AALBORG UNIVERSITY
DENMARK

DELIVERY in Erasmus+-project Solution By Inclusion

INTELLECTUAL OUTPUT 3: Questionnaire and radar chart for measuring student's mental well-being and social inclusion

Delivered by project partner: CaBE, Aalborg University

Solution By Inclusion

DEPARTMENT OF CULTURE AND LEARNING

AALBORG UNIVERSITY

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01-09-2021

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1. INTRODUCTION

This report constitutes project partner CaBE, Aalborg University, delivery on **Intellectual Output 3 (IO3)** in the Erasmus+ project *Solution By Inclusion: Development of digital, innovative Prevention & Intervention Solutions to strengthen Social Inclusion, Well-being and combat Early School Leaving in Vocational Education & Training (VET) and Second Change Learning (SCL) schools*.

The *Solution By Inclusion* project aims to reduce the number of dropouts among students at the upper secondary school level in European Vocational Education and Training (VET) schools and Second Chance Learning (SCL) schools by increasing social inclusion and mental well-being of the students. **IO3** contributes to this overall aim by assessing student's mental well-being and social inclusion captured in a questionnaire, which is based on the results from a systematic research literature review and a co-creation process with students from Peer Advisory Boards at the projects' three partnering schools.

TASKS LEADING TO THE PRODUCTION OF INTELLECTUAL OUTPUT 3:

The work of **IO3** consists of three work packages:

- **W.P.3.4:** A systematic research literature review of relevant studies regarding student dropout and youngsters' social inclusion and mental well-being.

- **W.P.3.5:** A co-creation processes consisting of focus group interviews with students from Peer Advisory Boards on what they define as social inclusion and mental well-being. Data from the interviews are used in a comparative study of differences and similarities in how students in different countries characterize social inclusion and mental well-being.

- **W.P.3.6:** A questionnaire and radar chart based on:

  1) The systematic research literature review (W.P.3.4)
  2) The comparative study (W.P.3.5)

STRUCTURE OF THE REPORT

The structure of the report follows the process of work shown in figure 1.

In **chapter 2**, a brief introduction to the methodology and results of the systematic research literature review (W.P.3.4) is given (See appendix 2 for full content of the literature review).

In **chapter 3**, the selection process of implementing the results of the review in the further work of IO3 is described. The selection process also included inputs from a pre- and post-questionnaire (see appendix 3) by project partner RVTS Sør (part of W.P.5). The result of the selection process was a first draft of dimensions and questions (see appendix 5 for full content of this first draft).

Chapter 4 unfolds the methodology and results from the focus group interviews, and accounts for the co-creation process of creating the finalized questionnaire and radar chart, including students as 'experts in their own life'.

In the final **chapter 5**, some final additions to the finalized questionnaire are accounted for, and an example of a complete radar chart is shown.

Figure 1: Process of work
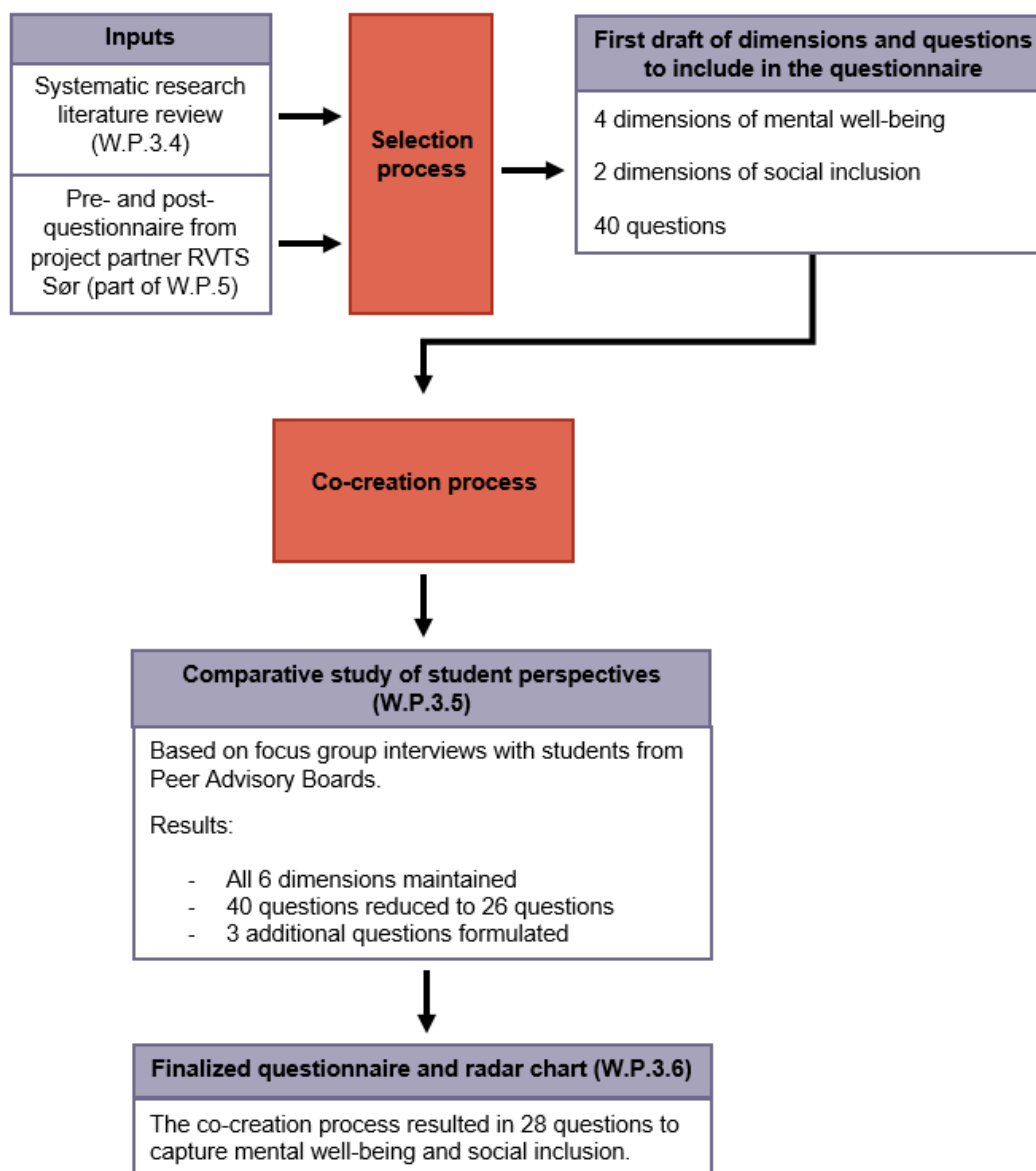
2. SYSTEMATIC LITERATURE REVIEW (W.P.3.4)

The purpose of **W.P.3.4** is to comprehend the-state-of-the-art knowledge of the field of youngsters' mental well-being and social inclusion. This knowledge is utilized to build the questionnaire and radar chart on existing research within this area (Appendix 1:140).

CaBE made the systematic research literature review and reported the results in an article presented for the steering group. The review is attached as appendix 2. The methodology and results of the review were also presented to the project partners participating in the steering group meeting March 4, 2021.
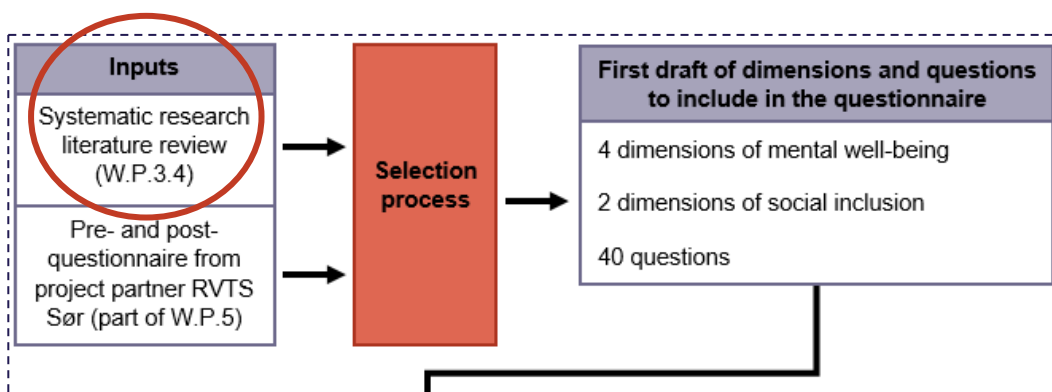
The following is a brief introduction to the methodology and results of the systematic literature review.

2.1. METHODOLOGY AND RESEARCH STRATEGY

The review is based on the following two research questions (Appendix 2:3):

1) *Which dimensions of mental well-being and social inclusion, respectively, increase the risk of dropout from VET, and how can these dimensions be measured and assessed?*

2) *What are the important confounding factors of the association between mental health, social inclusion and dropout?*

To answer the first research question, the review is focused on: *First* to uncover which dimensions of mental well-being and scholastic social inclusion affects the risk of dropout from Vocational Education and Training (VET) schools and Second Change Learning (SCL) schools, and *second,* to examine how to measure these dimensions statistically.

In answering the second research question, the review addresses the question of which confounding variables affect the causal relationships between dropout and mental well-being and social inclusion, respectively.

The review relied on the PRISMA checklist with three basic steps (Liberati et al., 2009):

1) Finding relevant documents
2) Selecting and filtering documents
3) Summarizing and analyzing the documents

STEP 1: FINDING RELEVANT DOCUMENTS

A so-called snowballing technique was applied, which refers to "*using the reference list of a paper or the citations to the paper to identify additional papers*" (Wohlin, 2014:1). In snowballing, the first step is to create a starter set of documents, for which we used the ERIC, Google Scholar, and Aalborg University Library databases. We used the following search terms:

Table 1: Search terms

Aspects	Related words and phrases
Aspect 1: Mental well-being (title)	Mental ill-being Mental health
Aspect 2: Social inclusion (title)	Social exclusion Social integration
Aspect 3: Vocational education & training	Vocational education Secondary education
Aspect 4: Dropout	Non-completion

This first step resulted in the inclusion of six relevant documents, which formed the basis of the second step of the snowballing procedure: Backward and forward snowballing (Wohlin, 2014) (see Appendix 2). In total, 1786 references were reviewed from August 2020 to October 2020.

STEP 2: SELECTING AND FILTERING DOCUMENTS

To determine which documents were relevant to an in-depth review, the following inclusion and exclusion criteria were established (Appendix 2:7):

Table 2: Inclusion and exclusion criteria

Inclusion criteria	Exclusion criteria
- Empirical studies - Studies that provide measurement of mental well-being and/or health in the VET-student population (youngsters age 15 to 25) - Studies that focuses on students in VET/secondary education in European countries - English written studies - Peer-reviewed articles, conference papers or book chapters	- Studies of only adult or child participants - Literature reviews - Studies that do not originate from a European country - Studies that does not include the terms "mental well-being" or "social inclusion" in the title - Studies where dropout is not the dependent variable - Mental disorder-specific (e.g. depression) studies

18 documents met the established inclusion criteria and were included in the in-depth review.

STEP 3: SUMMARIZING AND ANALYZING THE DOCUMENTS

Based on the 18 selected studies, dimensions of mental well-being and social inclusion as well as their impact on dropout were identified. Furthermore confounding factors of these causal relationships were found.

2.2. RESULTS

Six dimensions of mental well-being and two dimensions of social inclusion were identified based on the review (Appendix 2:9).

DIMENSIONS OF MENTAL WELL-BEING

This section contains a brief introduction to the six dimensions of mental well-being. A more thorough definition of the dimensions and their impact on dropout can be accessed in the literature review, along with propositions of how to measure each dimension (Appendix 2:9pp).

Dimension 1) General mental well-being refers to the student's assessment of how they are doing (Hjorth et al., 2016), and how they function in everyday life (Bania et al., 2016).

2) Internalizing dimension refers to the reaction of negative scholastic events, where the student redirects negative emotions against him- or herself. In some cases, these emotional reactions can be equated with symptoms of depression,

anxiety or the like (De Ridder et al., 2013; Sagatun et al., 2014; Holen et al., 2018; Hetlevik et al., 2018; Parviainen et al., 2020).

3) Externalizing dimension refers to the reaction of negative scholastic events, where the student redirects negative emotions against others. This may show as behavioral problems, such as anger, hyperactivity, inattention, or lack of concentration (De Ridder et al., 2013; Sagatun et al., 2014; Bania et al., 2016; Lee et al., 2009; Hetlevik et al., 2018; Holen et al., 2018).

4) Health dimension refers to the students' assessment of their physical health and health-related behavior, for instance, factors as insomnia, smoking habits, alcohol consumption, physical activity, hours of watching television, and so on (De Ridder et al., 2013; Sagatun et al., 2014; Ingholt et al., 2015; Svansdottir et al., 2015; Andersen et al., 2018).

5) Social dimension refers to the students' assessment of the quality of their social life and their attitudes towards others. For instance, how many (close) social relations they are part of and their willingness to help and be kind to other people (Goodman et al., 2003; Bania et al., 2016).

6) School burnout dimension refers to feelings of exhaustion or educational stress, loss of interest in schoolwork, and school-related feelings of incompetence and pessimism (Bask & Salmela-Aro, 2013; Eicher et al., 2014; Parviainen et al., 2020).

DIMENSIONS OF SOCIAL INCLUSION

This section briefly introduces the two dimensions of social inclusion. A more thorough definition of the dimensions and their impact on dropout can be accessed in the literature review, along with propositions of how to measure each dimension (Appendix 2:17pp).

Dimension 1) Social inclusion into the learning community refers to factors such as students' perceived interaction with school staff and teachers in particular, as well as feelings of school connectedness (Jørgensen, 2011; Nairz-Wirth & Feldmann, 2017; Andersen et al., 2018; Holen et al., 2018).

Dimension 2) Social inclusion into the social community. The second dimension of social inclusion refers to students' interaction with school staff and other students at school and their feelings of having (close) relationships with people at school (Jørgensen, 2011; Ingholt et al., 2015). Thus, this dimension refers explicitly to social settings within the students' school environment.

CONFOUNDING VARIABLES

Previous research stressed the importance of evaluating the association between students' mental well-being and social inclusion, respectively, and dropout from VET's/SCL in the context of other important factors (Esch et al., 2014). The term *omitted variable bias* describes the fact, that omitting of potential mediating or confounding factors may lead to an overestimation of the impact of the independent variables on the investigated subject (de Vaus, 2013). In this case, it means that the effect of mental well-being or social inclusion on dropout could be overestimated if we do not include other potentially confounding or mediating variables.

Based on previous research, several confounding variables were identified (e.g. Esch et al. 2014; Appendix 1:19pp). These variables can be organized into the following four categories: 1) Socio-demographic factors, 2) Family factors, 3) School-related factors, and 4) Individual factors. The selection process and co-creation process in the following chapters do not include these confounding factors. Instead, questions to capture confounding factors in the finalized questionnaire will be accounted for in section 5.1. (or see appendix 6).

3. SELECTION PROCESS: IMPLEMENTING RESULTS FROM W.P.3.4 IN THE FURTHER WORK OF IO3
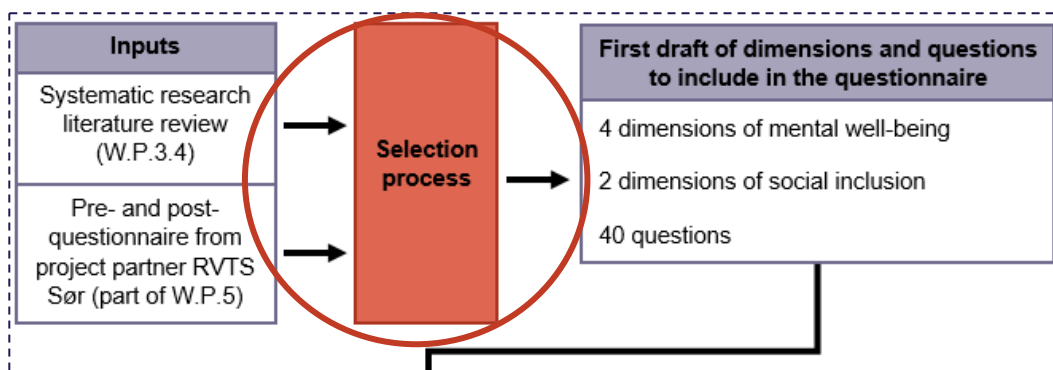
This chapter contains the account of implementing the results from the literature review in the further work of **IO3**. The finalized questionnaire and radar chart are to be used in a summative evaluation (W.P.7) to assess whether the prevention and intervention solutions of the project has worked as intended. Thus, to be sure that potential improvements in students' mental well-being and social inclusion can be attributed to the prevention and intervention solutions (W.P.4 and W.P.5), the dimensions and the questions were adjusted to be in line with the aim of the project. A selection process, where dimensions and questions of the literature review were selected or deselected to be part of a first draft of a questionnaire, was completed. The selection process also included additions of new questions inspired by the project partner RVTS Sør, who are responsible for one of the prevention/intervention solutions.

The first draft of dimensions and questions, as well as the criteria of selection, are presented in the following.

3.1. FIRST DRAFT OF DIMENSIONS

In adjusting the results of the literature review to be in line with the overall aim of the project, the six dimensions of mental well-being were downgraded into four. The downgrading process can be seen in figure 2 below.

First, it was found that including a dimension of 1) General mental well-being was not so meaningful, since the finalized radar chart aims to enlighten general mental well-being as an overall phenomenon based on a division into several dimensions. In addition, it was found that the two dimensions of 1) General mental well-being and 2) Internalizing dimension had many overlaps, which is why these two dimensions were combined into one dimension of **1) Emotional well-being**.

Figure 2: Selecting and adjusting dimensions
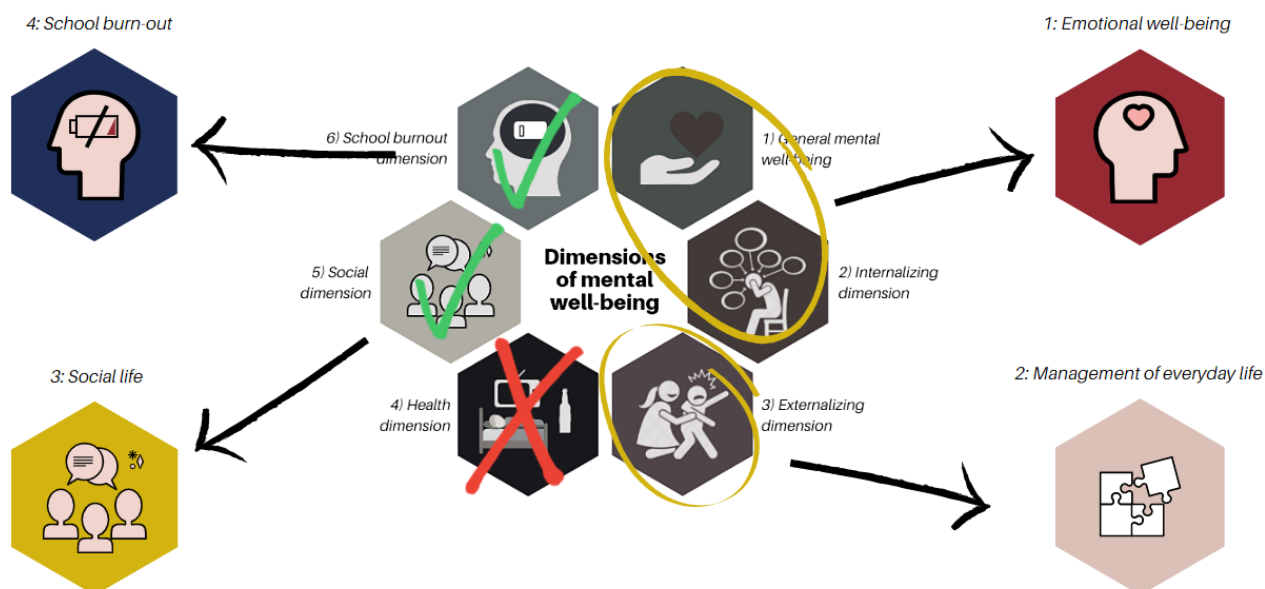
Secondly, the 3) Externalizing dimension conducted from the literature review is meant to capture behavioral problems. The questions related to this dimension are part of the highly validated Strength and Difficulties Questionnaire (SDQ), which was initially developed for use among children aged 2-17 years. Even though the questionnaire is also validated among adults, these questions seem quite age specific. Instead, a dimension of **2) Management of everyday life**, was found to be more appropriate for the target group, as well as more in line with the prevention and intervention solutions applied in the project.

Third, the 4) Health dimension was excluded in the further work of IO3, as physical health is not a point of importance to either the aim of the project or the prevention and intervention solutions applied.

The remaining dimensions of **3) Social life** and **4) School burnout** were kept as listed in the literature review.

Likewise, the two dimensions of social inclusion **1) Inclusion into the learning community** and **2) Inclusion into the social community** were kept as listed in the literature review.

3.2. SELECTING QUESTIONS TO CAPTURE EACH DIMENSION

The findings from the literature review of questions to include in a questionnaire on mental well-being and social inclusion are extensive. In total, a number of 74 questions are suggested in the review, and the questionnaire from RVTS Sør contained 28 additional questions. A reduction of questions were needed to create a compliant questionnaire. Approximate 4-5 questions within each dimension were

considered a minimum in order to be able to capture each of the respective subjects. The questions to capture each dimension were selected based on three criteria:

Table 3: Selection criteria

1. Relevant to aim of the project	The questionnaire aims at capturing improvements in mental well-being and social inclusion, induced by the prevention and intervention solutions of the project. This means that questions of no relevance to the aim of the project or the project intervention were deselected.
2. Diversity	As some of the questions proposed in the review were quite similar, the questions that were most diverse were selected, in order to frame each respective dimension as nuanced as possible.
3. Relevant to target group	Questions that did not directly address the target group (youngsters age 15 to 25) were discarded from the first draft.

The first draft of selected questions to capture each dimension is presented in appendix 5.

4. CO-CREATING PROCESS: COMPARATIVE STUDY OF STUDENT PERSPECTIVES (W.P.3.5)
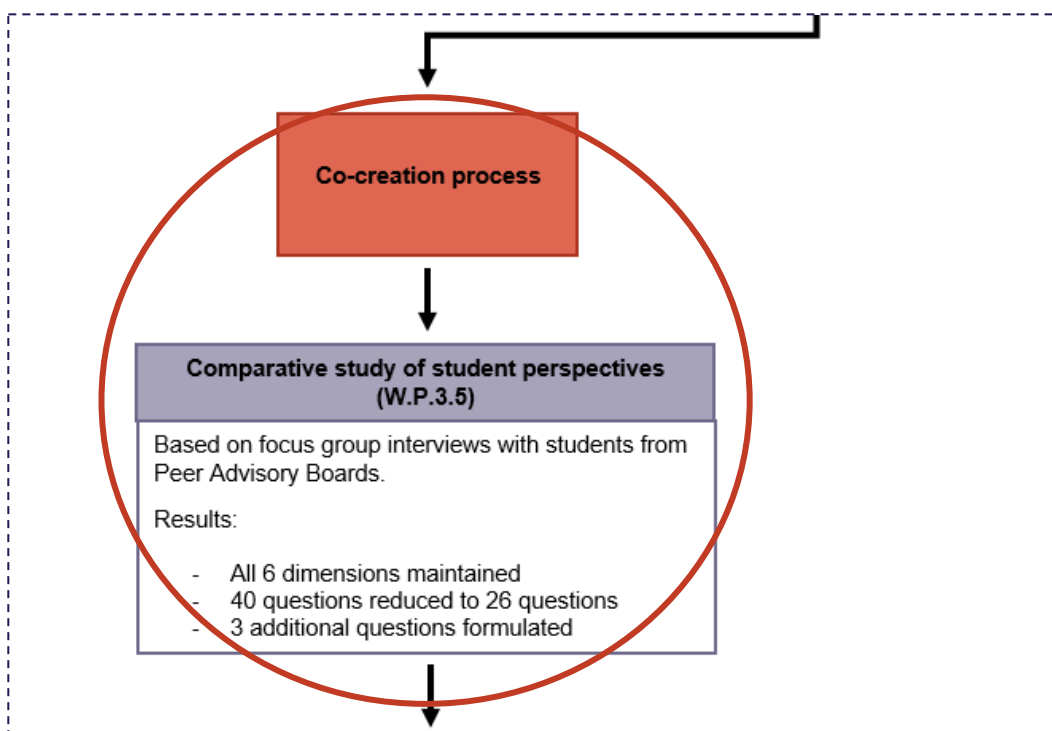
In the work of **W.P.3.5**, focus group interviews were used to gather data from students of the partnering VET/SCL schools, on their perspectives on social inclusion and mental well-being. The data collected formed the basis for a comparative study of differences and similarities on how students in different countries define social inclusion and mental well-being.

The primary purpose of including student perspectives were to create the questionnaire and radar chart as a co-creation process, where students were included as 'experts in their own life' (Appendix 1:140). Thus, the results of the comparative analysis was used to make some adjustments to the first draft of dimensions and questions, and creating the finalized questionnaire and radar chart.

This chapter unfolds the methodology and results from the focus group interviews, as well as the adjustments that the comparative analysis have given rise to.

4.1. METHODOLOGY

CaBE conducted three focus group interviews with students from the Peer Advisory Boards in February 2021 – one for each partnering school. About four students participated in each focus group interview. A teacher or supervisor accompanied the students to make the students feel safe and assist in potential

translation issues. The schools were responsible for appointing the students from their Peer Advisory Boards to participate in the interviews. Due to COVID-19, the interviews were hosted online using Zoom, and not physically during the transnational meetings as initially planned.

ANONYMITY AND DATA SECURITY

Each student has signed a declaration of consent prior to his or her participation in the interview. The data were stored, analyzed, and disseminated by CaBE/Aalborg University in accordance with European GDPR and data protection guidelines. First, this means that data are stored in a secure folder in Aalborg University's internal file management system. Second, it also means that the qualitative points used in the analysis and possibly the use of citations do not refer back to specific individuals.

INTERVIEW GUIDE

The interview guide (appendix 4) contained questions of both highly structured and more open-ended character.

The interviews progressed as follows:

1) The students were introduced to the four dimensions of mental well-being and the two dimensions of social inclusion.

2) For each dimension, the draft of questions were presented. Every student awarded points to the questions they found most important and adequate to include in a questionnaire capturing the respective dimension. The students awarded 3 points to the question he or she found MOST important and/or adequate. 1 point for the question that he or she found LESS important and/or adequate. 2 points to the question in between. The questions were presented in random order, and the order has been different from interview to interview to avoid biased results.

3) The votes of the students were put into a scoreboard to compare the points given from each of the students and summarize the total scores of each question (See figure 3 below).

4) The students discussed the results of the scoreboard, facilitated by questions like: "Why do you all agree that item number X is the most important?", or: "Why did you vote on item X?" Thus, this last part allowed the students to elaborate on their answers and include their reflections on mental well-being and social inclusion.

Figure 3: Score board example

Rating questions to capture dimension 1

Emotional well-being SCOREBOARD

Question	Student 1	Student 2	Student 3	Student 4	Total score
1. That you like most parts of your personality?	2	3	3	3	11
2. That people are basically good?					
3. That your life has a sense of direction or meaning to it?		2			2
4. Confident to think or express your own ideas and opinions?	3	1	2	2	8
5. Happy?				1	1
6. That you had something important to contribute to society?					
7. Satisfied with life?	1		1		2

The second part of the interview guide was more open-ended, asking the two following questions:

1) *What is mental well-being for you?*

2) *What is social inclusion for you?*

These questions aimed at capturing the students' immediate reflections on the two overall phenomena of mental well-being and social inclusion. The aim was to make sure all important dimensions of mental well-being and social inclusion were included in the further work of **IO3**.

REFLECTIONS ON THE INTERVIEWS

In conducting the focus group interviews, two overall challenges have impacted the interview material assemble.

The first challenge is due to the *conduct of online interviews rather than physical ones*, which led to technical issues and interrupted dialogue. Each school was given two choices for the conduction of the online interview (also conditioned by the current COVID-19 restrictions in the respective country): The students could

either sit together in one room at the school and participate in the online meeting room from one device. Alternatively, the students should sit in separate rooms and join the online meeting room from separate devices. We found perceived advantages and disadvantages in both constellations:

- At interviews, where all students were sitting together in the same room, the dialogue between the students was fluid. The purpose and advantage of using focus group interviews as a method is exactly that fluid discussions can arise among the participants, which can help bring out the important points. This means, that the method is particularly well suited for producing data on the meaning formations, interactions, and norms of social groups (Harrits, Pedersen & Halkier, 2012:150). However, poor sound quality and delay in internet connection occurred in this set-up.

- At interviews where the students participated from separate devices, no technical issues did occur. However, the discussions were interrupted and not as dialogue-based as in the above mentioned constellation. This emphasizes the importance of physical attendance in the performance of focus group interviews, which has not been possible due to COVID-19.

The second challenge was related to the *conduct of the interviews in English*, which also challenged the fluent discussion. The students often needed their teacher or supervisor to help in translating. Thus, the quality of the interview material could possibly be raised by conducting the interviews in the students' own language in order to support a slightly more smooth dialogue and a better opportunity for the students to express their opinions or views.

4.2. COMPARATIVE ANALYSIS

In this section, the results of the analysis are presented for each dimension separately. For each dimension, the scoreboard results (from the first part of the interview guide) from all three partnering schools will be compared and summarized, as this aims to assess which questions are most important to include in the finalized questionnaire according to the target group. In addition, the analyzes of the scoreboard results will be complemented by the qualitative statements from the students regarding each dimension. These qualitative statements also include the students' assessments from the second, open-ended part of the interview guide.

DIMENSION 1: EMOTIONAL WELL-BEING

From the vote of the draft of questions suggested for capturing the first dimension of emotional well-being, it appeared that the questions considered most important to include in the finalized questionnaire are:

Table 4: Questions in dimension 1 with most awarded points

Question formulation	Awarded points
Question 4: How often do you feel… Confident to think or express your own ideas and opinions?	20 points
Question 3: How often do you feel… That you like most parts of your personality?	17 points
Question 1: How often do you feel… Happy?	13 points
Question 6: How often do you feel… That your life has a sense of direction or meaning to it?	13 points

For all results see figure 4:

Figure 4: Total scores of draft of questions for dimension 1: Emotional well-being
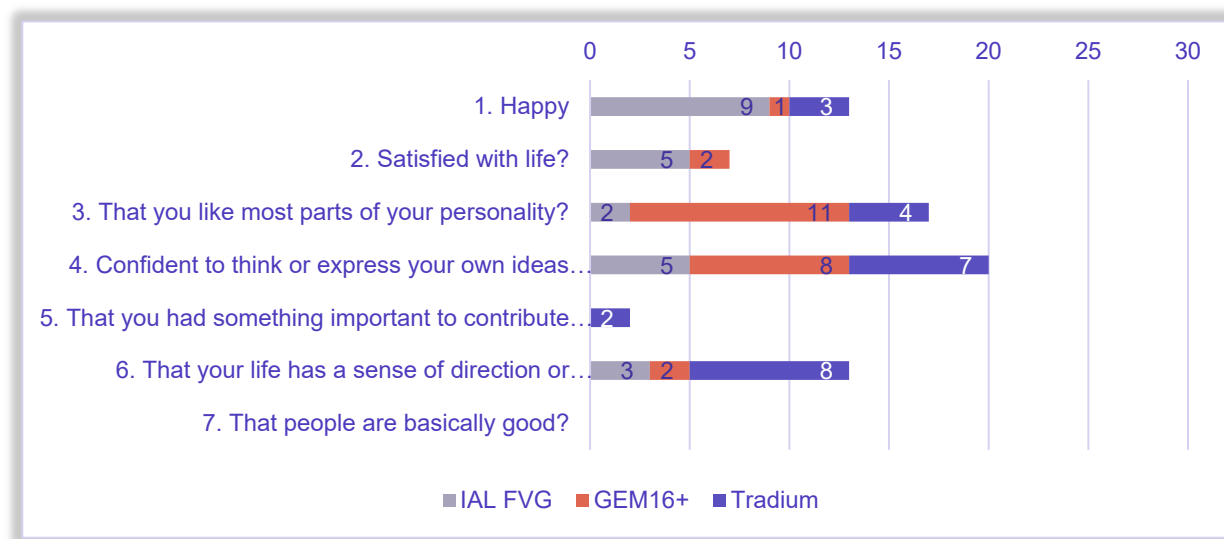
Question **4: Confident to think or express your own ideas and opinions?** were overall rated the hightst. One of the students said that this specific question has certain importance, because being confident means that you are able to change things in your life, and thus achieve a higher life satisfaction – regardless of the challenges life might put you through.

However, the table also indicates differences in votes across national borders. For instance, the students from GEM16+ in Malta only gave 1 point to question **1: Happy?**, whilst the students from IAL FVG in Italy voted very high on this item. A qualitative statement from an Italian student was that: "*The most important thing is to be happy. If you are happy, you can face all the other things of life.*" On the contrary, a student from Malta thinks that the question is too indefinite as you can be happy one moment, and sad the next. Moreover, you can be happy or sad for many different reasons - that "*does not mean that your life is broken, or that you generally have poor mental well-being*". Instead, the items 3 and 4 are found to be more specific, capturing problems that affect emotional well-being, according to the students from Malta.

The students from Denmark gave most points to item **6: That your life has a sense of direction or meaning to it?**, while neither students from Malta or Italy attributed any great importance to this item. A qualitative point from the Danish students upon this item were, that finding meaning in why you do things is important in life in general. Even though the students from Italy have not assigned many points to this item, an Italian student elaborates: "*That life has a sense of direction or meaning to it, and being satisfied and happy – these things are connected, and are most important for the maintenance of mental well-being*". This statement is an example of the fact that there is also an internal correlation between the questions within each dimension due to the complexity of the studied phenomena.

DIMENSION 2: MANAGEMENT OF EVERYDAY LIFE

In the dimension of management of everyday life, the students overall voted question **5: I feel good at managing the responsibilities of my daily life** the highest. This was especially of high importance according to the votes of the Danish students.

Figure 5: Total scores of draft of questions for dimension 2: Management of everyday life
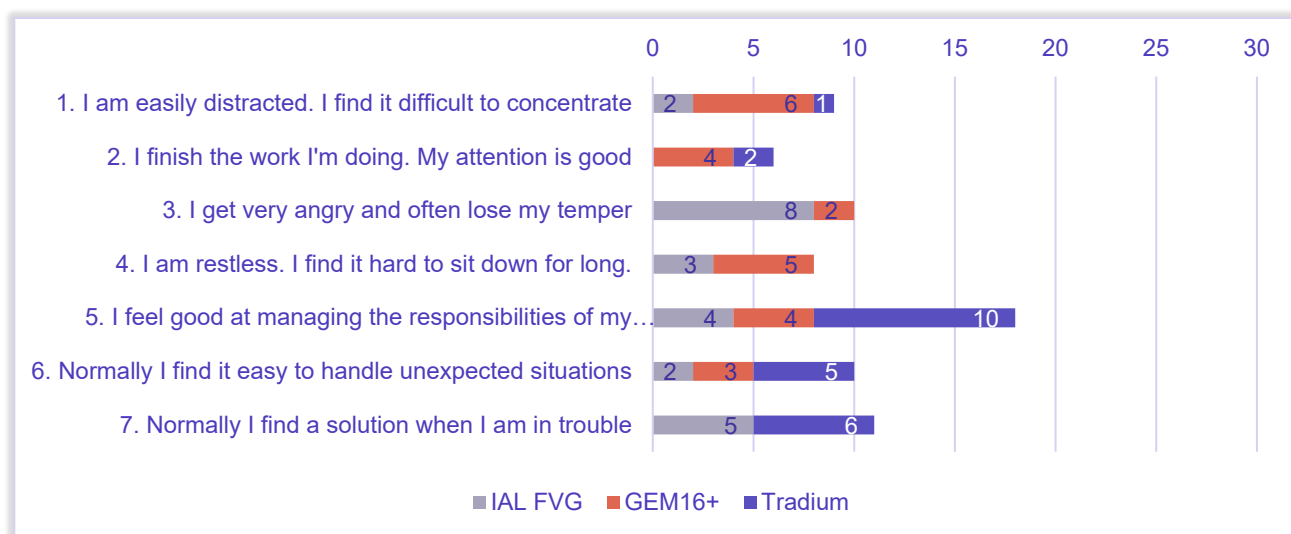
The Danish students said that being able to get out of bed in time, and manage your daily responsibilities are very important factors in good mental well-being. COVID-19 has been an eye-opener in this regard since the structure of daily life has been turned upside down. This challenge was also prominent among the Maltese students, who indicate that they spend much more time on social media and other skip actions during COVID-19. These special circumstances causing lack of routine consistency, seemed to affect the well-being of the students in all three countries.

The most notable differences in the votes between countries are that students from both Italy and Denmark find item **7: Normally I find a solution when I am in trouble** of relatively high importance, whilst this item did not get any points from the students in Malta. Generally, the Danish students attach great importance to the items regarding the management of life, solutions to troubles, and handling of unexpected situations, and not very much importance to the items of issues regarding attention, distraction, restlessness, or anger. According to the Danish students, this prioritization is due to the consideration, that if you are good at finding solutions and dealing with unexpected situations, then you can always manage all sorts of challenges in life.

On the other hand, the Italian students found item **3: I get very angry and often lose my temper** of the highest importance. The students described how they get angry if they feel that people do not listen to them, are disrespectful, or do not recognize their opinions. This finding indicates cultural differences in which challenges youngsters experience in managing their daily life, and thus maintaining a high level of well-being. Their different perspectives highlight the importance of keeping these cultural differences in mind when creating an international questionnaire to capture mental well-being.

Moreover, the open-ended questions as the last part of the interview guide have given rise to the formulation of a supplementary question within this dimension: When asking the question: *What is mental well-being for you?* the Danish students talked about having a balanced life. In their opinion, an important prerequisite for maintaining good mental well-being is being able to manage the responsibilities of everyday life and the ability to do things you enjoy in your spare time. This point was also addressed by a student from Malta, who said: "*It is important that you do not just have time for school, but that you also do something else*". Therefore, a supplementary item was formulated to this dimension: **I feel like I am having a good balance in my life, between schoolwork and spare time.**

DIMENSION 3: SOCIAL LIFE

In the third dimension of social life, question **3: How easy is it to talk to your close friends about things that really bother you?** got a total of 28 points. Students from all three countries voted high on this question, as seen in figure 6 below. A qualitative statement from the students regarding this dimension was that having someone to talk to about your feelings is extremely important to maintain a high level of mental well-being. Another point from the Danish students was that having fewer close friends, than many acquaintances, characterizes a good social life. In addition, a student from Italy stated: "*Friends are like second family to me*". These statements, as well as the scoreboard results, suggest that the *quantity* of friends does not affect mental well-being very much but that the *quality* of friendship is of high importance.

**Figure 6:** Total scores of draft of questions for dimension 3: Social life
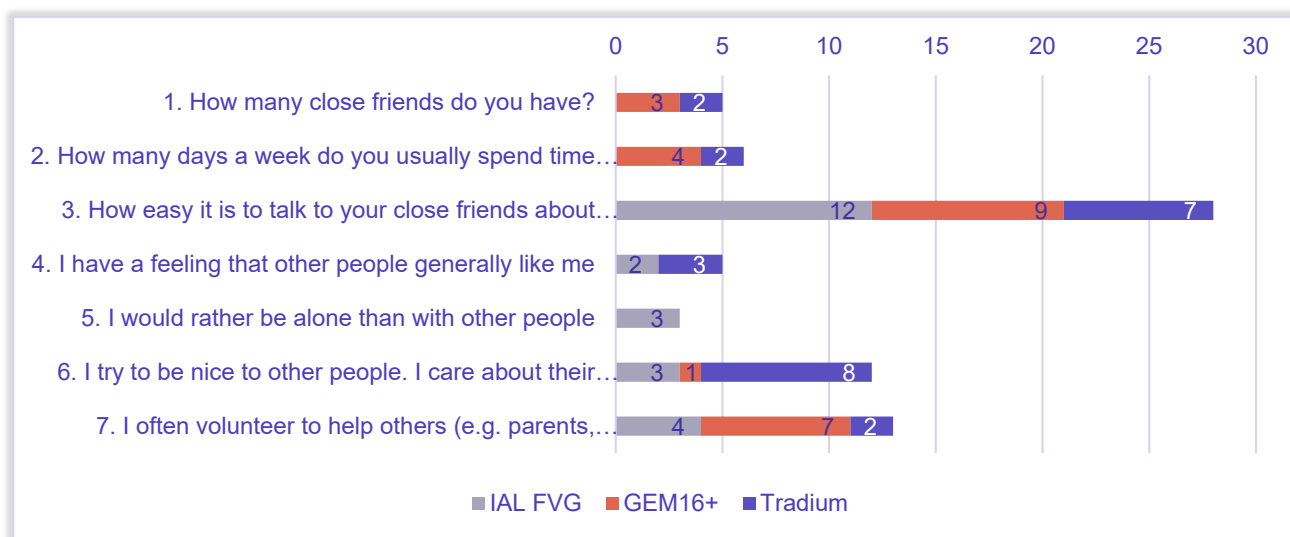
The questions in second and third place on the scoreboard were **6: I try to be nice to other people. I care about their feelings,** and **7: I often volunteer to help others (e.g. parents, friends, children, teachers)**. The votes between countries vary, as the Danish students voted many points to this question, whilst the Maltese and Italian students did not. The Danish students expressed that they find it very important to be nice to other people, while the Maltese students focused more on helping others. One student from Malta talked about how you could also understand the willingness of helping others as an indicator of "*how connected you are to your community*", and the Maltese students talked about how being part of a community plays an important role in relation to mental well-being, as one said: "*All people around you affect your social life*".

Finally, students from all three countries mentioned the importance of family relations as a missing object in the proposed questions. As one of the Danish students said: "*For me, mental well-being is when you feel it is healthy to be in the surrounding environment, both in regarding friends, school and at home*". Based on this consideration, a supplementary question regarding family relations was included in the finalized questionnaire. The formulation of the question was inspired by an already included question from The Health Behaviour in School-aged Children (HBSC) questionnaire: **How easy it is to talk to members of your family about things that really bother you?**, answering for each of the following items: "Mother", "Father", "Siblings" and "Other family members".

DIMENSION 4: SCHOOL BURNOUT

For the school burnout dimension, the two items **3: I feel lack of motivation in my schoolwork and often thinking of giving up** and **5: I feel that my educational and/or occupational future looks bright** got the most points, respectively 19 and 23 points, as seen in figure 7:

Figure 7: Total scores of draft of questions for dimension 4: School burnout
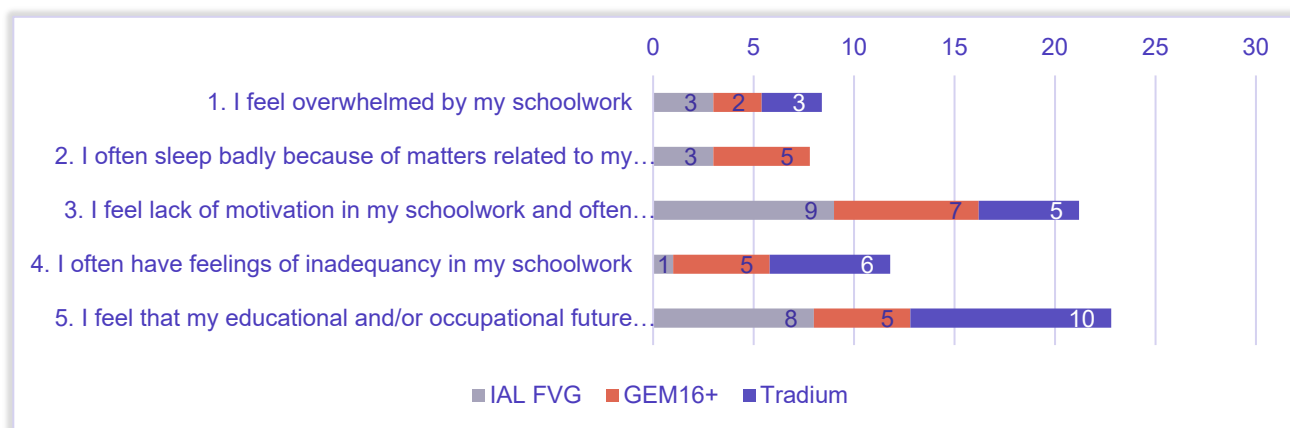
In both questions, points from all three countries are well represented, although the Maltese students voted a little lower on the feeling that their educational/occupational future looks bright. This may be due to different societal structures in the three countries affecting the future prospects of the youngsters. However, it may also be because GEM16+ is a Second Change Learning (SCL) school and not a Vocational Education and Training (VET) school like the partnering schools in Italy and Denmark. This means that the Maltese students are currently qualifying for further education and have not yet begun a vocational qualification education, and thus might face greater uncertainty in relation to their educational and occupational future.

As for the rest of the questions, there were also some differences in votes among the students in the three counties. The Danish and Maltese students found that feelings of inadequacy have an impact on the level of mental well-being, while the Italian students only attributed this question 1 point. Regarding item **2: I often sleep badly because of matters related to my schoolwork**, the Maltese students voted this of relatively high importance, while the same item got 3 points from the Italian students and 0 points from the Danish students.

As seen in the qualitative considerations of the former dimensions, the students also point to the internal correlation between the questions. One student said, that lack of motivation often happens because you feel overwhelmed by schoolwork. Likewise, another student said: "*Lack of motivation could also happen if you do not feel that you're educational or occupational future looks bright*".

In addition, the students point out how feelings of school burnout are associated with the dimension of inclusion into the learning community. As one student from Malta said: "*Better communication between student and teacher might help some of these* [school burnout] *issues*". In the interview with the Danish students, this point was also prominent, as the students suggested a question regarding whether

one thinks that schoolwork is interesting. This suggestion of a question was implemented in the finalized questionnaire.

Another important qualitative statement from the students from Malta, was that they found it very hard to vote in this dimension, because they actually found all five questions of very high importance. As this dimension only had five proposed questions, which all seem to be important for the ability to maintain good mental well-being, none of them were omitted from the finalized questionnaire.

DIMENSION 5: SOCIAL INCLUSION INTO THE LEARNING COMMUNITY

For the fifth dimension, two questions have received few points relative to the others. These are question number **3: I understand what my teacher teaches us**, and question number **4: I think that the teachers at this school treat students fairly**, as seen in figure 8 below.

Figure 8: Total scores of draft of questions for dimension 5: Social inclusion into the learning community
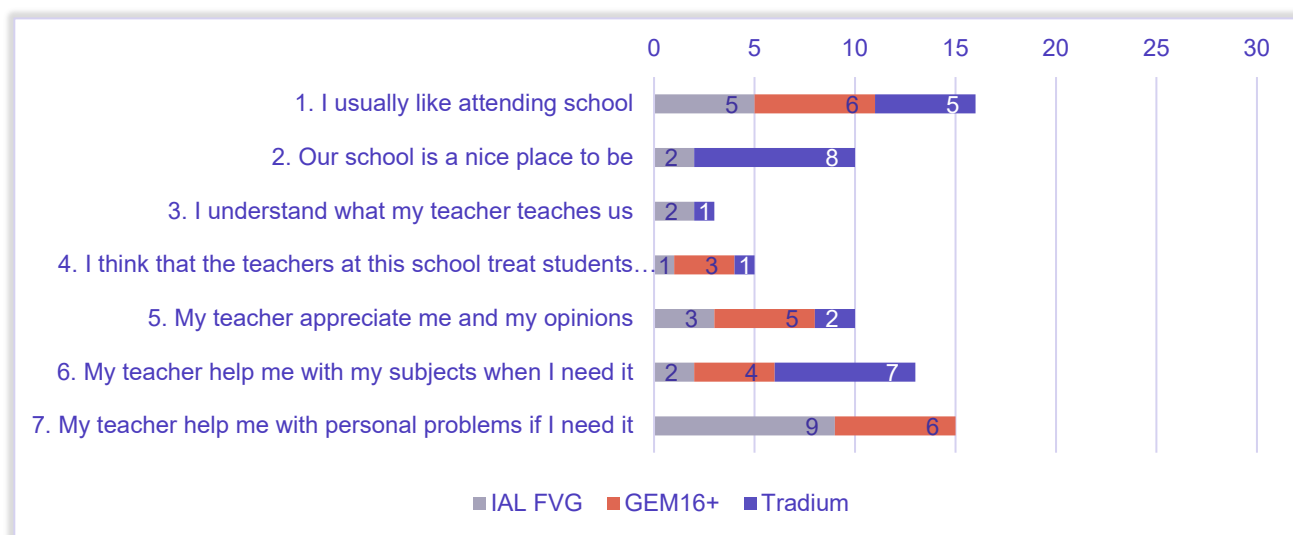
The Danish students explained why they did not consider the understanding of what the teacher is teaching of great importance for the inclusion into the learning community. They consider it a normal situation, that students do not initially understand what the teacher teaches. Instead, they see it as essential for the learning community that every student can get the help needed to achieve the understanding.

The Danish students underlines the importance of the right circumstances, allowing the teacher to help all students. For example, too many students in the classroom could pose a challenge in this matter. Therefore, they suggest including questions regarding school resources. Although these factors are undoubtedly an expression of the study environment, which may conceivably

affect the students' motivation and mental well-being, it was not considered relevant in relation to the dimension of social inclusion into the learning community, as the factor of school ressources relates to physical rather than social circumstances. The physical circumstances are not part of the prevention/intervention solution in this project. Instead, question **6: My teacher help me with my subjects when I need it**, constitutes a good indicator of the school's resources related to inclusion into the learning environment. Nevertheless, such factors of study environment as indoor climate and noise are considered important to keep in mind as an explanatory or confounding variable, and therefore a background question regarding this matter will be included in the questionnaire.

The students from Malta did not talk very much about the help of teachers directly, although they also assigned this question a relatively high amount of points. They talked about the pressure that the teachers put on the students, for example through assignments. Pressure due to assignments affects both the individual student's mental well-being as well as the learning environment, according to the Maltese students. They describe how the teachers at their school are gentle: "… *they remind you of assessments in a gentle way. This means that you do not lose motivation or get stressed*". This pressure described is captured in the questions under the fourth dimension of school burnout, for instance in the question: **I feel overwhelmed by my schoolwork**. These statements are thus again an example of how the six dimensions correlate internally.

What the Maltese students also talked about was a special Maltese culture, where: "*young people are educated on options*". By this, they meant that young people in Malta have a free choice of education and that there is no societal pressure to achieve a specific educational level. In their optics, this culture contributes to a high degree of mental well-being among young people.

As regarding the rest of the proposed questions to capture dimension 5, four other questions had a high total score from the students: Question number 1, 2, 5 and 7. As we found that questions number 1 and 2 are quite similar, we chose only to include the one with the most points: **1: I usually like attending school**. Students from all three countries agreed on the importance of including this question. The same goes for question number **5: My teacher appreciates me and my opinions**, although the Maltese students did assign this question with a relatively higher amount of points than students from Denmark and Italy. The last question we included in the finalized questionnaire is number **7: My teacher helps me with my personal problems if needed**, which was voted extremely high by the Italian students, and also high by the Maltese students, while the Danish students did not award this question with a single point. This again indicates some cultural differences among the three countries, regarding the teacher/student relationship.

DIMENSION 6: SOCIAL INCLUSION INTO THE SCHOOL COMMUNITY

In this last dimension of social inclusion into the school community, the students voted three questions almost similarly high: **1. I feel like I belong at this school**, **2: Other students accept me as I am**, and **6: How easy is it to talk to your friends in school about things that really bother you?** as seen in figure 9:

Figure 9: Total scores of draft of questions for dimension 6: Social inclusion into the school community
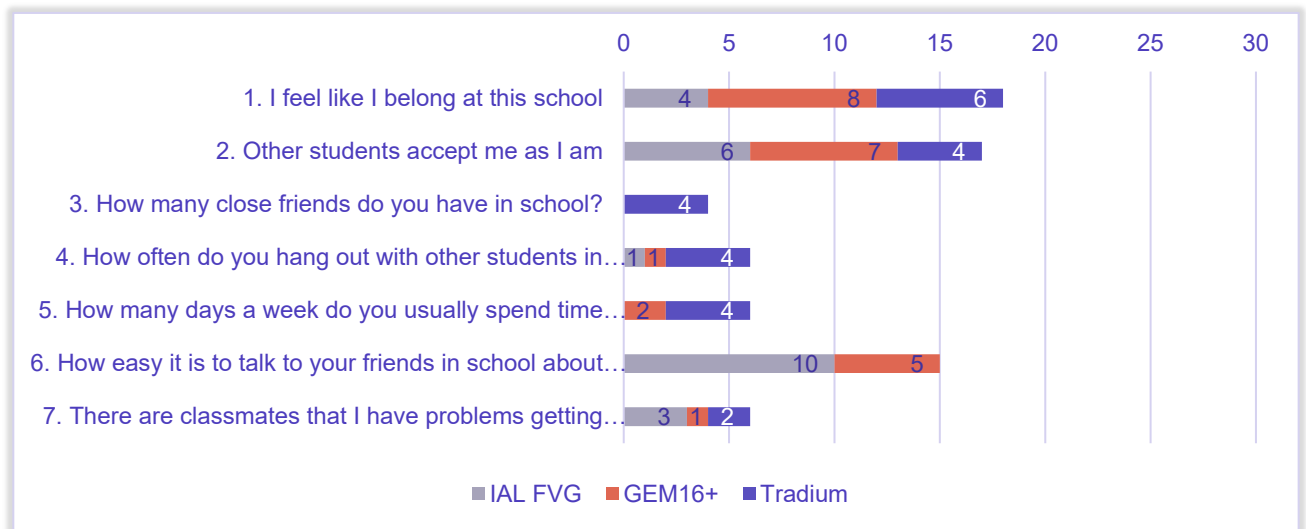
In both questions 1 and 2, the students from all three countries largely agreed, whereas question number 6 was assigned many points by the Maltese students, while the Danish students did not award a single point to this question. Instead, they gave points to similar questions like **3: How many close friends do you have in school?**

Students from all three countries assign a very great value to the social community at school in their votes as well as in their qualitative statements. For instance, an Italian student said: "*I really like being at this school, but not because of the address I follow – this wasn´t what I expected – but because of the school and the people here. They make me feel integrated.*"

According to both students and the teachers, who helped facilitating the interviews, the motivation for coming to school because of the social community has been even more prominent due to COVID-19.

As stated in section 3.2., an approximation of 4-5 questions within each dimension are considered a minimum to capture each of the respective subjects. Thus, we had to choose at least one of the questions remaining, even though they all got the same relatively small number of points. Here we chose number **4: How often do you hang out with other students in recess?**, as we found that this question supplemented the other selected questions as much as possible.

AN OVERALL ANALYTICAL FINDING: INTERCORRELATION

As seen in the above analyzes of each dimension, students from all three countries mentioned how the different dimensions of mental well-being correlates with each other. For instance, problems in your social life can affect your emotional well-being. Likewise, problems in your social life or poor emotional well-being can affect your ability to handle everyday's requirements and so on.

Secondly, some students also mentioned how social inclusion and mental well-being as overall phenomena correlate. As an answer to the open-ended question: "What is mental well-being for you?" one student said: "*Mental well-being to me is when I feel safe in my surroundings. That people around me are kind and do not speak ugly, and that I am not excluded - this also applies in relation to the teachers*".

Thus, this final reflection is important to have in mind when assessing mental well-being and social inclusion among this target group, as it clarifies the complexity of the overall phenomena of both mental well-being and social inclusion, as well as these two in context.

5. FINALIZED QUESTIONNAIRE AND RADAR CHART (W.P.3.6)
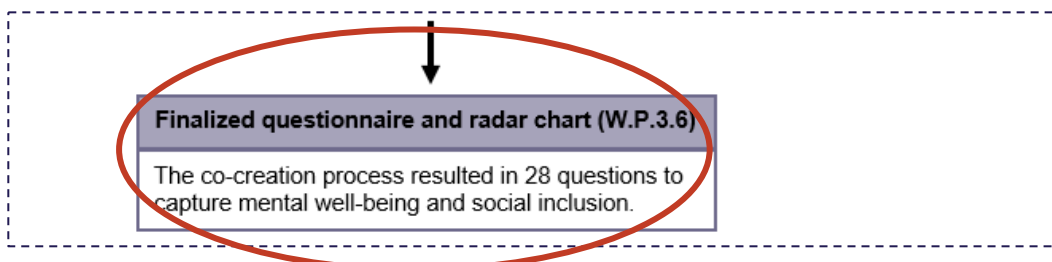
In the previous chapters, the dimensions of mental well-being and social inclusion, as well as the questions to capture these dimensions, were accounted for. However, the finalized questionnaire also contains two other type of questions:

1) Questions to capture confounding variables

2) School specific questions

In the following, accountings of the supplementary confounding variables and school specific questions are presented. The finalized questionnaire is attached as appendix 6.

5.1. QUESTIONS TO CAPTURE CONFOUNDING VARIABLES

Confounding variables are important to include in the questionnaire in order to be able to investigate the causal relationships in the final analyzes. This aims to increase the validity of the results and generate knowledge on whether the prevention and intervention solutions of the project affect some groups of students more than others. The factors proposed in the review were divided into the following four categories (Appendix 2:20): 1) Individual factors, 2) Socio-demographic factors, 3) School-related factors, and 4) Family factors.

The confounding variables included in the questionnaire is shown in table 5.

Table 5: Confounding variables

Individual factors	Socio-demographic factors	School-related factors	Family factors
• Gender • Age • Ethnicity	• Parents' educational level	• Apprenticeship agreement • Physical study environment	• Family constellation

As for the first category*, individual factors,* the variables **gender**, **age** and **ethnicity** are included in the questionnaire, which were all proposed in the literature review.

Socio-demographic factors often covers the educational, occupational or economic status of your parents. In this questionnaire, a question on parental educational level: **What is your parents' educational level?** was included. The question should be answered for the parent with the highest level of education.

Proposed questions for the category of *school-related factors* in the review, were questions regarding grades, reading and writing difficulties, educational aspirations, and apprenticeship agreement (Appendix 2:21). During the focus group interviews, it became clear that apprenticeship plays a large role in how the students view on their education. Many of them have chosen these particular educational institutions or study programs because they value the interaction between theory and practice. Therefore, a question regarding the apprenticeship agreement: **Do you have an apprenticeship agreement?** was included. In addition to this, the above analysis of the fifth dimension: Social inclusion into the learning community, indicated that students attach importance to the physical learning environment at their school because it can affect the social learning community. This is why a question of physical learning environment is also included: **How do you think of the physical study environment at your school? For instance indoor climate or noise.**

The last confounding variables stemming from the literature review were *family factors*, which refers to family structure and family functioning. A question inspired from the internationally validated questionnaire Health Behaviour in School-Aged Children (HBSC) was included: **We would like to know about your family constellation. Please answer this question for the home where you lived all or most of your life, and tick the people who you live(d) with**. The students will have the possibility of ticking: Mother, father, parent's spouse or partner, Sibling(s), Other (e.g. grandparents), I live(d) in a foster home or children's home, Other constellation. As for the family functioning, we do not find it necessary to add more questions on this point, as we find that the question in dimension 3: Social life: **How easy it is to talk to members of your family about things that really bother you?** contributes to this matter.

5.2. SCHOOL SPECIFIC QUESTIONS

School specific questions are included in the questionnaire in order to prepare more than just one radar chart for each school, and instead making several charts. As an example, three several charts could be made for students attending 1st, 2nd and 3rd year, respectively. The division of charts is based on some categories that makes sense for the individual school. Therefore, at a steering group meeting, the schools were asked to submit categories that can be used to

differentiate data and compile several radar charts. The school specific factors are shown in the table below:

Table 6: School specific questions

Tradium[1]	GEM16+[2]	IAL FVG[3]
Year of attendance: - 1st year - 2nd year - 3rd year	Number of subjects: - 1 - 2 - 3 - 4	Year of attendance: - 1st year - 2nd year - 3rd year
Field of study: - Economics - Market - International Language	Choice of optional subjects: - ECDL - Physics - Biology	Field of study: (self-reported)

5.3. THE FINALIZED RADAR CHART

A radar chart is a graphical method of analyzing data. The finalized radar chart in Intellectual Output 3 is based on the questionnaire developed. Thus, it is the graphic output of the four dimensions of mental well-being and the two dimensions of social inclusion.

Figure 10: The finalized radar chart

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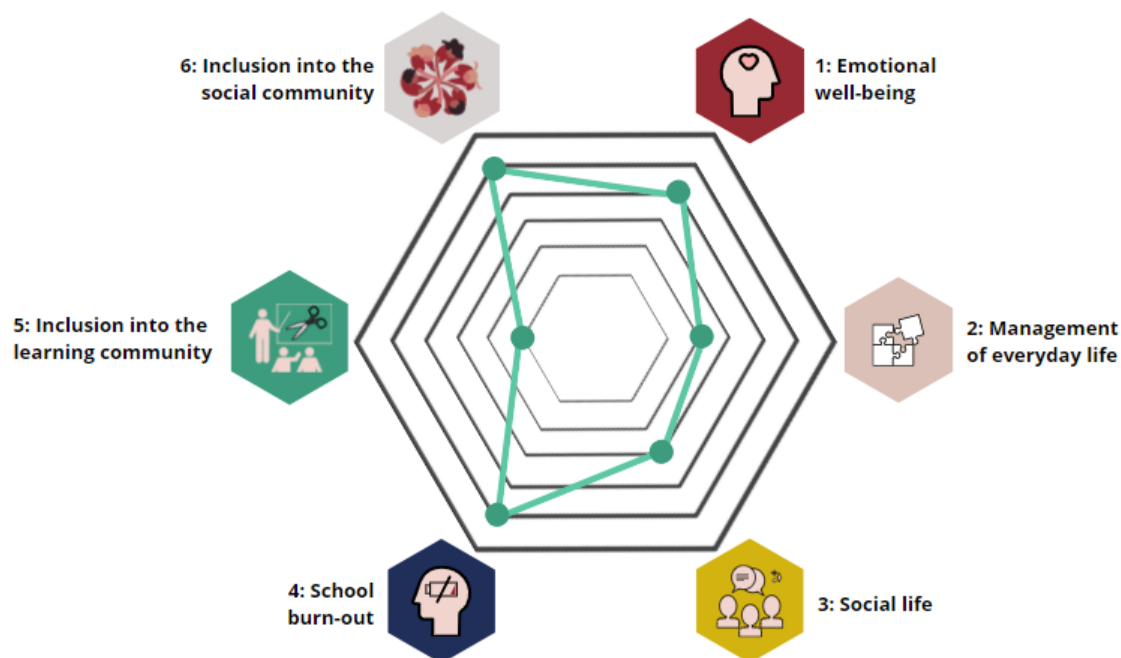
[1] Categories recieved from Jakob Svendsen, Tradium
[2] Categories recieved from Roberta Mifsud, GEM16+
[3] Categories were not received from IAL FVG. Instead, inspiration was taken from the requests of the two other schools.

The radar chart in figure 10 is an example of how the scores in the finalized radar charts could look like. For each dimension, the students can score from 1 to 6, with 6 indicating something positive (for instance, a high level of social inclusion into the learning community or a low level of school burnout) with 1 indicating something negative (for instance a low level of emotional well-being or a high level of school burnout). To illustrate an example: If this was an example from 1st year students at IAL FVG, these students would have scored 4 out of 6 on the dimension of emotional well-being, which would indicate that they experience a relatively high level of emotional well-being.

Radar charts like the illustrated example will be made for each school at school-level, as well as several charts for each of the subgroups presented in table 6. The radar charts will form the basis of the analyzes in the baseline 1 report (with due date April 1, 2022), and the evaluation of progress in dropout rates at the partnering schools (baseline 2), as part of the summative evaluationreport (W.P.7) with due date September 1, 2023.

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7. LIST OF APPENDICES

Appendix 1: Project application

Appendix 2: Systematic literature review

Appendix 3: RVTS Sør Questionnare Post

Appendix 4: Focus group interview guide

Appendix 5: First draft of questions to include in the questionnaire

Appendix 6: Finalized questionnaire