unstable family structure (e.g., frequent changes in caregivers, family conflict) impacting the student's well-being and support system. 0 points: Unknown Information/ Not applicable
	Education Level of the father	0	1	2	0 points: Primary or lower secondary school 1 point: High school 2 points: Higher education 0 points: Unknown Information/ Not applicable
	Education Level of the mother	0	1	2	0 points: Primary or lower secondary school 1 point: High school 2 points: Higher education 0 points: Unknown Information/ Not applicable
	Education Level of the older siblings	0	1	2	0 points: Primary or lower secondary school 1 point: High school 2 points: Higher education 0 points: Unknown Information/ Not applicable
	Migration:	0	1	2	No migration or stable residence for the past 3 years: 0 points Recent migration within the past year: 1 point Frequent migration (more than two moves within the past 3 years): 2 points
	Size of the Family:	0	1	2	1-3 dependents in the household: 0 points 4-6 dependents in the household: 1 point 7 or more dependents in the household: 2 points

				0 points: Unknown Information/ Not applicable
Socioeconomic status (e.g., income level, parental occupation):	0	2	4	0 points: High socioeconomic status with access to resources, educational opportunities, and financial stability. 2 point: Moderate socioeconomic status with some access to resources and financial stability, but occasional challenges. 4 points: Low socioeconomic status with limited access to resources, financial insecurity, and significant challenges in meeting basic needs. 0 points: Unknown Information/ Not applicable
Housing stability (e.g., frequent relocation, homelessness):	0	1	2	0 points: Stable housing situation with consistent residence and minimal disruptions. 1 point: Some housing instability, such as occasional relocation or temporary housing arrangements. 2 points: Severe housing instability, including frequent moves, homelessness, or inadequate housing conditions. 0 points: Unknown Information/ Not applicable
Access to resources such as books, internet, and educational materials at home:	0	1	2	0 points: Adequate access to resources at home, including books, internet, educational materials, and a conducive learning environment. 1 point: Limited access to some resources, with occasional barriers to educational materials or internet connectivity. 2 points: Significant lack of access to resources, such as limited availability of books, internet, or educational materials, hindering academic progress. 0 points: Unknown Information/ Not applicable
Children Involved in Family Care Responsibilities:	0	1	2	0 points: Not responsible for any family care duties 1 point: Occasionally responsible for family care duties (e.g., helping with household chores) 2 points: Regularly responsible for family care duties (e.g., caring for

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					younger siblings or elderly family members) 0 points: Unknown Information/ Not applicable
	Family involvement in the student's education (e.g., attending school events, helping with homework):	0	1	2	0 points: Active parental involvement in the student's education, including attendance at school events, regular communication with teachers, and support with homework. 1 point: Some parental involvement, but inconsistent participation in school-related activities or limited support with academic tasks. 2 points: Minimal parental involvement, with little to no engagement in the student's education or communication with school staff.
Section 5: Behavioral and Emotional Factors	Behavior in the classroom (e.g., disruptive behavior, participation level):	0	1	2	0 points: Positive behavior, actively engaged 1 point: Occasional disruptive behavior, moderate participation level 2 points: Frequent disruptive behavior, low participation level
	Peer relationships (e.g., conflicts with peers, social isolation):	0	1	2	0 points: Healthy peer relationships, no conflicts or social isolation 1 point: Some conflicts with peers, occasional social isolation 2 points: Persistent conflicts with peers, significant social isolation
	Emotional well-being (e.g., signs of anxiety, depression, or other emotional distress):	0	4	8	0 points: Stable emotional well-being, no signs of anxiety or depression 4 points: Occasional signs of anxiety or depression, manageable emotional distress 8 points: Persistent signs of anxiety or depression, significant emotional distress
	Engagement with school counseling or support services (if applicable):	0	1	2	0 points: Regular engagement with counseling or support services, actively seeking help when needed 1 point: Occasional engagement with counseling or support services, hesitant to seek help 2 points: Limited or no engagement with counseling or support services, avoiding seeking help when needed

Section 6: School Environment	Perception of school safety and sense of belonging:	0	1	2	0 points: Strong perception of school safety, high sense of belonging 1 point: Some concerns about school safety, moderate sense of belonging 2 points: Persistent concerns about school safety, low sense of belonging 0 points: Unknown Information/ Not applicable
	Loneliness among fellow pupils:	0	1	2	0 points: Strong social connections with peers, no feelings of loneliness 1 point: Occasional feelings of loneliness, but generally well-connected with peers 2 points: Persistent feelings of loneliness, significant social isolation from peers
	High academic ambitions in relation to academic self-perception:	0	1	2	0 points: High academic ambitions matched with a strong academic self-perception 1 point: High academic ambitions with occasional doubts about academic abilities 2 points: High academic ambitions coupled with a consistently low academic self-perception
	Quality of relationships with teachers and staff:	0	1	2	0 points: Positive relationships with teachers and staff, open communication 1 point: Some strained relationships with teachers or staff, occasional communication barriers 2 points: Poor relationships with teachers or staff, significant communication barriers
	Emotional support from teachers:	0	1	2	0 points: Strong emotional support from teachers, responsive to students' emotional needs 1 point: Some emotional support from teachers, occasional responsiveness to students' emotional needs 2 points: Lack of emotional support from teachers, little to no responsiveness to students' emotional needs
	Availability of academic support services (e.g., tutoring, mentoring):	0	1	2	0 points: Access to comprehensive academic support services, readily available when needed



					1 point: Limited access to academic support services, occasional availability when needed 2 points: No access to academic support services, unavailable when needed
	Perceived relevance and interest in academic subjects:	0	1	2	0 points: High perceived relevance and interest in academic subjects, actively engaged in learning 1 point: Moderate perceived relevance and interest in academic subjects, occasional disengagement 2 points: Low perceived relevance and interest in academic subjects, frequent disengagement
	VET Students. Is it likely that the student will find an apprenticeship?	0	2	10	0 points: Very likely 2 points: Normally such student will find a apprenticeship in our area 10 points: Mots like the student will struggle to find an apprenticeship

## Early School Leaving Risk Assessment Algorithm and Scoring Table for Bulgarian context

	Questions	Scoring			Explanation
Section 1: Student Information	Student's Name:	-	-	-	
	Age:	0	1	2	Calculate the difference between the student's age and the average age of their peers in the same grade or class. No deviation or within one year: 0 points Deviation of 1-2 years: 1 point Deviation of more than 2 years: 2 points
	Grade/Class:	-	-	-	
	Gender:	0	1	1	Male gender may indicate higher ESL risk due to societal factors, if it is associated with rural areas. Female gender may indicate higher ESL risk due to societal factors, if it is associated with minority context (eg. traditions in Roma community). Other gender may indicate higher ESL risk due to prejudice and discrimination
	Ethnicity:	0	4		If the student belongs to an ethnic group that is underrepresented or faces discrimination within the

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					school environment, they may receive a higher risk score.
	Languages spoken at home:	0	1		If the student speaks a language at home that is not widely spoken among their peers or is not the language of instruction at school, they may face additional challenges in communication and integration, resulting in a higher risk score.
	Special education needs (if any):	0	1	2	If the student requires special education support, they may face additional academic or social challenges, leading to a higher risk score. No Special Needs: 0 points Mild Special Needs: 1 point Severe Special Needs: 2 points
	Any relevant medical conditions or health concerns:	0	1	2	If the student has a medical condition that significantly affects their ability to attend school regularly or participate in activities, they are at a higher risk of early school leaving.
Section 2: Context	Urban / Rural Area of the student's home	0	4		0: Urban area indicates lower ESL risk. 1: Rural areas suggest some ESL risk.
	Transportation to school	0	3	6	0 points: Convenient access to reliable transportation options (e.g., school bus service, public transportation, walking distance to school). 1 point: Moderate inconvenience in transportation options (e.g., limited bus routes, longer commute times). 2 points: Significant barriers to transportation (e.g., lack of transportation options, long distances to school).
	School Resources	0	1	2	0 points: Well-funded schools with a wide range of resources, including technology, extracurricular programs, and support services. 1 point: Adequate funding for basic resources, but some limitations in access to specialized programs or support services. 2 points: Limited funding and resources, leading to significant

					gaps in educational opportunities and support services.
Section 3: Academic Performance	Average grades in the last academic term/year:	0	5	10	0 points: Above-average grades consistently maintained throughout the academic term/year. 1 point: Average grades with occasional fluctuations but generally meeting expectations. 2 points: Below-average grades with consistent struggles in meeting academic standards.
	Attendance record for the current academic term/year:	0	5	10	0 points: Excellent attendance, with minimal or no absences recorded throughout the academic term/year. 1 point: Moderate attendance, with occasional absences due to legitimate reasons (e.g., illness, family emergencies). 2 points: Poor attendance, with frequent or prolonged absences impacting academic progress.
	Any significant changes in academic performance or attendance? (If yes, please specify)	0	1	2	0 points: No significant changes in academic performance or attendance noted. 1 point: Minor fluctuations in academic performance or attendance observed, but not affecting overall engagement. 2 points: Major changes in academic performance or attendance, indicating potential underlying issues that require attention.
	Repetition of a school year:	0	1	2	0 points: No history of repeating a school year 1 point: Student has repeated one school year 2 points: Student has repeated multiple school years
	Involvement in extracurricular activities or clubs:	0	1	2	0 points: Active involvement in multiple extracurricular activities or clubs, demonstrating a well-rounded engagement. 1 point: Some involvement in extracurricular activities or clubs, but limited participation or sporadic engagement. 2 points: Minimal or no involvement in extracurricular activities, indicating potential disengagement from school life beyond academics.

Section 4: Socioeconomic Factors	Family structure (e.g., nuclear family, single-parent household):	0	1	2	0 points: Stable family structure (e.g., nuclear family) with consistent support and presence of both parents. 1 point: Single-parent household or non-traditional family structure with adequate support and stability. 2 points: Unstable family structure (e.g., frequent changes in caregivers, family conflict) impacting the student's well-being and support system.
	Education Level of the father	0	1	2	0 points: Primary or lower secondary school 1 point: High school 2 points: Higher education
	Education Level of the mother	0	1	2	0 points: Primary or lower secondary school 1 point: High school 2 points: Higher education
	Education Level of the older siblings	0	1	2	0 points: Primary or lower secondary school 1 point: High school 2 points: Higher education
	Migration:	0	1	2	No migration or stable residence for the past 3 years: 0 points Recent migration within the past year: 1 point Frequent migration (more than two moves within the past 3 years): 2 points
	Size of the Family:	0	1	2	1-3 dependents in the household: 0 points 4-6 dependents in the household: 1 point 7 or more dependents in the household: 2 points
	Socioeconomic status (e.g., income level, parental occupation):	0	4	8	0 points: High socioeconomic status with access to resources, educational opportunities, and financial stability. 4 points: Moderate socioeconomic status with some access to resources and financial stability, but occasional challenges. 8 points: Low socioeconomic status with limited access to resources, financial insecurity, and significant challenges in meeting basic needs.

## Algorithm based on partner country specific inputs for how to score ESL risk factors

	Housing stability (e.g., frequent relocation, homelessness):	0	2	4	0 points: Stable housing situation with consistent residence and minimal disruptions. 2 point: Some housing instability, such as occasional relocation or temporary housing arrangements. 4 points: Severe housing instability, including frequent moves, homelessness, or inadequate housing conditions.
	Access to resources such as books, internet, and educational materials at home:	0	1	2	0 points: Adequate access to resources at home, including books, internet, educational materials, and a conducive learning environment. 1 point: Limited access to some resources, with occasional barriers to educational materials or internet connectivity. 2 points: Significant lack of access to resources, such as limited availability of books, internet, or educational materials, hindering academic progress.
	Children Involved in Family Care Responsibilities:	0	2	4	0 points: Not responsible for any family care duties 2 points: Occasionally responsible for family care duties (e.g., helping with household chores) 4 points: Regularly responsible for family care duties (e.g., caring for younger siblings or elderly family members)
	Children Involved in Work:	0	3	6	0 points: Not involved in any work responsibilities 3 points: Occasionally involved in work responsibilities (e.g., part-time job during holidays) 6 points: Regularly involved in work responsibilities (e.g., part-time job after school)
	Early marriage or pregnancy in the family	0	5	10	0 points: No instances of early marriage or pregnancy in the family 5 points: Occasional instances of early marriage or pregnancy in the extended family, but not directly impacting the student 10 points: Direct impact of early marriage or pregnancy in the immediate family, potentially



					causing disruptions in the student's academic and personal life
	Family involvement in the student's education (e.g., attending school events, helping with homework):	0	1	2	<p>0 points: Active parental involvement in the student's education, including attendance at school events, regular communication with teachers, and support with homework.</p> <p>1 point: Some parental involvement, but inconsistent participation in school-related activities or limited support with academic tasks.</p> <p>2 points: Minimal parental involvement, with little to no engagement in the student's education or communication with school staff.</p>
Section 5: Behavioral and Emotional Factors	Behavior in the classroom (e.g., disruptive behavior, participation level):	0	4	8	<p>0 points: Positive behavior, actively engaged</p> <p>4 points: Occasional disruptive behavior, moderate participation level</p> <p>8 points: Frequent disruptive behavior, low participation level</p>
	Peer relationships (e.g., conflicts with peers, social isolation):	0	1	2	<p>0 points: Healthy peer relationships, no conflicts or social isolation</p> <p>1 point: Some conflicts with peers, occasional social isolation</p> <p>2 points: Persistent conflicts with peers, significant social isolation</p>
	Emotional well-being (e.g., signs of anxiety, depression, or other emotional distress):	0	1	2	<p>0 points: Stable emotional well-being, no signs of anxiety or depression</p> <p>1 point: Occasional signs of anxiety or depression, manageable emotional distress</p> <p>2 points: Persistent signs of anxiety or depression, significant emotional distress</p>
	Engagement with school counseling or support services (if applicable):	0	1	2	<p>0 points: Regular engagement with counseling or support services, actively seeking help when needed</p> <p>1 point: Occasional engagement with counseling or support services, hesitant to seek help</p> <p>2 points: Limited or no engagement with counseling or support services, avoiding seeking help when needed</p>

Section 6: School Environment	Perception of school safety and sense of belonging:	0	1	2	<p>0 points: Strong perception of school safety, high sense of belonging</p> <p>1 point: Some concerns about school safety, moderate sense of belonging</p> <p>2 points: Persistent concerns about school safety, low sense of belonging</p>
	Loneliness among fellow pupils:	0	1	2	<p>0 points: Strong social connections with peers, no feelings of loneliness</p> <p>1 point: Occasional feelings of loneliness, but generally well-connected with peers</p> <p>2 points: Persistent feelings of loneliness, significant social isolation from peers</p>
	High academic ambitions in relation to academic self-perception:	0	1	2	<p>0 points: High academic ambitions matched with a strong academic self-perception</p> <p>1 point: High academic ambitions with occasional doubts about academic abilities</p> <p>2 points: High academic ambitions coupled with a consistently low academic self-perception</p>
	Quality of relationships with teachers and staff:	0	1	2	<p>0 points: Positive relationships with teachers and staff, open communication</p> <p>1 point: Some strained relationships with teachers or staff, occasional communication barriers</p> <p>2 points: Poor relationships with teachers or staff, significant communication barriers</p>
	Emotional support from teachers:	0	1	2	<p>0 points: Strong emotional support from teachers, responsive to students' emotional needs</p> <p>1 point: Some emotional support from teachers, occasional responsiveness to students' emotional needs</p> <p>2 points: Lack of emotional support from teachers, little to no responsiveness to students' emotional needs</p>
	Availability of academic support services (e.g.,	0	1	2	<p>0 points: Access to comprehensive academic support services, readily available when needed</p>

	tutoring, mentoring):				1 point: Limited access to academic support services, occasional availability when needed 2 points: No access to academic support services, unavailable when needed
	Perceived relevance and interest in academic subjects:	0	1	2	0 points: High perceived relevance and interest in academic subjects, actively engaged in learning 1 point: Moderate perceived relevance and interest in academic subjects, occasional disengagement 2 points: Low perceived relevance and interest in academic subjects, frequent disengagement

### Early School Leaving Risk Assessment Algorithm and Scoring Table for Romanian context

	Questions	Scoring			Explanation
<b>Section 1: Student Information</b>	Student's Name:	-	-	-	
	Age:	0	1	2	Calculate the difference between the student's age and the average age of their peers in the same grade or class. No deviation or within one year: 0 points Deviation of 1-2 years: 1 point Deviation of more than 2 years: 2 points
	Grade/Class:	-	-	-	
	Gender:	0	1	1	Male gender may indicate higher ESL risk due to societal factors, if it is associated with rural areas. Female gender may indicate higher ESL risk due to societal factors, if it is associated with minority context (eg. traditions in Roma community). Other gender may indicate higher ESL risk due to prejudice and discrimination
	Ethnicity:	0	4		If the student belongs to an ethnic group that is underrepresented or faces discrimination within the school environment, they may receive a higher risk score.

	Languages spoken at home:	0	1		If the student speaks a language at home that is not widely spoken among their peers or is not the language of instruction at school, they may face additional challenges in communication and integration, resulting in a higher risk score.
	Special education needs (if any):	0	1	2	If the student requires special education support, they may face additional academic or social challenges, leading to a higher risk score. No Special Needs: 0 points Mild Special Needs: 1 point Severe Special Needs: 2 points
	Any relevant medical conditions or health concerns:	0	1	2	If the student has a medical condition that significantly affects their ability to attend school regularly or participate in activities, they are at a higher risk of early school leaving.
<b>Section 2: Context</b>	Urban / Rural Area of the student's home	0	3		0: Urban area indicates lower ESL risk. 3: Rural areas suggest some ESL risk.
	Transportation to school	0	3	6	0 points: Convenient access to reliable transportation options (e.g., school bus service, public transportation, walking distance to school). 3 point: Moderate inconvenience in transportation options (e.g., limited bus routes, longer commute times). 6 points: Significant barriers to transportation (e.g., lack of transportation options, long distances to school).
	School Resources	0	1	2	0 points: Well-funded schools with a wide range of resources, including technology, extracurricular programs, and support services. 1 point: Adequate funding for basic resources, but some limitations in access to specialized programs or support services. 2 points: Limited funding and resources, leading to significant gaps in educational opportunities and support services.

<b>Section 3: Academic Performance</b>	Average grades in the last academic term/year:	0	5	10	<p>0 points: Above-average grades consistently maintained throughout the academic term/year.</p> <p>5 point: Average grades with occasional fluctuations but generally meeting expectations.</p> <p>10 points: Below-average grades with consistent struggles in meeting academic standards.</p> <p>0 points: Unknown Information</p>
	Attendance record for the current academic term/year:	0	5	10	<p>0 points: Excellent attendance, with minimal or no absences recorded throughout the academic term/year.</p> <p>5 point: Moderate attendance, with occasional absences due to legitimate reasons (e.g., illness, family emergencies).</p> <p>10 points: Poor attendance, with frequent or prolonged absences impacting academic progress.</p> <p>0 points: Unknown Information</p>
	Any significant changes in academic performance or attendance? (If yes, please specify)	0	1	2	<p>0 points: No significant changes in academic performance or attendance noted.</p> <p>1 point: Minor fluctuations in academic performance or attendance observed, but not affecting overall engagement.</p> <p>2 points: Major changes in academic performance or attendance, indicating potential underlying issues that require attention.</p>
	Repetition of a school year:	0	1	2	<p>0 points: No history of repeating a school year</p> <p>1 point: Student has repeated one school year</p> <p>2 points: Student has repeated multiple school years</p>
	Involvement in extracurricular activities or clubs:	0	1	2	<p>0 points: Active involvement in multiple extracurricular activities or clubs, demonstrating a well-rounded engagement.</p> <p>1 point: Some involvement in extracurricular activities or clubs, but limited participation or sporadic engagement.</p> <p>2 points: Minimal or no involvement in extracurricular activities, indicating potential disengagement from school life beyond academics.</p>

<b>Section 4: Socioeconomic Factors</b>	Family structure (e.g., nuclear family, single-parent household):	0	1	2	0 points: Stable family structure (e.g., nuclear family) with consistent support and presence of both parents. 1 point: Single-parent household or non-traditional family structure with adequate support and stability. 2 points: Unstable family structure (e.g., frequent changes in caregivers, family conflict) impacting the student's well-being and support system.
	Education Level of the father	0	1	2	0 points: Primary or lower secondary school 1 point: High school 2 points: Higher education 0 points: Unknown Information/ Not applicable
	Education Level of the mother	0	1	2	0 points: Primary or lower secondary school 1 point: High school 2 points: Higher education 0 points: Unknown Information/ Not applicable
	Education Level of the older siblings	0	1	2	0 points: Primary or lower secondary school 1 point: High school 2 points: Higher education 0 points: Unknown Information/ Not applicable
	Migration:	0	1	2	No migration or stable residence for the past 3 years: 0 points Recent migration within the past year: 1 point Frequent migration (more than two moves within the past 3 years): 2 points 0 points: Unknown Information/ Not applicable
	Size of the Family:	0	1	2	1-3 dependents in the household: 0 points 4-6 dependents in the household: 1 point 7 or more dependents in the household: 2 points 0 points: Unknown Information/ Not applicable
	Socioeconomic status (e.g., income level,	0	4	8	0 points: High socioeconomic status with access to resources, educational opportunities, and financial stability.



## Algorithm based on partner country specific inputs for how to score ESL risk factors

	parental occupation):				<p>4 point: Moderate socioeconomic status with some access to resources and financial stability, but occasional challenges.</p> <p>8 points: Low socioeconomic status with limited access to resources, financial insecurity, and significant challenges in meeting basic needs.</p> <p>0 points: Unknown Information/ Not applicable</p>
	Housing stability (e.g., frequent relocation, homelessness):	0	2	4	<p>0 points: Stable housing situation with consistent residence and minimal disruptions.</p> <p>2 point: Some housing instability, such as occasional relocation or temporary housing arrangements.</p> <p>4 points: Severe housing instability, including frequent moves, homelessness, or inadequate housing conditions.</p> <p>0 points: Unknown Information/ Not applicable</p>
	Access to resources such as books, internet, and educational materials at home:	0	1	2	<p>0 points: Adequate access to resources at home, including books, internet, educational materials, and a conducive learning environment.</p> <p>1 point: Limited access to some resources, with occasional barriers to educational materials or internet connectivity.</p> <p>2 points: Significant lack of access to resources, such as limited availability of books, internet, or educational materials, hindering academic progress.</p> <p>0 points: Unknown Information/ Not applicable</p>
	Children Involved in Family Care Responsibilities:	0	2	4	<p>0 points: Not responsible for any family care duties</p> <p>2 points: Occasionally responsible for family care duties (e.g., helping with household chores)</p> <p>4 points: Regularly responsible for family care duties (e.g., caring for younger siblings or elderly family members)</p> <p>0 points: Unknown Information/ Not applicable</p>
	Children Involved in Work:	0	3	6	<p>0 points: Not involved in any work responsibilities</p>

## Algorithm based on partner country specific inputs for how to score ESL risk factors

					<p>3 point: Occasionally involved in work responsibilities (e.g., part-time job during holidays)</p> <p>6 points: Regularly involved in work responsibilities (e.g., part-time job after school)</p> <p>0 points: Unknown Information/ Not applicable</p>
	Early marriage in the family	0	5	10	<p>0 points: No instances of early marriage in the family</p> <p>5 points: Occasional instances of early marriage in the extended family, but not directly impacting the student</p> <p>10 points: Direct impact of early marriage in the immediate family, potentially causing disruptions in the student's academic and personal life</p> <p>0 points: Unknown Information/ Not applicable</p>
	Early pregnancy in the family	0	3	6	<p>0 points: No instances of early pregnancy in the family</p> <p>3 points: Occasional instances of early pregnancy in the extended family, but not directly impacting the student</p> <p>6 points: Direct impact of early pregnancy in the immediate family, potentially causing disruptions in the student's academic and personal life</p> <p>0 points: Unknown Information/ Not applicable</p>
	Family involvement in the student's education (e.g., attending school events, helping with homework):	0	1	2	<p>0 points: Active parental involvement in the student's education, including attendance at school events, regular communication with teachers, and support with homework.</p> <p>1 point: Some parental involvement, but inconsistent participation in school-related activities or limited support with academic tasks.</p> <p>2 points: Minimal parental involvement, with little to no engagement in the student's education or communication with school staff.</p>

					0 points: Unknown Information/ Not applicable
<b>Section 5: Behavioral and Emotional Factors</b>	Behavior in the classroom (e.g., disruptive behavior, participation level):	0	4	8	0 points: Positive behavior, actively engaged 4 point: Occasional disruptive behavior, moderate participation level 8 points: Frequent disruptive behavior, low participation level
	Peer relationships (e.g., conflicts with peers, social isolation):	0	1	2	0 points: Healthy peer relationships, no conflicts or social isolation 1 point: Some conflicts with peers, occasional social isolation 2 points: Persistent conflicts with peers, significant social isolation 0 points: Unknown Information
	Emotional well-being (e.g., signs of anxiety, depression, or other emotional distress):	0	1	2	0 points: Stable emotional well-being, no signs of anxiety or depression 1 point: Occasional signs of anxiety or depression, manageable emotional distress 2 points: Persistent signs of anxiety or depression, significant emotional distress 0 points: Unknown Information
	Engagement with school counseling or support services (if applicable):	0	1	2	0 points: Regular engagement with counseling or support services, actively seeking help when needed 1 point: Occasional engagement with counseling or support services, hesitant to seek help 2 points: Limited or no engagement with counseling or support services, avoiding seeking help when needed
<b>Section 6: School Environment</b>	Perception of school safety and sense of belonging:	0	1	2	0 points: Strong perception of school safety, high sense of belonging 1 point: Some concerns about school safety, moderate sense of belonging 2 points: Persistent concerns about school safety, low sense of belonging 0 points: Unknown Information
	Loneliness among fellow pupils:	0	1	2	0 points: Strong social connections with peers, no feelings of loneliness 1 point: Occasional feelings of loneliness, but generally well-connected with peers

## Algorithm based on partner country specific inputs for how to score ESL risk factors

					2 points: Persistent feelings of loneliness, significant social isolation from peers 0 points: Unknown Information
	High academic ambitions in relation to academic self-perception:	0	1	2	0 points: High academic ambitions matched with a strong academic self-perception 1 point: High academic ambitions with occasional doubts about academic abilities 2 points: High academic ambitions coupled with a consistently low academic self-perception 0 points: Unknown Information
	Quality of relationships with teachers and staff:	0	1	2	0 points: Positive relationships with teachers and staff, open communication 1 point: Some strained relationships with teachers or staff, occasional communication barriers 2 points: Poor relationships with teachers or staff, significant communication barriers 0 points: Unknown Information
	Emotional support from teachers:	0	1	2	0 points: Strong emotional support from teachers, responsive to students' emotional needs 1 point: Some emotional support from teachers, occasional responsiveness to students' emotional needs 2 points: Lack of emotional support from teachers, little to no responsiveness to students' emotional needs
	Availability of academic support services (e.g., tutoring, mentoring):	0	1	2	0 points: Access to comprehensive academic support services, readily available when needed 1 point: Limited access to academic support services, occasional availability when needed 2 points: No access to academic support services, unavailable when needed

	Perceived relevance and interest in academic subjects:	0	1	2	<p>0 points: High perceived relevance and interest in academic subjects, actively engaged in learning</p> <p>1 point: Moderate perceived relevance and interest in academic subjects, occasional disengagement</p> <p>2 points: Low perceived relevance and interest in academic subjects, frequent disengagement</p>
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### Early School Leaving Risk Assessment Algorithm and Scoring Table for Spanish context

	Questions	Scoring			Explanation
Section 1: Student Information	Student's Name:	-	-	-	
	Age:	0	1	2	<p>Calculate the difference between the student's age and the average age of their peers in the same grade or class.</p> <p>No deviation or within one year: 0 points</p> <p>Deviation of 1-2 years: 1 point</p> <p>Deviation of more than 2 years: 2 points</p>
	Grade/Class:	-	-	-	
	Gender:	0		1	<p>Male gender may indicate higher ESL risk due to societal factors, if it is associated with rural areas.</p> <p>Female gender may indicate higher ESL risk due to societal factors, if it is associated with minority context (eg. traditions in Roma community).</p>
	Ethnicity:	0		2	<p>If the student belongs to an ethnic group that is underrepresented or faces discrimination within the school environment, they may receive a higher risk score.</p>
	Languages spoken at home:	0		1	<p>If the student speaks a language at home that is not widely spoken among their peers or is not the language of instruction at school, they may face additional challenges in communication and integration, resulting in a higher risk score.</p>
	Special education needs (if any):	0	1	2	<p>If the student requires special education support, they may face additional academic or social challenges, leading to a higher risk score.</p>

## Algorithm based on partner country specific inputs for how to score ESL risk factors

					No Special Needs: 0 points Mild Special Needs: 1 point Severe Special Needs: 2 points
	Any relevant medical conditions or health concerns:	0	1	2	If the student has a medical condition that significantly affects their ability to attend school regularly or participate in activities, they are at a higher risk of early school leaving.
<b>Section 2: Context</b>	Urban / Rural Area of the student's home	0		1	0: Urban area indicates lower ESL risk. 1: Rural areas suggest some ESL risk.
	Transportation to school	0	1	2	0 points: Convenient access to reliable transportation options (e.g., school bus service, public transportation, walking distance to school). 1 point: Moderate inconvenience in transportation options (e.g., limited bus routes, longer commute times). 2 points: Significant barriers to transportation (e.g., lack of transportation options, long distances to school).
	School Resources	0	1	2	0 points: Well-funded schools with a wide range of resources, including technology, extracurricular programs, and support services. 1 point: Adequate funding for basic resources, but some limitations in access to specialized programs or support services. 2 points: Limited funding and resources, leading to significant gaps in educational opportunities and support services.
<b>Section 3: Academic Performance</b>	Average grades in the last academic term/year:	0	5	10	0 points: Above-average grades consistently maintained throughout the academic term/year. 1 point: Average grades with occasional fluctuations but generally meeting expectations. 2 points: Below-average grades with consistent struggles in meeting academic standards.
	Attendance record for the current academic term/year:	0	5	10	0 points: Excellent attendance, with minimal or no absences recorded throughout the academic term/year. 5 point: Moderate attendance, with occasional absences due to

## Algorithm based on partner country specific inputs for how to score ESL risk factors

					legitimate reasons (e.g., illness, family emergencies). 10 points: Poor attendance, with frequent or prolonged absences impacting academic progress.
	Any significant changes in academic performance or attendance? (If yes, please specify)	0	3	6	0 points: No significant changes in academic performance or attendance noted. 3 points: Minor fluctuations in academic performance or attendance observed, but not affecting overall engagement. 6 points: Major changes in academic performance or attendance, indicating potential underlying issues that require attention.
	Repetition of a school year:	0	1	2	0 points: No history of repeating a school year 1 point: Student has repeated one school year 2 points: Student has repeated multiple school years
	Involvement in extracurricular activities or clubs:	0	1	2	0 points: Active involvement in multiple extracurricular activities or clubs, demonstrating a well-rounded engagement. 1 point: Some involvement in extracurricular activities or clubs, but limited participation or sporadic engagement. 2 points: Minimal or no involvement in extracurricular activities, indicating potential disengagement from school life beyond academics.
Section 4: Socioeconomic Factors	Family structure (e.g., nuclear family, single-parent household):	0	1	2	0 points: Stable family structure (e.g., nuclear family) with consistent support and presence of both parents. 1 point: Single-parent household or non-traditional family structure with adequate support and stability. 2 points: Unstable family structure (e.g., frequent changes in caregivers, family conflict) impacting the student's well-being and support system.
	Education Level of the father	0	1	2	0 points: Primary or lower secondary school 1 point: High school 2 points: Higher education



## Algorithm based on partner country specific inputs for how to score ESL risk factors

					0 points: Unknown Information/ Not applicable
	Education Level of the mother	0	1	2	0 points: Primary or lower secondary school 1 point: High school 2 points: Higher education 0 points: Unknown Information/ Not applicable
	Education Level of the older siblings	0	1	2	0 points: Primary or lower secondary school 1 point: High school 2 points: Higher education 0 points: Unknown Information/ Not applicable
	Migration:	0	1	2	No migration or stable residence for the past 3 years: 0 points Recent migration within the past year: 1 point Frequent migration (more than two moves within the past 3 years): 2 points
	Size of the Family:	0	1	2	1-3 dependents in the household: 0 points 4-6 dependents in the household: 1 point 7 or more dependents in the household: 2 points
	Socioeconomic status (e.g., income level, parental occupation):	0	4	8	0 points: High socioeconomic status with access to resources, educational opportunities, and financial stability. 4 points: Moderate socioeconomic status with some access to resources and financial stability, but occasional challenges. 8 points: Low socioeconomic status with limited access to resources, financial insecurity, and significant challenges in meeting basic needs.
	Housing stability (e.g., frequent relocation, homelessness):	0	1	2	0 points: Stable housing situation with consistent residence and minimal disruptions. 1 point: Some housing instability, such as occasional relocation or temporary housing arrangements. 2 points: Severe housing instability, including frequent moves, homelessness, or inadequate housing conditions.

## Algorithm based on partner country specific inputs for how to score ESL risk factors

	Access to resources such as books, internet, and educational materials at home:	0	1	2	<p>0 points: Adequate access to resources at home, including books, internet, educational materials, and a conducive learning environment.</p> <p>1 point: Limited access to some resources, with occasional barriers to educational materials or internet connectivity.</p> <p>2 points: Significant lack of access to resources, such as limited availability of books, internet, or educational materials, hindering academic progress.</p> <p>0 points: Unknown Information/ Not applicable</p>
	Children Involved in Family Care Responsibilities:	0	2	4	<p>0 points: Not responsible for any family care duties</p> <p>2 points: Occasionally responsible for family care duties (e.g., helping with household chores)</p> <p>4 points: Regularly responsible for family care duties (e.g., caring for younger siblings or elderly family members)</p> <p>0 points: Unknown Information/ Not applicable</p>
	Children Involved in Work:	0	2	4	<p>0 points: Not involved in any work responsibilities</p> <p>2 points: Occasionally involved in work responsibilities (e.g., part-time job during holidays)</p> <p>4 points: Regularly involved in work responsibilities (e.g., part-time job after school)</p> <p>0 points: Unknown Information/ Not applicable</p>
	Early marriage or pregnancy in the family	0	1	2	<p>0 points: No instances of early marriage or pregnancy in the family</p> <p>1 point: Occasional instances of early marriage or pregnancy in the extended family, but not directly impacting the student</p> <p>2 points: Direct impact of early marriage or pregnancy in the immediate family, potentially causing disruptions in the student's academic and personal life</p> <p>0 points: Unknown Information/ Not applicable</p>

## Algorithm based on partner country specific inputs for how to score ESL risk factors

	Family involvement in the student's education (e.g., attending school events, helping with homework):	0	2	4	<p>0 points: Active parental involvement in the student's education, including attendance at school events, regular communication with teachers, and support with homework.</p> <p>2 pointst: Some parental involvement, but inconsistent participation in school-related activities or limited support with academic tasks.</p> <p>4 points: Minimal parental involvement, with little to no engagement in the student's education or communication with school staff.</p>
Section 5: Behavioral and Emotional Factors	Behavior in the classroom (e.g., disruptive behavior, participation level):	0	4	8	<p>0 points: Positive behavior, actively engaged</p> <p>4 points: Occasional disruptive behavior, moderate participation level</p> <p>8 points: Frequent disruptive behavior, low participation level</p>
	Peer relationships (e.g., conflicts with peers, social isolation):	0	2	4	<p>0 points: Healthy peer relationships, no conflicts or social isolation</p> <p>2 points: Some conflicts with peers, occasional social isolation</p> <p>4 points: Persistent conflicts with peers, significant social isolation</p> <p>0 points: Unknown Information/ Not applicable</p>
	Emotional well-being (e.g., signs of anxiety, depression, or other emotional distress):	0	3	6	<p>0 points: Stable emotional well-being, no signs of anxiety or depression</p> <p>3 points: Occasional signs of anxiety or depression, manageable emotional distress</p> <p>6 points: Persistent signs of anxiety or depression, significant emotional distress</p> <p>0 points: Unknown Information/ Not applicable</p>
	Engagement with school counseling or support services (if applicable):	0	1	2	<p>0 points: Regular engagement with counseling or support services, actively seeking help when needed</p> <p>1 point: Occasional engagement with counseling or support services, hesitant to seek help</p> <p>2 points: Limited or no engagement with counseling or support services, avoiding seeking help when needed</p>

Section 6: School Environment	Perception of school safety and sense of belonging:	0	1	2	0 points: Strong perception of school safety, high sense of belonging 1 point: Some concerns about school safety, moderate sense of belonging 2 points: Persistent concerns about school safety, low sense of belonging
	Loneliness among fellow pupils:	0	1	2	0 points: Strong social connections with peers, no feelings of loneliness 1 point: Occasional feelings of loneliness, but generally well-connected with peers 2 points: Persistent feelings of loneliness, significant social isolation from peers
	High academic ambitions in relation to academic self-perception:	0	1	2	0 points: High academic ambitions matched with a strong academic self-perception 1 point: High academic ambitions with occasional doubts about academic abilities 2 points: High academic ambitions coupled with a consistently low academic self-perception
	Quality of relationships with teachers and staff:	0	1	2	0 points: Positive relationships with teachers and staff, open communication 1 point: Some strained relationships with teachers or staff, occasional communication barriers 2 points: Poor relationships with teachers or staff, significant communication barriers
	Emotional support from teachers:	0	1	2	0 points: Strong emotional support from teachers, responsive to students' emotional needs 1 point: Some emotional support from teachers, occasional responsiveness to students' emotional needs 2 points: Lack of emotional support from teachers, little to no responsiveness to students' emotional needs
	Availability of academic support services (e.g., tutoring, mentoring):	0	1	2	0 points: Access to comprehensive academic support services, readily available when needed 1 point: Limited access to academic support services, occasional availability when needed

					2 points: No access to academic support services, unavailable when needed
	Perceived relevance and interest in academic subjects:	0	1	2	0 points: High perceived relevance and interest in academic subjects, actively engaged in learning 1 point: Moderate perceived relevance and interest in academic subjects, occasional disengagement 2 points: Low perceived relevance and interest in academic subjects, frequent disengagement

### Algorithm Interpretation:

- Low Risk (0-20 points): Students scoring in this range are considered to have a low risk of early school leaving.
- Moderate Risk (21-40 points): Students in this range are at moderate risk for early school leaving.
- High Risk (41-60 points): Students scoring in this range are at high risk of early school leaving.
- Critical Risk (61 points and above): Students with scores in this range are at critical risk of early school leaving.

### Rating Scale Implementation:

Each section of the questionnaire will be scored, and the scores will be summed to provide an overall risk score.

Risk scores will be displayed, categorizing students into different risk levels.

The tool will generate alerts based on these risk levels, triggering appropriate notifications and intervention plans.

The ESL warning tool system defines specific thresholds or criteria for each type of alert based on established risk factors associated with early school leaving. For example, thresholds may be set for academic performance, attendance, behaviour, socioeconomic status, emotional well-being, and engagement with support services.

- Alert 1: Academic Performance Decline Alert

Triggers when a student's average grades in the last academic term/year fall below a certain threshold.

Sends notifications to teachers, counsellors, and parents/guardians to intervene and provide additional academic support.

Provides recommendations for targeted interventions, such as tutoring, mentoring, or specialized academic assistance programs.

- Alert 2: Attendance Monitoring Alert

Activates when a student's attendance record for the current academic term/year indicates frequent or prolonged absences.

Sends alerts to school administrators, counsellors, and relevant support staff to investigate the reasons behind the absences and offer appropriate interventions.

- Alert 3: Behavioural Concern Alert

Triggers when a student's behaviour in the classroom, such as disruptive behaviour or low participation levels, raises concerns about their engagement and well-being.

Notifies teachers, counsellors, and behaviour intervention specialists to address the behaviour proactively and implement behaviour management strategies.

- Alert 4: Socioeconomic Risk Alert

Activates when a student's socioeconomic status, family structure, or housing stability indicates significant risk factors for early school leaving.

Alerts school social workers, counsellors, and community outreach programs to provide wraparound support services for the student and their family.

Offers referrals to external agencies or organizations for assistance with housing, financial aid, or social services as needed.

- Alert 5: Emotional Well-being Alert

Triggers when a student's emotional well-being, as indicated by signs of anxiety, depression, or emotional distress, warrants immediate attention.

Notifies school counsellors, mental health professionals, and crisis intervention teams to provide mental health support and interventions.

Establishes a protocol for ongoing monitoring of the student's emotional well-being and follow-up interventions to ensure their safety and well-being.

- Alert 6: Support Service Engagement Alert

Activates when a student's engagement with school counselling or support services declines or remains low despite identified needs.

Sends reminders to students, parents/guardians, and school staff about available support services and encourages proactive engagement.

Tracks the student's utilization of support services and identifies barriers to access for targeted outreach and assistance.



# For inquiries, contact us.



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