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**Intellectual
Multiverse**

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TOOLKIT AND RECOMMENDATIONS “INTELLECTUAL MULTIVERSE: ADULT LEARNING BY PLAYING WITH MULTIPLE INTELLIGENCIES”





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Chapter 1

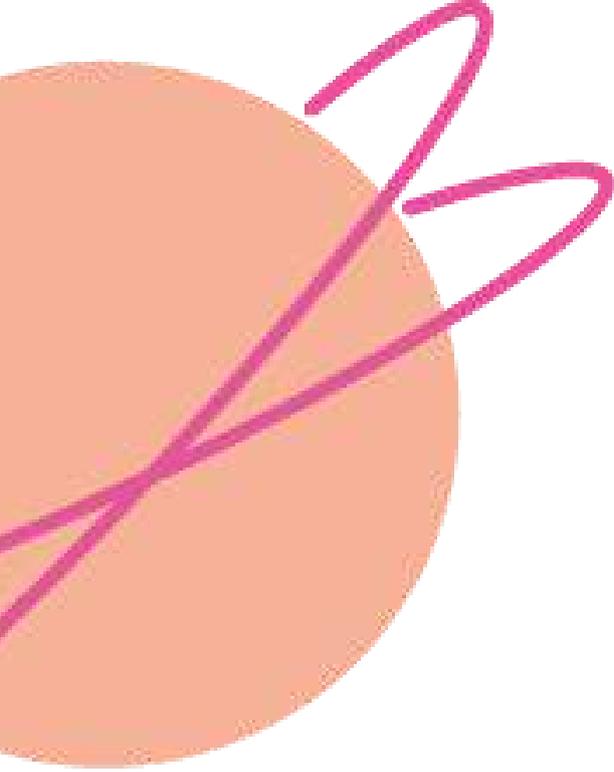
INTRODUCING THE PROJECT

The “Intellectual Multiverse” project aims to develop innovative educational tools for adult learners with fewer opportunities, creating a new approach based on the Multiple Intelligences Theory. This new approach will facilitate inclusivity and favour constructive learning paths for all adults involved.

The **main project objective** is to **promote education equity through an alternative methodology** based on **multiple intelligences**, to fully develop personal potential, in the field of **non-formal education of adults with fewer opportunities**.

The specific objectives of this project are:

- To improve capacities for adult educators in recognising and responding to personal needs in education, adapting to individual contexts and background, and to teach them the priorities of this process.
- To foster didactic strategies that avoid frustration and nurture motivation in non-formal education for adults with fewer opportunities.
- To offer strategies to adult educators to overcome the learning difficulties of their learners through individual motivations.
- To get to know and promote collaborative work between entities working in the social field with people with fewer opportunities from different target groups, through the Erasmus+ programme, building collaboration agreements and good relations between European organisations with common interests.



INTRODUCTION

The expected results of the “Intellectual Multiverse” project are:

- **Toolkit and recommendations “Intellectual Multiverse: adult learning by playing with multiple intelligences”**, with resources and activities for field professionals.
- **Workshop “Intellectual Multiverse”** for adult people in general but with an inclusive view for adults with fewer opportunities. It will be an instrument for professionals on how to detect individual potential in relation to different intelligences and personal motivation.



PARTNERS DESCRIPTION

FUNDACIÓN ASPAYM CASTILLA Y LEÓN (COORDINATOR)



Fundación ASPAYM Castilla y León has been working in the field of social services, particularly in the field of physical disability, since 2004. It helps people throughout their life cycle and is supported by educational and social experts as well as researchers in the field. In recent years, the Foundation has developed several projects using new technologies and promoted their use as a tool to improve the rehabilitation and quality of life of people with disabilities.

The youth department of ASPAYM Castilla y León develops many activities of promotion, non-formal education, employment, inclusive leisure, etc. One of the most outstanding examples is the inclusive camp developed by the organisation, which has 22 years of experience and multiple awards, as well as the awareness-raising project “Put yourself in my shoes”, whose main objective is the standardisation of disabilities in schools, community centres, youth organisations, etc.



PARTNERS DESCRIPTION



FUNDACIÓN PLAN B EDUCACIÓN SOCIAL

Fundación Plan B Educación Social is a private Spanish non-profit foundation, formally constituted and with self-management capacity. Our mission is to create social change that improves the lives of children and adolescents by providing them with opportunities for personal, social and educational growth.

We try to achieve this by setting clear objectives that we use as a guide to mark the path to follow in the work of the foundation:

- To develop a transformative participation.
- To comprehensively research, intervene and promote education as a tool for change.
- Empowering communities, promoting quality democracy and developing the environment.

Our experience involves the design of innovative projects that we implement both nationally and internationally. The foundation disseminates its initiatives to a wide range of target groups, from children to youth and adults. We also try to accommodate groups with fewer opportunities and people from rural areas. The initiatives carried out by the foundation not only focus on developing activities for each group individually, but also connecting different groups with each other to nurture social ties and participation dynamics between different groups, for example between children and the elderly.

At the national level, we focus on offering educational opportunities for our target groups, based on the needs of the community, including work integration, democratic dialogue or support in multiple dimensions of the educational field.

Internationally, we have implemented as coordinators as well as participants many projects supported by Erasmus+, KA1, KA2 and KA3 as well as the European Solidarity Corps with the aim to develop communities through socio-educational interventions with youth in Europe and abroad.

In line with our passion to empower different community groups, we fight for socio-educational rights and would like to be a reference partner for social education and to boost our efforts to achieve this goal.



PARTNERS DESCRIPTION

CEIPES - INTERNATIONAL CENTRE FOR THE PROMOTION OF EDUCATION AND DEVELOPMENT

CEIPES

CEIPES – International Centre for the Promotion of Education and Development is a non-profit organisation founded in 2007 and based in Palermo, Italy. It leads a Network of more than 8 European and extra European associations focused on Education, Training and Social Development. CEIPES has expertise in Education, Transfer of innovation and Project management in different European programmes tackling the Education and capacity building of different target groups, from young people to adults, from women to unemployed, migrants and disadvantaged groups. It also promotes lifelong learning, vocational training and entrepreneurship with the aim of enhancing opportunities for youth and adults to improve and acquire competencies and therefore boost their employability and inclusion.

CEIPES has several links with public and private local and international stakeholders that can contribute to the achievement of project results in terms of dissemination, exploitation and sustainability of them. CEIPES can count on experienced staff composed of professionals with different competencies and fields such as psychology, communication, training, international cooperation, social and cultural mediation, social assistance, ICT, digital manufacturing and law.



PARTNERS DESCRIPTION

ROSTO SOLIDÁRIO



Rosto Solidário (RS) is a Portuguese NGDO (non-governmental organization for development), established in 2007. The organisation is based in Santa Maria da Feira about 30 km from Porto. RS aims to foster global citizenship and solidarity by enhancing local communities' human and social development. RS's core principles are civic participation, social integration, solidarity, networking and partnership. The organisation's scope of work includes four main areas: International Development Cooperation, Global Citizenship Education, Volunteering and Family-based Social Support. Gender Equity, Human Rights and Social Inclusion are RS cross-cutting subjects. RS's legal status as a public utility has been recognised by the Ministry of Foreign Affairs in 2008. As a Portuguese NGDO Platform member, it is represented both in the Development Education Working Group and the Working Group on Ethics. RS is a credited host and sending organisation for Solidarity European Corps projects since 2011.

Since the beginning RS is supported by the Congregation of the Passion of Jesus Christ. It is also a member of the Plataforma das Entidades de Voluntariado Missionário (a national network of Catholic institutions that promote international volunteering programmes). At the local level, RS is a member of Rede Social do concelho de Santa Maria da Feira (a local network of 115 organisations with social intervention programmes – following National Action Plan for Inclusion guidelines). Within this network, RS has been awarded four times in recognition of its work in volunteering and supporting local communities' development.



PARTNERS DESCRIPTION

GAMMA INSTITUTE - AICSCC



AICSCC is an NGO whose aim is to promote, develop, research and initiate activities in the field of psychology, psychotherapy and mental health in particular (training for specialists, workshops, non-formal education for adults and professionals), promotion of best practices; training for specialists in various branches of modern psychological and mental health; facilitating collaboration between Romanian specialists and experts from the international space.

AICSCC (with Gamma Institute as a brand), has 3 departments:

- Gamma Training is the educational department of the organisation and consists of 2 training schools: Systemic Training School and Self-Activation School. Systemic training school: launched in 2011, it is accredited by the Romanian College of Psychologists as a training provider in systemic psychotherapy of the family and couple, and incorporated the latest research related to clinical practice into the curricula. The aim of the training school is to create a national and international network of professionals trained to a high standard of quality and to offer a space of constant evolution to therapists of all specialties (couple therapy, child psychology, clinical disorders, etc.). A training group has a curriculum in a 4-year postgraduate format, with approximately 150 graduates so far. Graduates have the opportunity to work after graduation in the organisation's private practice clinic and research department, described below.
- Gamma Clinic is the health department of the organisation and has 2 parts: Gamma Clinic Psychology and Gamma Kids. Gamma Clinic Psychology offers different psychological services to adolescents, young people and adults with different problems, in individual, couple, family or group sessions. The practitioners are clinical psychologists and accredited psychotherapists. The other part is Gamma Kids, which is a department that aims to help children (of all ages) and their families with all kinds of difficulties. The issues addressed are: anxiety and depressive disorders, school maladjustment, learning disorders, speech disorders, bullying, family and social difficulties and not only. The psychologists involved in Gamma Kids are psychotherapists specialised in child psychological issues, clinical psychologists, speech therapists, psychotherapists and art therapists for children with special educational needs (including learning disorders).



At Gamma Kids, we work with the child, but also with the whole family in a systemic approach and collaborate with teachers and other specialists. Activities are individual sessions, family sessions, parent sessions, workshops for children, art therapy workshops, trainings for parents and specialists.

- Gamma Research is the research department of the organisation and aims to develop fundamental research in the field of neuroscience and consciousness, but also in the field of psychotherapy. Through this department, we want to develop new training curricula for professionals in the psychological field, develop new methods and instruments for high-level intervention. Our research platform brings together specialists from psychology, cognitive sciences, genetics, human sciences and child psychology (the psychologists working at Gamma Kids are also researchers in the Gamma Research department).



Chapter 2

INVESTIGATION ABOUT ADULT'S NEEDS AND THEIR SATISFACTION WITH THE EDUCATION SYSTEM

INTRODUCTION

The importance of this research is to gain a holistic understanding of the current education system in the partner organisations' countries and discover which educational tools and methods appeal to adult learners. This study aims to analyse the strengths and weaknesses of the current adult education systems in Spain, Romania, Italy and Portugal, and propose innovative educational tools and resources that adult education professionals can use with their learners. They will be based on preferences and developed according to the multiple intelligences theory. Games and activities will represent each of the eight intelligences described in Howard Gardner's theory.

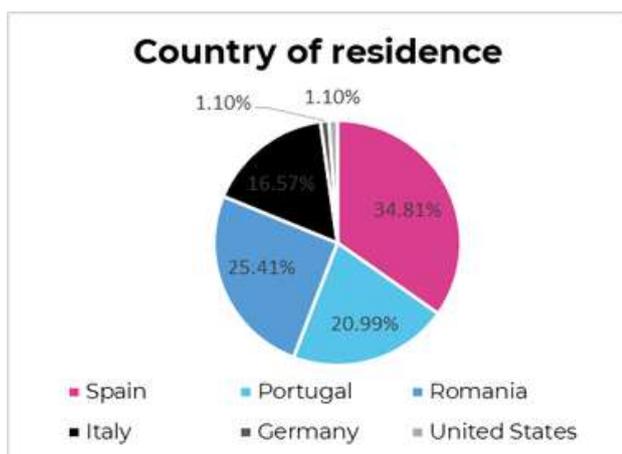
In order to carry out the study, the five partner organisations sent a questionnaire to adult learners, including those with fewer opportunities, as well as adult education professionals in their countries. The questionnaire has 27 questions, with a mix of multiple choice and open-ended responses, that address educational methodologies, difficulties/obstacles encountered during education, work on multiple intelligences, opinions about the current education system in their country, and suggestions for improvement. The first part is common for all respondents, while the second part is for adults to answer, and the last part is for adult education professionals. Each partner organisation had to collect 10 answers from adult education professionals and 20 from adults. The questionnaire template can be found in the annex to this study.

Respondents' answers to the questionnaires have been translated to English and analysed. The first part covers the basic profile of the respondents, such as their country of residence, age, and role (i.e. adult or adult education professional).

The second part of the study is for adults in general and adults with fewer opportunities and analyses their experience with the education system in their country of residence, their critiques and recommendations, as well as their training in each of the multiple intelligences.

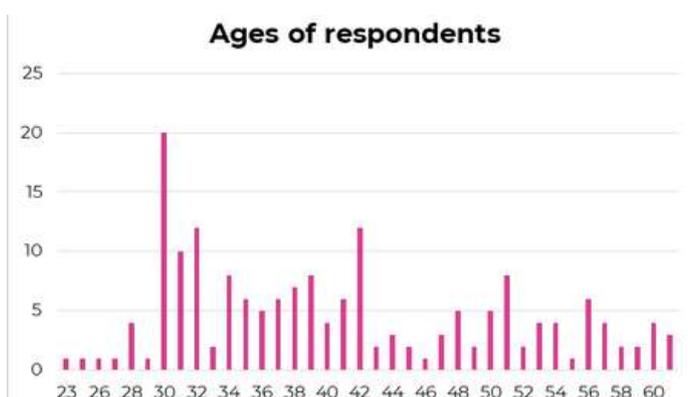
The third section is on adult education professionals and their experience in the education system in their country of residence, feedback on the current system, experience with multiple intelligences as well as suggestions for improvement. The conclusion analyses the most noteworthy results of the study and proposes solutions for the future, and ways to improve the current education system.

PROFILE OF RESPONDENTS



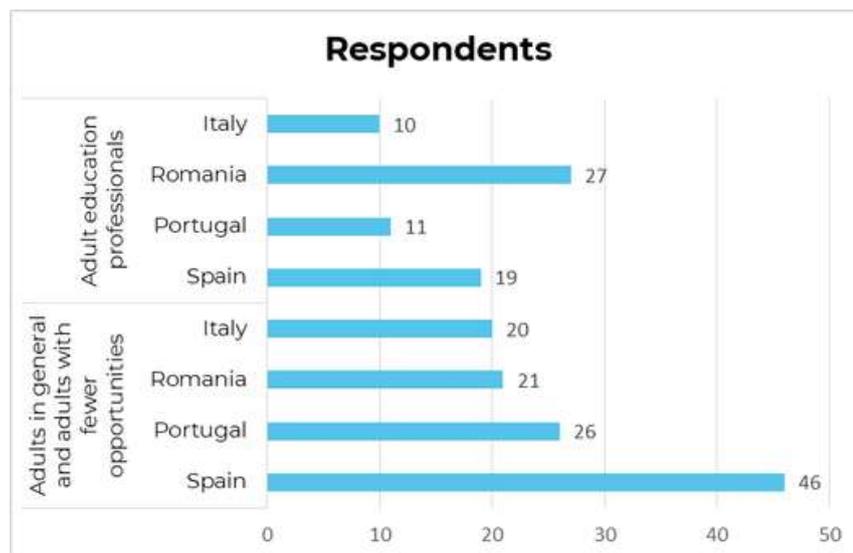
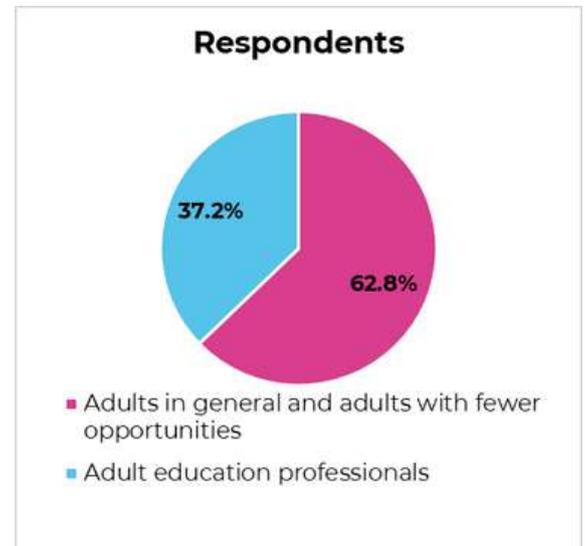
The questionnaire was sent to adult learners and adult education professionals by the five partner organisations. The largest number of respondents reside in Spain, and then in Romania, Portugal and Italy, respectively. A few of the respondents who completed the Romanian and Spanish questionnaires reside in Spain, Portugal and Romania. Additionally, 2 respondents reside in Germany, and another 2 live in the United States.

The target age group for this study was **from 30 to 65 years old**. The youngest person to answer the questionnaire was 23 years old and the oldest was 62. The average age of respondents was 42.5 and the most common age 30, with 20 of the respondents being that age.

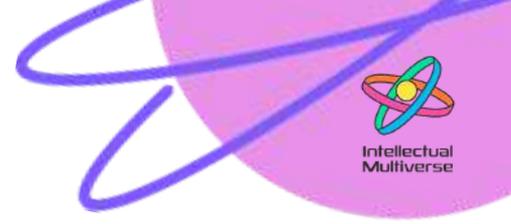




The target groups for this study are: **(1) adults in general and adults with fewer opportunities, and (2) adult education professionals.** Each partner organisation involved in the Intellectual Multiverse project was tasked to collect at least 20 responses from adults and 10 from adult education professionals.



The results per country show that most countries surveyed significantly more adult learners than adult education professionals. However, the results from Romania show slightly more responses from adult education professionals than adults in general and adults with fewer opportunities.



ADULTS IN GENERAL AND ADULTS WITH FEWER OPPORTUNITIES

MOST APPEALING LEARNING METHODS



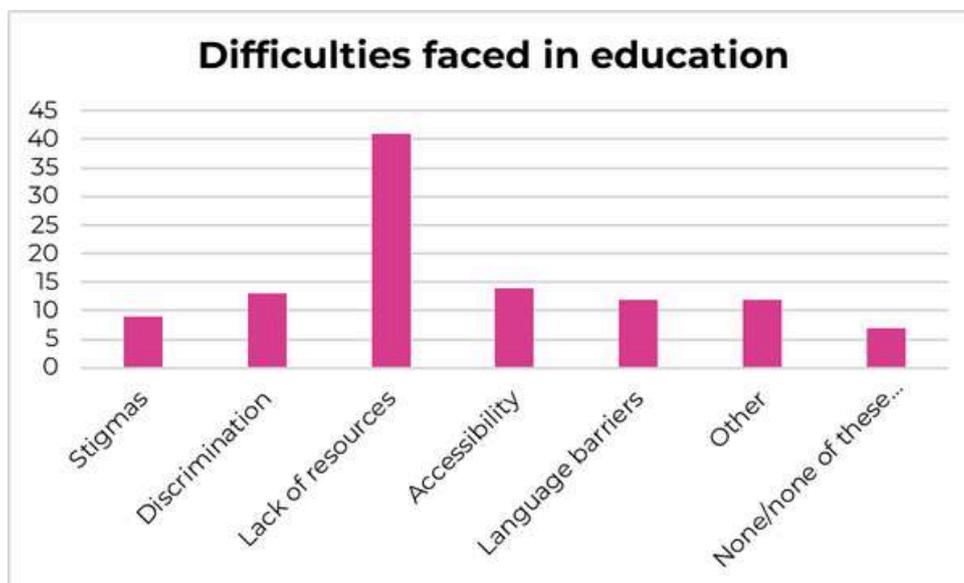
When asked which learning methods were most appealing to them, the most popular responses were **practical methods, learning-by-doing, collaborative/cooperative methods, non-formal learning methods, reading/books,** and **experiential learning.** Respondents seem to value practicality and place importance on applying knowledge or theory to real-world situations. Many prefer hands-on methods and methods that involve group work and collaboration with others. Some traditional methods, such as lectures, are also considered important, but many innovative methods, especially ones involving technology, are also highly regarded by the respondents. Additionally, some respondents noted autonomous learning methods where the learner takes charge of what and how they learn. **Game-based learning** and **gamification** were also mentioned by a fair amount of respondents.

These results show that the adults surveyed are most interested in practical, innovative methods, and methods that allow them to learn from experience and/or with others. They also value methods that make learning fun and expose learners to different learning styles. Surprisingly, a fair amount of respondents also seem to value traditional methods, like reading/books and lectures, which shows that they may still find practicality or usefulness in these methods.



DIFFICULTIES FACED DURING THEIR EDUCATION

Respondents were asked to select which difficulties they encountered the most during their education. They were given different options, as well as “other” and “none”. The most common response was “**lack of resources**”. This was chosen the most by respondents from all countries except for Romania. Romanian respondents had slightly more concern regarding **accessibility** as a barrier they encountered during their education, followed closely by “lack of resources”. Of the options given, “stigmas” was chosen the least. Those who faced “other” difficulties mentioned the unaffordable cost of educational resources and materials, lack of clear guidance, lack of interest or empathy from teachers, teaching style and inadequate teaching methodologies.



PROBLEMS IN THE CURRENT EDUCATION SYSTEM

When asked what problems they perceived in the current education system, the most common responses had to do with the system's one-size fits all approach, or **lack of adaptability to students' needs and/or learning styles**. Respondents mentioned how the system is not adapted to the current social reality or educational needs. As one respondent from Italy pointed out, these educational gaps can lead to drop out in the future.



Respondents also noted how the system employs the same teaching methods and prioritises quantitative knowledge, or logical-mathematical intelligence, without taking into consideration other methods or intelligences that could better suit students. Methods and concepts are standardised and a heavy focus is put on academic content, with less time to work on other skills, such as social or emotional skills. There is little room for creativity and individual exploration in the system which has to follow a strict curriculum. In order to deliver all of the content, the lecture method is favoured over other, more active ones, since it is much quicker.

Additionally, as one respondent from Portugal stated, subjects are siloed, meaning they are taught in isolation from one another, and there is little time or space for interdisciplinary projects.

The system is not suited to the diversity of people, different interests, aptitudes and learning rhythms. A respondent from Romania asserted that it “focuses on students with great potential and completely neglects the rest of the population”. A respondent from Spain is concerned about how the system does not adapt content to learners with special needs. Students are expected to adapt to the system, while it should be the other way around.

Other problems were also identified by respondents across the 5 partner organisations. The second most cited obstacle is how the system is **out-of-date** and many of the approaches used in teaching are **obsolete** and not in tune with what learners need. Methodologies and content employed are often used to prepare students for jobs that do not exist anymore. Likewise, there is a lack of innovation, which can lead to problems regarding the digital divide, especially in educational centres in areas with less resources.

As was seen in the previous question, **lack of materials and resources** is also a serious problem facing the current education system. Many respondents mentioned this, whether related to the content itself, or the lack of teachers as well. Others talked about the **differences** in materials and content **between different schools** and how this can lead to educational inequality in specific areas. A respondent from Spain mentioned how these differences are seen between Autonomous Communities, or regions, as well. Other difficulties mentioned by some of the respondents were **discrimination and lack of inclusion**. It seems that not enough is being done in educational institutions to address these issues and make learning more inclusive.

One respondent from Italy mentioned how most courses are only available in the Italian language, for example, and work could be done to make it more linguistically inclusive for migrants or foreign residents in the country. Likewise, offering courses in other languages could also help learners improve their foreign language skills, thus preparing them for jobs where foreign languages are required.

Respondents are also worried about **bureaucratic obstacles** in the education system that dictate curriculum requirements and sometimes make it difficult for those interested in learning to register for courses. The curriculum is very rigid and focuses on theory without linking this theory to everyday practice. The problem of frequent reforms in educational laws was mentioned by respondents from Spain, Romania and Portugal alike, and how this can add confusion to education requirements and further complicate things for teachers. This can often lead students and teachers alike to become **disinterested** in education. Additional aspects of the bureaucratization of education often discourage potential learners from signing up for courses or programmes due to the difficulty of overcoming obstacles, such as specific required certifications or difficult application processes.

Another topic mentioned by a significant number of respondents was the **cost of education**. Although public education is usually free, courses and programmes for adults often have an associated cost. Additionally, educational material, especially technological equipment, usually has high costs that are not affordable for everyone.

The last concern expressed by respondents was the **low standards** of education and excessive positivity. They imply that the current system is not very demanding of students and the quality is not necessarily high. Students may not always be challenged, and even when they make mistakes, there is a tendency to overlook them and always focus on the positive aspects. One respondent from Spain mentioned the **anti-failure culture**, which according to them, is often reinforced by parents. In an attempt to make their children the best they can be, they often overprotect them and do not let them fail or make mistakes. Thus, they are not given the chance to reflect on their mistakes and learn valuable lessons.

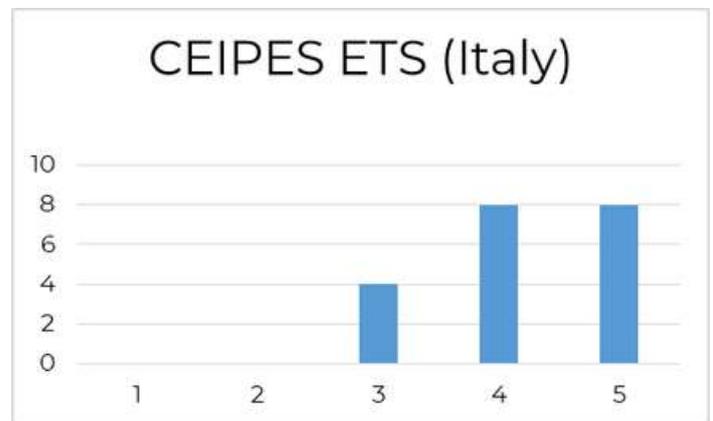
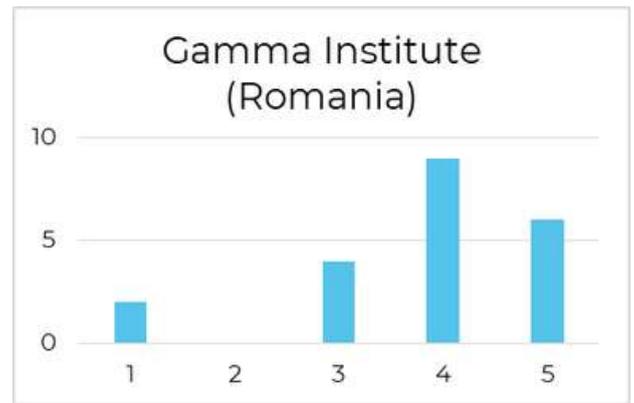
WORK ON SKILLS IN MULTIPLE INTELLIGENCES

Adult learner respondents were asked to assess how often they worked on skills in each of the multiple intelligences during their formative years. Answers were given on a scale of 1-5 where 1 corresponds with “very little”, 2 “a little”, 3 “somewhat”, 4 “a fair amount”, and 5 “a lot”.

These are the results for each of the intelligences:



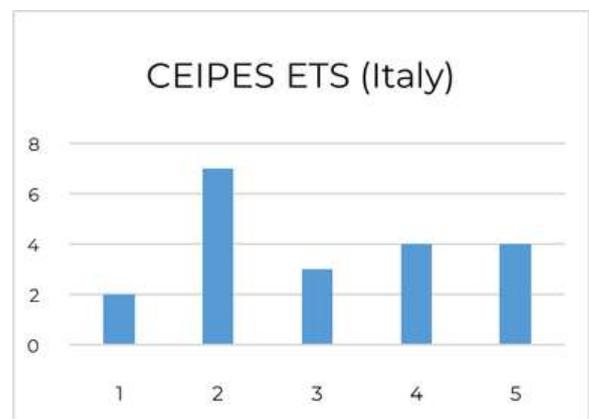
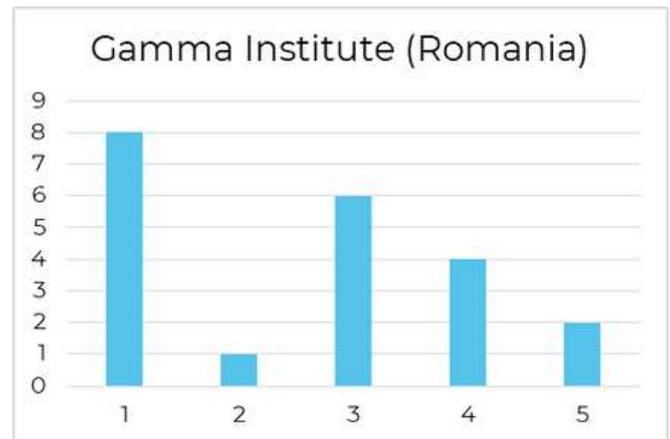
-Linguistic and logical intelligence (cognitive development):



The majority of respondents from the five partner organisations indicated that they **extensively** worked on linguistic and logical-mathematical intelligences during their education. Most respondents rated their experience as 4 or 5 out of 5, with a few selecting 3. Only six respondents, two from each of the Spanish organisations and two from Romania, reported having worked on these intelligences "very little." Notably, all participants from Italy and Portugal felt they had at least somewhat engaged with these intelligences during their formative years. The results are coherent considering that, according to Gardner, these are the two main intelligences that are exploited the most in traditional education and that most assessments are based on them.



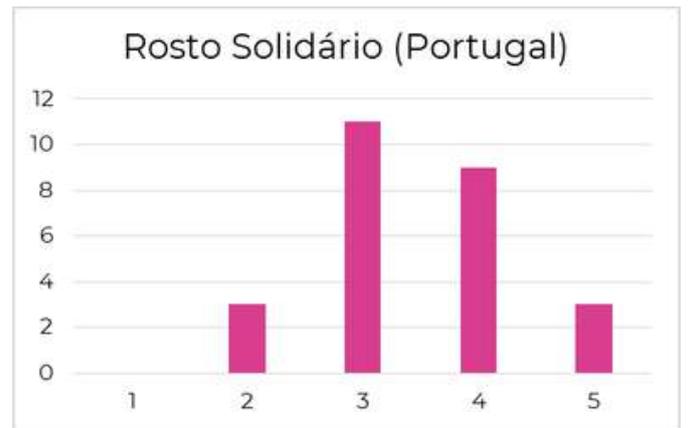
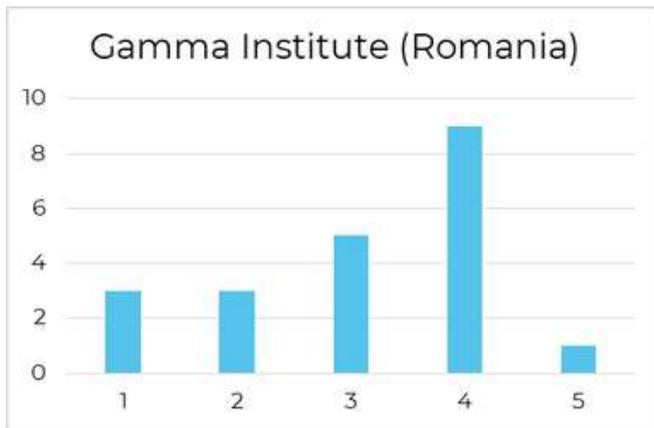
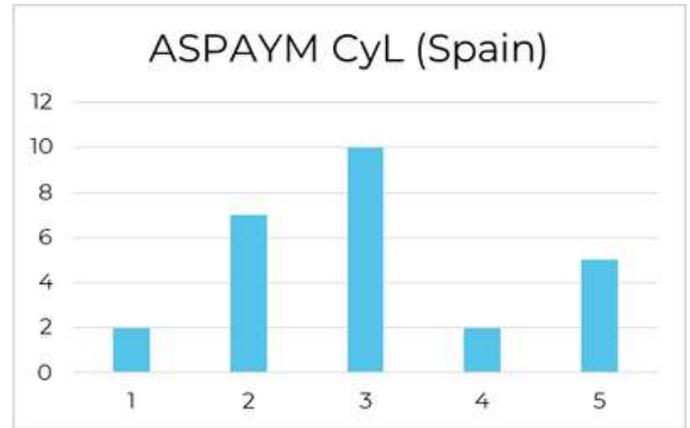
-Musical intelligence (artistic development):



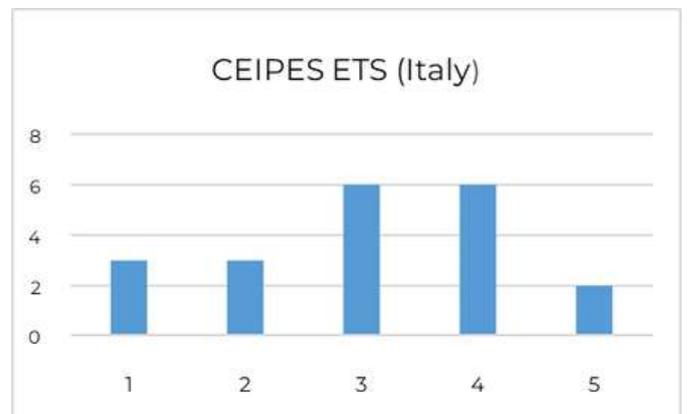
In contrast to the linguistic and logical-mathematical intelligences, respondents reported **significantly lower levels of experience** with musical intelligence (artistic development) during their formative years. The majority of participants across all countries selected 1 or 2, indicating "very little" or "a little" exposure to musical intelligence. Italy had the highest number of respondents who selected 4 or 5, reflecting "a fair amount" or "a lot" of engagement. Overall, musical intelligence appears to have been a lower priority in the educational systems of the partner organisations' countries, except perhaps in Italy, with some respondents expressing a desire for more focus on it during their education and training



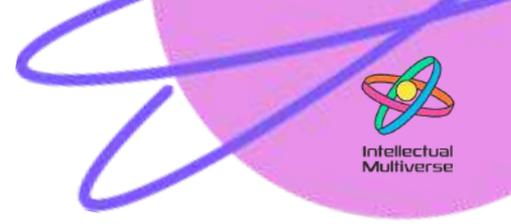
-Spatial and bodily intelligences (psychomotor development):



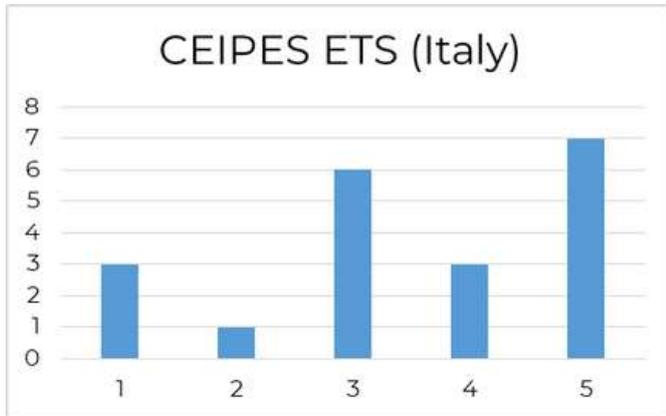
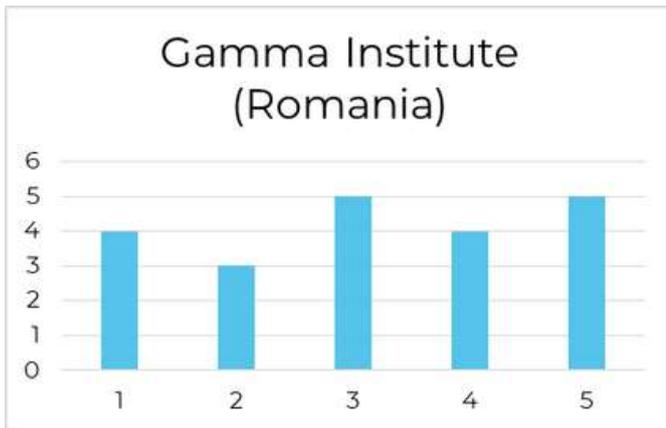
Most respondents indicated that they worked on spatial and bodily intelligences (psychomotor development) **"somewhat" or "a fair amount"** during their formative years. In particular, the majority of respondents from Spain selected 3 out of 5 (20 people). While none of the respondents from Fundación Plan B Educación Social reported working on these intelligences "a lot," 5 respondents from ASPAYM CyL did.



At least one respondent from each of the other organisations also indicated they worked on it "a lot." The most common response from Rosto Solidário's participants was "somewhat," and from Gamma Institute's, it was "a fair amount." Respondents from CEIPES ETS mostly reported working on these intelligences "somewhat" or "a fair amount," with 6 people choosing each option.



-Intrapersonal and interpersonal intelligences (emotional development):

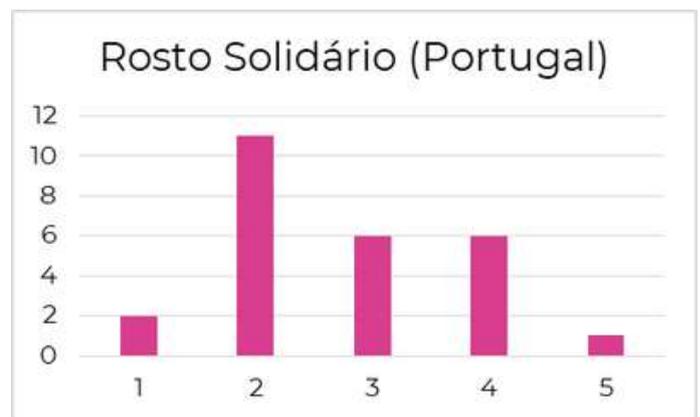
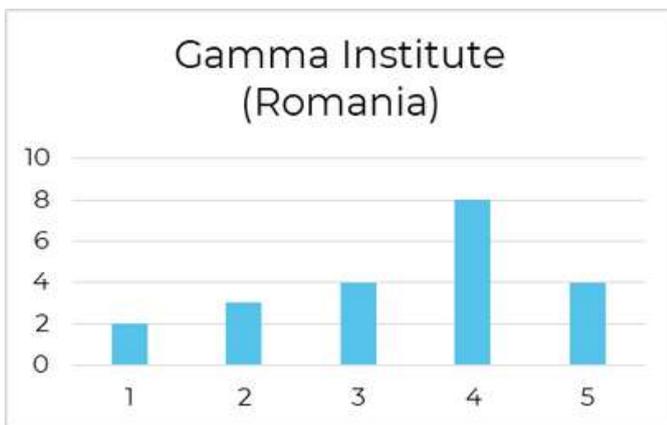


The responses regarding intrapersonal and interpersonal intelligences (emotional development) show **significant variation**. Most respondents from Fundación Plan B Educación Social reported working on these intelligences "very little" or "somewhat" during their formative years, while ASPAYM CyL participants were more likely to say "somewhat" or "a fair amount." Those from Rosto Solidário predominantly selected "a little" or "somewhat."

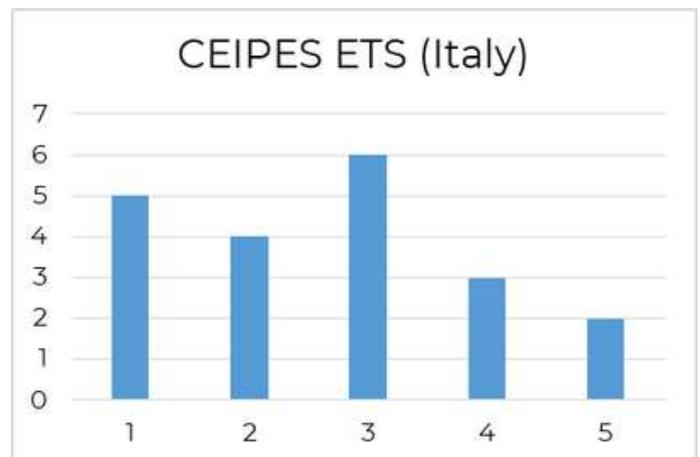
In contrast, 7 respondents from CEIPES ETS chose "a lot," followed by 6 who chose "somewhat." Gamma Institute respondents had mixed experiences, with "a lot" and "somewhat" being the most common answers, each selected by 5 participants. These responses highlight diverse experiences with emotional development across the partner organisations.



-Naturalistic intelligence (ethical - sustainable development):



The responses regarding naturalistic intelligence were **varied** across the partner organisations. Respondents from Fundación Plan B Educación Social mostly indicated they worked on this intelligence "a little" or "somewhat" during their formative years, with 6 people selecting each option. The most common response from ASPAYM CyL (8 people) was "somewhat," and the rest offered a mix of responses." Gamma Institute respondents mainly chose "a fair amount" (8 people), followed by "somewhat" and "a lot".

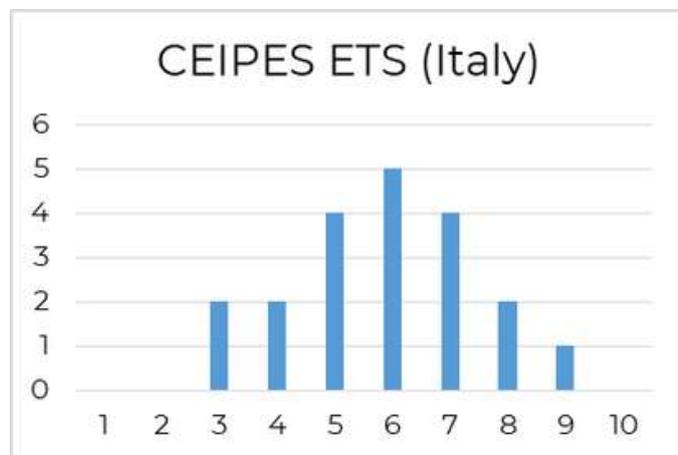
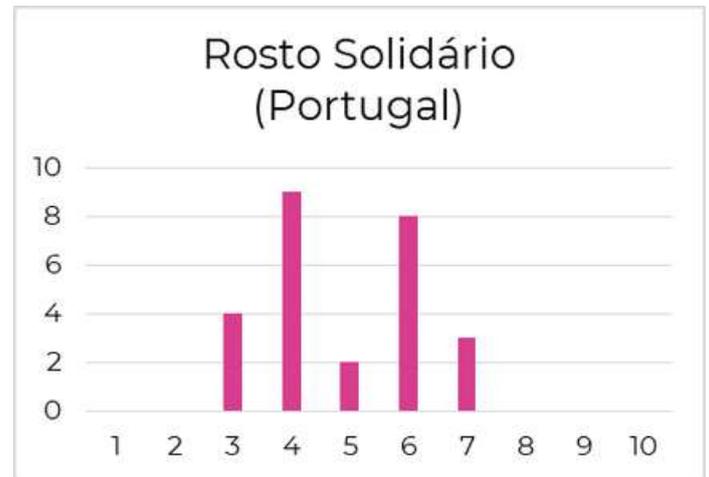
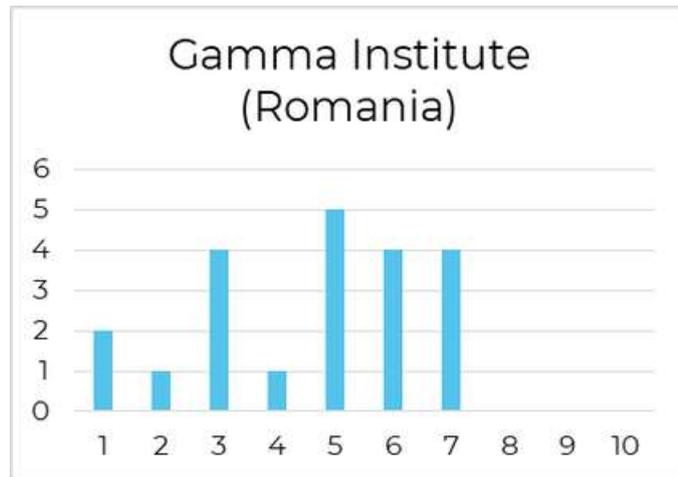
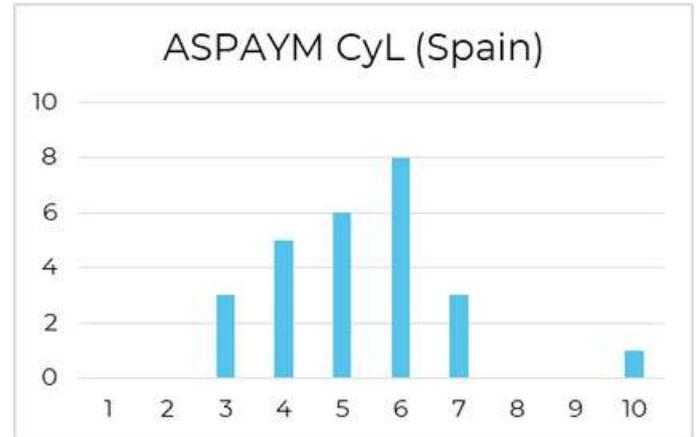


In Portugal, most respondents (11) selected "a little," with "somewhat" and "a fair amount" chosen by 6 respondents each. Italian respondents indicated the least engagement with this intelligence, with 6 selecting "somewhat" and 5 "very little." Overall, the responses suggest varied emphasis on ethical-sustainable development in current education systems.



SATISFACTION WITH THE CURRENT EDUCATION SYSTEM

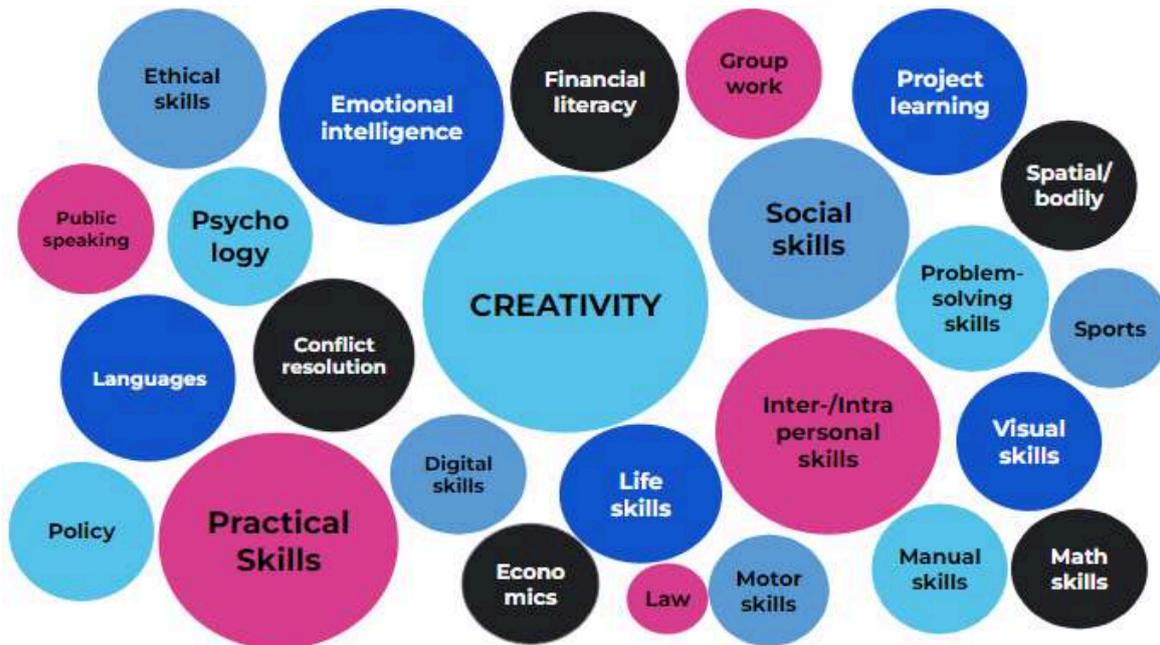
Respondents were asked to rate their satisfaction with the current education system on a scale of 1 to 10, 1 being “not at all satisfied (very bad)” and 10 being “extremely satisfied (excellent)”. These are their answers:



One can see that respondents on average are **only somewhat satisfied** with the current education systems in their countries of residence. The numbers are a little varied, but in most cases, the most common responses are 4 or 6, so slightly below average or slightly above average. The majority of people who responded to the questionnaires chose 7 or lower on a scale of 1 to 10.

Only one respondent, a person who answered ASPAYM CyL’s questionnaire, would say that they are “extremely satisfied” with the current education system. The most frequent response from Spanish and Italian residents was 6 on a scale of 1 to 10, so slightly above average. In contrast, the most common responses from Romanian and Portuguese respondents were 5 and 4 respectively, so “average” and “slightly below average”. This suggests that the level of satisfaction with the current education system is average across the board, though somewhat below average in Portugal, and slightly above average in Spain and Italy. Respondents are not completely dissatisfied with the current education system, but no one is extremely satisfied with it either. There is certainly room for improvement.

SKILLS THEY WOULD HAVE LIKED TO LEARN DURING EDUCATION/TRAINING



Questionnaire respondents were asked about what sorts of skills they would like to have learned during their education. Their answers were quite varied, but the most common responses were related to **creativity skills**. Many mentioned that they would have liked to develop their artistic skills, learn how to play an instrument, deepen their musical skills or work on more forms of expression like creative writing. As stated in the previous section about which intelligences they studied in their formative years, many of the respondents do not think they spent a great deal of time working on musical intelligence or artistic knowledge during their schooling.

Respondents also wish they would have gained more **practical skills**. They spoke a lot about the importance of learning skills that would help them in their professional futures, as well as focusing less on theory and more on putting knowledge into practice.



Many also mentioned their desire to have learned more about **emotional intelligence** during their formative years. They stressed the importance of learning how to manage their emotions and better understand them, as opposed to always suppressing “negative” emotions and not dealing with them.

Also related to this, many wanted to learn more about **inter/intrapersonal skills**, learning how to understand themselves better, take better care of themselves, and look after their social relationships as well. Some respondents also mentioned that they would have liked to develop their empathy during their formative years, too. A few mentioned specifically learning more communication skills to help them relate to other people better and improve their interpersonal skills.

Other skills mentioned by many were **ethical/sustainability skills**, especially applied to current world problems like climate change. One respondent from Portugal said specifically that they would like to learn about “living sustainability in a practical way at school and not just talking about it”. Thus, they would like to learn how to put this knowledge into practice in order to make changes in their daily life.

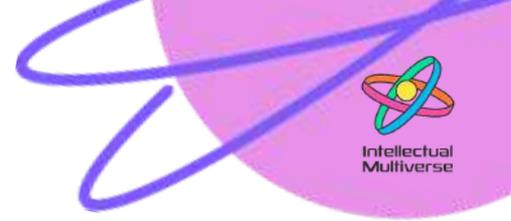
A significant number of respondents mentioned skills related to **financial literacy** as being ones that they would have liked to have developed during their formative years. Within financial literacy, many different topics were mentioned, such as: learning how to budget, saving money, investing, how to submit a tax return, planning for buying a house, etc.

The next most important skills mentioned by respondents were related to **life skills** in general. These included things like, how to find a job, how to do housework, cooking, cleaning, sewing, and carpentry.

Other specific skills were mentioned by less respondents, such as public speaking, group work, specific methodologies, and specific academic subjects. A few respondents mentioned language skills, including developing linguistic intelligence in one’s native language as well as learning foreign languages in a more effective and natural way. A couple of respondents mentioned digital skills, and learning how to use them both in academic and professional settings.

SUPERFLUOUS/UNNECESSARY ASPECTS OF EDUCATION/TRAINING

Respondents were asked to reflect upon superfluous or unnecessary aspects of their education/training. Most of their answers were related to the **impracticality** of education. They feel that they had many subjects that had **no practical application** for later in life. If they did have practical aspects, teachers were not able to convey this and thus they felt unprepared. One respondent mentioned how the way maths is taught often focuses more on the **theory** and not on the use that it has in daily life or in certain professions. Other respondents mentioned that the **out-dated** material and methodologies often used are not helpful for preparing students for the future.



For example, technology and/or artificial intelligence are not being used enough in school and teachers often still rely on traditional materials and methodologies that have been used for decades instead of innovating their approaches.

The next most popular response, by nearly 20 respondents, was “**none**”. These people believe that nothing is unnecessary and everything can teach you something. In their opinion, while there may be room for improvement, everything serves some purpose.

Another aspect mentioned by many respondents is rote **memorisation**. Individuals from all partner countries were opposed to this part of their education system. Many were forced to memorise data and historical facts for exams which they often forgot. This seems to be a problem across the board and in different subjects, such as maths, sciences, foreign languages, history and more.

Excessive theory is another aspect that many find to be superfluous. Many respondents believe that the education system focuses a lot on teaching theory and not enough on showing students how to apply this knowledge in practical situations.

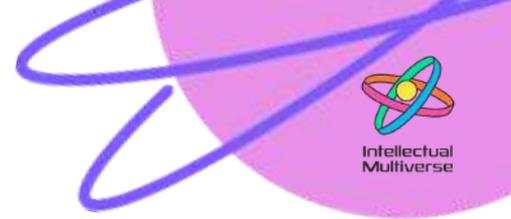
There were also some factors about teachers that were mentioned. A few respondents talked about the **unfair treatment of students by some teachers**, leading to discrimination and/or problems with self-esteem. Others spoke about how teachers are often **unmotivated** to do their jobs, perhaps due to teacher shortage or job conditions. Some also spoke about how they had teachers who, sometimes due to their age, were out of touch with the current reality and unwilling to use innovative methods to engage their students.

Respondents from all partner countries also mentioned some specific subjects that they would consider unnecessary. The most common one was **Religion**. Others mentioned by a few individuals were Classical Culture, Physics, Chemistry, elective subjects, everything besides maths, etc. Some mentioned that the subject matter was very repetitive and never changed, or had no practical applicability. Two individuals from Portugal also complained about Physical Education class, especially the way it is taught and the repetitiveness.

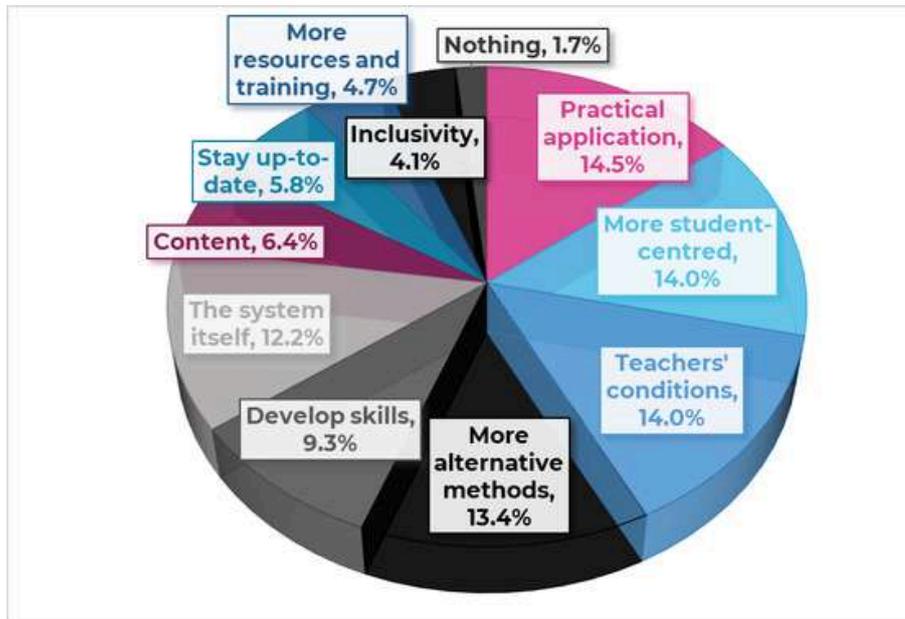
A few other aspects worth noting mentioned by respondents are the competitiveness of the education system, the scoring system and the education system itself.

ASPECTS OF THE CURRENT EDUCATION SYSTEM THAT SHOULD BE IMPROVED

Respondents recognise many areas of the current education system that could be improved. The pie chart on the left shows some of the main categories.



The two top areas mentioned were the **practical application** of education and making education **more student-centred**. Respondents believe that there should be less focus on theory and more opportunities to put knowledge into practice. There should be opportunities to train for work and practise what is being learned. Content and subjects covered in the classroom should be adapted to future professional needs, and training should be more similar to professional settings. A few respondents also mention the value of teaching life skills that can be applied outside of the professional world, such as financial literacy and cooking.



Additionally, there should be more individualised attention to students, and teaching methodologies and strategies should be personalised to fit students' needs. Students should be given more autonomy and more chances to discover on their own and also explore their own personal interests, not just what the curriculum demands.

Additionally, a few respondents stated that timetables should be more flexible, especially in education settings for adults who may have other priorities, such as a full-time job. This would make it easier for them to further their education while working and/or raising a family.

Many individuals mentioned that **teachers' conditions should be improved**. There should be more teachers, decreasing the student: teacher ratio. Teachers should have more opportunities for training so that they can incorporate innovative methods in their classrooms. In general, working conditions, salaries, and installations should also be improved to help motivate teachers more and make their work more comfortable. They should be given more time to coordinate and/or plan their lessons. Lastly, they should have more flexible timetables as well as their students. Many individuals also referred to the **use of more alternative methods and strategies** in the classroom in order to improve the learning experience. Some of the ones mentioned were debate, discussion, project-based learning, more group work, reading and writing, teaching values, etc.



A few respondents recommend encouraging active student participation and placing less emphasis on memorisation and more on increasing their theoretical knowledge base in other ways. Less importance should be placed on exams and other methods of evaluating could be explored. A few respondents would also suggest incorporating non-formal education in the classroom.

Some respondents would recommend **developing additional skills** that are not always promoted in the classroom. A fair amount of these respondents talked about **emotional intelligence** and the importance of developing this alongside other skills. A few also place importance on fostering critical thinking and logical thinking in academic settings. Finally, a few respondents believe that it is important to develop intelligences beyond the traditional linguistic and logical-mathematical intelligences that are traditionally taught in academia, especially inter/intrapersonal intelligence and other multiple intelligences.

There were also some recommendations on **improving the education system itself**. **Higher standards** should be held and **interdisciplinarity** should be encouraged. Teaching subjects together and showing the overlap between subject areas can be more beneficial than the traditional teaching of subjects in isolation. A few respondents believe that the system should be less bureaucratised and thus more accessible to everyone. Less importance should be placed on exams and marking systems should be improved to better reflect the current situation. One respondent from Spain mentioned that there should be less bilingualism, a debate that is common nowadays in the country. The system should allow for more family-school collaboration, especially for younger learners, and it should strive to foster empathy of both students and teachers alike. Lastly, as one Portuguese respondent pointed out, the stigma of failure should be removed. Students should be taught to learn from their mistakes and not feel so much pressure to achieve perfect results.

Regarding **content**, a few respondents would change specific courses or place more emphasis on them. A few would suggest teaching civic education and responsibility, showing learners the importance of participating in their communities and contributing to society in a positive way. According to respondents, Law, Music and Contemporary History and Politics should be part of the curriculum. Two respondents from Portugal believe that Physical Education should be adapted to be less repetitive and to encourage exercise and physical health. The way foreign languages are taught should also be changed to better prepare learners to utilise them as a vehicle for communication as opposed to just memorisation of vocabulary and grammar topics. There should be more focus on important, practical content, and less on content that is not practical.

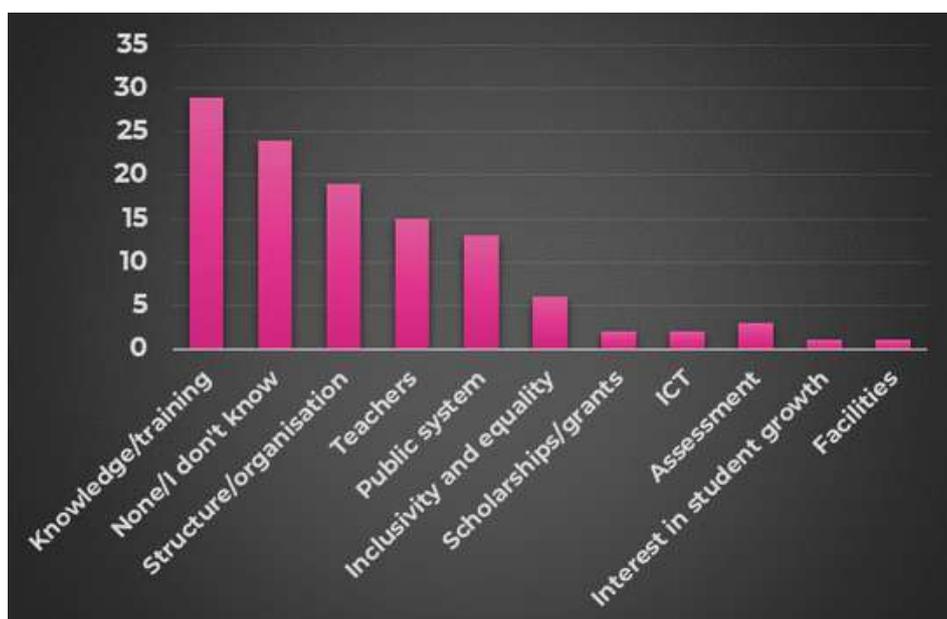
Additionally, some respondents would **modernise** the system and ensure that both students and teachers alike stay up-to-date with new technologies. Methodologies and classwork should be adapted to current technological trends and there should be equal accessibility to digital tools.

Lastly, a few respondents would suggest offering more resources and training for educators and making the system more inclusive for all. It should also be adapted to those with special needs.

ASPECTS OF THE CURRENT EDUCATION SYSTEM THAT ARE WORKING WELL

Most of the respondents provided insight on aspects of the current education that work well. However, **about 29%** of respondents could not think of any aspect of the education system that is working well.

The most common aspects mentioned were related to **knowledge and training** covered during their education. There was mention of the importance of gaining a theoretical background and learning general knowledge. Others are satisfied with the course offering and varied subject matter, and even having compulsory subjects thus exposing them to different areas they may not initially be interested in. A few mentioned specific subjects, such as foreign language classes. Teaching materials and specific projects were also brought up as positive aspects of the system. Another factor that was mentioned by a few individuals is the interdisciplinarity of the education system, which could provide learners with a well-rounded background.





The next most positive aspects of the current education system are related to its **structure and organisation**. Some respondents referred to specific protocols, how the system is reliable and provides routine and discipline for learners and educators alike. Others spoke about the overall structure, such as how it is split into different cycles, as well as periods and/or semesters.

There is some flexibility in the curriculum and room for using new methods, which is great for teachers, and students have the ability to choose their courses to some extent. It was also highlighted how educational institutions are spaces for socialisation of learners, an opportunity to get out and interact with others. A few individuals mentioned specific regional and national education laws that seem to be working well, too. Interestingly, one individual from Portugal reflected on how the system works well for "good students". While this is a positive notion for students who adapt well to the education system, it could also be an area for improvement for those who do not fit the "good student" role.

A significant number of respondents also consider **teachers** to be a part of the education system that is working well. However, this depends on the individual teacher. Respondents also mentioned teacher training as a positive aspect, but as one individual from Spain noted, this is often something that teachers do **on their own will**. Training is not necessarily something that is always provided in educational institutions.

Respondents also consider the **public school system** to be very positive. The fact that it is **free and accessible to everyone** ensures that all have access to education. However, as one respondent from Spain noted, higher education is not free and not always accessible to everyone.

A few respondents mentioned **inclusivity and equality** as positive aspects of the system. Inclusive playgrounds were mentioned. Two respondents spoke about how individual attention is given to those with special needs and how learners with different skills and skill levels are incorporated in the classroom.

Other factors mentioned were **scholarships/grants** available for potential learners and the incorporation of **ICT and technology** into the classroom. Two individuals mentioned assessment as well. One individual from Romania mentioned performance evaluation of teachers as a positive part of the system. A respondent from Spain mentioned continuous assessment of learners as a positive factor since it allows educators to assess knowledge retention regularly.

Lastly, one individual considered interest in student growth to be a positive part of the system. This could be either from the system itself or from individual teachers. School facilities were only brought up by one respondent, who specifically found science labs to be a positive part of the education system.

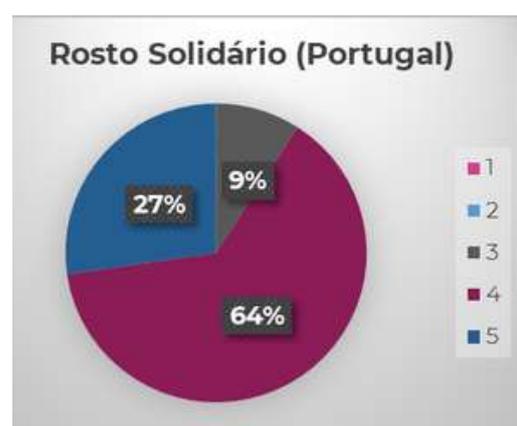
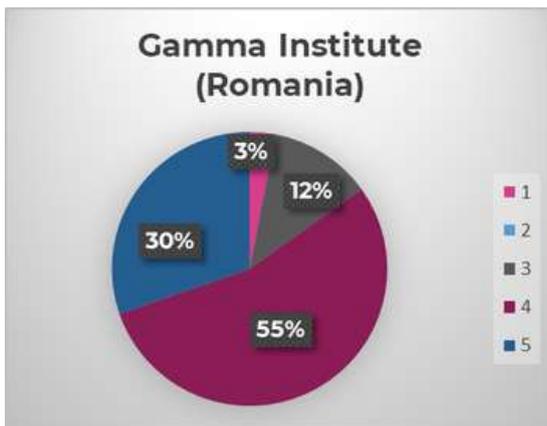
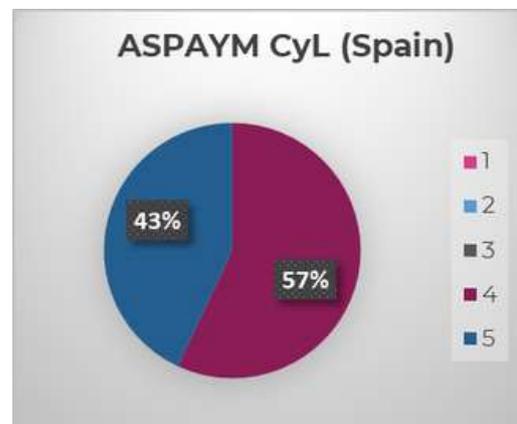


ADULT EDUCATION PROFESSIONALS

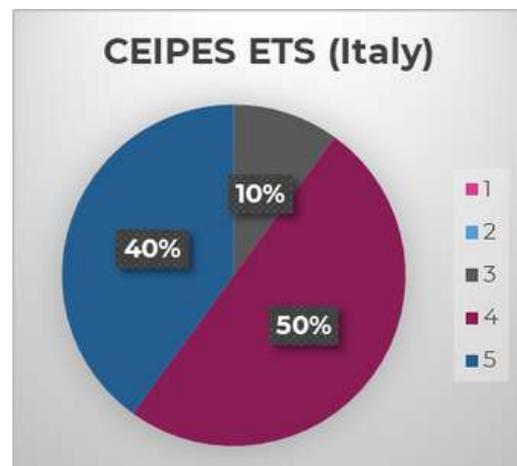
DEVELOPMENT OF SKILLS IN MULTIPLE INTELLIGENCES

Adult education professionals were asked to assess to what extent they consider that they have developed skills related to multiple intelligences. On a scale of 1 to 5, 1 being “very little” and 5 being “a lot”, they answered as follows:

-Linguistic and logical intelligence (cognitive development):



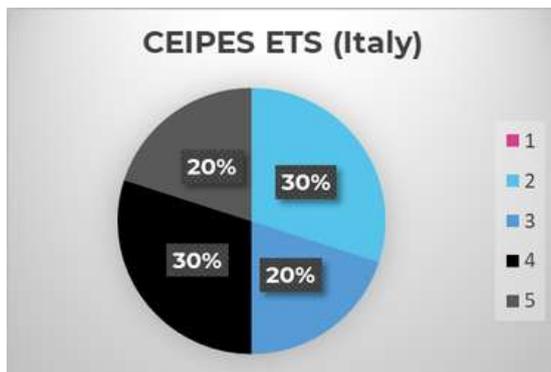
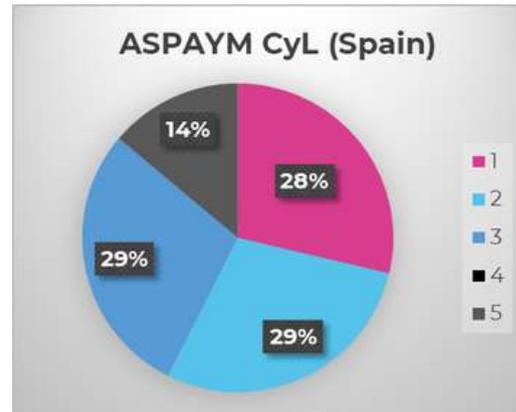
Most respondents reported working on linguistic and logical-mathematical intelligences to a significant degree. Specifically, 63.2% of adult educators from Fundación Plan B Educación Social indicated that they worked on these intelligences "a lot." All respondents to the Spanish questionnaires rated their experience as 4 or 5 on a scale of 1 to 5.





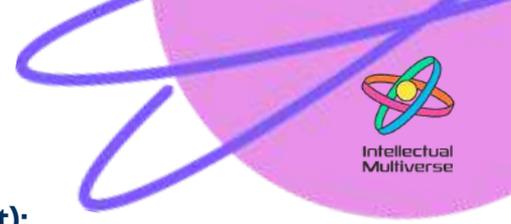
Conversely, while the majority of respondents from Romania, Portugal, and Italy also indicated that they worked on these intelligences "a fair amount," some reported working on them "somewhat." Notably, Gamma Institute had 3% of respondents who felt they worked on these intelligences "very little," rating it as 1 on the scale of 1 to 5.

-Musical intelligence (artistic development):

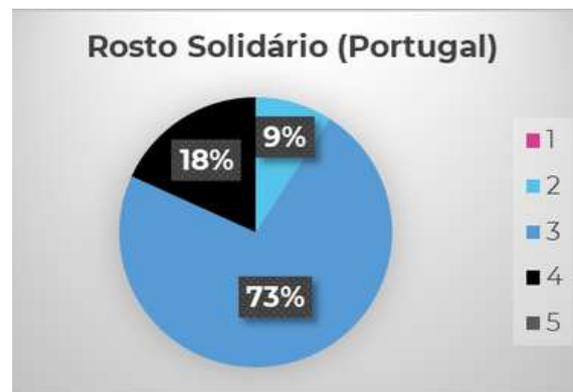
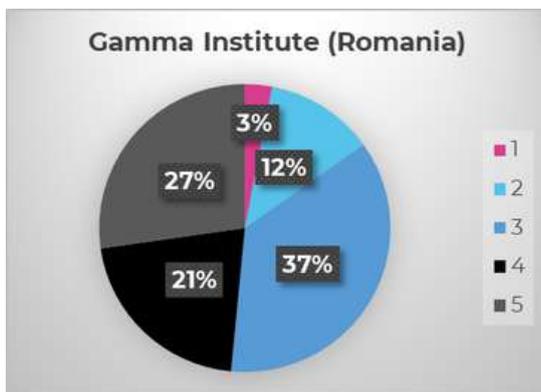
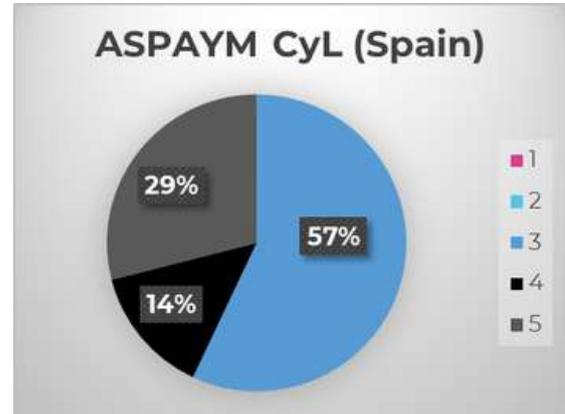


In contrast to linguistic and logical-mathematical intelligences, adult educators had **varied experience** in their development of musical intelligence. Most felt they worked on it either "a little" or "somewhat." Fundación Plan B Educación Social had the highest proportion of respondents indicating they worked on musical intelligence "a lot" (42%), with the next largest group reporting "a little" (25%).

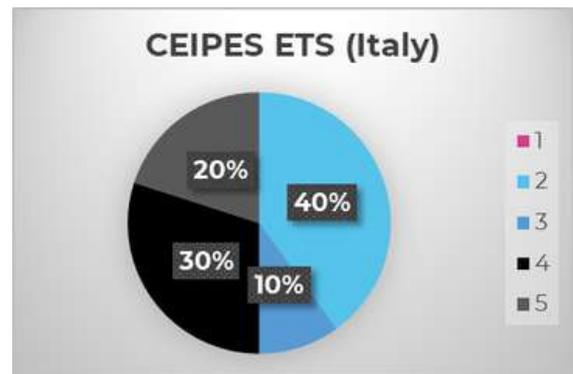
CEIPES ETS saw 30% of respondents saying they developed musical intelligence "a fair amount," while Gamma Institute had the same percentage reporting "somewhat." For both organisations, the next largest groups were "a little" for CEIPES ETS (30%) and "very little" for Gamma Institute (28%). Rosto Solidário respondents mainly reported working on musical intelligence "a little" (37%) or "very little" (27%). Similarly, ASPAYM CyL respondents generally indicated they worked on musical intelligence "somewhat," "a little," or "very little."



-Spatial and bodily intelligences (psychomotor development):

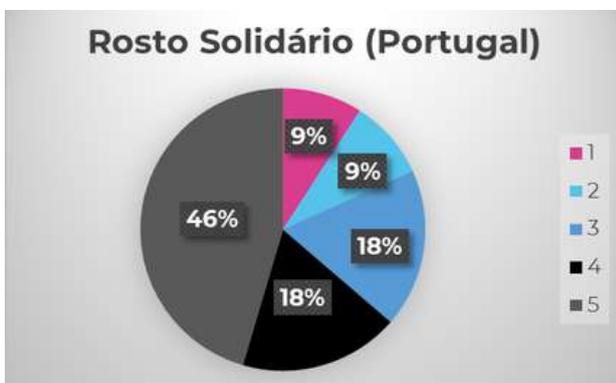
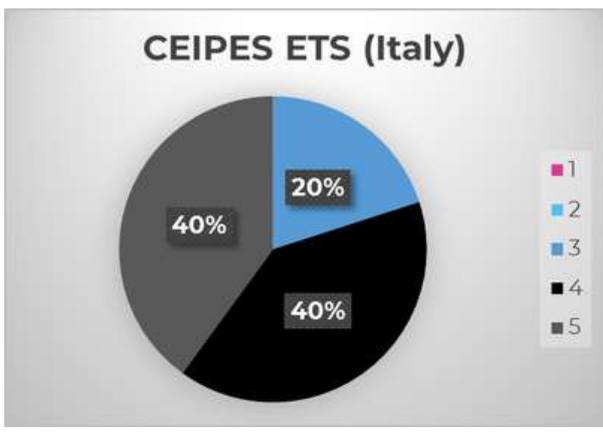
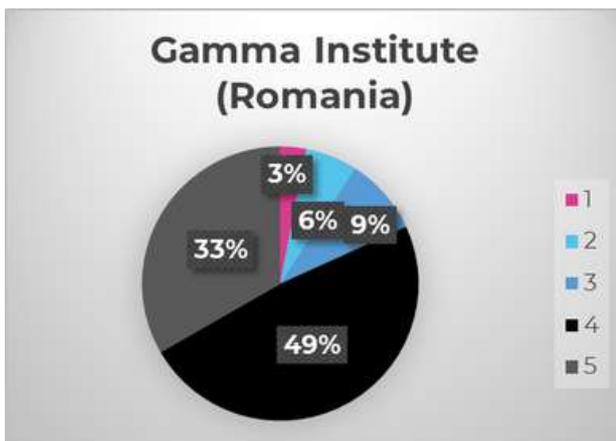
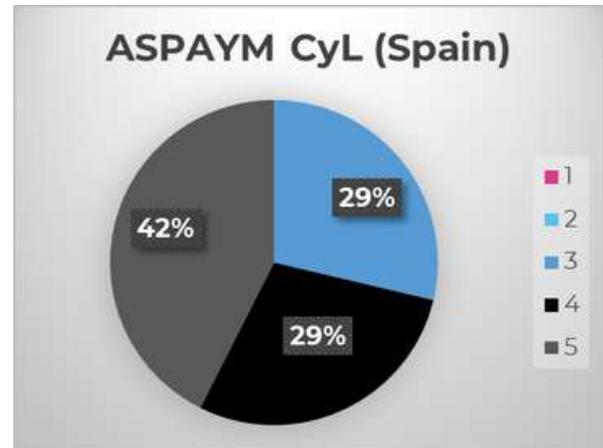


Respondents had **varied** opinions on their development of spatial and bodily intelligences. Most felt they had developed these skills **"somewhat."** Gamma Institute reported the highest proportion of respondents who felt they developed these skills "a lot" (27%) and "somewhat" (37%). Fundación Plan B Educación Social showed a balanced response, with significant percentages indicating development "a fair amount" or "somewhat." Similarly, ASPAYM CyL and Rosto Solidário had majorities reporting development "somewhat" or "a lot." CEIPES ETS responses were more mixed, with notable portions indicating "a little," "a fair amount," and "a lot." Gamma Institute was distinct in having both a high percentage of significant development and a very small percentage reporting minimal development.



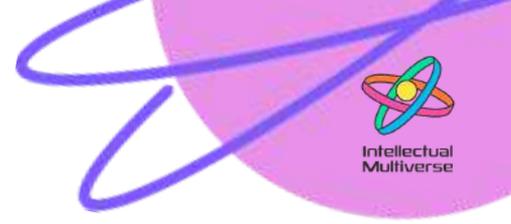


-Intrapersonal interpersonal intelligences (emotional development):

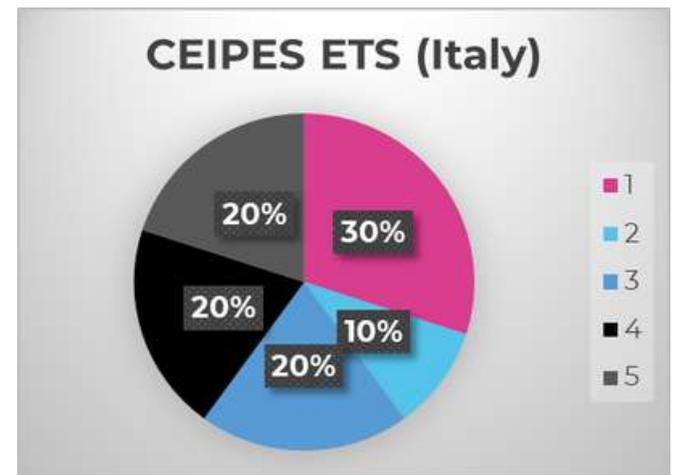
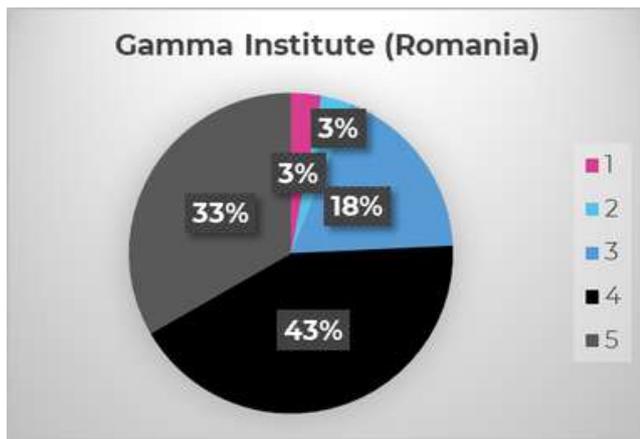
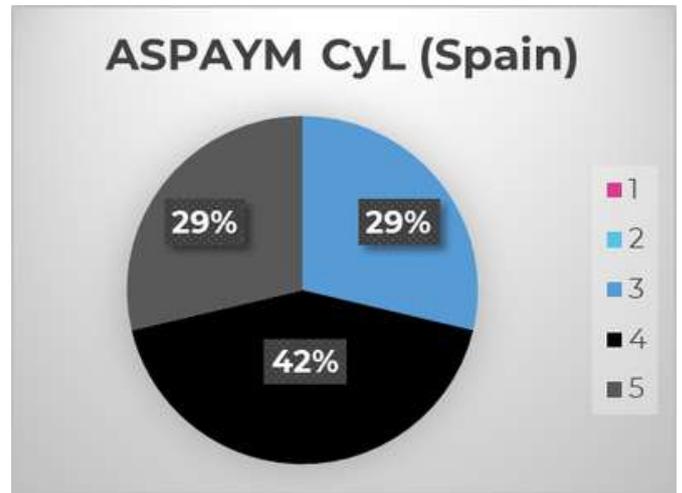


Overall, adult educators across the partner organisations felt they developed their intrapersonal and interpersonal intelligences either "a fair amount" or "a lot." At Rosto Solidário, 46% of respondents reported significant development, while 18% felt they developed these skills "a fair amount."

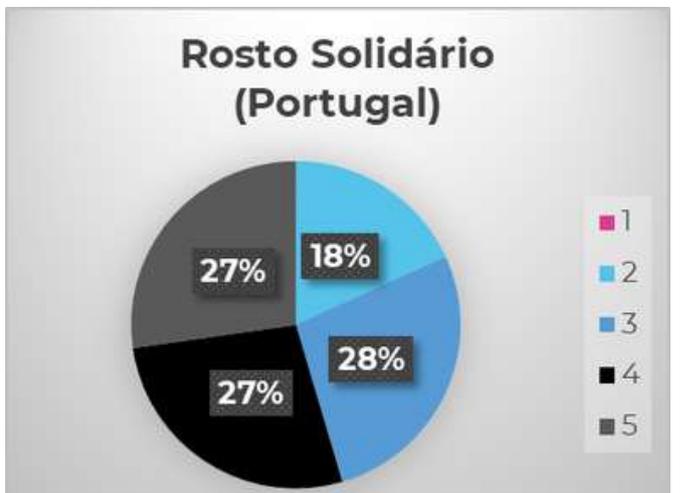
Gamma Institute saw 49% of respondents reporting "a fair amount" of development and 33% "a lot," and CEIPES ETS had similar responses, with 40% indicating "a fair amount" and another 40% "a lot." Respondents from ASPAYM CyL generally felt they developed these intelligences at least "somewhat", with 42% affirming that they developed it "a lot". Fundación Plan B Educación Social had a more varied response, with 33% reporting "somewhat," 33% "a fair amount," and 25% "a lot." Despite the positive overall feedback, a small proportion of respondents from Fundación Plan B Educación Social (9%), Gamma Institute (3%), and Rosto Solidário (9%) reported developing these intelligences "very little."



-Natural intelligence (ethical - sustainable development):



Regarding naturalistic intelligence (ethical-sustainable development), respondents from most of the partner organisations would agree that they developed this either “somewhat” or “a fair amount”. Most individuals who completed Fundación Plan B Educación Social’s questionnaire would say they developed it “a lot” (33%), “a fair amount” (25%), “a little” (25%). Respondents to ASPAYM CyL’s questionnaire would agree that they developed natural intelligence at least somewhat, with 42% believing they worked on it “a fair amount”.



Respondents from Gamma and Rosto believe that they developed it a significant amount as well: 43% from Gamma would say “a fair amount”, 33% “a lot”, and 18% “somewhat”, while 28% from Rosto would say “somewhat”, 27% “a fair amount”, and 27% “a lot”.



However, answers from respondents to CEIPES ETS’s questionnaire diverge from the rest in that 30% would say they developed natural intelligence “very little”. Then there seems to be some disagreement as 20% would say “somewhat”, 20% “a fair amount”, and 20% “a lot”. This may depend on the kind of education or training they received, the sort of area they live in (i.e. rural, urban, etc.) or other factors. Interestingly, answers from the other partner organisations are similar.

SKILLS WORKED ON WITH STUDENTS

When asked which skills they have worked on with their students, adult educators mentioned several different ones. The most common, worked on by more than 10 respondents, are: **emotional intelligence, linguistic intelligence, intrapersonal intelligence and interpersonal intelligence**. This suggests that, although many adult learners would have liked to have learned more about emotional intelligence as well as intrapersonal/interpersonal intelligence, many educators are already working these skills into their lessons and professional training now.

Other skills mentioned by at least 5 adult educator respondents that they work on are communication, creativity, natural intelligence, professional skills, logical-mathematical intelligence, digital/IT skills and spatial intelligence. It is worth noting that although Gardner states that **logical-mathematical intelligence** is one of the main ones taught in today’s schools and assessed in standardised testing, alongside linguistic intelligence, it is not one of the most-mentioned intelligences by adult educators surveyed.¹

Regarding the other intelligences in Gardner’s theory, musical intelligence and bodily-kinesthetic intelligence were only mentioned by 4 adult educators each. They are indeed being worked on, but to a lesser extent.

TRAINING/PROFESSIONAL DEVELOPMENT TO ADAPT TO NEW EDUCATIONAL METHODOLOGIES

Slightly more than half of adult educators believe that they have received sufficient training and professional development to adapt to new teaching methodologies and approaches.



¹ Gardner, H. (1983). *Frames of Mind*. New York: Basic Books., p.232



However, some of them stressed the fact that they had to look for the training themselves or learn through self-study. It was not always provided by their workplace. Others mentioned that they developed these skills directly through experiential learning or through work experience.

SUGGESTIONS AND RECOMMENDATIONS TO IMPROVE THE CURRENT EDUCATION SYSTEM

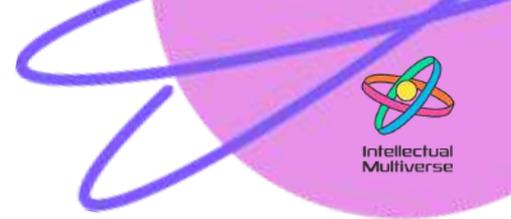
Adult educators provided many suggestions for improving the current education system. One of the most common themes that came up was to make education **more practical**. Educators would like to move away from theory-based teaching and add more practical elements that help to assimilate information learned and put it into practice. Some suggest employing learning by doing and project-based skills training to make the learning experience more hands-on and practical for learners' professional and personal lives. They also believe there should be practical training elements within education, to prepare learners for everyday life.

Many respondents also mentioned the importance of teaching **emotional intelligence**. According to one respondent from Romania, it should be taught starting from primary school and throughout all learning. Respondents from Portugal spoke about providing emotional development training and socio-emotional work to adults and education professionals specifically.

Another common theme that came up was providing more **training and professional development** opportunities to educators. This training should focus on their professional futures and provide them with opportunities to further develop skills. They should also have opportunities to learn about **new and innovative practices**, as well as teaching styles. One respondent from Italy stated the frontal lesson style should be questioned since others could be more beneficial to both learners and educators alike.

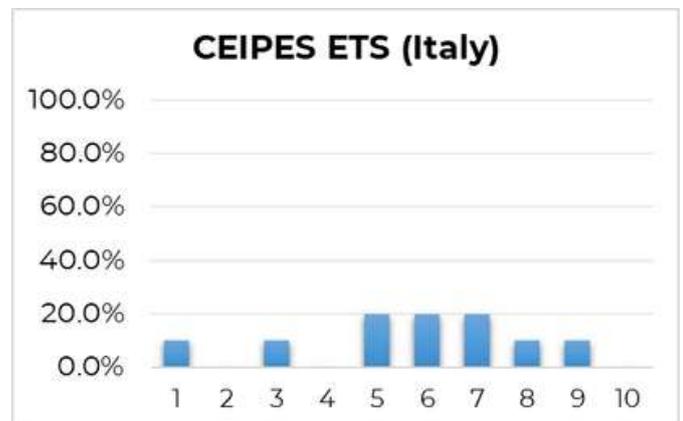
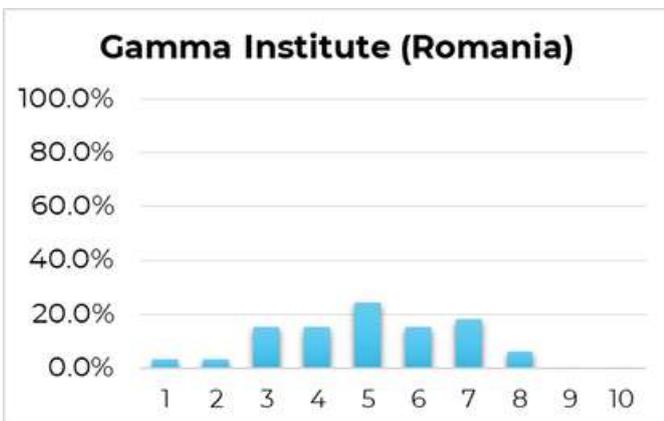
Others mentioned developing more digital and technological skills, working more on analytical and critical thinking skills, emphasising the importance of group work and teambuilding, working more on multiple intelligences, such as inter/intra-personal intelligences and providing multidisciplinary education. A few respondents also recommend using participatory methods to stimulate the learning experience.

Education should be student-centred and there should be greater flexibility and autonomy for educators. Respondents also mentioned structural aspects that should be improved, such as more resources and funding, or lower student-teacher ratios.



SATISFACTION WITH THE CURRENT EDUCATION SYSTEM

Adult education professionals were asked to rate their level of satisfaction with the current education system on a scale of 1 to 10, 1 being “very bad” and 10 being “excellent”.



Adult education professionals expressed only **moderate** levels of satisfaction with the current education system. Notably, none of the respondents rated their satisfaction as a perfect 10 out of 10. The most common ratings were 5 and 6, indicating that the majority of professionals feel either average or slightly above average in terms of their satisfaction.

These responses suggest a general sense of mediocrity in the perceived effectiveness and quality of the education system, with no strong feelings of excellence or fulfilment reported. This points to potential areas for improvement and a need for addressing underlying concerns within the system.



The most prevalent response from adult educators was a marked **dissatisfaction** with the current education system, with many stating that they could not identify any aspects that were functioning well. However, a notable portion of respondents did highlight the high levels of **motivation among teachers and professionals** as a positive element.

Interestingly, despite widespread criticism of the rigidity within the education system by adult learners, a significant number of adult educators—especially those from Romania and Portugal—expressed appreciation for the existing **legislation and regulatory frameworks** governing their education systems. Across all partner countries, there was a consistent recognition of the value of **innovation** within the current education system, whether through the introduction of new pedagogical approaches and methodologies, the integration of new technologies, or the use of artificial intelligence in the classroom.

Other aspects that were perceived as functioning effectively included the theory, evaluation processes, overall structure, organisation, and the public school system itself. Additionally, some respondents expressed that they appreciate the emphasis on skills development and the importance placed on cognitive learning. A few adult educators also acknowledged that their education systems provide teachers with a degree of autonomy and allow for some flexibility in curriculum development and content delivery.



CONCLUSION

In conclusion, the study highlights diverse perspectives from adult learners and adult education professionals regarding the current education system and the development of various intelligences. It sheds light on aspects of the system that are working well, others that are not effective, and suggestions for improvement.

The results show that both adult learners and adult educators are only **moderately satisfied** with the current education system. Only 1 adult learner was highly satisfied, and 2 were not satisfied at all, whereas no adult educator was highly satisfied and 3 were not satisfied at all. Comparing answers, adult educators were slightly more satisfied with the system than adult learners. This indicates that it is necessary to take into account adult learners' needs and adapt the system to better fit them.

Adult learners value **practicality**. They prefer hands-on learning, and opportunities to put what they learn into practice. They often have limited time to explore further learning and professional development, so they seek training that will be worthwhile for them professionally. They also enjoy non-traditional learning methods, such as learning-by-doing, experiential learning, non-formal learning, game-based learning, and gamification. They also enjoy collaborative learning and group work. Although a small number do see the value in traditional reading and lecture-style classrooms, the majority learn better with other methods.

Regarding problems and critiques of the current education system, many cited a **lack of resources**, especially up-to-date ones, as being a significant problem that made their educational experience difficult. Others critique the system's lack of adaptability to students' needs and/or learning styles, or the "**one-size fits all approach**". They suggest using different methods, moving away from the system's prioritising of logical-mathematical intelligence, and incorporating other intelligences, such as musical intelligence, in the curriculum. More time should also be devoted to working on creativity, social and emotional skills.

Learners surveyed also contemplated unnecessary aspects of the current education system. They mentioned that it often has no practical application to real life. Many subjects are **not relevant** for the kinds of jobs available today. They also believe that the focus on theory over practice is superfluous and should be changed. Out-dated methodologies and rote memorisation are also considered unhelpful.



In general, adult learners would say that to improve the current system, education should be more practical and applicable to future careers. It should also be more student-centred, flexible and adaptable to students' wants and needs.

In terms of aspects of the system that are working well, many respondents were not able to think of any at all. However, quite a few acknowledge that the knowledge/training covered during their education and training was working well for them.

The development of multiple intelligences during education and training showed variation. **Linguistic and logical-mathematical intelligences** were the most cultivated among both adult learners and educators. Spatial and bodily intelligences were moderately developed, with many adult educators reporting significant progress in these areas. Although responses differed by partner organisation, inter- and intrapersonal intelligence skills were also fostered to some extent. Naturalistic intelligence was generally developed "a little" or "somewhat" by adult learners, while most adult educators indicated they had worked on it at least somewhat, with some variation, particularly in Italy. **Musical intelligence**, however, received minimal attention from both groups. This shows that, in accordance with Gardner's theory, linguistic and logical-mathematical intelligences are still developed the most in education, whereas others are often ignored, such as musical and naturalistic intelligences. More work seems to be done with spatial and bodily intelligences, as well as interpersonal and intrapersonal intelligences, though more could be done.

The most common skills that adult educators work on with their students are **emotional intelligence, linguistic intelligence, intrapersonal intelligence and interpersonal intelligence**. This is notable because many adult learners mentioned wanting to develop these skills in more depth, so it seems that the adult educators surveyed have been trying to implement more of these skills in their teaching. Many less, but still an important number, work on logical-mathematical intelligence as well.

Regarding training and professional development, the majority of adult educators (**54%**) believe that they have received a sufficient amount. However, many go further to request additional training and professional development opportunities, especially to learn about new and innovative practices, and teaching styles.



Adult educators would suggest making education more practical and hands-on. Information should be easier to assimilate and put into practice. Although many already do teach these skills to their students, a large number mentioned that emotional intelligence should be incorporated more into teaching. They also believe more digital skills should be taught, and critical thinking should be fostered. It should also be made more inclusive and accessible for all.

Although many adult educators expressed dissatisfaction with the system in general, a large number of them value the work done by teachers and professionals in the education sector. Their motivation and hard work help students to excel. Interestingly, many also value the system itself and the legislation that is around it. Despite many stating that the systems are not innovative enough, many mentioned that this was a part of the system that they admire.



ANNEX

Community consultation - Intellectual Multiverse

The project 'Intellectual Multiverse' seeks to promote educational equity through the use of an alternative methodology based on multiple intelligences, which develops the potential of each person in the non-formal education of adults with fewer opportunities. The present project number 2023-1-ES01-KA220-ADU-000152430 has been designed, funded and formulated in alignment with the priorities of the Erasmus+ programme.

This survey is addressed to Adults in general, Adults with fewer opportunities and Education Professionals, and aims to assess educational preferences and their satisfaction with the current system.

Section II. Socio-demographic data

1. Which is your country of residence?

- Spain
- Portugal
- Romania
- Italy
- Other

2. How old are you?

Section III- Target group : between 30 and 65 years old

3. Role:

- Adults in general and adults with fewer opportunities
- Adult education professional

Section IV- Adults in general and adults with fewer opportunities

4. Which learning methods are most attractive to you?

5. What difficulties have you encountered during your education?

- Stigmas
- Discrimination
- Lack of resources
- Accessibility
- Language barriers
- Other

6. What difficulties do you see in the current education system?

Section V- During your formative years, have you worked on any of the following intelligences?

The neuropsychologist Howard Gardner argues that there are several types of intelligence and that we can be more developed in some types of intelligence than in others. Next, we will question your perception of some types of intelligence:

7. Linguistic and logical intelligence (cognitive development)

1 2 3 4 5
Very little - A lot

8. Musical intelligence (artistic development)

1 2 3 4 5
Very little - A lot



Section IX. Work experience

22. Through your experience as an employee, what skills have you worked on with your students?

23. Have you received sufficient training and professional development to adapt to new educational methodologies and approaches?

24. What suggestions or recommendations do you have to improve the quality of education in our institution?

Section X. Satisfaction with the current education system

25. As an educator, how satisfied are you with the current education system?

1 2 3 4 5 6 7 8 9
10

Very bad

Excellent

26. What aspects of the education system do you think should be improved?

27. What aspects of the education system do you consider to be working well?



Chapter 3

BIBLIOGRAPHIC REVIEW

INTRODUCTION TO MULTIPLE INTELLIGENCES THEORY

Context of Multiple Intelligences Theory

In the 1960s, Howard Gardner delved into developmental and cognitive psychology, spending two decades on a neuropsychological unit, exploring human abilities in the brain: how they develop, sometimes collaborate, and break down in pathological conditions.

In 1979, as part of the "Project on Human Potential," Gardner and other researchers were tasked with studying human potential and its realization. After combing through diverse literature (brain study, genetics, anthropology, psychology, and other relevant fields) they proposed the theory of Multiple Intelligences (MI theory).

Gardner claimed that all human beings possess not just a single intelligence (often called by psychologist's "g" for general intelligence); rather, as a species, human beings are better described as having a set of relatively autonomous intelligences (Gardner, 2011).

In the 80s, he identified various intelligences such as visual-spatial, verbal-linguistic, musical, logical-mathematical, interpersonal, intrapersonal, and bodily-kinesthetic and later, he expanded his theory, adding naturalist intelligence and suggesting the existence of existential intelligence.

However, each individual differs in the combination and degree of these intelligences due to genetic factors and experiences.

In brief, MI theory leads to three conclusions:

1. All of us have the full range of intelligence; that is what makes us human beings, cognitively speaking.
2. No two individuals—not even identical twins—have the same intellectual

profile because, even when the genetic material is identical, individuals have different experiences.

3. Having a strong intelligence does not mean that one necessarily acts intelligently. A person with high mathematical intelligence might use her/his abilities to carry out important experiments in physics or create powerful new geometric proofs; but she/he might waste these abilities in playing the lottery all day (Gardner, 2006).

Gardner believes that human cognitive competence is better described in terms of a set of abilities, talents, or mental skills, called intelligences. All normal individuals possess each of these skills to some extent; and individuals differ in the degree of skill and in their combination. Therefore, the MI theory may be more humane and veridical than alternative views of intelligence and it more adequately reflects the data of human “intelligent” behavior (Gardner, 2006).

Intelligences, Domains, and Fields

A crucial aspect of MI theory is the differentiation between intelligences, domains, and fields (Gardner, 2006, 2011).

Intelligence refers to a computational capacity rooted in human biology and psychology, enabling problem-solving or the creation of culturally valued products. The problem-solving skill allows one to approach a situation in which a goal is to be obtained and to locate the appropriate route to that goal. The creation of a cultural product allows one to capture and transmit knowledge or to express one’s conclusions, beliefs, or feelings. For instance, someone with high musical intelligence excels in tasks like recalling melodies or interpreting compositional changes.

A domain represents an organized societal activity where individuals can be classified based on expertise. For example, musical performance encompasses various intelligences, not solely musical, like bodily-kinesthetic or interpersonal intelligence. Conversely, musical intelligence can extend beyond music into domains like dance or advertising. Typically, proficiency in multiple intelligences is required across domains, and any intelligence can be applied in diverse cultural contexts.

The field, a sociological construct, includes individuals, institutions, and evaluation mechanisms that assess individuals' qualities. Success in a field often hinges on being deemed competent by its standards. Conversely, if the field struggles to evaluate or perceives work as inadequate, opportunities for achievement diminish significantly.



In short, intelligence is a bio-psychological construct; a domain is a sociological construct. During socialization, intercourse occurs principally between the individual and the domains of the culture. But once one achieves a certain competence, the field becomes very important.

Independence of the Multiple Intelligences

Gardner posits that human intelligences, the diverse faculties we possess, are largely independent of each other. This stands in stark contrast to traditional IQ measures, which often show high correlations among test scores. Evidence supporting MI theory comes from studies of brain-damaged patients and exceptionally talented or impaired individuals, revealing dissociations among intellectual strengths. Research consistently shows that certain faculties can be impaired while others remain intact, highlighting the autonomy of intelligences. This implies that proficiency in one intelligence, like mathematics, doesn't necessitate proficiency in another, such as language or music (Gardner, 2006).

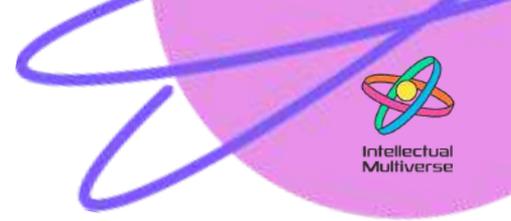
While some intelligences may exhibit closer ties, especially within specific cultural contexts, emphasizing their independence serves to caution against assuming strength in one area implies strength in others. Nevertheless, most culturally significant roles demand a blend of intelligences. For instance, dance requires bodily-kinesthetic, musical, interpersonal, and spatial skills to varying degrees. Similarly, politics necessitates interpersonal prowess, linguistic fluency, and possibly logical aptitude.

Bottlenecks and Compensation Mechanisms

Gardner also theorizes about “bottlenecks” and compensation mechanisms.

Bottlenecks arise when one intelligence hampers the functioning of others, often due to weaker intelligences hindering the expression of stronger ones. For instance, a person with weak linguistic skills may struggle to showcase their interpersonal intelligence due to communication difficulties.

Alternatively, bottlenecks can stem from overpowering strong intelligences. Furthermore, cultural tools used for skill development and assessment can create bottlenecks. In educational and professional settings, linguistic biases are common, with most assessments being language-based, regardless of the skill being evaluated. This puts individuals with weaker linguistic abilities at a disadvantage, even if they possess the requisite competence. Conversely, individual's adept at language and logic may excel in such tests, despite limited domain knowledge.



To ensure authenticity and validity, each intelligence should be assessed in its appropriate medium – such as bodily kinesthetic skills through movement or spatial abilities through visual tasks. Otherwise, linguistic, or logical-mathematical biases in assessments act as bottlenecks, limiting the accurate evaluation of diverse intelligences (Gardner, 2006).

Compensation occurs when one intelligence makes up for another. The advantage of compensation is that it supports how a particular job performance might emerge through several different combinations of intelligences. We have seen this at work in the educational sphere, where success on a particular measure – say, geometric skill – can be achieved through various combinations of intelligence. Compensation may also mask weaknesses that an employee or his manager may want to identify (Gardner, 2006).

Furthermore, conventional wisdom assumes that more of all intelligences is better. But weaknesses can be as important as strengths in matching people to work tasks and roles. It is not the amount of intelligence by itself that matters, but how different levels of the different intelligences affect each other within a particular situation or job. In fact, an individual may not be particularly gifted in any intelligence, and yet, because of a particular combination or blend of skills, he or she may be able to fill some niche uniquely well (Gardner, 2006).

The Role of “Experience”

Experience is critical for determining intellectual strengths and weaknesses as well as for developing the different intelligences. The two are reciprocal. For example, without music in the environment, musical intelligence is unlikely to develop; without musical intelligence as a potential, it is unlikely people will make music. Without other people around, interpersonal (and probably intrapersonal) intelligence is unlikely to develop; without personal intelligence as a potential, it is unlikely people will interact civilly and productively.

Implications of MI Theory in Education

It's crucial to distinguish between intelligence and learning styles. An intelligence, such as musical or spatial capacity, represents an individual's computational power, whereas a style denotes their approach to tasks (Gardner, 2011).

Educational implications don't directly stem from this psychological theory. However, considering individuals' diverse intellectual profiles is sensible when designing educational systems for individuals, groups, or even nations.



Teaching multiple intelligences presents challenges, but also opportunities. With eight intelligences, there are eight avenues for teaching rather than one. Each person's limitations can serve as another's learning opportunity. Leveraging various intelligences allows for tailored approaches that enhance understanding and reduce distortion. Paradoxically, constraints can be both suggestive and liberating.

An educator convinced of the relevance of MI theory should individualize and pluralize and use Multiple Representations of Key Concepts (Gardner 2006, 2011).

Individualizing education entails educators understanding each student's intelligence profile to teach and assess in ways that highlight their capacities. Traditional uniform schooling, where all students are taught and assessed identically, is viewed as fair but is fundamentally unfair. It privileges those strong in linguistic and logical-mathematical intelligences while disadvantaging those with different intellectual profiles.

A fairer approach involves acknowledging individual differences and tailoring education accordingly. Educators strive to grasp each student's learning strengths and tendencies, utilizing this information to craft personalized educational experiences. This approach aims to optimize learning outcomes for every child, recognizing and embracing their unique capabilities.

Pluralizing education involves educators selecting vital topics, concepts, or ideas and presenting them in diverse ways. This approach serves two crucial purposes:

- Teaching a topic through multiple methods caters to a broader range of students.
- Utilizing various delivery modes conveys a deeper understanding of the subject matter.

Comprehensive comprehension of a topic allows for multiple perspectives, tapping into one's diverse intelligences. Conversely, restricting oneself to a single mode of conceptualization and presentation risks undermining understanding, whether for teachers or students.

While multiple intelligences shouldn't be the sole educational objective, they can greatly aid in achieving educational goals once aligned with personal or societal values. Educational planning should consider which methods best facilitate an individual's attainment of desired competencies or roles.

In the case of the highly talented individuals, it may be necessary (and



sufficient) to enable them to work directly with an acknowledged master, in a kind of apprenticeship relation; it should also be possible to provide them with materials that he can explore (and with which he can advance) on his own.

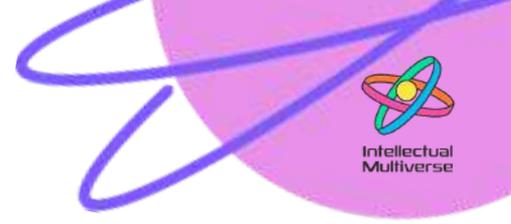
In the case of the individuals with meager abilities, or even frank pathologies, it will probably be necessary to devise special prostheses: machinery, mechanisms, or other means whereby the information or skills can be presented to them in such a way as to exploit the intellectual capacities they have, while circumventing (to as large an extent as possible) their intellectual frailties.

For individuals falling within the norm, a wider range of approaches and curricula may be available, though resource limitations and time constraints must be acknowledged (Gardner, 2011).

Multiple Representations of Key Concepts

Gardner believes that disciplinary understanding is most likely to be realized if educators focus on a manageable number of key concepts and explore them in some depth. Only under those conditions are the concepts likely to be understood. Here is where the idea of multiple intelligences can be of genuine benefit to educators oriented toward the goal of disciplinary understanding. Understanding is far more likely to be achieved if the student encounters the material in a variety of guises and contexts. And the best way to bring this about is to draw on all of the intelligences that are relevant to that topic in as many legitimate ways as possible.

The fascination of the theory lies also in the renovated optimism with which the human mind is observed. The possibility of learning is no longer considered the privilege of few people, and knowledge is no longer considered exclusively belonging to the fields of logic and linguistics: everyone has a personal intelligence which is different from other people's intelligence and potentially capable of development and progress. So, this idea can lead to a growing self-effectiveness (Torresan, 2005).



BODILY-KINESTHETIC INTELLIGENCE

Definition/General Description

Gardner defines bodily-kinesthetic intelligence as the ability to solve problems or create products using the body or parts. It is the intelligence of strength, endurance, flexibility, balance, dexterity, movement, expression, and body language.

Body-kinesthetic intelligence is the ability to express ideas, handle tools or perform physical exercises with the body.

Bodily kinesthetic intelligence is the capacity to manipulate objects and use a variety of physical skills. This intelligence also involves a sense of timing and the perfection of skills through mind–body union. Athletes, dancers, surgeons, and crafts people exhibit well-developed bodily kinesthetic intelligence. (Multiple Intelligence Theory, s. f.)

Different components / skills related to this type of intelligence

- Physical coordination and body awareness, which involves the ability to coordinate different parts of the body and an understanding of one's body parts.
- Fine motor bodily intelligence, in combination with spatial activities: manipulation and control of small muscles in tasks such as writing, drawing, or playing a musical instrument.
- Gross motor skills: Gross motor skills involve the coordination and control of larger muscle groups for activities such as running, jumping, or throwing.
- Balance and agility: Bodily intelligence encompasses the ability to maintain balance and move with agility, which is important in activities such as dance, gymnastics, or sports.
- Spatial awareness: Spatial awareness involves understanding one's body position in space and the ability to navigate through physical environments effectively.
- Hand-eye coordination: Hand-eye coordination refers to the ability to synchronize visual information with hand movements, essential for tasks such as catching a ball, threading a needle, or playing video games.
- Kinesthetic memory: Kinesthetic memory allows individuals to remember and replicate movements they have performed before, enabling skill acquisition and refinement through practice.
- Expressive movement: Bodily intelligence can also involve the use of body movements as a form of expression, such as in dance, theater, or mime.
- Manipulative skills: These skills involve the dexterity and precision required to manipulate objects with the hands and fingers, such as in crafts, woodworking, or surgery.



Relationship between this type of intelligence and the other types of intelligence

Skill in the use of the body for functional or expressive purposes tends to go hand in hand with skill in the manipulation of objects.

Skilled use of one's body has been important in the history of the species for thousands, if not millions, of years. In speaking of masterful use of the body. The Greeks revered the beauty of the human form and, by means of their artistic and athletic activities, sought to develop a body that was perfectly proportioned and graceful in movement, balance, and tone. More generally, they sought a harmony between mind and body, with the mind trained to use the body properly, and the body trained to respond to the expressive powers of the mind. But intelligent use of the body can be discerned in other pursuits as well.

Usually, in most of these occupations, other intelligences ordinarily play an important role. Nearly all cultural roles exploit more than one intelligence; at the same time, no performance can come about simply through the exercise of a single intelligence.

Fine motor bodily intelligence, in combination with spatial capacities, is most strongly entailed in the use of objects and tools. Particularly during the initial use of an object or a tool, the individual should carefully coordinate the information that he can assimilate through his spatial intelligence with the capacities that he has elaborated through his bodily intelligence (Gardner, 2011).

Overall, bodily intelligence and natural intelligence are intertwined aspects of human cognition, each contributing to individuals' overall abilities and adaptation to their environment.

Main uses of this type of intelligence and contexts

Bodily-kinesthetic intelligence relates to the aptitude for precise control and coordination of body movements. Individuals with elevated kinesthetic intelligence exhibit exceptional skills in physical activities and sports (*Gardner's Theory of Multiple Intelligences, 2023*):

- Those who can manipulate objects with finesse, such as artisans, ballplayers, instrumentalists.
- Individuals in whom use of the body proves central, such as inventors or actors.
- Dancers and swimmers, who develop keen mastery over the motions of their bodies.



How can a person develop skills related to this type of intelligence

Bodily-kinesthetic intelligence can be stimulated in the classroom through activities that require physical movement, games, acting, dancing, sports, crafts, pantomime, painting, and exercises. In this environment, the idea is that students can frequently work with different types of textures and

objects and are in an open space. The teacher can motivate students by offering them opportunities to belong to athletics, sculpture, drama, and dance clubs, among other arts that integrate movement (PhD, 2022).

- Take performing art classes to promote self-confidence, improvisation and to know your own body.
- Practice mindfulness and body awareness exercises into daily routines, such as yoga, tai chi, or meditation, breath control, enhancing overall body-mind connection.
- Obstacle races, in open environments, and “Simon says” if we are indoors.
- Playdough, arts, and crafts games.
- Skating, bike riding or riding a scooter.

Other theories / authors that address this type of intelligence

According to Swiss researcher **Jean Piaget**, all thought occurs through the body during the first two years of human life. Therefore, different researchers and educators have discovered that even the posture we have usually plays a fundamental role in obtaining or inhibiting students' academic achievement (PhD, 2022). <https://www.amazon.es/Construction-Reality-International-Library-Psychology/dp/0415846757>

Maria Montessori, an Italian physician, and educator, developed the Montessori method of education, which emphasizes hands-on learning, exploration, and movement. Montessori believed that movement and sensory experiences are essential for children's cognitive development and learning.

<https://www.montessori.org/>

Erik Erikson, a German American psychologist, developed a theory of psychosocial development that includes stages spanning from infancy to adulthood. Erikson's theory suggests that during adolescence, individuals experience a stage called identity versus role confusion, where they explore their identities through activities such as sports, hobbies, and artistic pursuits.

<https://www.simplypsychology.org/erik-erikson.html>

Jerome Bruner, an American psychologist, introduced the concept of "embodied



cognition," which emphasizes the role of the body and physical experiences in shaping cognitive processes and learning. Bruner argued that learning is not just a mental activity but also involves bodily engagement and interaction with the environment. (Ruiz & Linaza, 2015).

Loris Malaguzzi was an Italian educator and the founder of the Reggio Emilia approach to early childhood education. The Reggio Emilia approach prioritizes hands-on learning experiences, sensory exploration, and creative expression through various forms of art, movement, and play.

<https://www.reggiochildren.it/en/>

SPATIAL INTELLIGENCE

Definition/General Description

Spatial intelligence is the ability to process information in three dimensions, as well as the capacity to deal with aspects such as color, line shape, space, and the relationships between them.

It can also be defined as the ability to perceive reality, create mental representations, appreciate sizes and directions, among other factors (Cano, 2023).

Central to spatial intelligence are the capacities to perceive the visual world accurately, to perform transformations and modifications upon one's initial perceptions, and to be able to re-create aspects of one's visual experience, even in the absence of relevant physical stimuli. Spatial intelligence emerges as an amalgam of abilities. All the same, the individual with skills in several of the aforementioned areas is most likely to achieve success in the spatial domain. The fact that practice in one of these areas stimulates development of skills in related ones is another reason that spatial skills can reasonably be considered "of a piece" (Gardner, 2011).

Different components / skills related to this type of intelligence

- Spatial visualization: perceive a form or an object and the ability to perceive, hold, manipulate, and problem-solve from visual information (*Understanding and Developing Visual-Spatial Intelligence*, s. f.)
- Mental imagery
- Mental simulation



- Meta-representational competence: optimal external representation for a task, to use novel external representations productively and to invent new representations as necessary (Hegarty, 2010)
- Capacities to perceive the visual world accurately.
- Perform transformations and modifications upon one's initial perceptions.
- Re-create aspects of one's visual experience
- Sensitivity to the various lines of force that enter a visual or spatial display: tension, balance, and composition.

(Gardner, 2011)

Relationship between this type of intelligence and the other types of intelligence

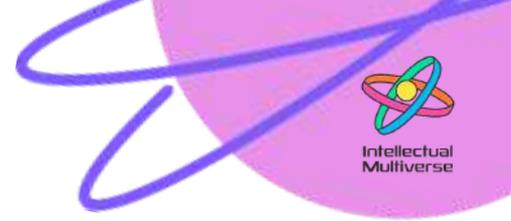
For most of the tasks used by experimental psychologists, linguistic and spatial intelligences provide the principal sources of storage and solution. Confronted by an item in a standardized test, individuals appear to use words or spatial images to approach the problem and to encode it and may well—though this assumption is far more controversial—also exploit the resources of language and/or imagery to solve the problem.

Visual thinking in the picture not only stimulates creativity but also enriches higher order thinking skill processes. It indicates that there is a connection between visual-spatial and logical-mathematical intelligence (Sukmawati et al., 2023).

Spatial intelligence and mathematical logical intelligence are very important in learning mathematics (Zaiyar et al., 2020).

Main uses of this type of intelligence and contexts

- To manipulate mental images of objects and the spaces these objects are in.
- To find our way around (sense of direction).
- For two-dimensional and three-dimensional versions of real-world scenes, as well as other symbols, such as maps, diagrams, or geometrical forms: resolving puzzles, reading maps, playing chess, completing mazes.
- This intelligence is of essence for a sculptor/sculptress or a mathematical topologist.
- In the sciences, the contribution of spatial intelligence is readily apparent.
- Resemblances that may exist across two seemingly disparate forms.
- Spatial intelligence might be beneficial in any career that needs planning, creating and problem-solving. For example: architecture, visual arts, graphic design, math, engineering, cartography, psychology.



How can a person develop skills related to this type of intelligence

- Solving a Rubik's Cube
- Completing mazes
- Putting puzzles together
- Reading maps (Understanding and Developing Visual-Spatial Intelligence, s. f.)
- Use descriptive spatial language every day
- Play tangram puzzles
- Participate in movement games
- Play spatial sports
- Play chess
- Build a memory palace: it is an activity to visualize familiar spatial environments and change these visualizations into images.
- Practices origami and paper folding (Games, 2022)

Other theories / authors that address this type of intelligence

The triarchic theory is comprised of three sub theories, each of which relates to a specific kind of intelligence: the contextual sub theory, which corresponds to practical intelligence, or the ability to successfully function in one's environment; the experiential sub theory, which corresponds to creative intelligence, or the ability to deal with novel situations or issues; and the componential sub theory, which corresponds to analytical intelligence, or the ability to solve problems.

<https://www.thoughtco.com/triarchic-theory-of-intelligence-4172497>

Thurstone's Primary Mental Abilities: The seven primary mental abilities in Thurstone's model are verbal comprehension, verbal fluency, number facility, spatial visualization, perceptual speed, memory, and inductive reasoning (Thurstone, as cited in Sternberg, 2003).

<https://www.simplypsychology.org/intelligence.html>

Vygotsky emphasized the role of social and cultural factors in cognitive development. While not explicitly focusing on spatial intelligence, Vygotsky's theory highlights the importance of environmental influences, including spatial environments, in shaping cognitive abilities.

<https://www.simplypsychology.org/vygotsky.html>

Cognitive Development: The Theory of Jean Piaget: Jean Piaget's theory of cognitive development suggests that children move through four different stages of intellectual development which reflect the increasing sophistication of children's thought

<https://www.simplypsychology.org/piaget.html>



Kaufman's Theory of Intelligence: Alan S. Kaufman proposed a theory of intelligence that includes multiple dimensions, one of which is spatial ability. Kaufman's theory emphasizes the importance of considering multiple intelligences beyond traditional measures like IQ.

<https://www.psychologytoday.com/us/blog/the-future-brain/201909/scott-barry-kaufman-calls-new-theory-intelligence>

MUSICAL INTELLIGENCE

Definition/General Description

In his first conceptualization of the Multiple Intelligence Theory, Gardner observes a variety of cases – ranging from speculations about the first impact of birds' singing to hominids, to modern studies of brain activity in reaction to music – that in his opinion definitively identify music as the product of an “intelligence” (Gardner, *Frames of Mind*, 1983).

The definition of musical intelligence as the capacity to interact, experience and produce music is not explicitly given by Gardner in the original *Frames of Mind*. Notably, the author does not refrain from referring to it directly as “music” on some occasion, as to implicitly embrace all human interaction with it:

The various lines of evidence that I have reviewed in this chapter suggest that, like language, music is a separate intellectual competence, one that is also not dependent upon physical objects in the world (Gardner, 1983, p.129).

Even in successive works of the author, in the process of reviewing and refining the theory, he does not give a direct and complete definition of musical intelligence, focusing instead more on the arguments that demonstrate how it is a specific set of skill, separated from linguistic or mathematical intelligence (Gardner, 1993).

It is reasonable to think that this lack of definition stems from the fact that the term *musical intelligence* is quite intuitive in its interpretation, especially considering its interchangeability with the pure term *music* in Gardner's works.

Different components / skills related to this type of intelligence

Starting from this substantial identity between musical intelligence and the human perception of music, musical intelligence involves all music-related skills and interactions.



Concretely, Gardner in his analysis of the intelligence, mentions both creative skills (such as the reinterpretation of pre-existing compositions) and formal skills (such as the execution of a musical piece).

In a broader view, despite being precedent to the Multiple Intelligence Theory and therefore not speaking of “musical intelligence”, the theory developed by the Japanese educator Shinichi Suzuki also deals with music-related skills.

The theory, originally developed in the first half of the 20th Century, has obviously evolved, and adapted during the following decades, but still maintains its core: children are introduced to a full immersion in music from the womb to let them develop personal qualities and become better individuals. Quoting Suzuki himself:

I want—if I can—to get education changed from mere instruction to education in the real sense of the word—education that inculcates, brings out, develops the human potential, based on the growing life of the child. [...] My prayer is that all children on this globe may become fine human beings, happy people of superior ability, and I am devoting all my energies to making this come about, for I am convinced that all children are born with this potential. (International Suzuki Association, consulted on 04/04/2024)

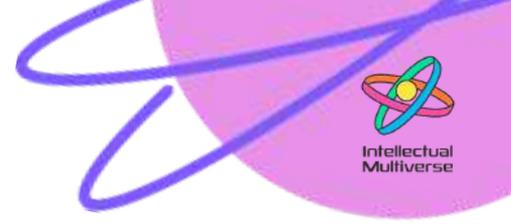
Relationship between this type of intelligence and the other types of intelligence

The whole concept of Multiple Intelligences is based on the correlation among them. As a matter of fact, Gardner affirms:

I do not wish to imply that in adulthood intelligences operate in isolation. Indeed, except in abnormal individuals, intelligences always work in concert, and any sophisticated adult role will involve a melding of several of them (Gardner, 1993).

Specifically, musical intelligence is firstly related to linguistic intelligence, since they are both seen as communication methods; on a physical level, both intelligences share the same channels, specifically the oral-auditory system and the gestural language.

Concerning this last aspect, musical intelligence is related also to bodily-kinesthetic intelligence, considering the natural connection that physical movement has in music, both in terms of expression through the body and the physical action of making music, interpreting, or directing an orchestra.



Perhaps one of the strongest connections is the one between musical and emotional intelligence; besides the obvious connection that can be made, Gardner mentions clinical cases of patients with damaged sub-cortical areas that usually result emotionally void while simultaneously uninterested in music.

Less intense, but still existent are connections with spatial intelligence, as demonstrated by some studies on phonographic grooves.

The correlation to mathematical intelligence is interesting, since music and mathematics are traditionally associated (since the Pythagorean school), as demonstrated by the connection between the rhythmical component of music and math, but their identity remains a dichotomy, being the emotional sphere a fundamental component of music, differently from mathematical thought (Gardner, 1983; 1993).

Main uses of this type of intelligence and contexts

As already discussed, musical intelligence is pretty much self-explanatory in its meaning and application. The main uses of this intelligence have been indeed already discussed in its description: this intelligence is applied in any action of composition, performance, listening and even in any interaction with music.

Its application involves all music-related activities, being the product of an education or simple responses to rhythm and melody.

How can a person develop skills related to this type of intelligence

Having observed the intuitive nature of musical intelligence, it may seem obvious that its development mainly stems from musical studies through all ages.

Several scholars focus especially on the developmental stages of the child, Suzuki above all. His method, as a matter of fact, focuses entirely on the period that goes from the prenatal phase of the child to the first years of life, covering every minute of their existence (see for example Gardner, 1983 for a thorough explanation of the process of being a Suzuki parent).

Concerning development in later stages of life, it may be interesting to observe the approach adopted by Sternberg in relation to musical intelligence, who believes that every intelligence may be divided into four branches: creative, analytical, practical, and wisdom-based skills.

The development of each one of these skills requires a combination of study, practice, and innate capacities, in different degrees according to the different aspects taken in consideration (Sternberg, 2020).

Sternberg's view is important in this context since it does not focus only on early developmental stages (as most of the other scholars in this document did) but adopts a more horizontal approach to the whole musical intelligence paradigm.

Other theories / authors that address this type of intelligence

Aside from Gardner, Sternberg and Suzuki have also been mentioned as significant scholars in the field of musical intelligence, despite it must be remembered that Suzuki developed his educational theory much earlier than the formulation of the Multiple Intelligence Theory by Gardner. His contribution is still worth mentioning, being a world-renowned innovation in the field of musical education.

Concerning other authors that may be taken in consideration, Sternberg explores the realm of musical intelligence studies in his already quoted article, recapping other scholars' remarkable studies in the field (Sternberg, 2020).

Among most recent theories it is worth mentioning Bamberger (1991), Cope (1996), or Liebman (2019) that fully focus on the analysis of musical intelligence. Thinking of more theory-based approaches, the Cattell-Horn-Carroll (CHC) theory of intelligence is a notable addition, while Law and Zentner's study (2012) is much more practice-based.

PERSONAL INTELLIGENCES (INTERPERSONAL AND INTRAPERSONAL)

Definition/General Description

Interpersonal intelligence, as conceptualized by Howard Gardner, refers to the capacity to understand and interact effectively with others. This form of intelligence entails the ability to perceive and respond appropriately to the moods, temperaments, motivations, and desires of other people. Individuals strong in interpersonal intelligence are adept at discerning emotional states, intentions, and social cues, enabling them to navigate complex social situations with ease (Gardner, 2006).

Gardner's theoretical framework for multiple intelligences, first articulated in *Frames of Mind*, posits that interpersonal intelligence is distinct from linguistic or logical-mathematical intelligences traditionally emphasized in educational systems. It encompasses both verbal and non-verbal communication skills, empathy, and the ability to manage relationships. Historically, figures such as



teachers, therapists, salespeople, and political leaders have exemplified high interpersonal intelligence (Gardner, 2011).

In educational contexts, Gardner highlights the importance of nurturing this intelligence, noting that collaborative learning environments can foster its development. As learning becomes more social and interactive, particularly with the integration of digital media, the role of interpersonal skills is magnified. Social networking platforms and collaborative tools can enhance opportunities for students to practice and refine these skills in both virtual and face-to-face settings (Weigel, Straughn, & Gardner, 2010).

Furthermore, Gardner's later work, such as *The App Generation* (Gardner & Davis, 2013), explores how digital technologies have transformed interpersonal dynamics among youth. While technology facilitates new forms of connection and communication, it also introduces challenges, such as the potential for shallow interactions and diminished face-to-face social skills. Gardner and Davis suggest that understanding and leveraging interpersonal intelligence is crucial in mitigating these effects and ensuring meaningful social engagement.

Overall, interpersonal intelligence is foundational not only to personal and professional success but also to the health of communities and societies. Its development and application are increasingly relevant in a world characterized by globalization and digital interconnectedness.

Intrapersonal intelligence, as outlined by Howard Gardner, refers to the capacity for self-awareness and self-reflection. It involves a deep understanding of one's own emotions, motivations, beliefs, and goals. Individuals with strong intrapersonal intelligence are adept at introspection and are capable of guiding their behavior based on an accurate perception of their internal states (Gardner, 2006).

Gardner introduced intrapersonal intelligence in his seminal work *Frames of Mind*, where he characterized it as a critical but often overlooked dimension of human cognition. Unlike interpersonal intelligence, which deals with understanding others, intrapersonal intelligence is oriented inward, helping individuals navigate their inner emotional landscapes and develop personal autonomy (Gardner, 2011).

A hallmark of high intrapersonal intelligence is the ability to form an integrated and coherent sense of self, a skill that is vital for personal decision-making and long-term goal setting. Gardner notes that this form of intelligence is essential for writers, philosophers, psychologists, and anyone whose work requires deep self-knowledge and authenticity (Gardner, 2011).



In contemporary society, especially in the context of pervasive digital media, the development of intrapersonal intelligence faces both challenges and opportunities. Gardner and Davis (2013) discuss how today's digital environments can either facilitate self-expression and reflection or, conversely, fragment the self through constant distraction and curated online identities. Cultivating intrapersonal intelligence can counteract these trends by fostering mindfulness and a stable self-concept.

In educational settings, promoting intrapersonal intelligence requires creating environments that encourage self-reflection, autonomy, and the exploration of personal interests. Reflective practices such as journaling, meditation, and individualized learning plans can significantly support the growth of this intelligence (Weigel, Straughn, & Gardner, 2010).

Ultimately, intrapersonal intelligence is foundational to emotional well-being and authentic life choices, enabling individuals to live intentionally and to align their actions with their core values.

Different components / skills related to personal intelligences

a. Interpersonal Intelligence

Interpersonal intelligence defines the ability to understand and interact effectively with other people. It involves sensitivity to others' moods, feelings, temperaments, and motivations and the ability to cooperate, negotiate, and manage relationships. According to Howard Gardner (2011), interpersonal intelligence is one of the multiple intelligences that are vital for successful communication and social functioning.

Key Components and Skills:

1. Empathy:

Empathy is the cornerstone of interpersonal intelligence. It refers to the capacity to put oneself in another's position and to understand their feelings and perspectives (Gardner, 2011).

2. Communication Skills:

Effective verbal and non-verbal communication skills are essential. These include active listening, articulating thoughts clearly, and reading body language and tone of voice (Gardner, 2006).

3. Conflict Resolution:

Individuals with strong interpersonal intelligence are adept at resolving conflicts. They can mediate disputes, understand different points of view, and find compromises that satisfy all parties involved (Gardner, 2006).



4. Teamwork and Collaboration:

Working effectively within a group setting is a fundamental skill. It requires sharing responsibilities, valuing others' contributions, and facilitating cooperation among team members (Weigel, Straughn, & Gardner, 2010).

5. Social Sensitivity:

This involves awareness of social cues and dynamics within groups. Individuals with high interpersonal intelligence can quickly assess group situations, identify underlying tensions, and act accordingly (Gardner & Davis, 2013).

6. Leadership Abilities:

Interpersonal intelligence supports leadership by enabling the leader to inspire trust, motivate team members, and build cohesive groups (Gardner, 2006).

7. Negotiation and Persuasion:

The ability to negotiate, persuade, and influence others is rooted in interpersonal intelligence. Effective negotiation requires understanding the needs and interests of all parties and communicating persuasively to achieve desired outcomes (Gardner, 2011).

8. Emotional Regulation in Social Contexts:

Managing one's emotions in social interactions is critical. High interpersonal intelligence entails not only understanding others but also regulating personal emotions to maintain harmonious relations (Gardner, 2006).

9. Cultural Competence:

Sensitivity to cultural differences is vital in today's interconnected world. Interpersonal intelligence involves navigating varying social norms and communication styles across cultures (Gardner & Davis, 2013).

10. Networking Abilities:

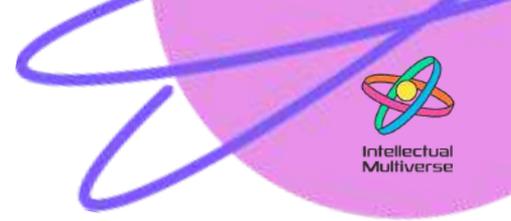
Building and maintaining a network of relationships is a key skill. Individuals with this intelligence know how to cultivate trust and establish rapport, crucial for both personal and professional success (Gardner, 2011).

Applications:

Interpersonal intelligence is crucial in fields such as teaching, counseling, sales, politics, management, social work, and any domain requiring effective interaction with others. Gardner and Davis (2013) argue that in the digital age, where communication often occurs through screens, fostering authentic interpersonal skills has become more critical than ever.

b. Intrapersonal Intelligence

Intrapersonal intelligence refers to a deep understanding of oneself, the ability to be introspective, and the capacity to discern one's emotions, motivations, beliefs, and goals (Gardner, 2006). This form of intelligence enables individuals to accurately assess their own strengths and weaknesses and to regulate their actions and behaviors accordingly.



Key Components and Skills:

1. **Self-awareness:**

Self-awareness is the ability to recognize and understand one's moods, emotions, drives, and their effects on others. According to Gardner (2011), this skill is foundational for personal development and emotional intelligence.

2. **Emotional Self-regulation:**

Being able to manage one's internal states, impulses, and resources is a hallmark of intrapersonal intelligence. High intrapersonal intelligence is reflected in the ability to remain calm under pressure and to respond thoughtfully to challenges (Gardner, 2006).

3. **Self-motivation:**

Individuals with strong intrapersonal intelligence are capable of motivating themselves without external rewards, maintaining focus on their internal goals (Gardner, 2011).

4. **Goal Setting and Strategic Planning:**

Gardner (2011) highlights that individuals with this intelligence are adept at setting realistic and meaningful goals and developing actionable strategies to achieve them.

5. **Reflection and Critical Thinking:**

Reflective practices, such as journaling and meditation, help individuals analyze their experiences and thoughts, promoting personal growth (Weigel, Straughn, & Gardner, 2010).

6. **Self-discipline:**

The capacity for delayed gratification and perseverance in the pursuit of goals requires self-discipline, a key indicator of intrapersonal intelligence (Gardner, 2006).

7. **Values Clarification:**

Clarifying and internalizing personal values helps individuals act consistently with their beliefs. Gardner (2011) suggests that this skill underpins authentic behavior and decision-making.

8. **Personal Resilience:**

Resilience, or the ability to cope with failure and setbacks, is supported by a well-developed intrapersonal intelligence (Gardner, 2006).

9. **Authenticity:**

Acting in ways that are true to one's beliefs and values. Authenticity is often cited as a marker of well-developed intrapersonal intelligence (Gardner, 2011).

10. **Mindfulness:**

Practicing mindfulness enhances self-awareness and emotional regulation, helping individuals stay connected to their inner experiences (Gardner & Davis, 2013).

Applications:

Intrapersonal intelligence is crucial for professions such as psychology, writing, philosophy, leadership, and entrepreneurship. Gardner and Davis (2013)



emphasize that in the current era dominated by digital distractions, cultivating intrapersonal intelligence is essential to maintaining a coherent and resilient sense of self.

Relationship between this type of intelligence and the other types of intelligence

Howard Gardner (2011) defines the personal intelligences – interpersonal and intrapersonal – as core components of human cognition, deeply integrated into broader intellectual functioning. These intelligences, although distinct in their focus (others versus self), share a complex and dynamic relationship with the other intelligences proposed in his theory of multiple intelligences.

Interpersonal intelligence – the ability to understand and interact effectively with others – closely complements linguistic intelligence. Effective communication requires nuanced verbal and non-verbal expression, relying on both a sensitivity to social cues and the capacity to articulate thoughts clearly (Gardner, 2006). Similarly, interpersonal intelligence often works in tandem with bodily-kinesthetic intelligence, especially in contexts where physical presence and body language influence social dynamics, such as in sports or performing arts.

Intrapersonal intelligence – the deep understanding of oneself – is strongly linked to logical-mathematical intelligence. The ability to reflect on one's thoughts and emotions often involves rational analysis and pattern recognition, aiding in structured self-assessment and strategic decision-making (Gardner & Davis, 2013). Moreover, intrapersonal intelligence enhances spatial intelligence when visualization of personal goals or conceptual mapping of one's life journey is necessary.

Both personal intelligences also maintain a relationship with musical and spatial intelligences. For example, music is not just an auditory experience but also an emotional one; strong intrapersonal intelligence enables individuals to internalize and interpret musical experiences deeply. Interpersonal intelligence, on the other hand, enhances collaborative artistic endeavors, such as ensemble performance or collective visual projects.

Importantly, Gardner (2006) emphasizes that no intelligence operates in isolation. Personal intelligences act as a bridge, allowing the other intelligences to be used in a socially and personally meaningful way. A scientist (logical-mathematical) must understand both themselves and others to lead a research team effectively; an artist (spatial) benefits from deep self-awareness to create authentic work that resonates with an audience.



In educational and professional environments, the synergy between personal intelligences and other types is crucial. For instance, effective teachers, counselors, and leaders need a balance of interpersonal skills (to manage relationships) and intrapersonal skills (to reflect and regulate their own behavior). Thus, the personal intelligences are not only pivotal for individual growth and social integration but also for maximizing the potential of all other intelligences.

Ultimately, personal intelligences form the connective tissue of human cognitive functioning, enhancing the application and integration of linguistic, logical-mathematical, spatial, bodily-kinesthetic, musical, and naturalistic intelligences across a wide spectrum of human activities (Gardner, 2011; Weigel, Straughn, & Gardner, 2010).

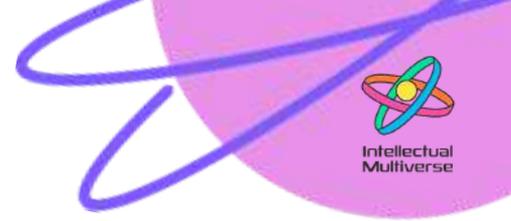
Main uses of this type of intelligence and contexts

The personal intelligences — interpersonal and intrapersonal — serve as fundamental capacities for human interaction and self-understanding, finding extensive applications across various life domains (Gardner, 2011). Their uses are both broad and deep, influencing educational, professional, social, and personal contexts.

Interpersonal intelligence facilitates social communication and collaboration. Its primary use is in understanding and influencing other people effectively. It is critically important in education, where teachers rely on interpersonal skills to manage classrooms and adapt instruction to diverse student needs (Gardner, 2006). Similarly, in counseling and therapy, practitioners utilize interpersonal intelligence to build trust, empathize, and guide clients through emotional processes. Leadership roles — whether in politics, business, or community organization — also demand high levels of interpersonal intelligence for team building, conflict resolution, and negotiation (Gardner & Davis, 2013).

In professional settings, interpersonal intelligence enhances teamwork and organizational functioning. Fields such as sales, customer service, healthcare, law, and diplomacy require the ability to interpret and respond to social cues, maintain professional relationships, and navigate complex interpersonal dynamics. Gardner (2011) notes that even in technology-driven industries, where technical skills are vital, the capacity for effective collaboration and communication remains a decisive factor for success.

In contrast, intrapersonal intelligence centers on self-knowledge and self-regulation. Its primary use is in facilitating personal decision-making, goal setting, and emotional resilience. In education, intrapersonal intelligence



supports individualized learning and academic perseverance by helping students understand their strengths, challenges, and motivations (Weigel, Straughn, & Gardner, 2010). Writers, philosophers, and researchers draw heavily on intrapersonal intelligence for reflective thinking, creativity, and problem-solving.

In professional contexts, intrapersonal intelligence is essential for roles that require autonomy, strategic planning, and ethical decision-making, such as entrepreneurship, scientific research, and leadership positions. Entrepreneurs, for instance, benefit from self-awareness and emotional regulation when managing risk and uncertainty (Gardner, 2006).

Moreover, both personal intelligences are crucial in the arts. Actors, musicians, and visual artists employ interpersonal skills to connect with audiences and collaborators, while intrapersonal intelligence allows them to tap into personal experiences and emotions, giving authenticity to their work (Gardner & Davis, 2013).

In the digital era, new contexts have emerged. Gardner and Davis (2013) highlight that social media platforms both challenge and expand the applications of personal intelligences. Interpersonal intelligence is tested through virtual communication, requiring adaptability to less tangible social cues, while intrapersonal intelligence is needed to maintain a stable identity amidst the pressures of digital self-presentation.

In conclusion, personal intelligences are indispensable across multiple contexts — from classrooms to boardrooms, from creative industries to technology sectors. They enable individuals to interact effectively with others and to navigate their inner worlds, thereby enhancing both personal fulfillment and societal contribution (Gardner, 2011; Weigel et al., 2010).

How can a person develop skills related to this type of intelligence

Developing Interpersonal Intelligence

Interpersonal intelligence, the ability to understand and interact effectively with others, can be cultivated through a variety of approaches:

1. **Active Listening Practice:** Improving interpersonal skills begins with becoming a better listener. Active listening involves giving full attention to the speaker, understanding their message, and responding thoughtfully (Gardner, 2006).
2. **Empathy Exercises:** Engaging in activities that promote perspective-taking, such as role-playing or reading literature that explores diverse experiences, enhances the ability to understand and share the feelings of others (Weigel, Straughn, & Gardner, 2010).
3. **Collaborative Projects:** Participating in team-based activities helps individuals learn how to negotiate, cooperate, and resolve conflicts. Group work in educational and professional settings offers real-world practice in managing interpersonal dynamics (Gardner & Davis, 2013).



4. **Feedback Reception:** Seeking and reflecting on feedback from peers and mentors helps develop social sensitivity and improve relational skills.

5. **Exposure to Diverse Social Settings:** Interacting with people from different cultural, social, and professional backgrounds broadens social awareness and adaptability.

Developing Intrapersonal Intelligence

Intrapersonal intelligence, the capacity for self-awareness and self-regulation, requires different developmental strategies:

1. **Self-Reflection Practices:** Journaling, meditation, and mindfulness exercises encourage individuals to explore their thoughts, emotions, and behaviors. Regular reflection fosters deeper self-knowledge (Gardner, 2011).
2. **Setting Personal Goals:** Learning to set and pursue meaningful goals enhances self-motivation and discipline. Breaking goals into actionable steps also strengthens strategic thinking (Gardner, 2006).
3. **Emotional Regulation Training:** Techniques such as cognitive reappraisal, breathing exercises, and emotional labeling help individuals manage their emotions and develop resilience.
4. **Strengths and Weaknesses Analysis:** Conducting honest assessments of personal capabilities and limitations promotes realistic self-appraisal and personal growth (Weigel et al., 2010).
5. **Values Clarification:** Engaging in exercises that help articulate core personal values assists individuals in aligning their actions with their beliefs, promoting authenticity and coherence.

Integrative Development

Since interpersonal and intrapersonal intelligences are interrelated, development activities often overlap. For example, mindfulness not only deepens self-awareness but also improves emotional attunement to others. Similarly, effective communication enhances both one's relationship with others and self-expression.

Educational institutions and workplaces can foster these intelligences by creating environments that value emotional learning, reflective practices, and social collaboration. Gardner and Davis (2013) argue that in an era dominated by digital interactions, intentional efforts to develop these skills are even more critical to counteract the potential for superficial connections and fragmented self-concepts.

In conclusion, while personal intelligences may be innate to varying degrees, they are highly malleable and can be systematically developed through structured practice, reflection, and diverse social engagements. By cultivating these skills, individuals enhance their capacity for meaningful social relationships and authentic self-understanding (Gardner, 2011; Weigel et al., 2010).



Other theories / authors that address this type of intelligence

Beyond Howard Gardner's model of multiple intelligences, several other theorists have explored concepts related to interpersonal and intrapersonal intelligences, often under different terminologies but with significant conceptual overlap.

One of the most notable contributions is **Daniel Goleman's** theory of Emotional Intelligence (EI). Goleman (1995) defines EI as a set of competencies involving self-awareness, self-regulation, social awareness, and relationship management – elements that closely mirror Gardner's personal intelligences. Goleman emphasizes that success in life and work depends more on emotional competencies than on traditional cognitive abilities measured by IQ tests.

Peter Salovey and **John D. Mayer** (1990), who originally coined the term emotional intelligence, proposed a model that categorizes EI into perceiving, using, understanding, and managing emotions, aligning closely with both interpersonal and intrapersonal skills.

In addition, **Carl Rogers'** humanistic psychology places a strong emphasis on self-awareness and personal growth. Rogers (1961) highlights the importance of self-concept and the congruence between an individual's real and ideal self, paralleling Gardner's intrapersonal intelligence, which is centered around accurate self-knowledge and emotional regulation.

Abraham Maslow's Hierarchy of Needs (1943) also implicitly addresses personal intelligences. His self-actualization stage requires deep intrapersonal understanding, while the social needs relate directly to interpersonal competence.

More recently, **Robert Sternberg's Triarchic Theory of Intelligence** (1985) introduces the concept of practical intelligence, which encompasses the ability to adapt to, shape, and select environments. Practical intelligence often involves managing social relationships effectively, akin to interpersonal intelligence.

Thus, Gardner's framework finds strong resonance in other psychological theories that recognize the central role of self-awareness and social competence in human development and functioning (Goleman, 1995; Salovey & Mayer, 1990; Rogers, 1961; Sternberg, 1985).



LINGUISTIC INTELLIGENCE

Definition/General Description

Linguistic intelligence encompasses skills and abilities related to language. In this sense, one may consider language as being perceived through the eyes, ears or even touch. It does not just refer to spoken language, but also written language, sign language, interpretation of symbols, etc. Speaking, reading, storytelling, making an argument, learning languages, and phonology are all developed through linguistic intelligence. Linguistic intelligence is an ability to produce language, but also, “an ability to analyze information and create products involving oral and written language such as speeches, books, and memos” (Davis et. al, 2011, 488).

Along with logical-mathematical intelligence, linguistic intelligence is one of the academic or scholarly intelligences, based on cognitive development, which are traditionally prioritized in the Western academic and professional world. Unlike logical-mathematical intelligence, linguistic intelligence was prioritized until the end of the 19th century, when the former started to gain more importance in academic spheres. However, according to Gardner in *Frames of Mind*, “linguistic competence is, in fact, the intelligence—the intellectual competence—that seems most widely and most democratically shared across the human species” (Gardner, 1983, 82). Thus, one could consider linguistic intelligence to be a universal intelligence possessed by many people across the planet.

Different components / skills related to this type of intelligence

Most of the main components and skills related to linguistic intelligence are associated with understanding and use of language. Some of these include: sensitivity to phonological features, ability to compute linguistic information, use of complex vocabulary and connectors, employment of descriptive language and dialogue, ability to follow a storyline, understanding and use of grammar and proper sentence structure, etc.

An individual with linguistic intelligence understands and employs different aspects of language, such as semantics, phonology, syntax, grammar, and pragmatics. Linguistic intelligence encompasses written communication, oral communication, recognition of tone of voice and gestures, as well as understanding of metaphors.

Skills in linguistic intelligence may also be influenced by the style or personality of a person. For example, “an introvert strong in linguistic intelligence might become a poet, while an extrovert with comparable linguistic competence is



more likely to become a debater” (Davis et. al, 2011, 491).

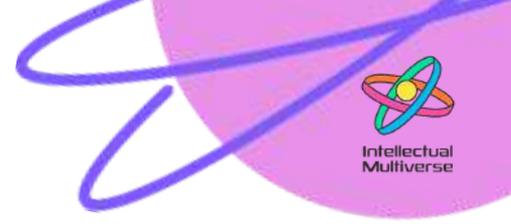
Relationship between this type of intelligence and the other types of intelligence

Linguistic intelligence is similar to logical-mathematical intelligence in that it is also related to cognitive development. Additionally, they are considered to be the two traditional intelligences, those that are most often assessed in educational and professional settings in Western countries. According to Gardner, this causes a problem since, “right now, our schools and training programs, which still emphasize language and logical-mathematical intelligences to the exclusion of almost all else, overproduce certain skills for the jobs available” (Gardner, 1983, 232). As he mentions, these are the skills of a law professor.

Additionally, there seem to be other interrelated parts to these two intelligences. In terms of linguistics as a subject, while one’s linguistic intelligence would allow them to excel in the syntax and phonology aspects of language, one’s logical-mathematical intelligence would give them skills in the semantic and pragmatic aspects of language. Regarding spoken language, for example, logical intelligence could help someone participating in a debate since it would give them skills to structure and organize their ideas with logic.

It is also said that linguistic intelligence is related to musical intelligence. In fact, in *Frames of Mind*, Gardner asserts that “many scholars suspect that linguistic and musical expression and communication had common origins and, in fact, split off from one another several hundred thousand, or perhaps even a million, years ago” (Gardner, 1983, 122). Sensitivity to phonology, sound, rhythm and composition are common skills/components of both intelligences. An individual with a strong musical intelligence could be more in tune with the rhythmic properties of language or may have strong listening comprehension skills, thus being able to properly recognize and imitate phonemes while learning foreign languages, for example. Examples of professions that might draw on both intelligences could be songwriters or poets.

Linguistic intelligence is also related to spatial intelligence. An individual with strong skills in linguistic and spatial intelligence excels in different aspects of language and also organization. This could help them write engaging texts to fit a word limit, something that journalists often have to do. Someone with these skills would also be more sensitive to the shape of linguistic symbols, so they may do well with writing or calligraphy.



Main uses of this type of intelligence and contexts

According to Gardner in *Frames of Mind*, in our society, “language is as often as not a tool—a means for accomplishing one’s business—rather than the central focus of attention” (Gardner, 1983, 101). Thus, language is mainly used as a vehicle for communicating information or achieving objectives.

In terms of professions, linguistic intelligence is useful for those who work as: orators, journalists, poets, linguists, lawyers, salespeople, politicians, etc. Skills in this intelligence will help people in these profiles to convey a message or reach a goal. Traditionally, this intelligence is useful for those who interact directly and indirectly with people, whether that be in a public relations position or in an office job with computer work.

Individuals with strong linguistic intelligence may excel in traditional schooling, especially on assessments, IQ tests, etc. However, in *New Horizons*, Gardner warns that strong linguistic intelligence may help people do well on traditional exams even if their knowledge of the subject area is not very high (Gardner, 1993, 220).

Additionally, linguistic skills are useful in ordinary conversation, as well as in writing- either creative writing or more legal/formal writing.

They may also help people to retain information, such as verbal lists. As Gardner mentions in *Frames of Mind*, individuals with strong linguistic skills may utilize “the mnemonic potential of language” to memorize information, such as “lists of possessions to rules of games, from directions for finding one’s way to procedures for operating a new machine” (Gardner, 1983, 82). In turn, this may help people explain knowledge or teach material to others.

Another aspect of linguistic skills that is useful is what Gardner calls the “rhetorical aspect of language—the ability to use language to convince other individuals of a course of action” (Gardner, 1983, 82). This aspect is especially interesting for individuals working in politics or public service, or even those in charge of sales or marketing who want to persuade others to purchase their products.

How can a person develop skills related to this type of intelligence

According to the theory, skills in linguistic intelligence are mostly developed in the infant and toddler phase as they learn to navigate the world around them. Some individuals may be naturally talented at language-learning, while others may need more nurturing. Children learn their native language(s) through exposure and immersion, through modeling or imitation, as well as practice. Children go through a “literal stage” as Gardner mentions in *A Synthesizing*



Mind, where they interpret language literally and may have difficulty understanding metaphorical language. According to Gardner, this is a stage that some adults never outgrow (Gardner, 2020, 206). Gardner's theory suggests that early childhood and the stages before puberty are critical periods for language learning, which is consistent with other theories in language acquisition.

In order to develop skills related to this type of intelligence, Gardner suggests the following in "Frames of Mind" (1983):

- Reading a wide range of materials in different styles and formats. This helps to acquire new vocabulary, improve comprehension skills, and improve overall language skills.
- Writing activities in different styles of expression (stories, letters, poems, essays, etc.)
- Oral presentations and debated- Improve spoken language skills, structure discourse, engage in discussions and improve argumentation skills
- Foreign language learning
- Creative writing workshops
- Literary analysis. This could be organized, for example, as a book club or something similar.

Other theories / authors that address this type of intelligence

Noam Chomsky - Gardner cites the famous linguist, well-known for his theories in the fields of linguistics and cognitive science, in several of his works. His Universal Grammar theory is one of his most famous theories that discusses linguistic intelligence and language acquisition.

<https://www.ling.upenn.edu/~ycharles/papers/ycbcb2017.pdf>

Jerome Bruner- An American psychologist and university professor known for his research in cognitive psychology. In "Frames of Mind", Gardner discusses his studies on the process of scaffolding in multiple intelligences, but especially in acquiring linguistic intelligence.

<https://www.collaborativeclassroom.org/blog/scaffolding-techniques-english-language-learners-part-1/>



LOGICAL-MATHEMATICAL INTELLIGENCE

Definition/General Description

This intelligence is directly related to humans' interactions with objects, leading to their capacity for conceptual and abstract thinking, and an ability to analyze numbers and patterns.

Logical-mathematical intelligence encompasses skills related to mathematics and science, such as solving equations and making calculations, as well as logical reasoning, which is often used to solve mathematical problems, identify patterns, or come up with scientific theories. There is some debate as to whether this intelligence should be split into two separate intelligences, though Gardner still conceives it as one.

Along with linguistic intelligence, logical-mathematical intelligence (part of cognitive development) is an academic or scholarly intelligence, often used in traditional modern secular schools on tests and exams and forming the basis with IQ tests. Unlike linguistic intelligence, "after the cognitive linguistic revolution was ushered in by the work of Noam Chomsky, skill with languages became much less important; logical-mathematical skills, of the sort associated with logicians, were at a premium." (Gardner, 1993, 32). Thus, one could consider this intelligence to be one of the highest regarded, especially in the Western world.

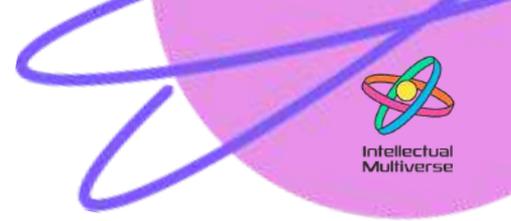
Different components / skills related to this type of intelligence

There are many different components and skills related to this type of intelligence. The most common ones mentioned by Gardner are skills in logic, logical reasoning, mathematics, science, numerical capacities, measurements, structure, and organization of ideas, and problem-solving. In terms of the last one, problem-solving, individuals with high logical-mathematical intelligence often come up with solutions to problems before they can be articulated in words. Interestingly, Gardner also mentions humor as a skill related to this intelligence, since humor, essentially, is a manipulation of logic.

Relationship between this type of intelligence and the other types of intelligence

The logical-mathematical intelligence is closely related to linguistic intelligence and spatial intelligence, and they often complement one another.

Fundamentally, it is related to linguistic intelligence since it is associated with cognitive development, and also because it is considered to be one of the traditional intelligences used in Western countries, especially in secular schools,



to measure intelligence. According to Gardner, this causes a problem since, “right now, our schools and training programs, which still emphasize language and logical-mathematical intelligences to the exclusion of almost all else, overproduce certain skills for the jobs available” (Gardner, 1983). As he mentions, these are the skills of a law professor.

Additionally, there seem to be interrelated parts to these two intelligences. In terms of linguistics as a subject, while one’s linguistic intelligence would allow them to excel in the syntax and phonology aspects of language, one’s logical-mathematical intelligence would give them skills in the semantic and pragmatic aspects of language. Regarding spoken language, for example, logical intelligence could help someone participating in a debate since it would give them skills to structure and organize their ideas with logic.

Logical-mathematical and spatial intelligence are also closely related. Both of these forms of intelligence are related to learning from objects in the world and they arise from a child’s actions upon the world and handling of objects. As Gardner states in *Frames of Mind*, “the “object-related” forms of intelligence—spatial, logical-mathematical...—are subject to one kind of control: that actually exerted by the structure and the functions of the particular objects with which individuals come into contact” (Gardner, 1983, 291). Additionally, they are also more fragile later in life when elderly people begin to lose some of these abilities.

We can see examples of these two intelligences being employed in many different areas of life. In terms of the academic and professional sphere, both architecture and engineering require strength in these two intelligences. One must have strong mathematical and logic skills, as well as an ability to judge spaces and distances, to succeed. Another example where these two intelligences are important is in the game of chess, which requires an ability to strong logical reasoning and visual perception skills.

Finally, there is a relationship between logical-mathematical intelligence and interpersonal intelligence, especially in the case of humor mentioned by Gardner. As he states in *New Horizons*, “if we are able to amuse someone else, it is because we have used logic to engage their interpersonal intelligence” (Gardner, 1993, 27). Essentially, one manipulates logic in a way to make connections with others. Thus, one could say that a comedian, especially one who does stand-up comedy, may have strong logical-mathematical and interpersonal intelligence.

Main uses of this type of intelligence and contexts

Logical-mathematical intelligence is useful in many different contexts. In terms of the professional world, strong skills in this type of intelligence are useful for data-centered, desk-oriented jobs, such as a data scientist or accountant. They are also useful in e-marketing.



As mentioned previously, when combined with other intelligences, such as the linguistic intelligence, logical-mathematical intelligence is useful in traditional Western secular schooling where emphasis is placed on skills in these intelligence areas. It would help individuals to excel on written assessments and also in STEM subject areas.

When combined with spatial intelligence, logical-mathematical intelligence is useful in areas such as engineering and architecture, as well as for playing chess.

Another example of its usefulness is with humor since humor is a manipulation of logic in a sense. An individual with strong logical-mathematical and interpersonal intelligence may be able to engage people with their humor, a skill that may help them establish connections with others.

How can a person develop skills related to this type of intelligence

According to Gardner, skills related to this intelligence are developed throughout childhood. It starts out with babies and children and their handling of objects in their environment. By touching them, moving them around and ordering them, they learn about numerical values and logic. It starts with material objects, and then it quickly moves away from physical things and becomes more abstract. This is what allows children to learn how to add and subtract, and eventually solve mathematical equations.

Logical-mathematical intelligence is one of the first to decline as individuals get older. In *Frames of Mind*, Gardner states that “the best years for productivity in these fields are before the age of forty, maybe even before the age of thirty; and while solid work can be conducted after that time, it seems relatively rare” (Gardner, 1983, 163). Thus, this suggests that intelligence in this field may be difficult to develop after a certain age and development of skills in logical and mathematical intelligence in infancy, childhood, and young adulthood are crucial.

In order to develop skills in this intelligence, Gardner suggests problem-solving activities. These could include: solving math problems, putting together puzzles, playing board games, doing logic games, or taking part in activities involving critical thinking.

Activities should also be proposed to develop logical reasoning, such as: identifying patterns, making predictions, drawing conclusions.

Gardner also suggests gaining more math and science knowledge. This can be done, for example, by reading books, watching documentaries or educational



videos, or taking part in science experiments. It may even include activities such as learning coding or programming.

Computational skills can also be developed, such as arithmetic, algebra, geometry, or statistics. Applying them to real-world situations could make them more relevant or relatable.

Other theories / authors that address this type of intelligence

Jean Piaget - Gardner mentions this Swiss psychologist known for his work in child development and cognitive development, in *Frames of Mind*. He studies the role of logical-mathematical thinking in the intellectual growth of children.
<https://files.eric.ed.gov/fulltext/EJ841568.pdf>

Robert J. Sternberg - An American psychologist and professor at Yale who developed the Triarchic Theory of Intelligence. In his theory, intelligence is defined by three aspects: the internal world of the individual, the external world of the individual and the individual's experience. In this case, the internal world would encompass analytic abilities or those related to logical-mathematical intelligence. <https://www.uwyo.edu/aded5050/5050unit6/sternberg.asp>

Lev Vygotsky - A Russian psychologist who studied developmental and history-cultural psychology. In general terms, his sociocultural theory suggests that children learn through social interactions and cultural context. By this theory, he would suggest that logical-mathematical intelligence would be learned by children through their interactions with others.
<https://www.simplypsychology.org/vygotsky.html>



NATURALIST INTELLIGENCE

Definition/General Description

Twenty-three years after his seminal work on multiple intelligences, Gardner added the naturalist intelligence (NI) to his original 7 intelligences. In this way, this intelligence has been comparatively less well studied than the other intelligences.

NI focuses on how people relate to the natural environment and their ability to observe, identify, and understand natural elements.

Gardner (1999, p.49) believes that *“the naturalist’s intelligence (is) as firmly entrenched as the other intelligences”* and that *“(t)here are. . .core capacities to recognize instances as members of a group (more formally, a species); to distinguish among members of a species; to recognize the existence of other, neighboring species; and to chart the relations, formally or informally, among the several species.”*

For the author, a naturalist is a *“(person who) ... demonstrates expertise in the recognition and classification of the numerous species-the flora and fauna- of his or her environment”* (Gardner, 1999).

In this way, naturalist intelligence refers to the human ability to discriminate, identify, observe, categorize, understand, and manipulate natural elements like plants, animals, and the environment and detect patterns in nature. It is present in individuals who can distinguish and find relations between plants, animals, and other components in nature (Watve and Watve, 2018).

It involves how sensitive a person is to nature and the world. It refers to a person’s interest in the natural world of animals, plants, and the natural work around them (Sadiku and Musa, 2021).

Likewise sensory-motor experiences seem to be material to be processed in naturalist intelligence.

Different components / skills related to this type of intelligence

- To use multiple senses
- To bear on artificial items, such that a child that can discriminate among plants and animals is using the same skills when she classifies sneakers, cars, etc.
- Observation, attention to detail, and an awareness of their surroundings and environment



- Selective attention towards things in nature, comparatively extended attention span and successful concentration towards living and nonliving things in nature in their natural form
- An intense interest and love for the outdoors
- To find/see relations among the different components in nature
- To observe interdependence among the naturally occurring living and nonliving things
- To distinguish among natural and manmade objects, to recognize, group, and label distinctions among natural phenomena
- Divergent thinking patterns on the gathered information
- Continuous processing over the acquired information to see relations amongst them and find out causal relationships
- Logically compilation and critical evaluation of the data to give meaning
- Deductive as well as inductive reasoning

Relationship between this type of intelligence and the other types of intelligences

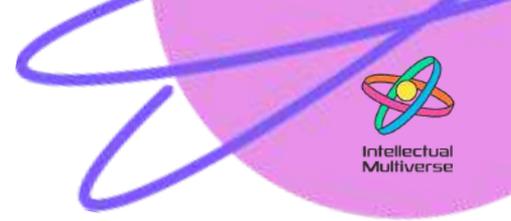
Watve and Watve (2018) found a significant correlation between naturalist intelligence and other intelligences, and the values ranged from moderate to high. Highest correlation among the pairs was between Naturalist intelligence and Bodily-Kinaesthetic intelligence. They were likely to have some factors more in common than the rest, perhaps related to physical and biological capacities of the individual.

Moderate correlation shown by naturalist intelligence with remaining Intelligences indicates that some intelligence factor is common to all. But the fact that the correlation is not perfect, in any pair, supports the idea of Gardner that naturalist intelligence is a separate intelligence (Watve and Watve, 2018).

Main uses of this type of intelligence and contexts

With strengths in finding patterns and relationships to nature, people with naturalistic intelligence excel in science, realistic, thing-oriented occupations, and nature-related careers. These careers require immersing themselves in nature, caring for plants and animals, and having sharp observation skills.

People with high naturalistic intelligence are interested in nurturing, exploring, and learning about the environment and other species. They're also said to be sensitive to even the most subtle changes in their environment, which help them find patterns and relationships with nature.



Before their skills manifest into careers, you'll see naturalists gravitate toward nature courses in botany, zoology, and marine biology.

Many adults, from all walks of life, are now seen participating in nature related activities, environment information collection, conservation action etc. Career options for individuals with dominant naturalist intelligence have become available in horticulture, environmental restoration, field biology, tourism, sustainable agriculture. The NI skills might be useful even in other fields such as the food industry.

Gardner has explained the concept of naturalist intelligence by quoting many examples of botanists, zoologists, evolution theorists, environmentalists, entomologists, etc.

Examples of notable people with naturalistic intelligence would be Charles Darwin, an evolutionary biologist; Neil deGrasse Tyson, an astrophysicist; and Jane Goodall, a primatologist.

How can a person develop skills related to this type of intelligence

In many fields people with skills for identification of natural elements or understanding of natural phenomena are needed. The intelligence profile of an individual is a potential which can develop into a skill in later years if a supportive environment is available.

Adult naturalists listed many activities they had engaged in at a young age. This suggests that they had displayed naturalist intelligence characteristics at a young age. However, some of them felt that the school environment was not very supportive of their potential. Their skills grew through their interactions at home with family, and outside of home, with friends having similar interests and by interactions with experienced naturalists. These individuals developed into adult naturalists due to the support through various means (Watve and Watve, 2018).

Naturalist intelligence nurturing activities that can be incorporated in formal and informal nature education and help raise environmental awareness in the society. Naturalistic intelligence can be fostered in students, at schools, by emphasizing the need for well-rounded scientific naturalists; developing curricula that involves students in outdoor inquiry-based projects; and helping students learn how to observe both the natural world and their own learning, skills that are essential to developing expert naturalistic knowledge.

Gardner suggests bringing what he calls the "summer culture" into the rest of the year - and into the learning environment -, to increase natural intelligence.



Some examples are:

- **Experience nature:** Being outdoors helps people to be active and to develop naturalistic intelligence by exposing them to nature. They can experience nature by taking walks or trips to experience wildlife.
- **Observe nature:** After experience comes observation. Using all available senses, people can watch animal behavior, use observation tools (magnifying glasses, microscopes, and telescopes), watch the weather, and take notice of ecological principles (plants growing or decomposing over time).
- **Explore nature:** During exploration, people can dive deeper into natural life. They can accomplish this by working with and learning in the natural world. They can grow plants, work in gardens, go on hikes, perform skits, and read or watch stories about nature.
- **Classify nature:** After they've experienced, observed, and explored nature, all that's left to do is classify. They can collect items to identify different plants, leaves, berries, and more. They can use these collections to highlight differences and similarities between their natural objects.
- **Activities encouraging use of multiple senses:** In recent years, schools encourage activities such as nature visits, plantations, vermiculture as part of environment education. This can provide an opportunity for children to interact with nature. Nature education courses can give similar opportunities to adults. But for development of NI, special efforts will be required to ensure that the individuals use all their senses with hands-on experience of nature rather than just seeing a natural area, listening to talks, demonstrations, presentations or through taking photographs. Walking through a natural area, touching, smelling different things on the way, camping, building and maintaining a compost pit provide an enriching sensory experience.
- **Activities providing information about diversity of natural elements:** Formal school curricula of state and central boards include biology and environmental sciences. Biology teaching in school and college includes detailed information about plants and animals, but it needs to be accompanied by practical lessons in interacting with the species in its natural state, not only in laboratories. A naturalist is not only required to learn and apply whatever is already documented, but to detect new patterns and linkages. For this she/he requires opportunities to explore natural objects and formulate her /his own concepts and patterns. Outdoor exposure through visits to parks, field trips to diverse natural areas are by far the best way of experiencing nature, especially if it includes opportunities to explore nature through multiple senses.



- Activities encouraging organization of information: Organizing observed information is an important part of developing NI. Keeping a field diary, notes, recordings, sharing and comparing with observations of others, conducting experiments, developing projects are also important parts of NI nurture.

Observing and drawing natural objects can be taken up as part of recording. But maintaining natural areas which allow outdoor activities is equally important and needs to be ensured by nature-aware society.

Other theories / authors that address this type of intelligence

Vardin (2003) has compared the human development theories proposed by Maria Montessori and Gardner, showing how both emphasize the importance of environment (used in a sense broader than natural environment) on human development. Montessori curriculum, especially the sensorial exercises are a good way for encouraging use of various senses.

Tirri and Nokelainen (2008) included “Environmental intelligence” in their Multiple Intelligences Profiling Questionnaire rather than Naturalistic Intelligence. They based this on the Environmental Sensitivity Scale (EnSS) influenced by the work of Gardner (1999), Morris (2004) and Wilson (1998). It included the following three categories: 1) Love for nature; 2) Nature conservation; 3) Environment-friendly consumer habits.

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Chapter 4.

METHODOLOGY

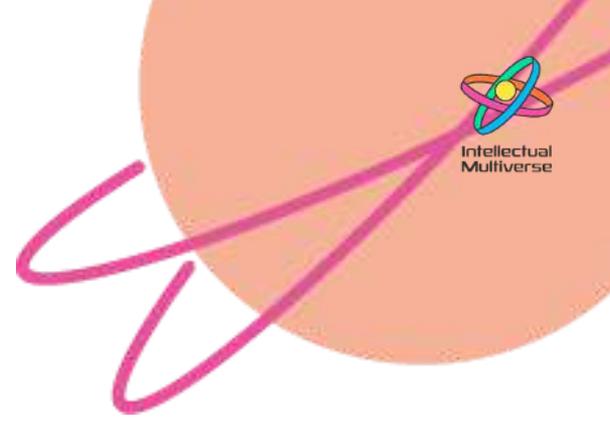
MAIN OBJECTIVES OF THE 17 ACTIVITIES AND 9 GAMES

Within the framework of the “Intellectual Multiverse” project, the consortium has developed a proposal for a programme of activities to be carried out in the same space, through which educators and adults who participate in it will be able to recognise the 8 Intelligences and their relationship with the following areas of personal development:

- Linguistic and logical-mathematical intelligences as cognitive development.
- Musical intelligence related to artistic development.
- Bodily and spatial intelligences related to psychomotor development.
- Intrapersonal and interpersonal intelligences related to emotional development.
- Natural intelligence related to ethical-sustainable development.

Thus, the Workshop “Intellectual Multiverse” has been created using game-based learning methodology and gamification. Thanks to this Workshop in particular, and to the “Toolkit and recommendations” in general, it is intended to achieve an improvement of the adult education practices of European organisations towards educational inclusion through the promotion of people's skills and potentials.

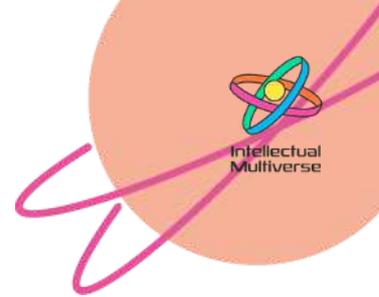
With the generation of this result, which combines different activities, games and educational resources focused on the potential and capabilities of people (through multiple intelligences and using game-based learning and gamification), it is intended that the educational community and related professionals can detect skills, abilities and motivations of students in the different areas of knowledge proposed as intelligences and their relationship with the aforementioned areas of development (cognitive, artistic, psychomotor, emotional and ethical-sustainable development). Furthermore, another objective of the “Intellectual Multiverse” workshop is to increase the motivation of learners, especially adults with fewer opportunities, through the vision of their abilities and the recognition of their potential after the workshop.



Game-based learning and gamification have been used to develop and achieve the outcomes of this project (that is, this Toolkit and the Workshop "Intellectual Multiverse" contained on it) because, even it is a complex methodology, with its elements and techniques, studied by many authors, it transfers the mechanics of games to the educational-professional field, either to better absorb knowledge, to improve some skill or to generate some positive experience.

Gamification is not about playing mere games in the classroom, but it consists of using game designs and techniques in non-game contexts in order to develop skills among players (in the concrete case of this project, in adults, specially those with fewer opportunities); the aim of gamification is to involve participants, encouraging both competition and cooperation among equals, as well as to increase their motivation.

Gamification uses an individual perspective to study the progress of learners and to offer the best learning path for each learner, depending on their needs and qualities, so this learning technique is well complemented by the information offered by Gardner in his Theory of Multiple Intelligences and its application in this project. In addition, gamification is able to handle diversified learning routes, as it emphasises small achievements (not the links between these achievements), so multiple routes to the main goal can be constructed, based on the objectives, skills and other characteristics of the participants. It should be noted that gamification also takes into consideration the visual dimension of the learning process, especially the visualisation of progress in the learning process and the chosen learning route.



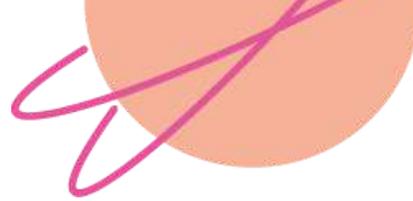
WHAT ARE THE ACTIVITIES AND HOW THEY CAN BE USED

In the framework of the “Intellectual Multiverse” project, the consortium has consulted and compiled **a total of 17 activities** to work on the different Multiple Intelligences, some of them being already existing resources and others elaborated by the project partners. Two activities have been chosen for each of the Intelligences to be worked on, except in the case of Musical Intelligence, which consists of three activities.

The distribution and main characteristics of each of the 17 activities mentioned are explained below:

- If the Intelligence to be worked on is the **Linguistic**, the following activities are proposed:
 - Activity called “Collaborative Storytelling” (30 min. approx.). The objectives of this activity are for participants to use their creative expression, to employ descriptive language (using grammar and vocabulary appropriately) and also figurative language, and to practise their written language and comprehension.
 - Activity called “Alibi” (30 - 45 min., approx.). The objectives of this activity are for participants to improve their verbal communication, listening, argumentation, figurative language and constructive questioning skills, practise debating skills (including comprehension and reasoning), work on grammar (especially past tenses), practise storytelling and also use creative expression.

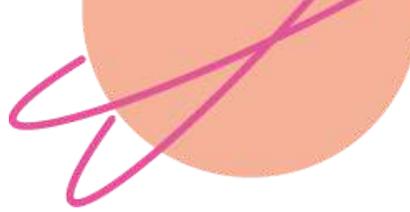
- If the Intelligence to be worked on is the **Logical-mathematical**, the following activities are proposed:
 - Activity called “Einstein game” (30 min. approx.). The objectives of this activity are for participants to use logical reasoning, make predictions and draw conclusions, and analyse and interpret data.
 - Activity called “Math Escape Room” (30 min. approx.). The objectives of this activity are for participants to use their problem-solving skills in groups and individually, to identify patterns, and also to practise and reinforce their calculation skills.



- If the Intelligence to be worked on is the **Musical**, the following activities are proposed:
 - Activity called “Harmony in pictures” (20 min. approx.). The objectives of this activity for participants are to improve their cognitive skills and to use music as a tool for understanding reality.
 - Activity called “Musical Storytellers” (25 min. approx.). The objectives of this activity for participants are to connect emotions to music and to learn how to describe emotions and how to create stories out of them.
 - Activity called “Rhythms and Emotions” (20 min. approx.). The objectives of this activity for the participants are to connect emotions with music and to learn to interpret the emotions of others and to describe their own emotions without speaking, through their sounds and rhythms.

- If the Intelligence to be worked on is the **Bodily-Kinesthetic**, the following activities are proposed:
 - Activity called “Rhythmic Beats” (30 min. approx.). The objectives of this activity are for participants to develop the aforementioned Body Intelligence through body percussion, exploring rhythms and movements, improving coordination, memory and creativity, and also improving body awareness.
 - Activity called “Talk with your hands” (30 min. approx.). The objectives of this activity are for participants to learn a little about sign language and, in this way, practise a different way of speaking and stimulate the motor system, as well as improving attention and visual perception.

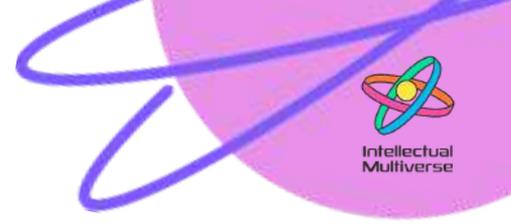
- If the Intelligence to be worked on is the **Spatial**, the following activities are proposed:
 - Activity called “Illustrating imagination” (30 min. approx.). The objectives of this activity for participants are to develop the representation, to encourage the imagination and to work on gross and fine motor skills.
 - Activity called “Blindly” (30 min. approx.). The objectives of this activity for participants are to improve concentration, to strengthen fine motor skills, to understand shapes and to recognise textures.



- If the Intelligence to be worked on is the **Intrapersonal**, the following activities are proposed:
 - Activity called “Sculpting the Self: A Journey in Clay” (90 min. approx.). The objectives of this activity for participants are to foster self-awareness through creative expression, to encourage reflection on personal identity, emotions, and values, and also to develop the ability to translate internal self-concepts into symbolic representations.
 - Activity called “The Three Letters: A Deep Dive into the Self” (90 min. approx.). The objectives of this activity for participants are to foster advanced self-awareness and emotional intelligence, to encourage deep reflection on past experiences, present identity, and future aspirations, and also to develop personal goal setting and long-term vision aligned with internal values.

- If the Intelligence to be worked on is the **Interpersonal**, the following activities are proposed:
 - Activity called “Building Bridges: The Empathy Circle” (90 min. approx.). The objectives of this activity for participants are to enhance empathy and active listening skills, to foster collaboration and understanding among participants, to develop the ability to interpret social cues and respond appropriately, and also to practice constructive feedback and peer support.
 - Activity called “The Negotiation Game: Win-Win Mission” (60 - 75 min. approx.). The objectives of this activity for participants are to enhance negotiation and conflict resolution skills, to develop the ability to balance assertiveness and empathy, and also to strengthen teamwork and collaborative problem-solving.

- If the Intelligence to be worked on is the **Naturalistic**, the following activities are proposed:
 - Activity called “Field Diary - my Nature Journal” (1 hour approx.). The objectives of this activity for participants are to develop awareness of nature around them, to motivate themselves to do outdoors activities and to promote learning while enjoying natural environments.
 - Activity called “Nature C.S.I.” (40 min. approx.). The objectives of this activity for participants are to resolve environmental mysteries analysing evidence about animal presence and actions.



1. ACTIVITY “COLLABORATIVE STORYTELLING”

LINGUISTIC INTELLIGENCE



TARGET GROUP

Adults/adults with fewer opportunities



NUMBER OF PARTICIPANTS

4-5 groups (15 -20 people in total)



TIME

Approximately 30 min.



OBJECTIVES

- To use creative expression.
- To employ descriptive language.
- To use grammar and vocabulary correctly.
- To use figurative language.
- To practise written language and
- comprehension.

WARM-UP: WISE WORDS

1. The facilitator splits the participants into groups of 4-5 people.
2. Within each group, each person takes turns saying one word to add to the saying. Each word added on to the saying should fit grammatically according to what the person prior to him/her said.
3. The facilitator must explain that this should be fairly quick, so participants should say the first word that comes to their mind.
4. Each group will make 3 sayings, having 5 minutes to do it.
5. The last person to end the saying will explain its meaning. The funnier, the better!
6. When the time is up, each group can share their favourite saying with the rest of the group.

The aim of this warm-up is to prepare participants for the activity by practising working together to build a common phrase. It should also serve to “break the ice” in the group.

DESCRIPTION OF THE ACTIVITY

In this activity, groups will write a common story together.

The participants will remain in their groups (those from the warm-up exercise). Each group will have a writing prompt, that can either be assigned in advance by the facilitator or chosen by the groups the same day.



The facilitator can decide whether all groups have the same or different prompts (with more advanced groups, he/she can have them come up with their own prompts, too).

Groups will also have a vocabulary list with words, phrases or expressions that need to be used in the story - depending on the group, the facilitator can also use pictograms or story cubes for this part.

Each member of the group should select a different colour to write with because, this way, the facilitator can identify who wrote which part.

Each person will take turns writing one sentence. After someone writes a sentence, the next person should write another sentence that is coherent with the previous one and continues the story.

Participants will have approximately 15-20 minutes to write their stories. The stories can be funny, scary, romantic, serious-whatever they prefer!

At the end, groups are encouraged to share their stories with everyone.

DISCUSSION/DEBRIEFING

- How did you feel while you were doing this activity? What did you enjoy the most/least?
- How did you feel when it was your turn to write? What strategies did you use to write your part?
- Did you find it challenging to make a coherent story with the prompt and vocabulary your group had to use?
- How was the communication between you and your group members?
- How do you think this activity promotes teamwork?
- How do you think this activity helps to improve linguistic intelligence?
- If you were to do this activity again, what would you do differently?



MATERIALS

- Sheets of paper.
- Pencils and/or pens.
- Story prompts (Annex 1).
- Vocabulary list (Annex 2).



RECOMMENDATIONS FOR FACILITATORS/VARIATIONS

- **LEVEL OF DIFFICULTY:** The level of difficulty of the story prompts and vocabulary can be adjusted when working with groups who are non-native or native speakers, also with groups with disabilities. Depending on the level of the participants and time available, you may want to consider having the group come up with their own story prompts and vocabulary lists.
- **EVALUATING ORAL LINGUISTIC INTELLIGENCE INSTEAD OF WRITTEN:** Depending on the group, it can also be done as an oral story-telling activity. Instead of having participants write, have them take turns saying one sentence each. In this case, the facilitator should go around and watch each group individually and groups will not be expected to share at the end of the activity.
- **ADAPTATION FOR BLIND OR VISUALLY DISABILITY:** If you are working with blind or visually-impaired individuals, you will have to tell them the story prompt out loud as well as the words that should be used (or have them accessible in Braille). Instead of vocabulary lists, the facilitator can use pictograms and/or story cubes.
- **ADAPTATION FOR DEAF OR HEARING DISABILITY:** It can also be done with deaf or hearing-impaired individuals. The warm-up can be changed to a written one instead of speaking. If the facilitator knows sign-language, it can be signed instead of written.
- **ONLINE VERSION:** The activity can also be done online. You can have participants meet in Zoom and work on the collaborative story together in Google Drive. Have each participant write with a different colour to distinguish who wrote what. Participants can be split into break-out rooms for both the warm-up and the written activity.



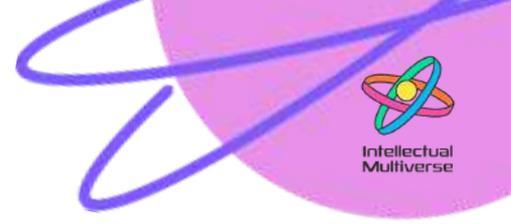


ANNEX 1: PROPOSAL OF STORY PROMPTS

- **1st prompt:** “One day, while cleaning my house, I found a secret letter...”
- **2nd prompt:** “I used to love chocolate cake, but all of that changed when...”
- **3rd prompt:** “As I was sitting by the fireplace, I watched the snowflakes falling outside...”

ANNEX 2: PROPOSAL OF VOCABULARY LIST

- *Turquoise*
- *Tomato sauce*
- *Lonely*
- *Frying pan*
- *Movie theater*
- *Frankly*
- *Spider*
- *Mailman*
- *Oven*
- *Slimy*



2. ACTIVITY “ALIBI”

LINGUISTIC INTELLIGENCE



TARGET GROUP

Adults/adults with fewer opportunities



NUMBER OF PARTICIPANTS

15 participants (1 group of 3
people and 3 groups of 4 people)



TIME

Approximately 30 - 45 min.



OBJECTIVES

- To enhance verbal communication, listening, argumentation, figurative language and constructive questioning.
- To practise debate skills.
- To utilise comprehension skills.
- To activate reasoning skills.
- To work on grammar (especially past tense).
- To practise storytelling.
- To use creative expression.

WARM-UP: TRWO TRUTHS AND ONE LIE

1. All participants gather in a circle. Without saying them out loud, each person will prepare 3 statements about themselves- two are true and one is a lie.
2. When it is a person’s turn, they must say all 3 statements. The lie should be something fairly believable to make it more difficult for the others to guess.
3. Participants guess which statement is the lie.
4. Once one person guesses, move on to the next person.

The aim of this warm-up is to prepare participants to practise reasoning and debating skills for the activity.

DESCRIPTION OF THE ACTIVITY

The facilitator starts by explaining that the group is going to do an activity where they will act as a character. In the group, 3 people will be accused of being guilty of committing a crime. They can be volunteers or the facilitator can choose them directly.

Depending on the size of the group, the rest of the group will be split into 3 groups (approximately 4 people each) to prepare questions to ask the “suspects”. If the group is small, it may be better to have each participant work on questions individually.

The facilitator shares the crime with the group - this should be prepared in advance. The facilitator decides whether to say the crime out loud or to write it on the board, depending on the level of the group.



The 3 “suspects” are asked to leave the room for 10-15 minutes to prepare their alibis (stories proving their innocence). They should decide, either among themselves or the facilitator, who committed the crime.

The others will stay in the room for 10-15 minutes and write questions together with their groups. Explain to the groups that each one should have a speaker and at least one note-taker for when they will question the suspects.

The facilitator will bounce back-and-forth between the 2 groups, helping the “suspects” work on their alibi and the rest of the groups work on writing their questions. The alibis should be fairly believable and the participants should consider all aspects of the crime, when it was committed, and why their character couldn’t have done it. The other groups making questions should consider what information they need to decide who is guilty.

When the 3 suspects are ready to present their alibis, the facilitator will bring them back to the room. The facilitator explains that the jury needs to decide which of the 3 suspects is guilty. They should listen carefully to all three stories, take notes, ask questions, and take note of the answers. They should not say out loud who they think is the guilty person. There will be time to discuss with their groups at the end of the questioning.

Now, the facilitator will act as the judge, making sure the suspects present their alibis, and taking questions from each group in an orderly fashion.

All groups should be given equal turns to ask questions to the suspects and the suspects should also have time to answer. The facilitator should manage time efficiently.

Once all of the questioning is finished, the 3 suspects should leave the room. The groups will have 5 minutes to discuss among themselves who they think is guilty.

Once they have reached their verdict, the facilitator invites the 3 suspects back. Each group votes and the identity of the guilty person is revealed.

DISCUSSION/DEBRIEFING

- How did you feel while you were playing the game? How is the experience of being a suspect/being a jury member?
- (For suspects) Was it difficult to think of an alibi? How did you feel when the rest of the group questioned you?
- (For jury) Was it challenging to think of questions before knowing how the suspect would respond? What strategies did you use to write your questions? Did this change after you heard the alibis?
- How do you think this activity could help you improve your linguistic intelligence?
- If you were to do this activity again, what would you do differently?



MATERIALS

- A room and another place where a few people can step outside of the room.
- Sheets of paper.
- Pencils and/or pens.
- Scenario prompts (Annex 1).



RECOMMENDATIONS FOR FACILITATORS/VARIATIONS

- When possible, it is helpful to have two facilitators do this activity. That way, one of them can stay with the main group that writes questions and the other can be with the suspects. However, it is not necessary.
- **LEVEL OF DIFFICULTY:** Depending on the group's linguistic skills, for example if there are non-native speakers, the facilitator may want to introduce courtroom vocabulary and review past tense verbs.
- **GROUP SIZE:** If you're working with a small group (less than 10 people), you may decide to choose 2 suspects and have the rest of the group work individually to ask questions. There is also another version where you have just 1 suspect and the suspect has to prove their innocence. In this case, the facilitator needs to change the instructions a little and explain that this person is being accused. This makes for a shorter activity if time is limited.
- **ADAPTATION FOR BLIND OR VISUALLY DISABILITY:** If you are working with blind or visually-impaired individuals, make sure you read the crime out loud and give them a role- either in the group or as a suspect-where they don't need to write. Their group members should explain any visual cues they may see from the suspects (i.e. if they are not giving eye contact while speaking, since this could be a sign that they are lying).
- **ADAPTATION FOR DEAF OR HEARING DISABILITY:** Since this activity works primarily on oral debate skills, you may need a sign-language interpreter if you have deaf or hearing-impaired individuals.
- **ONLINE VERSION:** The activity can also be done online. Using the Zoom platform, the facilitator can send the 3 suspects to a break-out room where they can work on their alibis. However, take in mind that someone else needs to manage the Zoom call so that the facilitator can move back and forth from the break-out rooms.

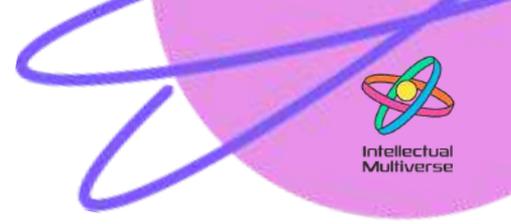




ANNEX 1: PROPOSAL OF SCENARIO PROMPT

Crime: “Someone stole the frog from the façade of the University of Salamanca yesterday, at 19:30 h.!”





3. ACTIVITY “EINSTEIN GAME”

LOGICAL-MATHEMATICAL INTELLIGENCE



TARGET GROUP

Adults/adults with fewer opportunities



NUMBER OF PARTICIPANTS

15 participants



TIME

Approximately 30 min.



OBJECTIVES

- To utilise logical reasoning.
- To make predictions.
- To draw conclusions.
- To analyse and interpret data.

WARM-UP: LINE-UP GAME

1. All participants should stand up. The facilitator tells them that they need to line up according to instructions he or she will give .
2. The participants have to put themselves in order according to the instructions (for example: who was born the most West/East, shoe size etc.)
3. The facilitator can increase the difficulty by adding instructions (for example: without talking, you have to hop on one leg, etc.)

The aim of this warm-up is to prepare participants for working together by following directions and arranging themselves in a coherent and logical way.

DESCRIPTION OF THE ACTIVITY

In this activity, participants need to get clues from each other, analyse information from the clues, arrange it in a logical order and find out the missing information. There are two different versions, according to difficulty, but in both the objective is to figure out who owns the fish.

Firstly, the facilitator explains to participants that while the activity is a whole group activity, it is mostly individual.

Each participant should have a piece of paper and something to write with, and also another paper with a clue.



In order to get information from the others, participants need to walk around the room and go up to each person individually: they can only ask for information from the person regarding what is on their clue card - meaning that if the person has information from other people they talked to, they cannot give it to you. The point is to talk to each and every person in the room and write down the information they give you.

When giving information, participants should only give information about what is on their paper. They should not make inferences based on clues they received from others or give information from others to the group.

Once everyone has spoken, participants sit down with their information and try to figure out how to arrange it in order to see who owns the fish.

The facilitator can decide whether or not they want to show participants the chart for arranging the information. Depending on the group, they may prefer to have the participants figure out on their own that they can make a chart.

While working out the information, participants should work alone in silence and not speak to the others.

If the facilitator sees that the group is having trouble, they can encourage the group to work together, but only after giving them a chance to work it out on their own.

Once the answer has been discovered, the facilitator will go over the clues and show the chart with the solutions to the group.

DISCUSSION/DEBRIEFING

- How did you feel while you were doing this activity?
- How did you feel while you shared information with the others? How did you feel when they gave you their information?
- How do you think this activity could help you reinforce your logical-mathematical intelligence?
- What did you find most challenging about the activity?
- What strategies did you use to solve it?
- If you were to do this activity again, what would you do differently?



MATERIALS

- Sheets of paper.
- Pencils and/or pens.
- Clue cards (Annex 1).
- Solutions (Annex 2)



RECOMMENDATIONS FOR FACILITATORS/VARIATIONS

- This activity is adaptable to many different groups. However, it is important to have as many clues as participants in the group.
- When working with groups of less than 15, the facilitator can decide whether to give multiple clues to different people or if the facilitator themselves will have the clues. Some of the clues can also be combined, especially ones that only give one piece of information.
- It is essential that all of the clues are given out because the puzzles can only be solved if participants have all 15 clues.
- The clue cards have additional boxes at the end where the facilitator can add additional clues if working with larger groups. Some of the clues give two pieces of information, so they can be split into two. For even larger groups, clues can be repeated or information can be given that isn't relevant, which could make it even more challenging.
- **LEVEL OF DIFFICULTY:** There are 2 scenarios that can be used that you will find in the annexes. The first version is medium-difficulty which should be solvable by most adults. The second version is difficult and may be more challenging to solve alone. After talking to the other participants and getting all of the missing information, participants should be encouraged to work on arranging the information on their own first. If the facilitator sees that some individuals are stuck, they can make small groups. The facilitator can also give additional clues if necessary.
- **ADAPTATION FOR DEAF OR HEARING DISABILITY:** Instead of speaking, have participants write the information from their clues down.
- **ONLINE VERSION:** The activity can also be done online. If it's done on Zoom, participants can private message each other to get information. Other platforms can also be used, such as online conferencing ones that allow participants to speak to each other individually.





ANNEX 1: CLUE CARDS

Level of difficulty: Medium

Clues:

The person who dances ballet has a dog.

The Dane doesn't play football.

The person who has a goat drinks milk.

The Norwegian drinks hot chocolate.

The Swede has a dog and lives next to the person who plays basketball.

The Norwegian has a cat and lives next to the person with the dog.

The Brit bowls and lives next to the person who plays basketball.

The Dane doesn't drink apple juice.

The Dane doesn't have a goat.

The German plays volleyball.

The German has a hamster and lives next to the person who has a cat.

The German is in the first house.

The person who has a hamster drinks tea.

The person who drinks water plays basketball.

The Dane doesn't have a hamster.



Level of difficulty: Difficult

Clues:

The British person lives in the red house.

The Swede has a dog.

The Dane drinks tea.

The green house is directly to the left of the white house.

The owner of the green house drinks coffee.

The person who swims has a bird.

The owner of the yellow house plays football.

The person who lives in the middle house drinks milk.

The Norwegian lives in the first house.

The person who plays basketball lives next door to the person who has a cat.

The person who has a horse lives next to the person who plays football.

The person who plays rugby drinks soda.

The German plays tennis.

The Norwegian lives next to the blue house.

The person who plays basketball has a neighbour who drinks water.



ANNEX 2: SOLUTIONS

Level of difficulty: Medium

Clues:

- The person who dances ballet has a dog.
- The Dane doesn't play football.
- The person who has a goat drinks milk.
- The Norwegian drinks hot chocolate.
- The Swede has a dog and lives next to the person who plays basketball.
- The Norwegian has a cat and lives next to the person with the dog.
- The Brit bowls and lives next to the person who plays basketball.
- The Dane doesn't drink apple juice.
- The Dane doesn't have a goat.
- The German plays volleyball.
- The German has a hamster and lives next to the person who has a cat.
- The German is in the first house.
- The person who has a hamster drinks tea.
- The person who drinks water plays basketball.
- The Dane doesn't have a hamster.

Who owns the fish?

Solution:

Position	Nationality	Pet	Drink	Sport
1	German	Hamster	Tea	Volleyball
2	Norwegian	Cat	Hot chocolate	Football
3	Swede	Dog	Apple juice	Ballet
4	Dane	Fish	Water	Basketball
5	Brit	Goat	Milk	Bowling



Level of difficulty: Difficult

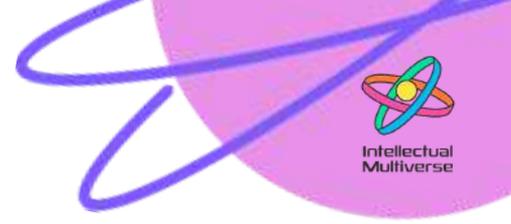
Clues:

- The British person lives in the red house.
- The Swede has a dog.
- The Dane drinks tea.
- The green house is directly to the left of the white house.
- The owner of the green house drinks coffee.
- The person who swims has a bird.
- The owner of the yellow house plays football.
- The person who lives in the middle house drinks milk.
- The Norwegian lives in the first house.
- The person who plays basketball lives next door to the person who has a cat.
- The person who has a horse lives next to the person who plays football.
- The person who plays rugby drinks soda.
- The German plays tennis.
- The Norwegian lives next to the blue house.
- The person who plays basketball has a neighbour who drinks water.

Who owns the fish?

Solution:

Position	House's Color	Nationality	Pet	Drink	Sport
House 1	Yellow	Norwegian	Cat	Water	Football
House 2	Blue	Dane	Horse	Tea	Basketball
House 3	Red	Bit	Bird	Milk	Swimming
House 4	Green	German	Fish	Coffee	Tennis
House 5	White	Swede	Dog	Soda	Rugby



4. ACTIVITY “MATH ESCAPE ROOM”

LOGICAL-MATHEMATICAL INTELLIGENCE



TARGET GROUP

Adults/adults with fewer opportunities



NUMBER OF PARTICIPANTS

15 - 20 participants (groups of 3 - 4 people)



TIME

Approximately 30 min.



OBJECTIVES

- To utilise problem-solving skills in a group setting and individually.
- To practise solving problems.
- To identify patterns.
- To practise and reinforce computational skills.

WARM-UP: SILENT COUNT

1. All participants stand in a circle, facing each other. The facilitator tells them that in silence and in their head, they will count.
2. When the facilitator claps, the group should stop counting and remember their last number. The facilitator will give instructions with operations that they need to apply to that number (i.e. add 2, subtract 7, multiply by 5, etc.)
3. When everyone is ready, the facilitator tells them to start counting from 1 in their heads.
4. The facilitator should wait a little bit and then add an operation. The operations should start as very simple ones and gradually increase the difficulty.
5. When the facilitator is ready to finish the activity, they should clap and tell participants that it will be the last operation.
6. At the end, the facilitator can ask some volunteers to say what number they were on.

The aim of this warm-up is to prepare participants for doing maths operations in their head and to get them ready for the Escape Room challenges.



DESCRIPTION OF THE ACTIVITY

In this activity, each group must work together to escape the room by finding solutions. The sum of the solutions of all of the problems is the answer that opens the lock.

Firstly, the facilitator explains to the participants that they are all stuck in a room and need to find a way to escape. The answers to the challenges will give them clues to the final solution.

The facilitator can choose to make up a story to make things more interesting, such as the participants are stuck in the basement of an abandoned building and they need to find their way out before dark.

All members of the groups will work together to find solutions to the 6 challenges in the Math Escape Room. The sum of all of the solutions will open the lock.

Each group will be given paper and pencils to solve the problems, but they should not say the answers out loud. If not, they could help the other groups.

In the sample Escape Room in the annex, there are 4 challenges. This can be adapted according to the group and the facilitator can decide how many to do. However, this should be decided in advance since the sum of all of the challenges is the final answer.

Once all groups have solved all of the challenges, they should add the answers together. This number, if correct, will open the lock. They should write down the answer and show it to the facilitator. If it's correct, they will be allowed to escape the room. If not, the facilitator can help them and show them where they went wrong.

DISCUSSION/DEBRIEFING

- How did you feel while you were doing this activity?
- (If you do the activity in groups) How was the experience doing this activity in a group? How would it be different if you were doing this alone?
- (If you do the activity alone) How was the experience doing this activity alone? How would it be different if you were in a group?
- How do you think this activity could help you reinforce your logical-mathematical intelligence?
- What did you find most challenging about the activity?
- If you were to do this activity again, what would you do differently?



MATERIALS

- Sheets of paper.
- Pencils and/or pens.
- Challenge cards (Annex 1).
- Solutions of the challenges (Annex 2).



RECOMMENDATIONS FOR FACILITATORS/VARIATIONS

- **LEVEL OF DIFFICULTY:** The warm-up can be adjusted to fit different levels of difficulty. For lower difficulty, remove division and multiplication. The facilitator can also ask the group to count slowly so that they don't reach higher numbers. To add more difficulty, the facilitator can mix operations from the beginning and give participants less time to count.
- **INDIVIDUAL VERSION:** It may be more convenient to carry out the activity as an individual one, instead of a group one. In that case, each participant should go through all of the challenges on their own and write down their answers. The facilitator can adapt the challenges accordingly.
- **ADAPTATION FOR BLIND OR VISUALLY DISABILITY:** For working on this activity with blind or visually-impaired individuals, it may be best to shorten the activity. The facilitator should say all of the challenges out loud and give ample time for participants to complete challenges. If available, the challenges can be prepared in Braille or Nemeth code.
- **ADAPTATION FOR DEAF OR HEARING DISABILITY:** For working on this activity with deaf or hearing-impaired individuals, all challenges should be done on paper. It could be helpful to project them on the wall or write them on the board. The human calculator challenge suggested in the annexes can be done in writing as well and may work better as an individual exercise.
- **ONLINE VERSION:** The activity can also be done online. If it's done in a group, the facilitator can use the break-out room feature in Zoom to divide the participants into small groups. The human calculator challenge could be done in writing in the big group where the facilitator can show the questions on their screen and have the participants work individually on each question on a piece of paper. At the end of the challenges, each group or individual participant can send their answer in a private chat to the facilitator.





ANNEX 1: CHALLENGE CARDS

HUMAN CALCULATOR:

1.

Math Escape Room!



4x8

2.

Math Escape Room!



/2

3.

Math Escape Room!



**+ measurement
of the folder**

4.

Math Escape Room!



x2

5.

Math Escape Room!



-53

6.

Math Escape Room!



**/ number
of groups
= final number**



SEQUENCES:

Math Escape Room!

Sequences!

1, 9, 17, 25, _____

35, 33, 31, 29, _____

98, 88, 79, 71, _____

144, 72, 36, 18, _____

1, 1, 2, 6, _____

SUM= _____

ENIGMA:

Math Escape Room!

I am a two-digit number. My tens digit is three times my units digit. The sum of my digits is 12. What number am I?

$a+b=12$
 $bx3=a$

Enigma!

FINAL CHALLENGE:

Math Escape Room!

Final challenge!

9	8	12	10	44
39	5	29	72	40
42	74	81	58	25
87	35	79	45	17
38	4	13	24	55

- The initial number (9) x 8
- 37
- /7
- x itself
- +14
- /3
- + this number's digits in reverse order
- digit from 1-9 not in the chart

Clue: all answers are in the chart



ANNEX 2: SOLUTIONS OF THE CHALLENGES

HUMAN CALCULATOR:

Math Escape Room!



Human calculator!

$4 \times 8 = 32$
 $32 / 2 = 16$
 $16 + \text{measurement of the folder (33)} = 49$
 $49 \times 2 = 98$
 $98 - 53 = 45$
 $45 / \text{number of groups (5)} = 9$

SEQUENCES:

Math Escape Room!



Sequences!

$+8 \ +8 \ +8 \ +8$
 $1, 9, 17, 25, 33$

$-2 \ -2 \ -2 \ -2$
 $35, 33, 31, 29, 27$

$-10 \ -9 \ -8 \ -7$
 $98, 88, 79, 71, 64$

$/2 \ /2 \ /2 \ /2$
 $144, 72, 36, 18, 9$

$\times 1 \ \times 2 \ \times 3 \ \times 4$
 $1, 1, 2, 6, 24$

$33 + 27 + 64 + 9 + 24 = 157$

ENIGMA:

Math Escape Room!



Enigma!

I am a two-digit number. My tens digit is three times my units digit. The sum of my digits is 12. What number am I?

$a + b = 12$
 $b \times 3 = a$

93



FINAL CHALLENGE:

1.

Math Escape Room!

9	8	12	10	44
39	5	29	72	40
42	74	81	58	25
87	35	79	45	17
38	4	13	24	55

- Your number x 8 ($9 \times 8 = 72$)

Clue: all answers are in the chart

2.

Math Escape Room!

9	8	12	10	44
39	5	29	72	40
42	74	81	58	25
87	35	79	45	17
38	4	13	24	55

- Your number x 8 ($9 \times 8 = 72$)
- -37 ($72 - 37 = 35$)

Clue: all answers are in the chart

3.

Math Escape Room!

9	8	12	10	44
39	5	29	72	40
42	74	81	58	25
87	35	79	45	17
38	4	13	24	55

- Your number x 8 ($9 \times 8 = 72$)
- -37 ($72 - 37 = 35$)
- $/ 7$ ($35 / 7 = 5$)

Clue: all answers are in the chart

4.

Math Escape Room!

9	8	12	10	44
39	5	29	72	40
42	74	81	58	25
87	35	79	45	17
38	4	13	24	55

- Your number x 8 ($9 \times 8 = 72$)
- -37 ($72 - 37 = 35$)
- $/ 7$ ($35 / 7 = 5$)
- x itself ($5 \times 5 = 25$)

Clue: all answers are in the chart

5.

Math Escape Room!

9	8	12	10	44
39	5	29	72	40
42	74	81	58	25
87	35	79	45	17
38	4	13	24	55

- Your number x 8 ($9 \times 8 = 72$)
- -37 ($72 - 37 = 35$)
- $/ 7$ ($35 / 7 = 5$)
- x itself ($5 \times 5 = 25$)
- + 14 ($25 + 14 = 39$)

Clue: all answers are in the chart

6.

Math Escape Room!

9	8	12	10	44
39	5	29	72	40
42	74	81	58	25
87	35	79	45	17
38	4	13	24	55

- Your number x 8 ($9 \times 8 = 72$)
- -37 ($72 - 37 = 35$)
- $/ 7$ ($35 / 7 = 5$)
- x itself ($5 \times 5 = 25$)
- + 14 ($25 + 14 = 39$)
- $/ 3$ ($39 / 3 = 13$)

Clue: all answers are in the chart

7.

Math Escape Room!

9	8	12	10	44
39	5	29	72	40
42	74	81	58	25
87	35	79	45	17
38	4	13	24	55

- Your number x 8 ($9 \times 8 = 72$)
- -37 ($72 - 37 = 35$)
- $/ 7$ ($35 / 7 = 5$)
- x itself ($5 \times 5 = 25$)
- + 14 ($25 + 14 = 39$)
- $/ 3$ ($39 / 3 = 13$)
- + this number's digits in reverse order ($13 + 31 = 44$)

Clue: all answers are in the chart

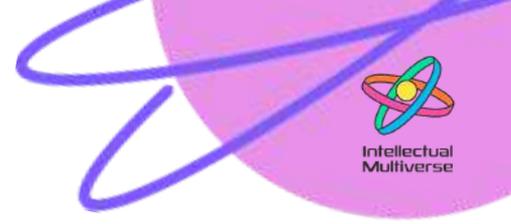
8.

Math Escape Room!

9	8	12	10	44
39	5	29	72	40
42	74	81	58	25
87	35	79	45	17
38	4	13	24	55

- Your number x 8 ($9 \times 8 = 72$)
- -37 ($72 - 37 = 35$)
- $/ 7$ ($35 / 7 = 5$)
- x itself ($5 \times 5 = 25$)
- + 14 ($25 + 14 = 39$)
- $/ 3$ ($39 / 3 = 13$)
- + this number's digits in reverse order ($13 + 31 = 44$)
- the digit from 1-9 that doesn't appear in the chart ($44 - 6 = 38$)

Clue: all answers are in the chart



5. ACTIVITY “HARMONY IN PICTURES”

MUSICAL INTELLIGENCE



TARGET GROUP

Adults/adults with fewer opportunities



NUMBER OF PARTICIPANTS

20 participants (divided in 4 - 5 groups)



TIME

Approximately 20 min.



OBJECTIVES

- To improve cognitive skills.
- To use music as a tool for understanding the reality.

DESCRIPTION OF THE ACTIVITY

The facilitator divides the participants into 4 or 5 groups. Each group is given an image and some instruments or sound tools.

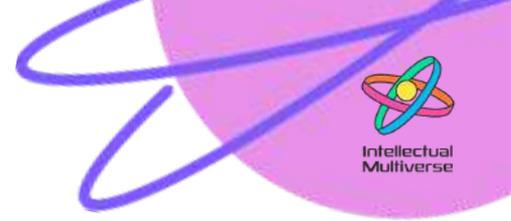
The groups should analyze their image for mood or story ideas and then create a piece of music that reflects the image's emotion or narrative.

After elaborating the piece of music, each group must perform the music for the other participants without revealing the image.

The rest of the groups must guess the image based on the music, followed by a reveal.

DISCUSSION/DEBRIEFING

- How did you feel while you were doing this activity?
- What did you find most challenging about the activity?
- How do you think that music conveys emotions or stories?
- If you were to do this activity again, what would you do differently?



6. ACTIVITY “MUSICAL STORYTELLERS”

MUSICAL INTELLIGENCE



TARGET GROUP

Adults/adults with fewer opportunities



OBJECTIVES

- To connect emotions to music.
- To learn how to describe emotions and how to create stories out of them.



NUMBER OF PARTICIPANTS

20 participants (divided in 4 - 5 groups)



TIME

Approximately 25 min.

DESCRIPTION OF THE ACTIVITY

The facilitator prepares in advance a piece of music. Then, the music is played, while participants are divided into 4 - 5 groups.

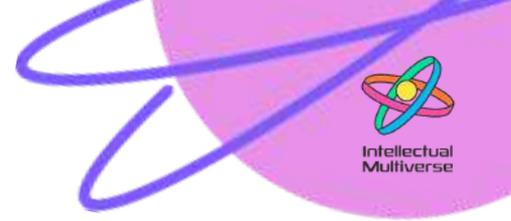
The facilitator asks them to focus on the emotions, mood, and any "story" they may hear. Participants can note key elements like tempo, dynamics, and instrumentation.

After listening, each group is asked to write a short story (200 words max.), based on how the music made them feel, describing characters, setting, and plot.

Finally, all participants share their stories with the rest of groups.

DISCUSSION/DEBRIEFING

- How did you feel while you were doing this activity?
- What did you find most challenging about the activity?
- How do you think that music conveys emotions or stories?
- How many different interpretations of the same music emerged?



7. ACTIVITY “RHYTHMS AND EMOTIONS”

MUSICAL INTELLIGENCE



TARGET GROUP

Adults/adults with fewer opportunities



NUMBER OF PARTICIPANTS

20 participants (divided in 4 - 5 groups)



TIME

Approximately 20 min.



OBJECTIVES

- To connect emotions to music.
- To learn how to interpret the emotions of others and to describe their own emotions without speaking, through their sounds and rhythms.

DESCRIPTION OF THE ACTIVITY

The facilitator divides the participants into 4 - 5 groups. Each group is given some musical instruments or another objects they can use to make sound (for example, shakers, sticks, etc.).

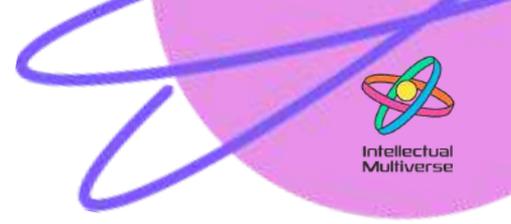
Each group is asked to create a rhythm that expresses a specific emotion, assigned beforehand: happiness, fear, anger, calm, etc...

Once every group has developed their rhythm, they will perform it for the other participants.

After each performance, the other groups must guess which emotion the rhythm represents and discuss how the rhythm made them feel.

DISCUSSION/DEBRIEFING

- How did you feel while you were doing this activity?
- What did you find most challenging about the activity?
- How do you think that music conveys emotions or stories?



8. ACTIVITY “RHYTHMIC BEATS”

BODILY-KINESTHETIC INTELLIGENCE



TARGET GROUP

Adults/adults with fewer opportunities



NUMBER OF PARTICIPANTS

15 participants



TIME

Approximately 30 min.



OBJECTIVES

- To practise body percussion, while exploring rhythms and movements.
- To improve coordination, memory and creativity.
- To develop and improve body awareness.

DESCRIPTION OF THE ACTIVITY

At the beginning, the facilitator explains that body percussion uses the body itself as a musical instrument, allowing each person to explore rhythms and movements in a creative and conscious way. For this reason, this activity improves coordination, rhythm and body awareness.

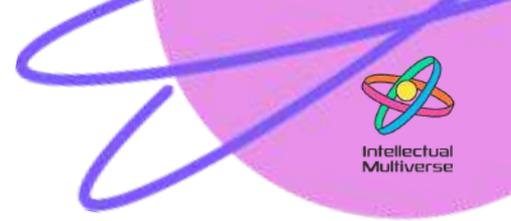
The facilitator should explain Body Percussion and its benefits for coordination and body awareness to the participants.

After that, facilitator plays some music (he/she must prepare it in advance) and participants are asked to explore individually some basic rhythms, using different parts of the body, and creating sequences.

To finish the activity, the facilitator can prepare a relaxation moment.

DISCUSSION/DEBRIEFING

- How did you feel while you were doing this activity?
- Have you ever tried body percussion activities before?
- What did you find most challenging about the activity?



9. ACTIVITY “TALK WITH YOUR HANDS”

BODILY-KINESTHETIC INTELLIGENCE



TARGET GROUP

Adults/adults with fewer opportunities



NUMBER OF PARTICIPANTS

15 participants



TIME

Approximately 30 min.



OBJECTIVES

- To learn a little about sign language.
- To practise a different way of speaking.
- To stimulate the locomotor system and improve attention and visual perception.

DESCRIPTION OF THE ACTIVITY

At the beginning, the facilitator explains to the participants the importance of Sign Language, highlighting that there is no “Universal Sign Language”, but that each language has its own Sign Language. For this activity, the facilitator can use the sign language in his/her own language, but some Sign Language Alphabet are given as examples.

After the explanation, using the Sign Language Alphabet, the participants are asked to practise names and words and to understand how they function.

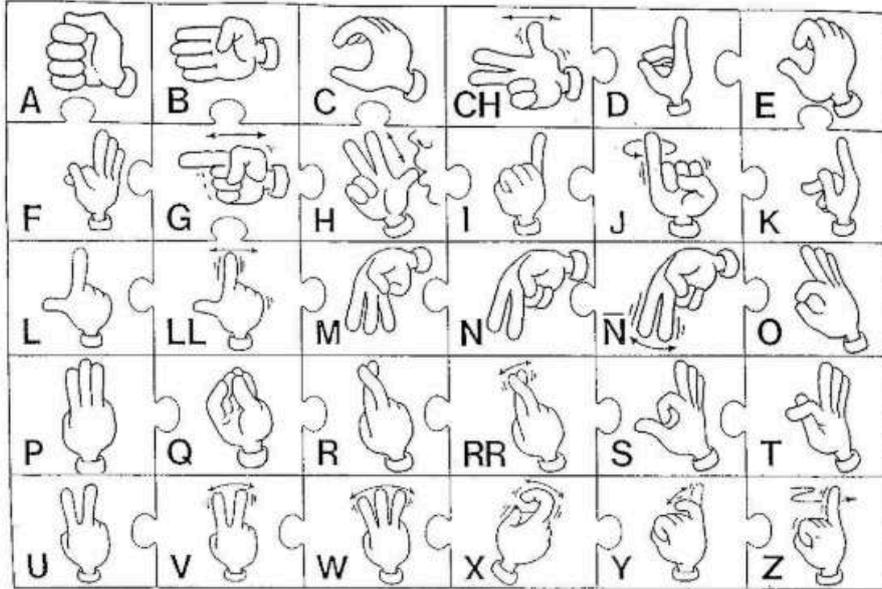
DISCUSSION/DEBRIEFING

- How did you feel while you were doing this activity?
- Have you ever tried to speak with your hands?
- What did you find most challenging about the activity?



ANNEX: SIGN LANGUAGE ALPHABETS

SPANISH SIGN LANGUAGE ALPHABET:



PORTUGUESE SIGN LANGUAGE ALPHABET:



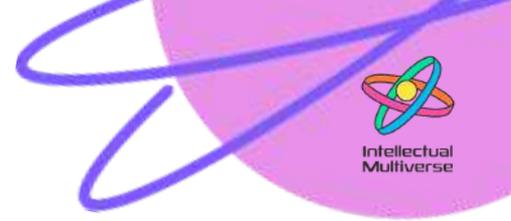


ITALIAN SIGN LANGUAGE ALPHABET:



ROMANIAN SIGN LANGUAGE ALPHABET:





10. ACTIVITY “ILLUSTRATING IMAGINATION”

SPATIAL INTELLIGENCE



TARGET GROUP

Adults/adults with fewer opportunities



OBJECTIVES

- To develop the representation.
- To encourage the imagination.
- To work on gross and fine motor skills.



NUMBER OF PARTICIPANTS

10 participants



TIME

Approximately 30 min.

DESCRIPTION OF THE ACTIVITY

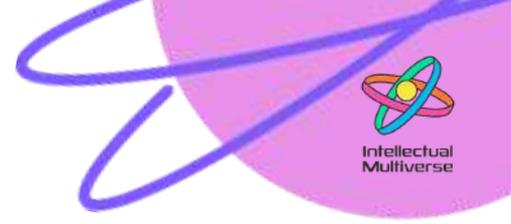
The facilitator reads aloud an excerpt from a randomly selected story. He/she repeats the fragment about three times.

While the facilitator is reading, the participants are asked to visualize the scene with their eyes closed. They are left for a few minutes to develop their imagination. After this time the participants should draw what the fragment of the story suggests to them.

It is not necessary to explain what the story is about. It is very nice to see how the same fragment is different in each person.

DISCUSSION/DEBRIEFING

- How did you feel while you were doing this activity?
- What did you find most challenging about the activity?



11. ACTIVITY “BLINDLY”

SPATIAL INTELLIGENCE



TARGET GROUP

Adults/adults with fewer opportunities



NUMBER OF PARTICIPANTS

15 participants



TIME

Approximately 30 min.



OBJECTIVES

- To develop concentration and recognition skills.
- To strength fine motor skills.
- To develop the recognition of textures and the understanding of shapes.

DESCRIPTION OF THE ACTIVITY

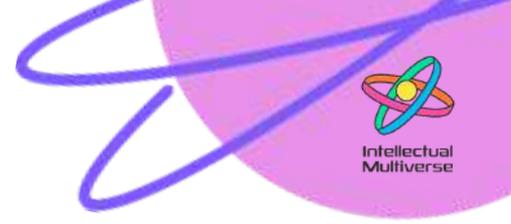
Previously to the development of this activity, the facilitator must hide in a bag several objects that are easy to recognize. They can be a small ball, a banana, a pencil and an apple, for example.

In this activity, the participants, without seeing what is inside, are asked to reach into the bag and select an object. They should touch it to try to recognise it and then draw the object without looking at the paper either - as this helps them to concentrate much more on touch and on the path of the crayons.

Another option to carry out this activity is for facilitator to ask participants to model with clay or plasticine the object they selected from the bag through the touch and texture of the object.

DISCUSSION/DEBRIEFING

- How did you feel while you were doing this activity?
- What did you find most challenging about the activity?



12. ACTIVITY “SCULPTING THE SELF: A JOURNEY IN CLAY”

INTRAPERSONAL INTELLIGENCE



TARGET GROUP

Adults/adults with fewer opportunities



NUMBER OF PARTICIPANTS

8 - 20 participants



TIME

Approximately 90 min.



OBJECTIVES

- To foster self-awareness through creative expression.
- To encourage reflection on personal identity, emotions, and values.
- To develop the ability to translate internal self-concepts into symbolic representation.

INTRODUCTION

The facilitator should introduce intrapersonal intelligence as the ability to access one’s own feelings and internal states and to use this knowledge for self-guidance (Gardner, 2011). Then, he/she should explain that creative activities like sculpting can help externalize internal experiences, promoting deeper self-understanding.

WARM-UP: GUIDED VISUALIZATION

The facilitator asks participants to close their eyes and imagine their current “self” as an object, shape, or symbol (5 min. approx.).

Prompt reflection: What colors, textures, or forms come to their minds?

DESCRIPTION OF THE ACTIVITY

This activity is divided in 3 different moments:

1. Sculpting Session (45 min. approx.):

The facilitator distributes clay or modeling dough to each participant. Then, he/she instructs them to sculpt a representation of themselves (not a literal self-portrait, but a symbolic or abstract model reflecting who they are at this moment).

The facilitator should encourage them to think about their emotions, values, strengths, and challenges while sculpting.



2. Reflection Writing (10 min. approx.):

After completing the sculpture, the facilitator asks participants to write a short paragraph describing their work:

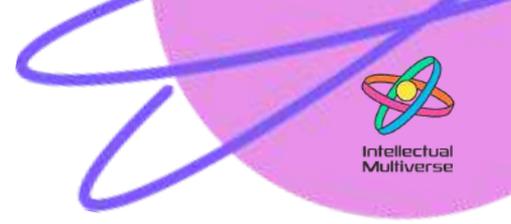
- How did they choose these shapes/colors?
- What aspects of themselves are they representing?

3. Sharing (20 min. approx.):

Participants who feel comfortable can present their sculptures and reflections to the group.

DISCUSSION/DEBRIEFING

- How did it feel to represent yourself in a non-verbal, artistic way?
- Did the sculpture reveal anything unexpected about you?



13. ACTIVITY “THE 3 LETTERS: A DEEP DIVE INTO THE SELF”

INTRAPERSONAL INTELLIGENCE



TARGET GROUP

Adults/adults with fewer opportunities



NUMBER OF PARTICIPANTS

8 - 20 participants (Individual activity,
optional sharing in pairs or small groups)



TIME

Approximately 90 min.



OBJECTIVES

- To foster advanced self-awareness and emotional intelligence.
- To encourage deep reflection on past experiences, present identity, and future aspirations.
- To develop personal goal setting and long-term vision aligned with internal values.

INTRODUCTION

The facilitator should introduce intrapersonal intelligence as the foundation for knowing oneself, managing emotions, and making informed, authentic life choices (Gardner, 2011). The, he/she should also explain that the ability to reflect deeply across time (past, present, and future) builds a coherent sense of identity and purpose.

WARM-UP: QUICK GUIDED VISUALIZATION

The facilitator says the following to the participants: *"Close your eyes and picture yourself as a child. Now shift the image to who you are today. Finally, imagine yourself 10 years from now."*

After 5 min. approx., the facilitator asks participants to write three words describing each version of themselves: Past, Present, Future.



DESCRIPTION OF THE ACTIVITY

This activity is divided in 3 different moments, as participants will write 3 different letters sequentially, building a dialogue across time:

1. Letter to the Past Self (20 min. approx.):

The participants are asked to address their younger self (5–10 years ago). Each person should express gratitude, forgiveness or advice for the experiences he/she had. The facilitator will ask participants to reflect on what they have learned from their past challenges and successes.

2. Letter to the Current Self (20 min. approx.):

The facilitator asks participants to write to themselves today, reflecting on acknowledge strengths and areas for growth. The participants should reflect on what matters most to them now and how they are living according to their values.

3. Letter to the Future Self (20 min. approx.):

The facilitator asks participants to project themselves 10 years ahead, sharing their hopes, dreams, and intentions. Participants should describe the kind of person each one aspires to become and the path they envision.

Finally, there will be a Reflection Sharing (20 min. approx.): In pairs or trios, participants can share selected excerpts or insights - optional, depending on comfort level.

DISCUSSION/DEBRIEFING

- Which letter was the hardest to write? Why?
- Did writing these letters shift your understanding of who you are or where you're heading?
- How can you use what you discovered to guide your actions starting today?



MATERIALS

- Paper, pens, envelopes (optional, if participants wish to seal their letters).
- Calm background music (optional) to support a reflective atmosphere.



RECOMMENDATIONS FOR FACILITATORS/VARIATIONS

Create a "time capsule": seal the letters and schedule them to be returned to participants in one year.

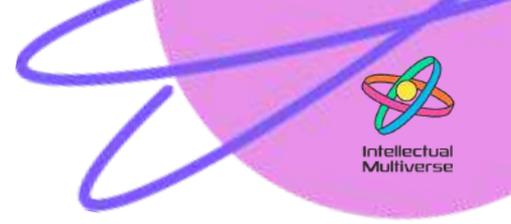
As a visual variation, after writing, participants can draw a timeline linking the three selves.

Use poetic form for the letters to encourage deeper emotional expression.



BIBLIOGRAPHY

- Gardner, H. (2011). *Frames of mind: The theory of multiple intelligences* (Updated ed.). Basic Books.
- Pennebaker, J. W. (1997). *Opening up: The healing power of expressing emotions*. Guilford Press.
- Brown, B. (2018). *Dare to Lead: Brave Work. Tough Conversations. Whole Hearts*. Random House.



14. ACTIVITY “BUILDING BRIDGES: THE EMPATHY CIRCLE”

INTERPERSONAL INTELLIGENCE



TARGET GROUP

Adults/adults with fewer opportunities



NUMBER OF PARTICIPANTS

8 - 20 participants



TIME

Approximately 90 min.



OBJECTIVES

- To enhance empathy and active listening skills.
- To foster collaboration and understanding among participants.
- To develop the ability to interpret social cues and respond appropriately.
- To practice constructive feedback and peer support.

INTRODUCTION

The facilitator should introduce the concept of interpersonal intelligence as the ability to understand and interact effectively with others (Gardner, 2011). He/she should highlight the importance of empathy and listening skills in building strong personal and professional relationships.

WARM-UP EXERCISE

The facilitator starts by pairing the participants randomly. Each person has 3 minutes to share a positive experience from their life while the other participant listens attentively without interrupting.

After each round, listeners summarize what they heard, focusing on emotions and key points.

Debrief the warm-up by asking:

- How did it feel to be listened to without interruption?
- What was challenging about summarizing the story?



DESCRIPTION OF THE ACTIVITY

The facilitator asks participants to form small circles (5 - 6 people on each). Then, one participant shares a real or hypothetical problem or dilemma (2 - 3 min. approx.). After the sharing, each group member reflects briefly (1 min. approx.) on what they understood, focusing on emotions and needs expressed. No advice is allowed at this stage – only reflections and empathetic responses.

After all reflections, the original speaker can comment on what feedback was most meaningful.

Then, the facilitator ask participants to rotate roles until each person has had a chance to share.

DISCUSSION/DEBRIEFING

- What did you learn about yourself and others?
- How did active listening influence your connection to the speaker?
- In what ways can these skills be applied in daily life?



MATERIALS

- Chairs arranged in circles.
- Timer or stopwatch.
- Notebook and pen (optional, for personal notes).



RECOMMENDATIONS FOR FACILITATORS/VARIATIONS

For smaller groups, increase the number of sharing rounds.

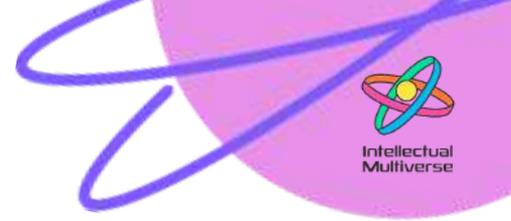
For advanced participants, introduce more complex topics for discussion (for example, ethical dilemmas).

Encourage participants to maintain eye contact and use non-verbal affirmations (nodding, smiling).



BIBLIOGRAPHY

- Gardner, H. (2011). *Frames of mind: The theory of multiple intelligences* (Updated ed.). Basic Books.
- Goleman, D. (1995). *Emotional intelligence: Why it can matter more than IQ*. Bantam Books.



15. ACTIVITY “THE NEGOTIATION GAME: WIN-WIN MISSION”

INTERPERSONAL INTELLIGENCE



TARGET GROUP

Adults/adults with fewer opportunities



NUMBER OF PARTICIPANTS

12 - 30 participants



TIME

Approximately 90 min.



OBJECTIVES

- To develop awareness of nature around us.
- To motivate myself to do outdoors activities.
- To promote learning while enjoying natural environments.

INTRODUCTION

The facilitator should briefly introduce interpersonal intelligence, emphasizing the importance of negotiation, collaboration, and social awareness (Gardner, 2011). Then, it can be a moment of discussion about how real-world success often depends on reaching mutually beneficial agreements.

WARM-UP: YES - NO EXERCISE

The facilitator starts by pairing the participants randomly. In each pair, participants have to continue a conversation where they are only allowed to respond with “yes” or “no” - no other words allowed.

After 2 minutes, the facilitator should ask the following:

- How hard was it to keep the conversation going?
- What strategies worked best?



DESCRIPTION OF THE ACTIVITY

The facilitator divides the participants into teams of 3 - 4 people. Each team represents a different "country" tasked with negotiating an international agreement (for example, environmental treaty, trade deal, cultural exchange). Each team receives a confidential brief detailing their country's goals, must-haves, and points they are willing to compromise on.

Then, there is a Negotiation Phase: all teams have 30 min. approx. to negotiate and reach a consensus that meets at least 70% of each country's goals.

Finally, there will be a reflection on the negotiation process, when the facilitator can ask participants the following:

- What strategies were effective?
- What were the biggest challenges?
- How did empathy and understanding help in reaching agreements?

DISCUSSION/DEBRIEFING

- How did you manage competing interests?
- What role did listening and flexibility play in successful negotiation?
- Can you think of real-life situations where these skills are critical?



MATERIALS

- Paper sheets.
- Pencils and/or pens.
- Confidential country briefs (printed or digital).
- Negotiation sheets (to track agreements and compromises).
- Timer.



RECOMMENDATIONS FOR FACILITATORS/VARIATIONS

Add a twist: introduce unexpected “global events” midway (for example, economic crisis, environmental disaster) that force teams to adapt their negotiation strategies.

For smaller groups, create fictional companies or organizations instead of countries.



BIBLIOGRAPHY

- Gardner, H. (2011). *Frames of mind: The theory of multiple intelligences* (Updated ed.). Basic Books.
- Fisher, R., Ury, W., & Patton, B. (2011). *Getting to Yes: Negotiating Agreement Without Giving In* (3rd ed.). Penguin Books.

16. ACTIVITY “MY FIELD DIARY - NATURE JOURNAL”

NATURALIST INTELLIGENCE



TARGET GROUP

Adults/adults with fewer opportunities



NUMBER OF PARTICIPANTS

10 - 12 participants (to work individually)



TIME

Approximately 60 min.



OBJECTIVES

- To develop empathy for the natural environment.
- To motivate yourself for outdoor activities.
- To promote learning in a natural setting.

WARM-UP: WHO IS WHO?

The facilitator starts by explaining to the participants that some historical figures are considered to have the highest naturalistic intelligence. Then, he/she will challenge participants to guess who these figures are (for this purpose, the facilitator has at his/her disposal some slides in the Annex).

DESCRIPTION OF THE ACTIVITY

This activity is divided in 4 steps.

STEP 1. (15 min. approx.):

Following the path of Darwin, the facilitator challenges the participants to build their own Nature Journal: a small booklet to take with them on their next walk and start spotting naturalistic details all around them. Drawings, feelings, observations, interesting details, learnings, natural elements, etc.

The facilitator presents the Nature Journal film (whose link is available on “Materials” section) or another film more suitable to the group.

Then the facilitator presents the materials and allows the participants to work on it for 15 min. approx.: draw, cut, glue, write..., using their creativity to build and decorate the journal. The cover can be personalized, chapters can be included (plants, animals, thoughts, drawings and photographs, among others).



STEP 2. (10 min. approx.):

The next challenge for participants is to start using the Nature Journal. The facilitator asks the participants to recall a certain spot in Nature they can remember: the house garden, a holiday place, a trip they never forget, the Sunday family walk...

Once the spot is identified, the facilitator challenges the participants to bring to mind memories of that nature spot and fill in the Journal with related information: name of the place, location, data of visit, season of the year, typical landscape (mountain, plane, valley, river, forest), typical trees/flowers/ animals, common sounds (water, wind, bird singing), smells and colours, specific and unique details that are stuck in one's memory... This information can be written or even drawn.

STEP 3. (10 min. approx.):

The facilitator invites the participants to list on post-it (or small reused papers) ideas related to sustainability and respect for nature in our lives, and place them in 3 different boxes:

1. Nature friendly actions each person already includes in his/her life.
2. Nature friendly actions each person considers experimenting.
3. WOW actions (something new, bold, out of the box...).

Finally, from the boxes, the participants can choose some actions they would like to try in their daily life to become more sustainable and nature friendly - and include them in the Nature Journal.

STEP 4. (10 min. approx.):

The facilitator invites the participants (those who wish to) to present their journals and/or their special spot and/or the WOW actions.

DISCUSSION/DEBRIEFING

- Did you feel you were somehow connecting to Nature?
- Did you discover a "nature lover" you did not know of inside you?
- Do you agree this kind of activity can help you develop naturalistic skills and a more caring attitude towards nature?



MATERIALS

- Paper sheets.
- Pencils and/or pens.
- Craft materials: draft paper, used card boxes, draft paper, scissors, glue, scotch-tape, old magazines (for picture cutting) and natural elements (flowers, tree leaves, sticks...), among others.
- Post-its or small pieces of paper.
- 3 small boxes.



RECOMMENDATIONS FOR FACILITATORS/VARIATIONS

Keep music/sounds playing while the participants are working, if the activity is developed in a room. Here are some links to nature sounds:

- [Birds Singing](#)
- [Water White noise](#)
- [Ocean Waves](#)

While the participants are at work, Aromatherapy is another possible option in terms of awakening the senses and providing an atmosphere of wellness.

If possible, develop this activity in an outdoor space (a garden, a picnic area, etc.).

As the project's activities all together provide a personal path, another suggestion is to use this Nature Journal as a Personal Diary for the whole process of Multiverse Activities. This way, each participant will have a personalized notebook to register, write, draw, take notes, make lists, make plans, etc., while participating in the project's activities about Multiple Intelligences.



RESOURCES

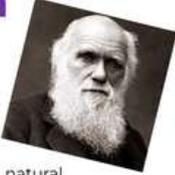
- Short video about making a Nature Journal: [Nature Journal film](#)
- Step by step instructions about making a Nature Journal: <https://www.wikihow.life/Make-a-Nature-Journal>
- Different proposals for Field Diaries: <https://pt.pinterest.com/search/pins/?q=naturalistic%20journals&rs=typed>
- What to register in a Field Diary (in English):
 - <https://www.youtube.com/shorts/jJU0YwtzT8Y>
 - <https://www.earthwiseaware.org/ewa-nature-circles/ewa-circles-rules-tools/nature-naturalist-journaling-why-how-to/>



ANNEX: SLIDES FOR THE WARM-UP “WHO IS WHO?”

Charles Darwin

Guess who?



He retained his childhood love and curiosity for the natural world, he ultimately became one of the most influential people in history with his work on the evolution of species.

Jacques Costeau

Guess who?



French naval officer and ocean explorer, scientist, and researcher studied all forms of marine life.

Dian Fossey

Guess who?



She was a zoologist best known for researching the endangered gorillas of the Rwandan mountain forest and one of the first to call attention to the extinction of species.

Carl Sagan

Guess who?



He led us through the heights of the galaxy and became a popular and influential astronomer.



Jane Goodall



Guess who?

She is a British ethologist, known for her exceptionally detailed and long-term research on the chimpanzees of Gombe Stream National Park in Tanzania.

Greta Thunberg



Guess who?

She is a young Swedish environmental activist known for challenging world leaders to take immediate action to mitigate the effects of human-caused climate change.

Nature & (NOT famous) people

Since the beginning, **indigenous peoples** have had a strong relationship with nature.



They consider it sacred and feel an integral part of it.

It's the environment from which they derive their sustenance - the food and water they need to survive.

Indigenous communities pay special attention to climate cycles and the seasons (the best time for planting and growing crops.)

In their rituals, the elements of nature, especially flora and fauna, are always present.

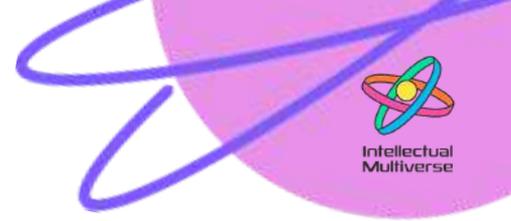
Nature & (NOT famous) people

Indigenous people are peoples who maintain **a way of life in harmony with nature**.



They are **inspiring examples of sustainable societies**, and their knowledge and practices should guide humanity's growth towards sustainability.

Examples: Amazonian Indian communities, the north american First Nations, the Massai People in Kenia, the Pigmee People in central Africa, the Maoris in New Zealand, the Kanaks in New Caledonia...



17. ACTIVITY “NATURE C.S.I.”

NATURALIST INTELLIGENCE



TARGET GROUP

Adults/adults with fewer opportunities



NUMBER OF PARTICIPANTS

15 participants



TIME

Approximately 40 min.



OBJECTIVES

- To resolve environmental mysteries
analysing evidence about animal
presence and actions.

WARM-UP: CAN YOU TELL?

The facilitator starts by challenging the participants with some knowledge about nature: can they identify animals by the sound they make? Here is a list of possibilities: <https://animalsoundslist.com/>

Another possibility with a variety of sounds found in nature (water, steps walking, bird singing, frog sounds, etc.): <https://pixabay.com/sound-effects/search/nature/>

DESCRIPTION OF THE ACTIVITY

The facilitator divides the participants into groups and informs them that they will be Crime Scene Investigators (C.S.I.) of what may have happened in a certain natural environment.

The facilitator presents an example (called “Mystery 0”): the scenario, the clues, the suspects, the possible hypotheses, the answer and the justification.

Then each group receives a nature situation to analyse concerning a mysterious scenario. The groups analyse the clues and propose hypotheses to what may have happened.

After that, each group presents their solutions to the mystery and their justifications, according to their naturalistic knowledge.

Finally, the facilitator confirms/reveals the correct answer and provides further explanation - if needed.



DISCUSSION/DEBRIEFING

- Do you agree this kind of activity can help you develop naturalistic skills and a more caring attitude towards nature?



MATERIALS

- Paper sheets.
- Pencils and/or pens.
- Mystery cards for the facilitator (Annex 1) with hints to help the groups, if needed.
- Mystery cards for the participants (Annex 2) with the information about the mystery and blank spaces to write down the hypothesis, the answer and the justification.



RECOMMENDATIONS FOR FACILITATORS/VARIATIONS

The facilitator may create their own C.S.I. scenarios more adjusted to the Fauna and Flora of the region.



RESOURCES

Sounds of animals for the warm-up exercise:

- <https://animalsoundslist.com/>
- <https://pixabay.com/sound-effects/search/nature/>

ANNEX 1: MYSTERY CARDS FOR THE FACILITATOR

MYSTERY 0 (EXAMPLE):

TITLE	THE SCRATCHED TREE
SCENARIO	A tree shows signs of being visited by an animal.
CLUES	<p>Large, rounded footprints near a scratched tree.</p> <p>There are partially eaten fruit peels and teeth marks on the ground.</p> <p>Someone scratched the tree and left tufts of dark fur.</p>
SUSPECTS	<ul style="list-style-type: none"> • Wolf • Bear • Deer • Fox
POSSIBLE HYPOTHESES	<p>Wolves don't eat fruit.</p> <p>A Deer doesn't have dark hair.</p> <p>Bears eat fruit, leave big footprints and rub against trees.</p> <p>Foxes don't have dark fur.</p>
ANSWER	Bear
JUSTIFICATION	Bears eat fruit, have dark hair and love to scratch trees with their claws.

MYSTERY 1:

TITLE	THE INVADED CAMPING SITE
SCENARIO	A group of campers wake up to find their campsite gone. There are footprints in the dirt, torn food packets and a ripped backpack.
CLUES	Small footprints near the tents. Bitten and scattered food packages. Orange hairs stuck to the backpack.
SUSPECTS	<ul style="list-style-type: none"> • Fox • Badger • Stray dog
POSSIBLE HYPOTHESES	Foxes have orange fur. Badgers can handle garbage, but they have dark fur. A Stray dog can also look for food in the garbage.
ANSWER	Fox
JUSTIFICATION	Foxes have orange fur and are very curious about human activity.

MYSTERY 2:

TITLE	THE POLLUTED LAKE
SCENARIO	A small lake that used to be crystal clear is now murky with foam on the surface. Several fish lie dead on the shore.
CLUES	<p>The water smells different.</p> <p>The grass near the lake looks greener and more overgrown.</p> <p>There is a lot of algae on the surface of the water.</p> <p>There are wheel tracks on the shore.</p>
SUSPECTS	<ul style="list-style-type: none"> • Fertilizers from a nearby farm • Beavers • Wild boar
POSSIBLE HYPOTHESES	<p>Fertilizers from a nearby farm - Excess nutrients cause algae blooms, which remove oxygen from the water and kill fish.</p> <p>Beavers can change the flow of water, but they don't cause foam or fish to die.</p> <p>Wild boar can stir up mud but would not affect the water in this way.</p>
ANSWER	Fertilizers from a nearby farm
JUSTIFICATION	Fertilizers cause the change of water colours, excessive growth plants and algae. The track of wheels on the shore are proof of human presence.

MYSTERY 3:

TITLE	THE MISSING EGGS
SCENARIO	A nest that was full of eggs yesterday is now empty. There are no signs of broken shells, but there are feathers on the ground.
CLUES	Gray and white feathers scattered on the ground. Small scratches on the tree trunk. No eggshells at the site. Distant sound of an animal calling at night.
SUSPECTS	<ul style="list-style-type: none"> • Owl • Wildcat • Raccoon
POSSIBLE HYPOTHESES	Owls hunt small birds and can take whole eggs without leaving a trace. Wildcat could steal eggs but usually leave more visible marks. Raccoons steal eggs but usually break the shells on the spot.
ANSWER	Owl
JUSTIFICATION	Gray and white feathers scattered, no other marks and the disappearance of the eggs. The calling sound.

MYSTERY 4:

TITLE	THE SHATTERED TREE
SCENARIO	A young tree was destroyed during the night. Its trunk is cut to pieces and branches are scattered everywhere.
CLUES	Irregularly cut trunk. Tooth marks in the wood. Small dyke is starting to form in a nearby stream. Wet tracks near the bank.
SUSPECTS	<ul style="list-style-type: none"> • Beaver • Boar • Bear
POSSIBLE HYPOTHESES	Beavers cut down trees with their teeth to build dykes. Boars can scratch trees, but they don't cut down trunks. Bears scratch trees to mark their territory, but they don't destroy them that way.
ANSWER	Beaver
JUSTIFICATION	The irregularly cut trunk with tooth marks in the wood. The building of a small dyke on a nearby stream.

MYSTERY 5:

TITLE	THE MYSTEIOUS BURROW
SCENARIO	On a mountain trail, the hikers find a newly dug burrow, but they don't know what animal it might be.
CLUES	<p>Deep, wide hole, with earth churned up around it.</p> <p>Small clawed footprints at the entrance.</p> <p>Insect remains and small bones nearby.</p> <p>A strong smell of musk coming from the hole.</p>
SUSPECTS	<ul style="list-style-type: none"> • Badger • Rabbit • Fox
POSSIBLE HYPOTHESES	<p>Badgers dig large burrows and feed on insects and small animals.</p> <p>Rabbits also dig burrows, but they don't leave bone remains around.</p> <p>Foxes can dig holes, but they usually choose natural shelters rather than digging something new.</p>
ANSWER	Badger
JUSTIFICATION	The deep, wide hole with small, clawed footprints at the entrance and the strong smell of musk coming from the hole.

MYSTERY 6:

TITLE	GARDEN UNDER ATTACK
SCENARIO	A community garden full of vegetables and flowers is starting to show eaten leaves, small sticky trails and diseased plants.
CLUES	Leaves with small holes and chew marks. Small greenish eggs on the back of leaves. Some plants are covered in a sticky substance. Presence of ants around affected plants.
SUSPECTS	<ul style="list-style-type: none"> • Aphids • Caterpillars • Snails
POSSIBLE HYPOTHESES	Aphids suck the sap from plants and excrete a sweet substance (honeydew), which attracts ants. The ants protect the aphids in exchange for the honeydew. Caterpillars also eat leaves, but they don't produce the sticky substance. Snails leave trails of mucus, but they don't lay greenish eggs or attract ants.
ANSWER	Aphids
JUSTIFICATION	The sticky substance, the greenish eggs and the presence of ants.



TEMPLATE TO CREATE ANOTHER MYSTERIES:

TITLE	
SCENARIO	
CLUES	
SUSPECTS	
POSSIBLE HYPOTHESES	
ANSWER	
JUSTIFICATION	

ANNEX 2: MYSTERY CARDS FOR THE PARTICIPANTS

MYSTERY 0 (EXAMPLE):

TITLE	THE SCRATCHED TREE
SCENARIO	A tree shows signs of being visited by an animal.
CLUES	<p>Large, rounded footprints near a scratched tree.</p> <p>There are partially eaten fruit peels and teeth marks on the ground.</p> <p>Someone scratched the tree and left tufts of dark fur.</p>
SUSPECTS	<ul style="list-style-type: none"> • Wolf • Bear • Deer • Fox
POSSIBLE HYPOTHESES	
ANSWER	
JUSTIFICATION	



MYSTERY 1:

TITLE	THE INVADED CAMPING SITE
SCENARIO	A group of campers wake up to find their campsite gone. There are footprints in the dirt, torn food packets and a ripped backpack.
CLUES	Small footprints near the tents. Bitten and scattered food packages. Orange hairs stuck to the backpack.
SUSPECTS	<ul style="list-style-type: none">• Fox• Badger• Stray dog
POSSIBLE HYPOTHESES	
ANSWER	
JUSTIFICATION	



MYSTERY 2:

TITLE	THE POLLUTED LAKE
SCENARIO	A small lake that used to be crystal clear is now murky with foam on the surface. Several fish lie dead on the shore.
CLUES	The water smells different. The grass near the lake looks greener and more overgrown. There is a lot of algae on the surface of the water. There are wheel tracks on the shore.
SUSPECTS	<ul style="list-style-type: none">• Fertilizers from a nearby farm• Beavers• Wild boar
POSSIBLE HYPOTHESES	
ANSWER	
JUSTIFICATION	



MYSTERY 3:

TITLE	THE MISSING EGGS
SCENARIO	A nest that was full of eggs yesterday is now empty. There are no signs of broken shells, but there are feathers on the ground.
CLUES	Gray and white feathers scattered on the ground. Small scratches on the tree trunk. No eggshells at the site. Distant sound of an animal calling at night.
SUSPECTS	<ul style="list-style-type: none">• Owl• Wildcat• Raccoon
POSSIBLE HYPOTHESES	
ANSWER	
JUSTIFICATION	



MYSTERY 4:

TITLE	THE SHATTERED TREE
SCENARIO	A young tree was destroyed during the night. Its trunk is cut to pieces and branches are scattered everywhere.
CLUES	Irregularly cut trunk. Tooth marks in the wood. Small dyke is starting to form in a nearby stream. Wet tracks near the bank.
SUSPECTS	<ul style="list-style-type: none">• Beaver• Boar• Bear
POSSIBLE HYPOTHESES	
ANSWER	
JUSTIFICATION	

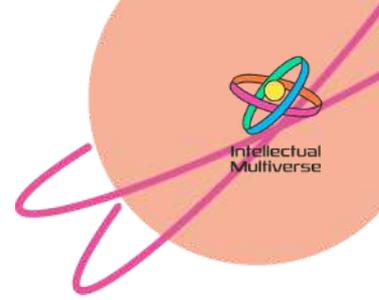
MYSTERY 5:

TITLE	THE MYSTERIOUS BURROW
SCENARIO	On a mountain trail, the hikers find a newly dug burrow, but they don't know what animal it might be.
CLUES	Deep, wide hole, with earth churned up around it. Small clawed footprints at the entrance. Insect remains and small bones nearby. A strong smell of musk coming from the hole.
SUSPECTS	<ul style="list-style-type: none"> • Badger • Rabbit • Fox
POSSIBLE HYPOTHESES	
ANSWER	
JUSTIFICATION	



MYSTERY 6:

TITLE	GARDEN UNDER ATTACK
SCENARIO	A community garden full of vegetables and flowers is starting to show eaten leaves, small sticky trails and diseased plants.
CLUES	Leaves with small holes and chew marks. Small greenish eggs on the back of leaves. Some plants are covered in a sticky substance. Presence of ants around affected plants.
SUSPECTS	<ul style="list-style-type: none">• Aphids• Caterpillars• Snails
POSSIBLE HYPOTHESES	
ANSWER	
JUSTIFICATION	



WHAT ARE THE GAMES AND HOW THEY CAN BE USED

With the aim of generating a proposal for a programme of games through which educators and adults who participate in it can recognise what the 8 intelligences are and their relationship with the areas of personal development, the consortium of the “Intellectual Multiverse” project has **created and developed 9 different games** (one for each of the 8 Multiple Intelligences and an extra game). The mentioned programme, with its corresponding introduction and subsequent conclusions, takes shape in the Workshop “Intellectual Multiverse” (which can be found in the last chapter of this Toolkit), aimed at increasing the motivation of pupils, especially adults with fewer opportunities, through the vision of their abilities and the recognition of their potential after completing the mentioned Workshop.

In order to work on **Interpersonal Intelligence**, the following games are suggested:

- Game called “The Submarine’s Journey” (30 min. approx.). In addition to Interpersonal Intelligence, through this game it can be worked on the Spatial one. The objectives of this game for participants are to improve spatial orientation and coordination skills, to practise sequences of movements, to foster trust, communication and active listening skills, to work on teamwork (be aware of the individual role in the group) and also to boost body and self-awareness both individual and group.
- Game called “Acquire the wisdom” (30 min. approx.). Through this game it can be worked on Intrapersonal Intelligence and Interpersonal too. The objectives of this game for participants are to label emotions, to draw on emotions as a means of understanding and guiding one’s own behaviour and to be able to read the intentions and desires of others.
- Game called “Brave new world” (45 min. - 1 hour approx.). This is the 9th game designed in the framework of this project additionally, whose duration is about 1 hour and the main Intelligence worked on the mentioned game is the Logical-mathematical and the secondary is the Interpersonal. The objectives of this extra-game for participants are to connect their logic with the interpersonal intelligence and make eco-friendly decisions, to assess their logical intelligence and the capacity of decision-making, to establish priorities and to develop their team-work skills.

If the objective is to work on **Logical-Mathematical Intelligence**, the following games are suggested:

- Game called “The Whispering Forest” (20 - 25 min. approx.). In addition to Logical-Mathematical Intelligence, through this game it can be worked on the Linguistic one. The objectives of this game for participants are to strengthen problem-solving and critical-thinking skills, to exercise logical-thinking in a cooperative setting, to exercise linguistic skills in a cooperative setting, and to evaluate logical-mathematical intelligence in participants, and also linguistic one.
- Game “Brave new world” (45 min. - 1 hour approx.). The main Intelligence worked on it is the Logical-mathematical and the secondary is the Interpersonal. The objectives of this extra-game for participants are to connect their logic with the interpersonal intelligence and make eco-friendly decisions, to assess their logical intelligence and the capacity of decision-making, to establish priorities and to develop their team-work skills.

If the aim is to work on **Spatial Intelligence**, the following games are suggested:

- Game called “Moving around your house” (30 min. approx.). In addition to Spatial Intelligence, through this game it can be worked on the Bodily-kinesthetic one. The objectives of this game for participants are to foster the ability to solve problems using the body or parts of it, to improve the physical coordination and body awareness (and also the fine and gross motor skills), to improve spatial awareness and kinesthetic memory and to practice expressive movement and mental representations creation too.
- Game “The Submarine’s Journey” (30 min. approx.). Through this game it can be worked on the Interpersonal Intelligence and Spatial too. The objectives of this game for participants are to improve spatial orientation and coordination skills, to practise sequences of movements, to foster trust, communication and active listening skills, to work on teamwork (be aware of the individual role in the group) and also to boost body and self-awareness both individual and group.

If the objective is to work on **Musical Intelligence**, the following games are suggested:

- Game called “Connecting the rhythms” (30 min. approx.). In addition to Musical Intelligence, through this game it can be worked on the Naturalistic one. The objectives of this game for participants are to discriminate, integrate and create sounds and melodies, to develop the rhythmic ability, to discriminate, identify and categorize natural sounds, and also to logically compile and critically evaluate the data to give meaning.
- Game called “WordJam: The Music Factor” (30 min. approx.). Through this game it can be worked on Linguistic Intelligence and Musical too. The objectives of this game for participants are to foster creativity, to improve vocabulary, teamwork and performance skills, and to practise time management and public speaking/performance.

If the aim is to work on **Intrapersonal Intelligence**, the following games are suggested:

- Game “Acquire the wisdom” (30 min. approx.). In addition to Intrapersonal Intelligence, through this game it can be worked on the Interpersonal one. The objectives of this game for participants are to label emotions, to draw on emotions as a means of understanding and guiding one’s own behaviour and to be able to read the intentions and desires of others.
- Game called “Know your emotions” (30 min. approx.). Through this game it can be worked on the Bodily-Kinesthetic Intelligence and Intrapersonal too. The objectives of this game for participants are to recognise one’s own emotions and also the others’ emotions, and to draw on emotions as a means of understanding and guiding one’s own behaviour.

If the objective is to work on **Linguistic Intelligence**, the following games are suggested:

- Game “WordJam: The Music Factor” (30 min. approx.). In addition to Linguistic Intelligence, through this game it can be worked on the Musical one. The objectives of this game for participants are to foster creativity, to improve vocabulary, teamwork and performance skills, and to practise time management and public speaking/performance.
- Game “The Whispering Forest” (20 - 25 min. approx.). Through this game it can be worked on Logical-Mathematical Intelligence and Linguistic too. The objectives of this game for participants are to strengthen problem-solving and critical-thinking skills, to exercise logical-thinking in a cooperative setting, to exercise linguistic skills in a cooperative setting, and to evaluate logical-mathematical intelligence in participants, and also linguistic one.

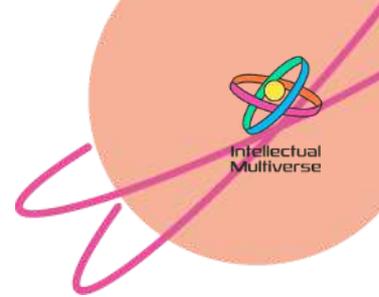


If the objective is to work on **Naturalistic Intelligence**, the following games are suggested:

- Game called “Naturalistic Gymkhana” (45 min. approx.). In addition to Naturalistic Intelligence, through this game it can be worked on the Logical-Mathematical one. The objectives of this game for participants are to learn how to pay attention to natural details and elements in their local area, to validate the knowledge about natural elements and improve the learning of more, and also to develop awareness to natural causes and questions in their surroundings.
- Game “Connecting the rhythms” (30 min. approx.). Through this game it can be worked on Musical Intelligence and Naturalistic too. The objectives of this game for participants are to discriminate, integrate and create sounds and melodies, to develop the rhythmic ability, to discriminate, identify and categorize natural sounds, and also to logically compile and critically evaluate the data to give meaning.

If the aim is to work on **Bodily-Kinesthetic Intelligence**, the following games are suggested:

- Game “Know your emotions” (30 min. approx.). In addition to Bodily-Kinesthetic Intelligence, through this game it can be worked on the Intrapersonal one. The objectives of this game for participants are to recognise one’s own emotions and also the others’ emotions, and to draw on emotions as a means of understanding and guiding one’s own behaviour.
- Game “Moving around your house” (30 min. approx.). Through this game it can be worked on the Spatial Intelligence and Bodily-kinesthetic too. The objectives of this game for participants are to foster the ability to solve problems using the body or parts of it, to improve the physical coordination and body awareness (and also the fine and gross motor skills), to improve spatial awareness and kinesthetic memory and to practice expressive movement and mental representations creation too.



GENERAL RECOMMENDATIONS FOR FACILITATORS

- The facilitator should read carefully this Methodology's chapter and the whole Final Workshop before implementing the mentioned one with his or her target group. He or she can decide, then, if he or she wants to use some activities, apart from the games, or to combine some of them (depending on the aim of his or her workshop).
- The facilitator should make sure that the space, materials needed and so are available for each group of participants. It is important to adapt some of the mentioned materials and also the explanations, depending on the target group.
- The facilitator should be sure that he or she has enough time to properly develop the Final Workshop - the facilitator can divide the mentioned Workshop in 2 different sessions, working the 8 different Intelligences in each one through 4 different games. This is explained deeply in this Methodology's chapter.
- If it is possible, it would be advisable to have at least 2 facilitators.
- Depending on the target group and its level of "comprehension", the facilitator, instead of explaining the whole text about each Intelligence, he or she can just give the examples of each one.
- As a recommendation, the facilitator should start each session with an energizer or activity that "awakes" the group of participants.
- The facilitator should finish each game with a quick debriefing moment, according to the explanation given in each of the 8 different games.
- The facilitator should adapt the conclusions of the Final Workshop according to his or her target group, to the aim why he/she did the mentioned Workshop and to the different experiences that participants may have during the sessions. Don't forget to use the evaluation instruments (including the debriefing part).
- After the implementation of the Workshop and the identification of your target group's profile, it is important to adapt some of the mentioned materials and also the explanations



1. I can process information in 3 dimensions (relation between colour, line, shape and space).

1	2	3	4	5	6	
Totally disagree				Totally agree		

2. I can perceive reality and create mental representation.

1	2	3	4	5	6	
Totally disagree				Totally agree		

C. Overall Evaluation

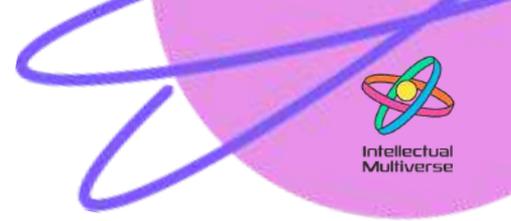
After the workshop, please assess how aware you are about your own skills in the different intelligences.

Scale:

1 -Not aware at all

6- Totally aware

	1	2	3	4	5	6
Logical-mathematical						
Linguistic						
Interpersonal						
Intrapersonal						
Musical						
Natural						
Spatial						
Bodily/Kinesthetic						



It is also important for **each professional involved in the Workshop “Intellectual Multiverse”** (i.e., both facilitators and observers) to reflect individually, for which the following questions are suggested:

A. After organizing and facilitating the workshops, do you think that:

- Were the games adapted to the target group?
- Did the games make it possible to assess the intelligence to which they related (as they appear in the game template description)?
- Did the games help you improve your tools and strategies for intervening with adults with fewer opportunities?
- Do you think that there is an adequacy of the activities carried out (and results achieved) with the objectives of this project?
- Do you consider adequate or inadequate the resources/tools for educational inclusion of adults with fewer professional opportunities developed in this project?

B. Regarding your acquisition of skills after having contact and experimenting with the different resources in this project, particularly in the workshops:

- Do you consider that you have acquired knowledge about Gardner's theory of multiple intelligences?
- In your opinion, is the Theory of Multiple Intelligences useful for educators of adults with fewer opportunities? What is its potential?
- How do you imagine using the resources and games from this project in the future with your target groups?
- Do you think you now have more tools to detect the individual potentials and intelligences of your participants?



Chapter 5.

WORKSHOP

“INTELLECTUAL MULTIVERSE”

INTRODUCTION OF THE WORKSHOP

Have you ever been told during your educational period that you were “very good at maths” or “super good at literature”, but you didn’t succeed in physical activities or music? And do you know someone else that was completely the opposite?

Many years ago, when we talked about intelligence, there were only 2 options: you were intelligent or you were not.

After some years, a psychologist called Howard Gardner presented his theory about different intelligences and the main conclusions were that all of us have the full range of intelligences (that is what makes us human beings, cognitively speaking), and no 2 individuals have the same intellectual profile because, even when the genetic material is identical, individuals have different experiences.

Do you know how many intelligences exists within a person? The answer is 8 different intelligences! And for sure you will recognise all of them now:

- **Intrapersonal Intelligence:** it involves the knowledge of the internal aspects of a person: access to one’s own feeling life, one’s range of emotions, the capacity to make discriminations among these emotions and eventually to label them and to draw on them as a means of understanding and guiding one’s own behavior - for example, this allows you to have self-compassion and awareness, self-reflection and to understand the others by first understanding yourself.
- **Interpersonal Intelligence:** the capacity to notice distinctions among others, in particular, contrasts in their moods, temperaments, motivations, and intentions - for example this intelligence permits a person to read the intentions and desires of others, to create positive relations with others and to communicate well verbally and non-verbally.
- **Linguistic Intelligence:** this encompasses skills and abilities related to language - spoken, but also written language, sign language, interpretation of symbols, etc. This allows people to speak, read, storytelling, make an argument and learn languages, and phonology. It also permits to analyze information and create products involving oral and written language such as speeches, books and memos.



- **Musical Intelligence:** it involves skill in the performance, composition, and appreciation of musical patterns - for example, this capacity allows a person to recognize and compose musical pitches, tones and rhythms.
- **Logical-mathematical Intelligence:** it is related to humans' interactions with objects, leading to their capacity for conceptual and abstract thinking, and an ability to analyze numbers and patterns - for example, this permits people to solve equations and make calculations, as well as logical reasoning.
- **Naturalistic Intelligence:** the ability to discriminate, identify, observe, categorize, understand and manipulate natural elements like plants, animals, and the environment, and detect patterns in nature - for example, this allows people to distinguish and find relations between plants, animals, and other components in nature. This capacity involves how sensitive a person is to nature and the world.
- **Bodily Kinesthetic Intelligence:** the ability to solve problems or create products using the body or parts - for example, the skills of using your strength, endurance, flexibility, balance, dexterity, movement, expression and body language.
- **Spatial Intelligence:** the ability to process information in 3 dimensions, to deal with aspects such as color, line shape, space, and the relationships between them - for example, this permits a person to perceive reality, create mental representations, appreciate sizes and directions, among others.

It is important to highlight that inside each one of us, we have all the 8 Intelligences in different levels! Each of these types of Intelligences have an innate part and a part developed during life, through different activities and experiences.

You are here, in this moment, to realise and discover in which extent each of the Intelligences manifest in you! Maybe you discover parts of yourself that you never knew about and you can start improving yourself in each of these aspects. Let's start discovering!



DEVELOPMENT OF THE WORKSHOP

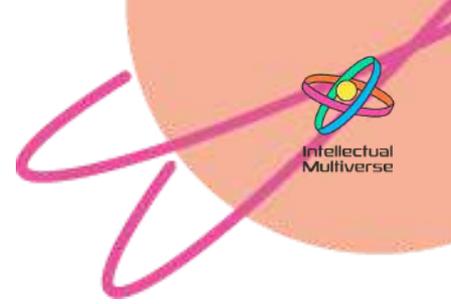
Although in the framework of this “Intellectual Multiverse” project the consortium has designed 9 games in total, we propose to use 8 (one to work on each of the intelligences). During the internal testing phase of the different games by the professionals involved in this project, which took place in Santa Maria da Feira, Portugal, the consortium found that the duration of the Workshop “Intellectual Multiverse” was twice as long as the one planned at the beginning of the project - instead of 3 hours, it turned out to be approximately 6 hours long. Therefore, after analysing the duration of each game and the main Intelligence (and the secondary too) worked on, it was decided to divide this Workshop “Intellectual Multiverse” into 2 different sessions with 4 games on each.

The first session of the previously mentioned Workshop is designed as follows:

- Introduction for the participants, which can be found at the beginning of this chapter.
- First game called “Acquire the wisdom” (30 min. approx.). The main Intelligence worked on this game is the **Intrapersonal** and the secondary is the Interpersonal.
- Second game called “The Whispering Forest” (30 - 45 min. approx.). The main Intelligence worked on this game is the **Logical-mathematical** and the secondary is the Linguistic. This game can be replaced by the so-called “Brave new world” (9th game designed in the framework of this project additionally), whose duration is about 1 hour and the main Intelligence worked on the mentioned game is the Logical-mathematical and the secondary is the Interpersonal.
- Third game called “Moving around your house” (30 - 40 min. approx.). The main Intelligence worked on this game is the **Spatial** and the secondary is the Bodily-kinesthetic.
- Fourth game called “Connecting the rhythms” (30 min. approx.). The main Intelligence worked on this game is the **Musical** and the secondary is the Naturalistic.

The second session of the Workshop is designed as follows:

- Fifth game called “The Submarine’s Journey” (30 - 40 min.). The main Intelligence worked on this game is the **Interpersonal** and the secondary is the Spatial.
- Sixth game called “Naturalistic Gymkhana”. The main Intelligence worked on this game is the **Naturalistic** and the secondary is the Logical-Mathematical.
- Seventh game called “Know your emotions” (30 min. approx.). The main Intelligence worked on this game is the **Bodily-Kinesthetic** and the secondary is the Intrapersonal.
- Eighth game called “WordJam: The Music Factor” (30 min. approx.). The main Intelligence worked on this game is the **Linguistic** and the secondary is the Musical.
- Final conclusions.



1. GAME “ACQUIRE THE WISDOM”

INTELLIGENCE: Intrapersonal and Interpersonal Intelligences



TARGET GROUP

Adults/adults with fewer opportunities



NUMBER OF PARTICIPANTS

3-4 groups of 4 people



TIME

Approximately 30 min.



OBJECTIVES

- To utilise intrapersonal intelligence to identify one’s strengths and areas of improvement.
- To practice teamwork skills by working together on 3-4 different tasks.
- To put into practice one’s leadership skills in a team activity.
- To employ problem-solving skills.

DESCRIPTION OF THE GAME

The facilitator starts by reading the following text to the whole group:

“Once upon a time, in (...) an old wizard noticed that people are struggling in finding (...) in their lives, and decided that it is the time to unveil a secret that ancient people knew, but was lost when (...) In order to access this wisdom, they need the super-brain to crack the code and truly understand the message. To have this super-brain you need to activate the superpower. So first, you need to find who you are.”

Next, the facilitator asks the participants to draw a character that represents them, including their strengths while working on a team and one main characteristic they would like to improve. Then, they should give a name to their character.

The facilitator then explains the next part of the activity. The challenge is that the super-brain requires 3 parts of the message. When it was lost, the message was separated in 3 different parts of the World, far from one another. To succeed in this mission, you are lucky to have teammates, so we will split into 3 groups. Your final objective is that each team finds a missing part of this message and after that, to work together to complete the super-brain.

Then, the facilitator will split the participants into teams. Teams are asked to spend 1-2 minutes introducing their characters that they have drawn. Depending on the size of the group or the amount of time the facilitator has, there can be 3 or 4 different activities. These activities can be done simultaneously by splitting up the groups in smaller groups, or one after the other.



These are some examples of activities that can be done for the first task, which is related to bodily-kinesthetic/spatial intelligence:

1. Have each group throw an object (such as pebbles, acorns, a ball, a plastic figurine, etc.) into a container or box.
2. Each group has a jar and a different material (such as pebbles, fabric, coins, etc.) and they have to make them fit inside the jar.

The next task is related to musical and/or naturalistic intelligence. These are some sample activities:

1. Prepare in advance 3-4 different natural or musical sounds. These could be animals, weather, musical instruments, etc. Either send the sound clips to the groups or have them go to a secluded part of the room to listen with their group and guess the natural and/or musical elements.
2. Another variation would be to play the sounds and have participants choose the correct flashcard corresponding to the sound.
3. Have participants play a song using their body. This also incorporates bodily-kinesthetic intelligence.

The next task is related to logical-mathematical and linguistic intelligence. Give each group one or more of the following riddles and have them solve it:

1. There is a rooster sitting on the roof of a barn. If he were to lay an egg, which way would it roll? (This wouldn't happen because roosters don't lay eggs.)
2. What is the only star that has no light? (A starfish.)
3. What has to be broken before you can use it? (An egg.)
4. Which month of the year has 28 days? (All of them)
5. I have no life, but I can die. What am I? (A battery)
6. A man went outside in the rain without an umbrella and didn't get a single hair on his head wet. Why? (He's bald.)
7. I'm tall when I'm young and I'm short when I'm older. What am I? (A candle).

For the last task, the facilitator can add logical-mathematical exercises. Some examples are:

1. Math word problems
2. Crossword puzzles
3. Word searches

After the groups finish the 3 or 4 tasks, they will each be given a piece of the final super brain puzzle to solve together. Each piece is a part of a larger message which should be prepared in advance according to the word the facilitator decides to put in the 2nd blank of the superbrain message (i.e. happiness, intelligence, success, etc.). Some examples for the message could be:

1. Happiness is not found, but created daily.
2. The key to success is to focus our conscious mind on things we desire, not things we fear.
3. Success is the sum of small efforts, repeated day in and day out.



DISCUSSION/DEBRIEFING

- Did you have enough time to answer?
- Were you stressed/frustrated and why? What did you do?
- What could you do during the class or at home to improve your performance in this game?
- How did you calculate the result?
- What would you do differently next time?
- Did you find the strategy to calculate quicker?
- Are you better or worse than your classmates? How can you help them to be better?
- How can they or your teacher help you to improve?
- What variation would you include to help students to get frustrated more often?



MATERIALS

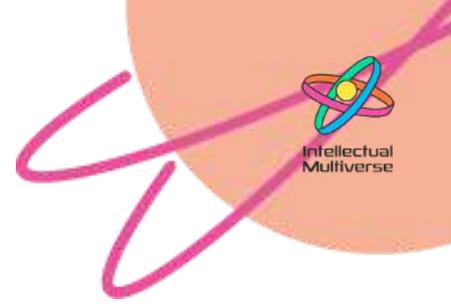
- Sheets of paper.
- Pencils and/or pens.
- A box or a jar (something that can be filled with some objects).
- Audio clips and riddles should be prepared and selected ahead of time.
- Small pieces of paper with parts of the super brain's message, prepared in advance.



RECOMMENDATIONS FOR FACILITATORS/VARIATIONS

The facilitator can choose between 3 or 4 tasks per group.





2. GAME “THE WHISPERING FOREST”

INTELLIGENCE: Logical-mathematical and Linguistic Intelligences



TARGET GROUP

Adults/adults with fewer opportunities



NUMBER OF PARTICIPANTS

Maximum 25 people



TIME

20 - 25 min.



OBJECTIVES

- To strengthen problem-solving and critical-thinking skills.
- To exercise logical-thinking in a cooperative setting.
- To exercise linguistic skills in a cooperative setting.
- To evaluate logical-mathematical intelligence in participants, and also linguistic one.

DESCRIPTION OF THE GAME

This game is cooperative. Participants should be split into 4-5 groups with the same number of people, if possible - groups can be adjusted according to group size.

The game consists of 7 categories, and each category has a different colour. The facilitator will decide previously which tasks to use, which level of difficulty, etc. Each category has 5 different tasks and they all incorporate logic to some extent.

The 7 categories are:

- Logical patterns (orange cards).
- Maths calculations (yellow cards).
- Logic riddles (pink cards).
- Science and Linguistics (green cards) - regarding these green cards, depending on the group, the participants can be asked by the facilitators to write 3 sentences or more.
- Logical deduction (purple cards).
- Measurement and data analysis (red cards).
- Debate (blue cards) - participants present 3 arguments in favour or against something.



The facilitator starts reading the following **introductory text** to the participants:

“We are gathered in a lush, enchanted forest. We hear the gentle rustle of leaves and the soft calls of various animals. Suddenly, a wise old owl appears and explains that the forest is in danger, and its inhabitants need our help. To save the forest and its creatures, we must complete a series of tasks and answer questions. Each correct answer will reveal a piece of a magical sentence that, when completed and put together with the sentences of the other groups, will unlock the secret to restoring harmony in the forest. The owl encourages everyone to work together, reminding them that every small action counts in protecting the world around them”

Participants are split into groups of 5 people. Each participant needs to complete at least 1 task, so each person in the group chooses a colour card with their challenge - they won't know which category each colour is, which helps avoid that participants who are stronger in one area don't only choose a question in that area.

The facilitator will give an example of how to do / solve each one of the tasks. Here we offer a serie of examples:

- Ex. for the task 1 (maths calculations):

$$\begin{array}{r} 10 \\ - 8 \\ 1 _ 7 \end{array}$$

Answer: $\begin{array}{r} 10 \\ 2 \ 8 \\ 1 \ 1 \ 7 \end{array}$

- Ex. task 2 (logical patterns): *“First you plant a seed, then you water it, then it flowers, etc.”*
- Ex. task 4 (logic riddles): *“There is a rooster sitting on the roof of a barn. If he were to lay an egg, which way would it roll?” Answer: Roosters do not lay eggs!*
- Ex. task 5 (science): *“What is the only star that has no light?” Answer: The starfish*
“Please, write a short text about endangered animals.”
- Ex. task 6 (logical deduction): *“Some bees are queens. All queens are beautiful.*
Conclusions:
1.All bees are beautiful.
2.All queens are kings.”
Answer: Neither Conclusion 1 nor 2 are right

All groups have to complete all 7 tasks.



Once participants finish each task, the facilitator gives them each a word. When they finish, they put the words together and make a sentence.

Then, groups get together and put their sentences in logical order to make a coherent story.

Some **example texts for the end are the following:**

- *“The environment is very important for all of us. It includes air, water, and land around us. We need to protect nature for future generations. Small actions can make a big difference. Let’s work together to keep our planet healthy!”*
- *“Animals are essential for a balanced ecosystem. They provide us with food, companionship, and help pollinate plants. We must protect their habitats to ensure their survival”.*

The facilitator must split each text into separate sentences and then split each sentence into 4-5 parts, according to the number of people in each group.



MATERIALS

- Task cards, divided into colour categories (Annex), that can be printed or sent in digital format, i.e. PDF.
- Pencils and/or pens.
- Paper sheets.



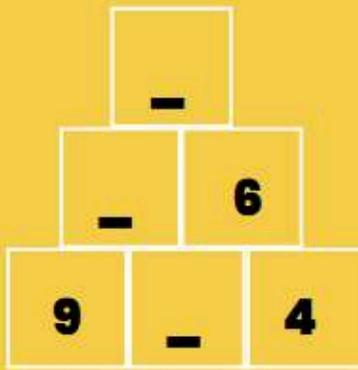
RECOMMENDATIONS FOR FACILITATORS/VARIATIONS

- The game can be played in-person and also easily adapted for use online. When doing the game online, you can use Zoom and send challenges to participants in private messages, or through any messaging app (i.e. Whatsapp).
- If a group of participants solve the tasks very quickly, the facilitator can give them more cards - just remember to cut out in more pieces the final text to be put together by all participants to finish the game and that's it.
- Regarding the green cards (Science and Linguistic), depending on the target group, the participants can be asked by the facilitators to write 3 sentences or more.
- The facilitators can decide if they are giving to the participants one set of cards or one card per person.



ANNEX: TASK CARDS

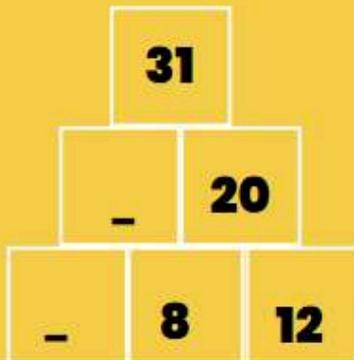
Complete this number pyramid. The sum of the numbers above on each level must result in the number at the top, on the last level.



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Complete this number pyramid. The sum of the numbers above on each level must result in the number at the top, on the last level.

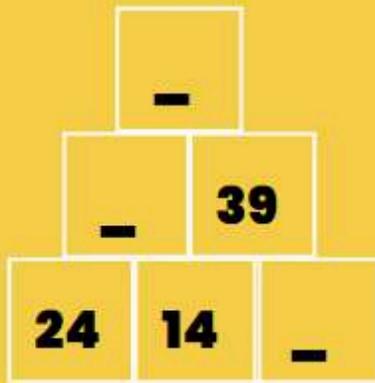


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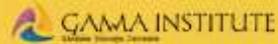
Complete this number pyramid. The sum of the numbers above on each level must result in the number at the top, on the last level.



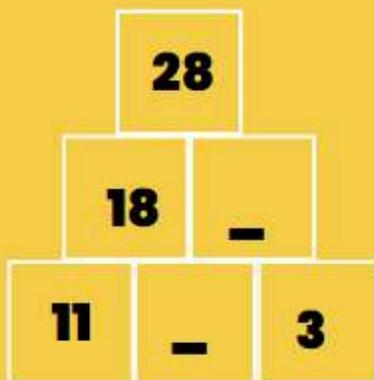
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Complete this number pyramid. The sum of the numbers above on each level must result in the number at the top, on the last level.



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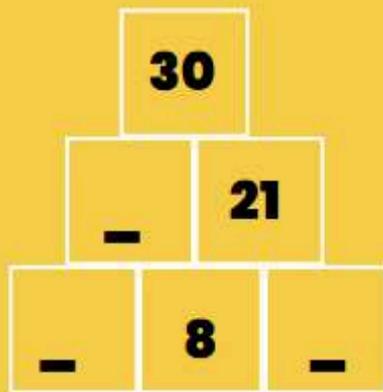


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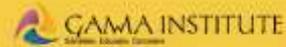




Complete this number pyramid. The sum of the numbers above on each level must result in the number at the top, on the last level.



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Arrange the following words in a meaningful order.

- 1.Secondary Education,
2. Master, 3.University,
- 4.Primary School,
- 5.Doctorade

- A: 5, 1, 2, 3, 4
- B: 4, 2, 3, 1, 5
- C: 4, 1, 3, 2, 5
- D: 4, 3, 2, 1, 5



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**Arrange the following
words in a meaningful
order.**

**1.Word, 2.Paragraph,
3.Sentence, 4.Letters,
5.Whole text**

- **A: 4, 1, 5, 2, 3**
- **B: 4, 1, 3, 5, 2**
- **C: 4, 2, 5, 1, 3**
- **D: 4, 1, 3, 2, 5**



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**Arrange the following
words in a meaningful
order.**

**1.Elephant, 2.Cat,
3.Mosquito, 4.Tiger,
5.Whale**

- **A: 5, 3, 1, 2, 4**
- **B: 3, 2, 4, 1, 5**
- **C: 1, 3, 5, 4, 2**
- **D: 2, 5, 1, 4, 3**



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Arrange the following words in a meaningful order.

1.Grass, 2. Curd, 3.Milk, 4.Cow, 5.Butter

- **A: 1, 2, 3, 4, 5**
- **B: 2, 3, 4, 5, 1**
- **C: 4, 3, 1, 2, 5**
- **D: 5, 4, 3, 2, 1**



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Arrange the following words in a meaningful order.

1.Police, 2.Punishment, 3.Crime, 4.Judge, 5.Judgement

- **A: 3, 1, 2, 4, 5**
- **B: 1, 2, 4, 3, 5**
- **C: 5, 4, 3, 2, 1**
- **D: 3, 1, 4, 5, 2**



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**Debate: present 3
arguments in favour
or against the topic
proposed.**

Artificial Intelligence



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**Debate: present 3
arguments in favour
or against the topic
proposed.**

Social Media



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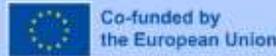
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**Debate: present 3
arguments in favour
or against the topic
proposed.**

Holidays

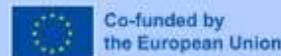


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**Debate: present 3
arguments in favour
or against the topic
proposed.**

**Taking care of the
environment**



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Debate: present 3 arguments in favour or against the topic proposed.

Countryside VS. City



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Logic Riddle

You have 6 eggs, you crack 2, you fried 2 and you eat 2. How many eggs do you have?



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Logic Riddle

There are 10 white and 10 black socks in a bag. What is the smallest number of socks that need to be taken out of the bag to have a pair of socks?



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Logic Riddle

During which month do people sleep the least?



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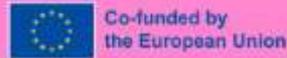
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Logic Riddle

**You are my son but I
am not your father.
Who said this?**

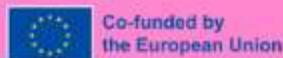


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Logic Riddle

**Beth's mother has
three daughters. One
is called Lara, the
other one is Sara.
What is the name of
the third daughter?**



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**Please, write a
short text about:**

**Endangered
animals.**



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**Please, write a
short text about:**

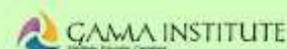
**How is the
climate in your
area.**



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**Please, write a
short text about:**

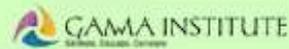
**The different
types of animals
that can be found
in the desert.**



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**Please, write a
short text about:**

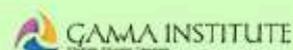
**What can you
find in the
mountain**



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**Please, write a
short text about:**

**The different
types of animals
that you can find
in the ocean**



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**Take these statements to be
true, read the conclusions
and choose the correct
option (A, B, C and D):**

**Some dreams are nights.
Some nights are days.**

Conclusions:

**1. All days are either nights or
dreams.**

2. Some days are nights.

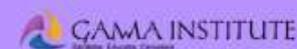
- **A: Only conclusion 1 is right**
- **B: Only C. 2 is right**
- **C: Neither C.1 nor 2 are right**
- **D: Both C.1 and 2 are right**



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Take these statements to be true, read the conclusions and choose the correct option (A, B, C and D):

**Some kings are queens. All queens are beautiful.
Conclusions:**

- 1. All kings are beautiful.**
- 2. All queens are kings.**

- **A: Only conclusion 1 is right**
- **B: Only C. 2 is right**
- **C: Neither C.1 nor 2 are right**
- **D: Both C.1 and 2 are right**



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Take these statements to be true, read the conclusions and choose the correct option (A, B, C and D):

All flowers are trees. No fruit is tree.

Conclusions:

- 1. No fruit is flower.**
- 2. Some trees are flowers.**

- **A: Only conclusion 1 is right**
- **B: Only C. 2 is right**
- **C: Neither C.1 nor 2 are right**
- **D: Both C.1 and 2 are right**



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Take these statements to be true, read the conclusions and choose the correct option (A, B, C and D):

All mangoes are golden in colour. No golden-coloured things are cheap.

Conclusions:

**1. All mangoes are cheap.
2. Golden-coloured mangoes are not cheap.**

- **A: Only conclusion 1 is right**
- **B: Only C. 2 is right**
- **C: Neither C.1 nor 2 are right**
- **D: Both C.1 and 2 are right**



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Project code: 2023-1-ES01-KA220-ADU-000152430



Take these statements to be true, read the conclusions and choose the correct option (A, B, C and D):

Some swords are sharp. All swords are rusty.

Conclusions:

**1. Some rusty things are sharp.
2. Some rusty things are not sharp.**

- **A: Only conclusion 1 is right**
- **B: Only C. 2 is right**
- **C: Neither C.1 nor 2 are right**
- **D: Both C.1 and 2 are right**



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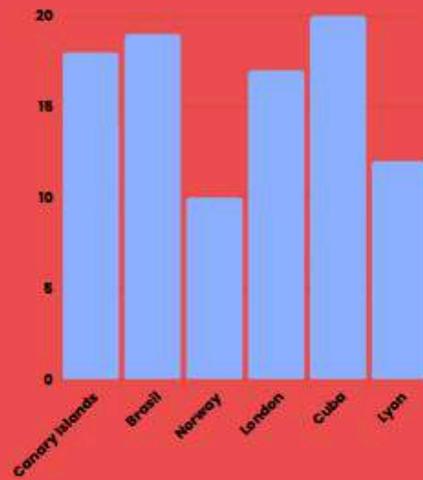
Project code: 2023-1-ES01-KA220-ADU-000152430





Answer the following question:

What is the most preferred place?

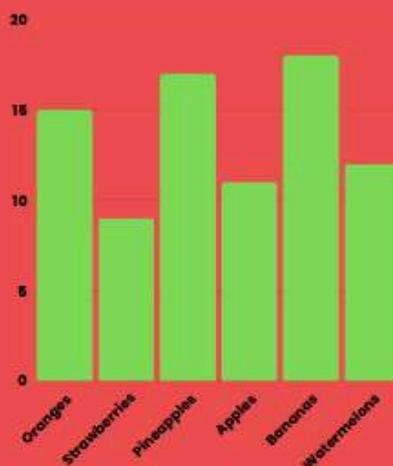


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Answer the following question:

What is the fruit with the lowest preference?



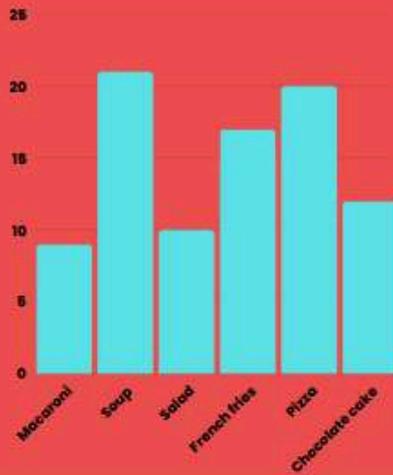
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Answer the following question:

How many people prefer macaroni?



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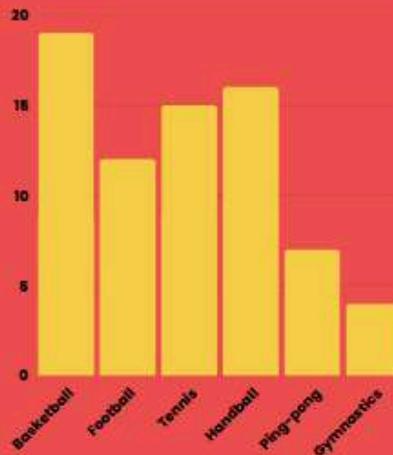


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Answer the following question:

How many people prefer tennis?



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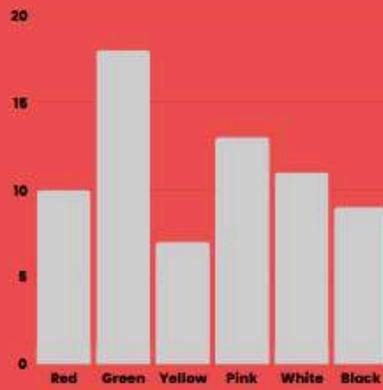
Project code: 2023-1-ES01-KA220-ADU-000152430





**Answer the following
question:**

**How many people
prefer pink?**



Project code: 2023-1-ES01-KA220-ADU-000152430



3. GAME “MOVING AROUND YOUR HOUSE”

INTELLIGENCE: Spatial and Bodily-Kinesthetic Intelligences



TARGET GROUP

Adults/adults with fewer opportunities



NUMBER OF PARTICIPANTS

3-4 groups of maximum 5 participants



TIME

30 min. approx.



OBJECTIVES

- To foster the ability to solve problems using the body or parts of it.
- To improve the physical coordination and body awareness, and also the fine and gross motor skills.
- To improve spatial awareness and kinesthetic memory.
- To practice expressive movement and mental representations creation.

DESCRIPTION OF THE GAME

The facilitator divides the group into smaller groups to play. Each group will have a house map with rooms and need to decide who is going to represent each character.

The facilitator gives the following instructions:

“We will now be playing a game. I am giving each one of you a house map (Annex 1). This is your common house. In that house lives 5 people (or less in case the group has less participants): person 1 (eg. Mother), person 2 (eg. Aunt), person 3 (eg. Son), person 4 (eg. Cousin) and person 5 (eg. Grandmother).

Please decide who is going to represent each character. You need to act (perform) like you really are that character. The way you move around the space, the way you will act during the tasks...

Now, each person has a house map and is a character. Imagine that the map is this space in front of you. You have the scale of the map right there. Each square of the grid represents one step. So, can we all take a step forward? It needs to be a small one. Let's try it!”

The participants should try to give the steps and align the size of the steps they take. The facilitator continues with the instructions:

“That bold trace are doors. All the doors are closed, and you can see in the map the direction they should open.

Now, where do you think the bathroom is? And what about the living room? And the kitchen? Could you please open the door of the kitchen?”



The facilitator should let the participants point out where they think the rooms are in the space and to give an example on how the doors open.

If the facilitator notices some confusion, he/she will help them to understand the scale and position of the rooms in the real space, before the game begins.

The facilitator can give 5 minutes to each group to move around the space to better understand where the imaginary spaces of their house are.

When everyone knows the scale and where the rooms and doors are, the facilitator will ask participants 2, 3, 4 and 5 to stand outside the house at the front door. Only person 1 is going to go to the Living Room.

Each person needs to position himself/herself where the facilitator told them to be.

The facilitator will ask participants to take a few moments to imagine that they really are that person/character, trying to think and behave like that character.

Then, each participant will receive some instructions from the facilitator (in a paper or whispered – Annex 2).

The task is to guide someone to another room, to do a task, without saying which room you are guiding in. Participants need to understand where the other is, and to guide him/her through the space, considering the objects and the doors of the map. The facilitator should remember the participants don't forget that the doors are all closed!

The facilitator starts giving the instructions to Person 1, as presented in Annex 2.

If some participant has difficulty giving or receiving instructions, the facilitator should wait a bit to understand if the group is going to help that person or if the person can develop some strategy. Only if the person starts to show some demotivation the facilitator should intervene.

Example of the game dynamic:

Person 1 is in the living room and receives the first paper to give instructions to person 2. Person 1 needs to give instructions to person 2 to go to the bathroom to clean it. However, person 1 cannot tell person 2 where the final destination is. It's only when person 2 gets to the bathroom that person 1 instructs her/him that she/he has to clean that room of the house.

After acting out the task in the bathroom, the facilitator gives person 2 the paper with the instructions (or whisper) she/he has to give to person 3 - and so on with all the other characters, until everyone has been guided and has guided other participants.



DISCUSSION/DEBRIEFING

- How do you feel about working in a group?
- How do you feel about representing another person?
- How do you feel about giving instruction to others? And about receiving?
- Did you imagine the space in your mind? Was it difficult?
- How was it for you to move through space, with your body (space and body awareness)?



MATERIALS

- A large space, at least 4 metres long (6 small steps) and 2 metres wide (4 small steps).
- Paper and pens/pencils.
- Printed house maps (Annex 1).
- Instructions for participants (Annex 2) - can be printed or whispered.
- Proposals for the characters (optional).
- Masks (optional).

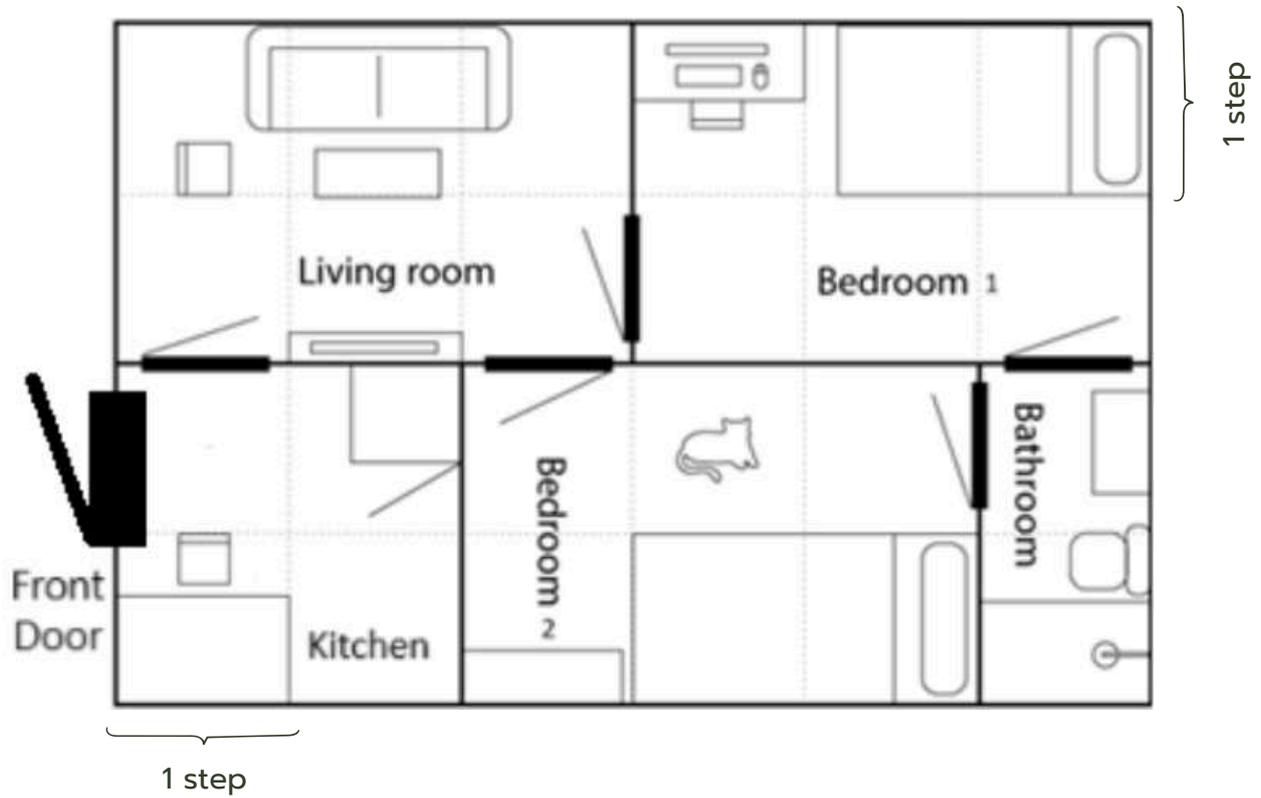


RECOMMENDATIONS FOR FACILITATORS/VARIATIONS

- The facilitator needs to know well the space where the game is taking place, ensuring that it has enough space for playing it.
- The ideal is to have a minimum of 3 players and a maximum of 5 to play the game (Part 2). If the group has only 3 or 4 people, the facilitator should remove some character of the instructions (Annex 2). However, if the group is bigger, the facilitator can make pairs and each pair of 2 people represents one character that needs to move around as one person only. In this case, the game can be played with 10 participants.
- The facilitator can adapt the characters to the group. For instance, the characters can be a traditional family; or a group of friends; or a cleaning team... Whatever suits better each group. The facilitator can also let each group decide who they are.
- The facilitator can also change the tasks that each character needs to perform and decide their level of difficulty.

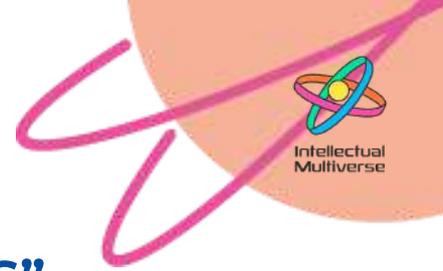


ANNEX 1: HOUSE MAP



ANNEX 2: INSTRUCTIONS FOR PARTICIPANTS

Nr	Who gives the instruction	Where that person is placed	To whom the instruction is given	Where that person needs to go	What task should the person perform and where
1	Person 1	Living room	Person 2	Bathroom	Clean the bathroom
2	Person 2	Bathroom	Person 3	Kitchen	Clean the fridge in the kitchen
3	Person 3	Kitchen	Person 4	Bedroom 2	Clean the bedroom 2
4	Person 4	Bedroom 2	Person 5	Bedroom 1	Put the laundry in the closet in bedroom 1
5	Person 5	Bedroom 1	Person 1	Outside	Go outside and cut the grass



4. GAME “CONNECTING THE RHYTHMS”

INTELLIGENCE: Musical and Naturalistic Intelligences



TARGET GROUP

Adults/adults with fewer opportunities



NUMBER OF PARTICIPANTS

4 groups of 4-5 participants



TIME

30 min. approx.



OBJECTIVES

- To discriminate, integrate and create sounds and melodies.
- Music creation; Rhythmic ability.
- Discriminate, identify and categorize natural sounds.
- Logically compilation and critical evaluation of the data to give meaning.

WARM UP ACTIVITY:

All the participants need to stand up. The facilitator gives the following instruction: *“You are going to hear some sound. You need to guess if they are sounds from nature, from animals or human sounds. Each corner of the room is a category. You need to move to the corner that you think is right.”*

DESCRIPTION OF THE GAME

FIRST PART:

The facilitator divides the group into 4 teams (max. 5 elements in each team). Then, he/she explain the game as follows:

“Every team is going to work separated from each other. You will receive a mobile phone/computer with 4 music parts. Your first goal is to identify the music and the category which belongs.

- *1st category: Music style.*
- *2nd category: Musical instrument.*
- *3rd category: Natural elements*
- *4th category: Animals.*

For having access to all the categories, you need first to guess the previous one. After you guess all categories, your group needs to find out which scenario you think belongs to. The scenario is an ecosystem. All the scenarios are different.”



Then, the 4 groups need to go to different places to have access to the music sounds. It can be necessary to have 1 facilitator in each group to play the 1st track, decide if the answer is right and play the next track.

Another option is: instead of having one per group, use a pre-recorded interactive app or a QR code for each group to unlock sounds step by step.

SECOND PART:

After each group identifies the scenario, the facilitator gives the following instructions:

“Now, each group needs to create a melody or performance that includes some of the music sounds you heard before. The goal is to perform that melody to the other groups, so they can guess your scenario. This is not a competition, because the whole group wins together (collaborative work).

You have 20 minutes of creation and you can use it whenever you want: produce sounds, use your body, find out elements outside, manipulate and explore natural elements...”

THIRD PART:

When all groups finish the task, they go to the same room and start performing. The game ends when they guess all the group’s performances.

SCAN



Jungle



Desert



City



Beach



DISCUSSION/DEBRIEFING

After the game ends, the facilitator asks the group some questions:

- How do you feel about working in a group?
- How do you feel about listening to each music piece? It was difficult for you to recognize it?
- How do you feel about creating a new melody?
- How do you think this exercise is related to musical and naturalistic skills?



MATERIALS

- A large space.
- Mobile phone or computer with internet for each team.
- Musical scenarios (Annex 1).
- Music for each scenario (Annex 2).
- Headphones (optional).
- Musical instruments, elements from nature (optional).



RECOMMENDATIONS FOR FACILITATORS/VARIATIONS

The facilitator needs to know well the space where the game is taking place, ensuring that it has enough space for playing it.

The ideal is to have a maximum of 4 teams, with 5 players.

Adaptations for special needs:

- Use visual aids (flashcards or images) to represent sounds or instruments.
- Offer noise-canceling headphones for participants sensitive to sound.
- Allow tactile exploration of instruments/natural elements.
- Provide written or visual instructions for clarity.



ANNEX 1: MUSICAL SCENARIOS

1st scenario: Jungle

- Music style: traditional / tribal.
- Instrument: drums / bongo.
- Natural element: water cascade.
- Animal: monkey or elephant.

2nd scenario: Beach

- Music style: reggae.
- Instrument: vocals.
- Natural element: ocean waves.
- Animal: seagulls or dolphins.

3rd scenario: Desert

- Music style: Arabian music.
- Instrument: flute.
- Natural element: sandstorm or fire.
- Animal: snake.

4th scenario: City

- Music style: rock.
- Instrument: electric guitar.
- Natural element: thunder.
- Animal: dogs or cats.



ANNEX 2: MUSIC FOR EACH SCENARIO

Some examples for the scenarios:

1st scenario (Jungle):

- Jungle-jazz-drum-water cascade-monkey/elephant:
<https://open.spotify.com/intl-es/track/2Ju42T1PwVXzBoG4qnRgxm?si=fdea892ad7634eb5> (2:02-2:21) <https://open.spotify.com/intl-es/track/4d21y8DL6oMN4n9NmArNqg?si=033585c3e56c4920> (6:29 -6:40)
- Drums: <https://open.spotify.com/intl-es/track/7lkfR8pnwz7EE2Scvo7EP8?si=0999247818224012>
- Bongo: <https://open.spotify.com/intl-es/track/71J0ZiyY16BJBITgeQuSl3?si=98df326f285a4a2f>
- Water cascade: <https://open.spotify.com/intl-es/track/6LWNOJ2CRhFCqdomoysEh3?si=6f0dfa659af84e9c>
<https://open.spotify.com/intl-es/track/0Hid0lrDc50PWfBdyadwVD?si=4b0dddcf6e684b9c>
- Monkey: <https://open.spotify.com/intl-es/track/3ahQ6mc3lrdgKJVl6bUJhz?si=054af68324a1417c>
- Elephant: <https://open.spotify.com/intl-es/track/5JvB9P9JN6Ny9kJRmV4gCl?si=8f78f65dae2b4f7b>

2nd scenario (Beach):

- Beach reggae/ vocals ocean waves dolphins:
<https://open.spotify.com/playlist/37i9dQZFIElgtVMulk5m2P>
<https://open.spotify.com/track/3c6CoQBVpDNHL2QcBogllc>
- Vocals: <https://open.spotify.com/album/1r0zcv9hn6TFqajmdFcHg5>
<https://open.spotify.com/album/0U8YOylg6DUJTco8NhvCsW>
- Ocean waves: <https://open.spotify.com/playlist/51xnvswDeZbfyKq5d1ufHT>
<https://open.spotify.com/track/0YuKG1kFgb6vLDiQqmBaM3>
- Dolphin: <https://open.spotify.com/track/0ZRE4to8ZWvstsGngL7PHm>
- Seagull: <https://open.spotify.com/track/762UJE0oSp7By20KsbWks2>

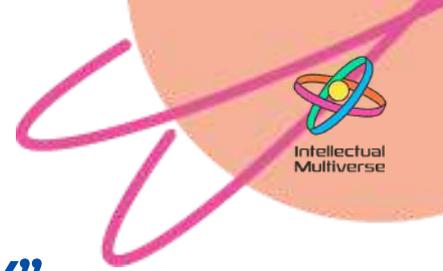
3rd scenario (Desert):

- Arabesque style: <https://open.spotify.com/playlist/37i9dQZFIEId4VNBaRtbbT>
- Western style: <https://open.spotify.com/playlist/43h5szKEIG0gKfoBLFsXAg>
- Classical flute: <https://open.spotify.com/playlist/6waO5TodggE9epY91vYlwe>
<https://open.spotify.com/playlist/3ZRIJdLlJyRjM4MjD25wdb>
- Fire: <https://open.spotify.com/playlist/37i9dQZF1DXaa8UmWJHYTU>
- Snake (hiss): <https://open.spotify.com/playlist/1u22b1ppbHwuk3WdHxkPYG>
- Snake (rattlesnake): <https://open.spotify.com/track/3kJEX8plJltkvQTEfyIO8g>



4th scenario: City

- Rock: <https://open.spotify.com/album/3DGHc6kJMQauqBiDqQC76t>
<https://open.spotify.com/playlist/6mwwlCec874FbDaz8EDeyj>
- Instrument-electric guitar: <https://open.spotify.com/playlist/71u9LyXX96cfmfPBJVpe3A>
- Thunderstorm: <https://open.spotify.com/playlist/6wx6zQaEaQ7pWj7e0CIM3S>
- Dogs: <https://open.spotify.com/playlist/63tOIPXEGtCWGBqYAbTKbN>



5. GAME “THE SUBMARINE’S JOURNEY”

INTELLIGENCE: Interpersonal and Spatial Intelligences



TARGET GROUP

Adults/adults with fewer opportunities



NUMBER OF PARTICIPANTS

10 participants (2 groups of 5 people)



TIME

30 min. approx.



OBJECTIVES

- To improve spatial orientation and coordination skills.
- To foster trust, communication and active listening skills.
- To work on teamwork, be aware of your individual role in the group, and work for a common goal.
- To boost body and self-awareness both individual and group.

WARM UP ACTIVITY “THE SPY”:

This is a 5 minute warm-up/introduction to the game. Participants are now spies, standing together in a circle. The facilitator explains to them that everyone should put their heads down, looking at the ground and, when he or she counts up to 3 (*1..., 2... and 3!*), they should look up from the ground and look at someone. If by chance 2 people (2 spies, in this case) look at each other, they lose because they will have been discovered by each other, and both leave the circle.

The participant(s) who are left at the end wins.

DESCRIPTION OF THE GAME

Before starting, the facilitator should ask if anyone has any difficulties and adapt the game accordingly. Since this game involved physical touch, they should also make sure all participants are okay with this, or adapt the game accordingly.

The goal of the game is to find the lost treasure of Jacques Cousteau. Each group has separate parts of the treasure and both need to put them together to find the treasure (a full puzzle). The facilitator tells a story about a sunken ship and explains the background of the story. Participants (crew) will be in an underwater submarine and will follow their captain’s instructions to bring their pieces together and find the treasure (the image on the puzzle).

Roles:

- 2 captains.
- 2 submarine crews.



BEFORE PLAYING:

One facilitator takes the group out of the room and explains the activity - the other facilitator sets up the room with the obstacle course. They can move chairs around, put cones on the ground, ropes, etc.

The participants are split into 2 equal groups and 1 person in each group starts as the “submarine captain” (leader).

The captain needs to take care of the submarine, use their empathy to guide the group, and be in touch with the feelings and reactions of the group. (The facilitator should explain this to the captain and give them a few seconds to reflect on parts of their personality that they could use to lead the group.)

The rest of the group are the crew. The crew needs to use their intrapersonal skills as well to use their potential to support the others and follow the instructions. The facilitator should explain this to the crew and give them a few seconds to reflect on parts of their personality that they could use to be a good crew member.

The facilitator explains the signals for movement:

- 1 tap on your shoulders with both hands, 1 step forward
- 2 taps, two steps forward
- 1 tap on the right shoulder, one step to the right
- 1 tap on the left shoulder, one step to the left
- 2 taps on the right shoulder, turn right
- 2 taps on the left shoulder, turn right
- 1 tap on the head, step backwards

Depending on the level of difficulty, the facilitator can take away or add more taps (for example, a signal to jump, to duck).

If there is time, also the participants could come up with their own signals, which is a great way to work on interpersonal skills.

HOW TO PLAY:

1. The “submarine captain” (leader) is the one who gives the orders to the rest of the group. They will lead for a maximum of 4-5 minutes and the facilitator will let them know when the group should change captain by shouting, “change of captain” or something similar.
2. Once the group members have gone over the instructions, the groups get in line. The “submarine captain” is in the back.
3. All of the group puts their hands on the shoulders of the person in front of them. Everyone except for the captain are blindfolded and they must depend on the captain to give them instructions.
4. With each change of captain, we add another instruction to increase the difficulty. Each person will have a chance to be the captain, for a maximum of 4-5 minutes.

Both teams’ goal is to bring their treasures together and put them together and find the treasure (image from Annex).



DISCUSSION/DEBRIEFING

The debriefing will start once the 2 groups bring their pieces of the treasure together and discover the final image. The facilitator will ask them as a whole group to explain what they have “found”. Some example questions to further the debriefing are:

- How did you feel in this activity?
- What did you prefer: being the submarine captain or part of the crew?
- How did you feel as a leader and how did you feel as a participant? (leadership, empowerment, communication, concerned about the state of the team, empathy, dependence on the captain, nervous, insecure, trusting, feeling secure in the group, etc.)
- What did you learn about yourself? (Your strengths, weaknesses, personal limits)
- What did you learn about the group?
- What did you learn about yourself being in this group?
- What did you use to do that task (style of learning)?
- How could you improve in this game the next time you play?



MATERIALS

- A large space.
- Classroom objects that can be used as obstacles (chairs, stools, rope, backpacks, boards, etc.).
- Treasure (Annex) - pieces of a puzzle, and also 2 treasure chests. The treasure is an image of the sea that is divided into many pieces and equally distributed in the 2 treasure chests. When it is put together, there will be a full image (i.e. an underwater scene).
- Blindfolds (optional).
- Background music related to the sea to create ambience (optional).
- Captain (optional).





RECOMMENDATIONS FOR FACILITATORS/VARIATIONS

- **ADAPTATIONS:**

- Depending on the characteristics of the group, you can adapt by adding more or less instructions and more or less obstacles.
- For people who do not like to be touched, instead of touching, the captain could clap or make sounds and each one could stand for a specific direction.
- For people with reduced mobility, verbal instructions or clapping can be done. If this is not possible, visual instructions can be given, such as images, colours, or pictograms.

- **ONLINE VERSION:** Online version: this game can be adapted to battleship game or a digital treasure chest using <https://genially.com/> (participants would have to make an account before). The game would have to be made in advance and made public, shared with participants. The captain is the only one who can open the template and move the game and the others discuss how to move. After 2-3 minutes, you can switch captains. Explain the rules before starting. You may want to send a document in the chat with the instructions for the task. (Increase digital competences). To make it more difficult, give them only 10 minutes to finish and it ends when the facilitator closes the game. The teams do not know where the other teams are.

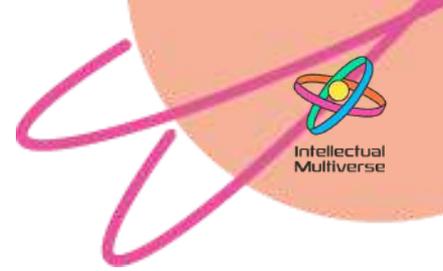
- **CLASS DOJO:** At the beginning, each person creates an avatar of themselves, an emotion, that identifies them and their personality. Short presentation of each person before starting the activity. This would be a way to work on intra- and interpersonal skills.

- **DEBRIEFING OPTIONS:** If speaking is difficult, perhaps you could use cards with emojis so that participants can show how they are feeling.



ANNEX: TREASURE (IMAGE TO CREATE THE PUZZLE)





6. GAME “NATURALISTIC GYMKHANA”

INTELLIGENCE: Naturalistic and Logical-mathematical Intelligences



TARGET GROUP

Adults/adults with fewer opportunities



NUMBER OF PARTICIPANTS

12 to 16 participants (divided in groups)



TIME

45 min. approx.



OBJECTIVES

- To learn to pay attention to natural details and elements in our local area.
- To validate the knowledge about natural elements and improve the learning of more.
- To develop awareness of natural causes and questions in our surroundings.
- To improve the capacity for logical reasoning to identify patterns.
- To develop problem-solving skills
- To improve skills to structure and organize ideas with logic.

WARM UP ACTIVITY:

The facilitator asks the participants to sit comfortably, close their eyes and listen to a soundtrack (2 min. approx.):

- Birds Singing: <https://www.youtube.com/watch?v=Nmmsl2X--U>
- Water White noise: <https://www.youtube.com/watch?v=jkLRith2wcc>
- Ocean Waves: <https://www.youtube.com/watch?v=6Mwq88CqzJ4>

After this experience, they may feel now emerged in a natural environment. This Warm Up activity is also a suggestion for our daily life.

The facilitator can read the following text to the participants:

“Often, we would like to go out and enjoy nature, but we can’t. However, technology can help us bring nature closer to us. At work, or at home, a soundtrack can provide a nice working environment or a relaxing moment at the end of the day...”

DESCRIPTION OF THE GAME

Natural Intelligence is also about knowledge. Some people have lots of knowledge about a specific topic, but, usually, we don’t even realize how much we already know about Nature. And how much more we can still easily learn...

The facilitator explains that the participants are playing a team game, with 4 challenges. The challenges will be the same for all the teams, but the sequence of the challenges are different for each team, so they don’t will be doing the same challenge at the same time.



IMPORTANT NOTE TO FACILITATORS:

If there are, for instance, 4 teams, the facilitator needs to prepare 4 different sequences to give to each team.

The facilitator also should explain that some challenges of the game will take place outside the working room (in a garden nearby, preferably).

Each team is going to be evaluated by their performances regarding the challenges. The total points for the 4 challenges will have a maximum value of 98 points. The team that finishes first receives 2 extra points. Thus, the maximum score that can be obtained in this game is 100 points.

Each team has 30 minutes to complete the game!

STEPS OF THE GAME:

- Step 1: The facilitator divides the group into teams, each one with a name (eg. fire, water, wind, earth, etc.).
- Step 2: Each team must choose a representative with a mobile phone. It will be the only mobile phone available per team (only as a variation, we can print the tasks).
- Step 3: Each team will receive the activity instructions (Annex 1) on that mobile phone. The team must follow the sequence of tasks (previously done by the facilitator). The facilitator warns that it is forbidden to search for information on the Internet.
- Step 4: The teams need to answer to the 4 challenges of the game (outside and inside the room) in 30 minutes.
- Step 5: After completing the tasks, all teams return to the working room and give their answers sheet to the facilitators. The first team to finish wins an extra 2 points (total: 100 pt).

CHECKING THE RESULTS:

The answers are corrected by the facilitator and punctuated on a board.

In some challenges the answers are “closed”, and correcting the answers is easy (Quiz and Classification challenge).

In “Scavenger Hunt” challenge the facilitator needs to check all the elements of the challenge (check the photos, the trash, the natural elements brought, etc).

In “Connection Story” the facilitator can define previously some criteria to evaluate the speech each group is going to do: for example, ability to argue, clarity of arguments, consistency of speech, the participant's performance when playing the character, among other criteria.

In the end, after the teams' scores have been totalled, one team will be the winner.



MATERIALS

- Mobile phone and/or sound speaker.
 - Activity Worksheets (Annex), which can be printed or sent in PDF to the mobile phones.
 - White board or flip chart paper.
 - Pens/pencils and markers.
 - Litter bags and disposable gloves (optional).
-
- Warm up music:
 - Birds singing: <https://www.youtube.com/watch?v=Nmmsl2X--U>
 - Water White noise: <https://www.youtube.com/watch?v=jkLRith2wcc>
 - Ocean Waves: <https://www.youtube.com/watch?v=6Mwq88CqzJ4>
-
- Nature Quizzes examples:
 - <https://quiz-questions.uk/nature-quiz/>
 - <https://toptriviaquestions.com/nature-quiz-questions-and-answers/>



RECOMMENDATIONS FOR FACILITATORS/VARIATIONS

- **ACTIVITY WORKSHEETS:** can be printed and answers are written on it directly, as it may be easier for some participants, instead of reading a document on a mobile phone. The 2nd option is more eco-friendly.
- **QUIZ QUESTIONS:** find questions related to the natural environment where the participants live. They will easily know the answers. Ensure the questions have only 1 answer.
- **CLASSIFICATION CHALLENGE:** participants may not know these animals (very rare), so one possibility is to include peculiar animals from your area.
- **SCAVENGER HUNT:** look for an outdoor nearby place and search for possibilities to include in the hunt. The facilitator must check the hunt (area and tasks) previously and adapt the questions/tasks related to that specific area.
- **CONNECTION STORY:** choose a nature related topic that your participants will be familiar with. The given words must also be understandable by all.





ANNEX: CHALLENGES OF THE GAME

QUIZ

MAXIMUM 15 POINTS (1 POINT/EACH QUESTION)

Category	Question 1	Question 2	Question 3
Natural phenomena	How are earthquakes measured?	Volcanoes can produce lightning. True or false?	What is the official name of the Northern lights?
Water	Which is the largest ocean in the world?	What is the name for a catastrophic ocean waves?	What is the name for large bodies of water surrounded by land?
Plants	Is Aloe Vera a plant, a tree or a herb?	What type of tree is a traditional Christmas tree?	Name the miniature trees that are originated in China and Japan.
Animals	What is the name for fear of animals?	Which are the only mammals that can fly?	What body part do butterflies use to taste things?
Under the sea	How many hearts does an octopus have?	Which fish produces caviar?	Which underwater creatures are the only animal where the male gives birth?



CLASSIFICATION CHALLENGE

MAXIMUM 20 POINTS (5 POINTS FOR EACH RIGHT ANSWER)

Classify the following images into the right category:

1. Mammals
2. Reptiles
3. Birds
4. Insects

A



B



C



D





SCAVENGER HUNT MAXIMUM 48 POINTS

Using all your senses, complete the following tasks, strolling around the _____ (name of the place, garden, street, farm).

1. How many (*name*) trees can you count? _____. (4 points)
2. Feel the smell of 2 natural elements and write down the names of those elements. (4 points / 2 points each) _____ + _____
3. Bring 3 different tree leaves (from the floor). (9 points – 3 points/each)
4. Record 5 different sounds of the environment (natural and/or human) . (15 points / 3 points each)
5. Take 3 pictures that illustrate how human construction, and nature can be integrated into sustainable urbanism. (6 points / 2 points each)
6. Plogging action: Pick up at least 5 items that are considered litter/trash and bring with you. (10 points / 2 points each)



Plogging definition: Plogging is a term invented by Erik Ahlström referring to the act of picking up trash and litter while jogging. It is a portmanteau of the Swedish term “plocka upp”, which means “to pick up,” and jogging.



CONNECTION STORY MAXIMUM 15 POINTS

Your group must write a speech, in no more than 75 words, on the theme **“Forest”** (for example). It is mandatory to use the following words:

- Biodiversity
- Climate change
- Sustainable economy
- Wildlife

You must choose a representative person to present the argument to the other groups.

You are a Politician / a student / a Businessman / an environmental - activist...
(give one option to each group).



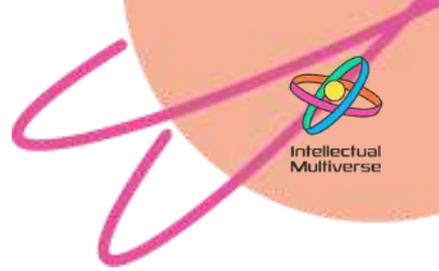
SOLUTIONS

QUIZ:

- Answers about Natural phenomena: Richter Scale, True, Aurora Borealis.
- Answers about Water: Pacific Ocean, Tsunami, a Lake.
- Answers about Plants: A plant and herb, Pine trees, Bonsai.
- Answers about Animals: Zoophobia, Bats, the Feet.
- Answers about Under the Sea: Three, Sturgeon, Seahorses.

CLASSIFICATION:

The animals given are all Mammals (pangolin, bat, platypus, manatee).



7. GAME “KNOW YOUR EMOTIONS”

INTELLIGENCE: *Intrapersonal and Bodily-Kinesthetic Intelligences*



TARGET GROUP

Adults/adults with fewer opportunities



NUMBER OF PARTICIPANTS

Maximum 10 participants



TIME

30 min. approx.



OBJECTIVES

- To recognise one’s own emotions and also the others’ emotions.
- To draw on emotions as a means of understanding and guiding one’s own behaviour.

DESCRIPTION OF THE GAME

PHASE 1 - BUILD UP/TIMED WARM UP:

The facilitator distributes a blank sheet of paper and a piece of clay/play-doh to each participant.

Then he/she gives 2 minutes for everyone to write on the sheet of paper “*What emotion describes you better today?*” Each participant writes the answer on the paper, without letting anyone see the written emotion, folds the paper and keeps it in his pocket or wherever it suits them best.

When the time is up, the facilitator rings the buzzer or stops the time. The facilitator at this point gives the participants another 2 minutes to represent the previously written emotion with the play-doh/clay. The participants model the emotion without saying what emotion they are “modeling”. When the time is up, the facilitator rings the buzzer.

Short debriefing - the facilitator asks:

- “*Was it hard to create your emotion with play-do?*”
- “*Does it resemble the picture you had in your mind?*”
- “*If not, there’s no problem, but do you believe the shape or at least the colors match your emotion?*”



PHASE 2:

The facilitator divides the participants in groups of 3 people and explains to them that each group should guess and share the emotions that participants represented in each play-doh/clay figure.

When the 3 participants from each group have shared their emotions (represented in the play dough/clay), everyone in that group should create together a short story based on those emotions.

Short debriefing:

- *“How did it feel to cooperate in creating a story, based on different emotions? Did you all agree?”*
- *“Was it easier to guess or make the others guess?”*
- *“Was it challenging to create a story?”*

PHASE 3:

The facilitator explains to each group that, once they have elaborated their story (based on the emotions identified by all members and put together), they should prepare a role-play for the rest of the groups to guess not only the plot of the story, but also the emotions that are part of it. To do this, each member of the group should be a different character.

In this way, one by one, each group will perform their role-play (story) and the rest of the groups will have to guess the story and the emotions.

FINAL DEBRIEFING:

- How was it for you to express your emotion through playdough/clay?
- Do you still feel the way you have written in the paper and modeled?
- Was the team work stimulating?



DISCUSSION/DEBRIEFING

- How was for you to prepare the playdough and later the role-play?
- Would you do something differently next time?
- How was for you to play this game?
- How did you felt the communication with your group mates?
- How was for you to understand the rules of the game?
- Are you able to explain this game to another student?



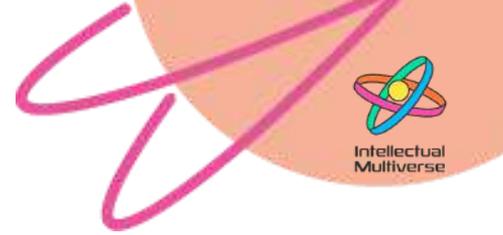
MATERIALS

- White sheets.
- Pens/pencils or markers.
- Play-dough/Clay in multiple colors.
- Wheel of emotions (Annex) with also some synonym, to be projected during the game.
- Buzzer sound (optional).



RECOMMENDATIONS FOR FACILITATORS/VARIATIONS

- **ONLINE VERSION:** you can create a labyrinth of emotions online. Home screen asks "how are you feeling today?". The player chooses a face and must achieve the corresponding emotion by traversing the maze.
- **VARIANT FOR VISUAL/COGNITIVE IMPAIRMENTS:** the person with visual/cognitive disabilities could say their emotion in the ear of the facilitator who will write it on a sheet of paper and, instead of play-dough/clay, he or she could choose a sound or song.



8. GAME “WORDJAM: THE MUSIC FACTOR”

INTELLIGENCE: Linguistic and Musical Intelligences



TARGET GROUP

Adults/adults with fewer opportunities



NUMBER OF PARTICIPANTS

3 groups of 5 participants



TIME

30 min. approx.



OBJECTIVES

- To foster creativity and improve vocabulary.
- Teamwork and Performance skills.
- Time management and Public speaking/performance.

DESCRIPTION OF THE GAME

Participants are divided into 3 groups of 5 participants and are given a list of 50 terms and are asked to create a song of their favorite genre. Groups must incorporate as many of the 50 terms as possible into their lyrics and must pay attention not to repeat the terms more than once (terms can be repeated but will count as one point).

Each person (if possible) needs to write a paragraph of the lyrics. However, the whole group is responsible for the lyrics and its performance.

In the end, once the lyrics are ready, they have to hand it over to the facilitator.

Groups may use any available instruments or beat-making tools to create a rhythm for their song.

The winner of "**WordJam: The Music Factor**" will be the group that earns the highest score based on the points chart determined by the other groups and the facilitator. The facilitator will evaluate each performance according to specific, quantitative (scoring in the points charts) and qualitative (coherence of rhythm and lyrics) criteria, and use of the provided terms.

Creativity will be assessed by the other groups, according to the chart and entertainment.

The group with the most points (sum) at the end of the activity will be declared the winner.



DISCUSSION/DEBRIEFING

- How was for you to play this game?
- How did you felt the communication with your group mates?
- How was for you to understand the rules of the game?
- Are you able to explain this game to another student?



MATERIALS

- List of 50 terms per each group (Annex 1), divided into different categories.
- Points chart (Annex 2).
- Various instruments, if possible (i.e., maracas, drums or every instrument needed, or beat-making tool, etc.).
- Paper sheets.
- Pens/pencils of different colors assigned to each person within the group.



RECOMMENDATIONS FOR FACILITATORS/VARIATIONS

- Highlight that they'll have 30 minutes to compose, practice, and perform their creation.
- Emphasize that the focus is on creativity, self-expression and use of given terms, and fun.
- The role of the facilitator is to check the groups and how they are developing the lyrics and mediating the distribution of tasks and remember the colors used by each participant. If one participant is incapacitated from writing or does not wish to, the facilitator can propose the whole group to support this person.
- Recognize that participants will have different levels of musical and lyrical skill. For those less confident in creating rhythm, allow more focus on lyrics or vice versa. Each person will have a pen of different color to write its paragraph of the lyrics.
- Encourage them to embrace their personal style—whether it's lyrical complexity or focusing more on rhythm and performance.



ANNEX 1: LIST OF 50 TERMS

Basic Words:

- *Hello* – A simple but versatile word that can be used to say hello or goodbye.
- *Thank you* – Used to express gratitude.
- *Please* – Used to make polite requests.
- *Sorry* – Used to apologize or to get someone’s attention.
- *Yes* – One of the simplest and most useful words, it means “affirmation”.
- *No* – The opposite of “yes”, it means “negation”.

Words to Introduce Yourself:

- *I* – Personal pronoun,
- *You* – Personal pronoun
- *My name is* – Used to say your name.
- *Pleased to meet you* – An expression used when meeting someone for the first time.
- *How are you?* – A common question to ask how someone is doing.
- *Good* – Positive response to the question “How are you?”

Words for Time:

- *Today* – The current day.
- *Tomorrow* – The next day.
- *Yesterday* – The previous day.
- *Morning* – The beginning of the day.
- *Afternoon* – The middle of the day.
- *Evening* – The end of the day.

Essential Numbers:

- *One* – The number 1.
- *Two* – The number 2.
- *Three* – The number 3.
- *Four* – The number 4.
- *Five* – The number 5.
- *Ten* – The number 10.

Words for Eating and Drinking:

- *Water* – An essential element for life.
- *Bread* – A common food in many cultures.
- *Wine* – A popular drink in Italy and Spain.
- *Coffee* – Much loved by Italians and Portuguese.
- *Breakfast* – The first meal of the day.
- *Lunch* – The main meal at midday.
- *Dinner* – The evening meal.



Words for Home:

- *House* – The place where you live.
- *Bedroom* – A room in your home.
- *Kitchen* – The place where you prepare food.
- *Bathroom* – The room where you wash.
- *Bed* – Where you sleep.
- *Table* – Where you eat or work.

Words for Getting Around:

- *Car* – A common means of transportation.
- *Bus* – A means of public transportation.
- *Bike* – An environmentally friendly means of transport.
- *Train* – A means of rail transport.
- *Plane* – A means of air transport.

Words for Shopping:

- *Shop* – A place where you buy things.
- *Price* – How much something costs.
- *Discount* – A reduction in price.
- *Money* – The money used to buy things.
- *Credit card* – A method of payment.

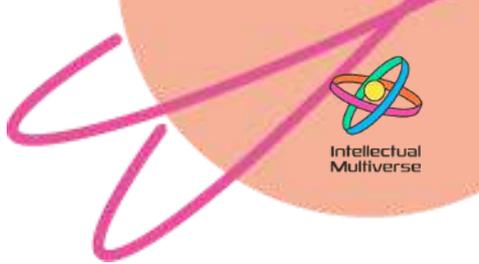
Words for Expressing Emotions:

- *Happy* – When you are happy.
- *Sad* – When you are not happy.
- *Angry* – When you are very annoyed



ANNEX 2: POINTS CHART

- **Basic Words:** 1 point
- **Words to Introduce Yourself:** 2 points
- **Words for Time:** 3 points
- **Essential Numbers:** 4 points
- **Words for Eating and Drinking:** 5 points
- **Words for Home:** 6 points
- **Words for Getting Around:** 7 points
- **Words for Shopping:** 8 points
- **Words for Expressing Emotions:** 9 points



9. GAME “BRAVE NEW WORLD”

INTELLIGENCE: Logical-mathematical and Interpersonal Intelligences



TARGET GROUP

Adults/adults with fewer opportunities



NUMBER OF PARTICIPANTS

Groups of 3-4 participants



TIME

45 min. - 1 hour approx.



OBJECTIVES

- To connect their logic with the interpersonal intelligence and make eco-friendly decisions.
- To assess their logical intelligence and the capacity of decision-making.
- To establish priorities.
- To develop their team-work skills.

DESCRIPTION OF THE GAME

NARRATIVE:

“You (the group) and 30 other people have been sent to a just discovered island, kept in secret. You need to survive on the island, in a healthy and happy way, for more than 3 weeks, with no contact or help from the rest of the world.”

DEVELOPMENT:

The group receives a Map and a list of tasks.

1. Individually, each participant analyzes a list of 15 priorities and makes the distribution of 5 priorities per week (5 min.).

2. The members of the group negotiate with each other which will be the final priorities for the community on the island (10 min.).



3. To have your plan implemented, the following questions have to be answered:
- How will you manage the basic resources (food, water, energy etc)
 - In which part of the island will you establish your different facilities/ constructions?
 - How will you ensure the safety and wellbeing of the community?
 - On the map, draw your plans for the 3 weeks.

The groups have 15 min. for these 4 tasks.

Bonus task: Create a jingle for your island community. If you succeed in doing this task in time, you have one extra point.

4. Each group presents its map and the facilitator asks certain questions to assess the feasibility of the plans, according to 3 indicators: Health, Happiness and Sustainability. The groups must present 2 examples of each (10 min.).



DISCUSSION/DEBRIEFING

- How did you feel?
- Which indicators were you more focused on?
- What have you discovered about life priorities?
- How will you integrate the learnings from this exercise in your life?



MATERIALS

- Sheets of paper. _____
- Pencils and/or pens. _____
- Colors. _____
- List of priorities (Annex 1) _____
- Island Map (Annex 2). _____



RECOMMENDATIONS FOR FACILITATORS/VARIATIONS

- Facilitators can print one list of priorities for each group of participants. _____
- Facilitators can skip the initial part (for this game to take less time) in which participants reflect on their own priorities, based on the list given. _____
- Make groups of 3 or 4 people, depending on the number of participants, but not more than 5 (in order to make it easier for the discussions within the groups). _____
- Give time reminders so groups move on to the next task. Keeping the time for each task is very important for respecting the length of the game. _____





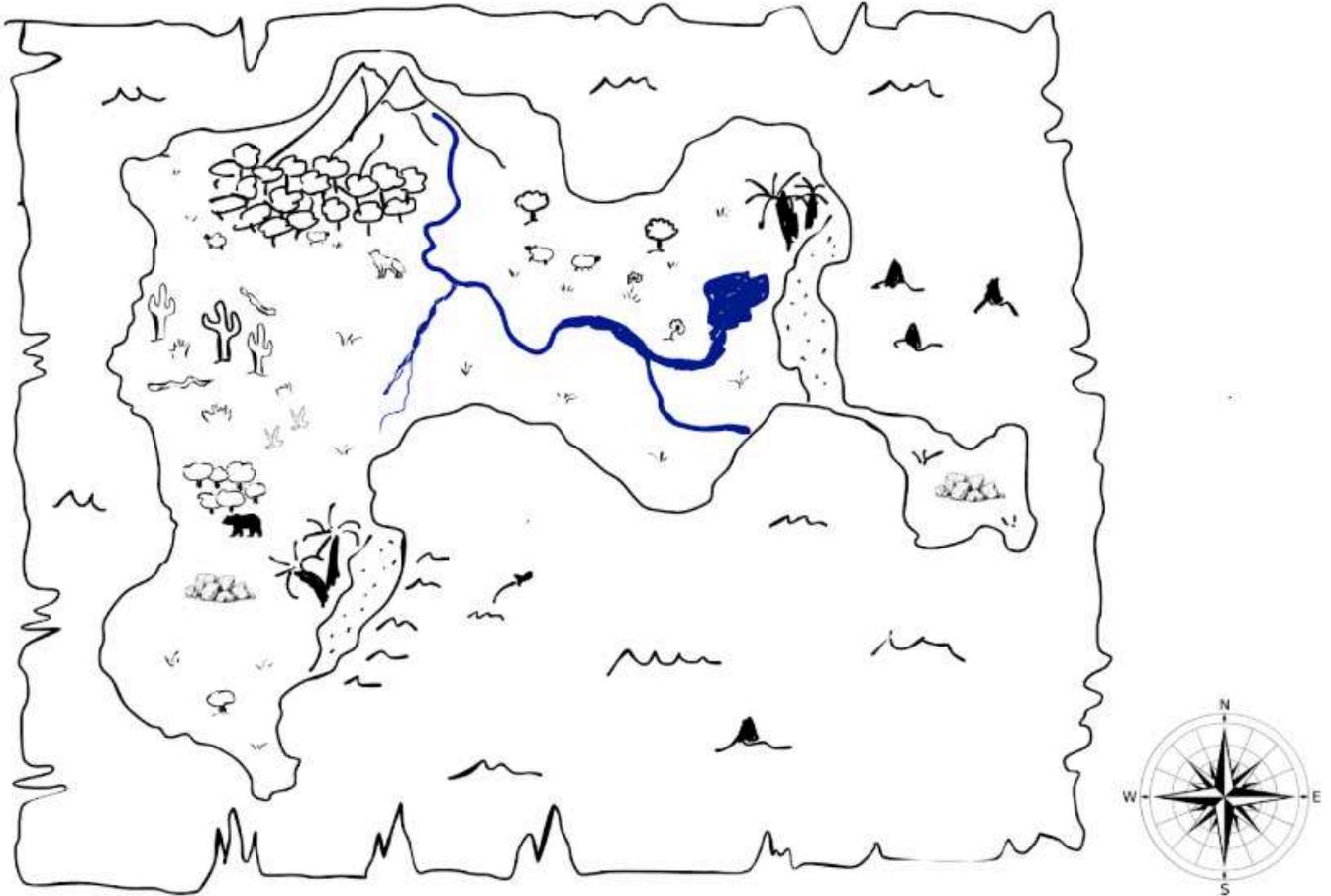
ANNEX 1: LIST OF PRIORITIES

1. Create shelters.
2. Find potable water.
3. Separate domestic animals from the dangerous ones.
4. Discover/develop natural health medicines.
5. Teach the kids and young people about safe and healthy habits about living in the nature.
6. Build facilities for keeping animals.
7. Engage in planting and gardening.
8. Learn about the island weather.
9. Create an inventory of the island resources.
10. Create fire places for heating and cooking.
11. Have fun in the nature.
12. Creating a social system for decision making.
13. Create tools for fishing and hunting.
14. Use the natural elements to create tools for cooking, building and transporting objects.
15. Cut enough wood.
16. Hunt animals.
17. Produce mechanisms for preserving food and natural resources.
18. Identify the traces of the animals to know where they usually move.
19. Build walls around the community to prevent animals attacks.
20. Cook food for everyone, once you have enough resources.

Week 1	Week 2	Week 3



ANNEX 2: ISLAND MAP





FINAL CONCLUSIONS AFTER THE WORKSHOP

At the end of each session, there must be a moment of sharing, when participants can reflect on their work. The facilitator should focus in that moment, at the end of the Final Workshop, on 3 main aspects regarding the development of the mentioned Workshop:

- Final Questionnaire - to be answered by the participants individually.
- Group reflections/debriefing - how did participants feel that day: what was easy, what was challenging, what would you improve regarding the games, what have you learned, what do you think that you will use in your daily life after these sessions...
- Final Certificates for participants.



CONCLUSIONS EXTRACTED AFTER THE TESTING PHASE IN EACH COUNTRY

SPAIN

FUNDACIÓN ASPAYM CASTILLA Y LEÓN

In Spain, the Workshop "Intellectual Multiverse" was tested with 2 very different groups: the first was held in León, with adults with and without disabilities, while the second was held in Ponferrada, in collaboration with the organisation "Proyecto Hombre", whose users were the participants in this test phase.

Although both groups of participants began the workshop with a very positive attitude, according to the facilitators and observers, specifically in the first one there was a significant change in their attitude from the first warm-up activity to the last game: for example, some people who attended the sessions together (friends, couples, etc.) only talked to each other at first, but gradually gained confidence with the group, opened up more and even ended up sharing personal experiences with the rest of the participants.

Overall, therefore, from the point of view of the facilitators and observers, and based on the conclusions drawn by the participants through a satisfaction questionnaire at the end of the Workshop sessions, it is considered that the games and activities really contributed to the professional and personal growth of the participants.



FUNDACIÓN PLAN B EDUCACIÓN SOCIAL

The testing carried out by Fundación Plan B Educación Social, also in Spain, was implemented with a group of adults with disabilities at the Casjuvi Youth Centre. The activities were well received and effectively adapted to the target group. Most games required simplification or shorter versions, which was possible in almost all cases except for Word Jam: The Music Factor, which proved difficult to adapt without losing its essence.

Both the facilitator and the observer agreed that the games helped improve the organisation's tools and strategies for educational intervention with adults with fewer opportunities. They also found the approach highly valuable for fostering self-awareness and personal development through the Multiple Intelligences Theory. Using this framework encouraged reflection on intellectual diversity and demonstrated that there is no single "right way" to learn or interact with the environment.

Participants were motivated and enjoyed the workshops. They expressed that the sessions helped them to discover their own strengths and understand the eight intelligences better. They also reported feeling more cohesive as a group and valued the inclusive and participatory methodology. According to their self-assessment, they felt most confident in musical, intrapersonal, naturalistic and linguistic intelligences, while bodily-kinesthetic, spatial, interpersonal and logical-mathematical intelligences were perceived as areas for improvement.

Some practical lessons emerged from the testing phase. Facilitators noted that preparation time is necessary to adapt the materials to different levels, and that modelling certain games before starting can significantly enhance comprehension. Activities that involve writing should offer alternatives such as drawing, and the inclusion of visual aids (e.g., a Wheel of Emotions) can make the exercises more accessible.

Despite minor challenges, the workshops were considered highly successful. They achieved their objectives of promoting awareness of multiple intelligences, increasing motivation, and fostering personal reflection among participants. The organisation plans to continue using these games in future educational and social projects.



ITALY

CEIPES ETS (INTERNATIONAL CENTER FOR PROMOTION OF EDUCATION AND DEVELOPMENT)

In Italy, the Intellectual Multiverse project workshop was held on two separate dates. The first was held at the CEIPES headquarters, and the second at a different location with the capacity to accommodate a larger number of attendees. The number of participants in the two workshops differed, enabling the facilitators to adapt the games to suit the needs of each group.

The participants in both workshops had similar backgrounds and, with a few exceptions, did not know each other.

The atmosphere was relaxed and pleasant, although they did not know exactly what activities they would be doing, the participants were eager to learn more about the Theory of Multiple Intelligences.

After an icebreaker exercise, the first games developed were those related to personal intelligence, which allowed participants to start loosening up and sharing information about themselves and their current emotional state.

From that moment on, they were eager to get involved, experiment and express their ideas. All the games presented were widely appreciated, considered useful in analyzing and developing the relevant intelligence, and successfully completed.

At the end of the workshop, everyone shared their thoughts on the different types of intelligence, stating that they felt more skilled at developing certain types of games than others. The most popular games were generally those related to interpersonal and intrapersonal intelligence (e.g. 'Know Your Emotions'), while 'Moving Around Your House', which is related to bodily-kinesthetic intelligence, was repeatedly rated as difficult due to the need to imagine the described spaces.

Based on the feedback received at the end of the sessions and the responses to the evaluation form, it is clear that the workshops were widely appreciated. Each game was positively evaluated and considered fundamental to developing personal skills.

The participants were enthusiastic and requested further information regarding the various forms of intelligence, stating their desire to integrate the games into their daily professional activities.



PORTUGAL

ROSTO SOLIDÁRIO - ORGANISATION FOR HUMAN AND SOCIAL DEVELOPMENT

The eight games were tested with two distinct groups:

- Nursing Team at the Fiães Health Center (2 sessions)
- Training participants at ALPE – Santa Maria da Feira (4 sessions)

With the Nursing Team, all the games were carried out in a fun and relaxed atmosphere, marked by strong teamwork and collaboration. The participants felt that the activities helped to strengthen team cohesion and group dynamics, while also allowing them to recognize personal strengths – as well as those of their colleagues – that may not have been fully visible before.

To the Training participants at ALPE, there was an evolution, from not knowing each other well, to actively engaging to teamwork and group cohesion. The activities did not require significant individual exposure contributed to their sense of comfort and willingness to participate. They reported that the games helped them deepen their understanding of their intrapersonal abilities, as well as interpersonal skills such as teamwork and communication. In the end, the feedback was extremely positive. The participants felt that the games helped to further strengthen the team and fostered a deeper level of self-awareness and mutual understanding within the group.



ROMANIA

GAMMA INSTITUTE - INSTITUTE FOR RESEARCH AND STUDY OF QUANTUM CONSCIOUSNESS

The activities and games from the Intellectual multiverse program were tested in Romania on 2 groups of adults, having for each 2 sessions (3 hours/ session).

Both groups were addressed to adults, but we had a specific:

- the first group was formed from adults also working in educational fields. So, in the debriefing part, we punctuated the usage of the games in their daily work
- the second group was formed from adults with certain needs on personal development and with psychological issues as: low self-esteem, depression or burn-out, people searching for professional reconversion.

For both groups, the main focus was on self-evaluation of multiple intelligences, followed by drafting a mini-plan for 2 main changes:

- using on maximum the potential of dominant intelligences
- developing the "forgotten" intelligences and using them in daily life

The impact on the participants was:

- they were surprised by the theory of Gardner and they were very curious to know more information about the 9 intelligences
- they discovered in which way they developed certain intelligences in the detriment of the others and what are the limitative beliefs that are stopping them on develop of use more that intelligences
- some of them took lessons and become aware about how they can encourage their kids to explore and develop more as much intelligences ad possible.

The feedback regarding the games was:

- were fun and easy to understand from their conclusions and to self-evaluate the intelligences
- can be adapted and played also with other target groups: kids or youngsters
- can be used in school in order to create self-awareness about personal potential
- could be adapted and used even in family activities with kids and family members.

Overall, Intellectual Multiverse workshops were a success, well received by participants and with a huge potential of replicability in Gamma Institute context, workshops and daily basis activities.



FINAL RECOMMENDATIONS FOR IMPLEMENTING THE WORKSHOP

- The facilitators should read carefully the Methodology chapter and the whole Final Workshop before implementing the mentioned one with their target group. These facilitators can decide, then, if they want to use some activities, apart from the games, or to combine some of them (depending on the aim of their workshop).
- The facilitators should make sure that the space, materials needed and so are available for each group of participants. It is important to adapt some of the mentioned materials and also the explanations, depending on the target group.
- The facilitators should be sure that they have enough time to properly develop the Final Workshop - these facilitators can divide the mentioned Workshop in 2 different sessions, working the 8 different Intelligences in each one through 4 different games. This is explained deeply in the “Methodology” chapter.
- If it is possible, it would be advisable to have at least 2 facilitators.
- Regarding the introduction of this Workshop “Intellectual Multiverse”, depending on the target group and its level of “comprehension”, the facilitators, instead of explaining the whole text about each Intelligence, they can just give the examples of each one.
- As a recommendation, the facilitators should start each session with an energizer or activity that “awakes” the group of participants.
- The facilitators should finish each game with a quick debriefing moment, according to the explanation given in each of the 8 different games.
- The facilitators should adapt the conclusions of the Final Workshop according to his or her target group, to the aim why he/she did the mentioned Workshop and to the different experiences that participants may have during the sessions. Don’t forget to use the evaluation instruments (including the debriefing part).
- After the implementation of the Workshop and the identification of each target group’s profile, it is important that facilitators adapt some of the mentioned materials and also the explanations.



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