EU Rural Virtual Classroom

Inventory of best practices

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SERVICIO ESPAÑOL PARA LA INTERNACIONALIZACIÓN DE LA EDUCACIÓN

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Index

Introduction

Within the framework of the RURAL VIRTUAL CLASSROOM (RVC) Erasmus+ Project (2021-1-ES01-KA220-SCH-000023731), an inventory of best practices in education has been developed for rural classrooms. This inventory corresponds to Work Package 2 (WP-2), **Best Practices Study**.

The main goal of **WP-2** is to carry out an inventory of best educational practices based on a systematic search in scientific literature, research projects and other European educational projects, as well as other international databases. The purpose is to provide a corpus for the development of the objectives in:

- **WP-3** (Logical and functional design of the Rural Space Collaborative Learning),
- **WP-4** (IT, technological and functional development of the product, internal testing, testing of programmable routines, incorporation and testing of languages, training of partners in the use of the product), and
- **WP-6** (Organize dissemination actions in three main groups: initial, intermediate and final actions).

This document of best practices in education is divided into four different sections. First, the methodology is presented. It shows the process of identification, selection and analysis of the best practices. Secondly, the educational practices selected are organized into five different parts according to the target population: students, teachers, families, communities and multiple stakeholders. Thirdly, there is the section "Technology in the classroom", which collects the best practices that have been implemented in digital contexts. This information might be useful for designing the RVC Platform. Finally, there is the section "Other resources", where we present relevant materials that may be useful for Work Packages 3, 4 and 6.

1. Methodology

1.1. Information search

The search for information was focused mainly on scientific articles published in indexed journals of impact in education. In addition, reports and documents from international organizations (e.g. European Commission, UNESCO, UNICEF, among others) that provide relevant information for the proposed objective were selected and reviewed.

The bibliographic sources chosen for the search were:

- Scientific databases, such as Scopus, Web of Science (WoS) and Education Resources Information Center (ERIC)
- Erasmus+ projects
- Toolkits
- European projects
- Other education-related organizations

Besides, we used a series of keywords that narrowed down the search to the topic. The following table (see table 1) organizes the keywords according to two categories:

a) Target/Population

b) Intervention/Context.

The combination of the keywords in the research facilitated the identification of relevant publications. Some of the keywords were also used in Spanish for the search.

Table 1. Keywords for the search

Keywords			
Target / Population		**Intervention / Context**	
rural education	family	school activities	training project
primary school	student	ICT	virtual classroom
rural school	teacher	educational resources	good practices
rural community	community	educational deficits	best practices
		collaborative learning	impact
		education project	evidences
		active learning	

1.2. Selection process

Based on the scientific literature, and after exhaustively reviewing different approaches, we consider that a best educational practice can be defined as an exemplary educational intervention that guides the teaching process supported by actions already carried out and with satisfactory results.

For the identification of the best educational practices, only those that met the following requirements have been considered in the elaboration of this repository.

- It produced conclusive results when implemented, and showed innovation with respect to previous work in the field. Thereby, representing a successful context for changes in ways of doing things that produce improvements. These educational practices will therefore be effective and efficient.
- Evidence of social impact has been identified, meaning that there is scientifically endorsed evidence that, when taken as the basis for policies or actions, it generated improvements in society which were relevant for the objective of this project. Based on this, effective practice is defined through the requirement of solid evidence (quantitative and/or qualitative) of the social impact achieved by the respective practice in education.

UNESCO. (2021). *Management of Social Transformations Program*. Retrieved from: https://es.unesco.org/themes/transformaciones-sociales/most

- The social impact required from these practices had to reflect the improvement in at least one of the following dimensions to be considered for its inclusion in the repository: academic success; individual and school well-being; promotes the social cohesion of the community and families; increases the motivation; equal opportunities environment; diminishes social and cultural gaps; new methodologies for teachers; promotes equity and inclusion.
- Besides, a best practice must be sustainable, whose social, economic and environmental requirements must be maintained over time and produce long-lasting effects (UNESCO, 2021).
- Finally, a best practice should be replicable, i.e. to serve as a model for developing educational policies, initiatives and actions in other places and contexts (INCLUD-ED Consortium, 2015).

1.3 Analysis of best practices

Following the aforementioned precepts, the next section presents the repository of best educational practices. Below briefly states what it entails.

- *Name*
- *What is it?* (A brief description of the educational practice)
- *How does it work?* (How the activity takes place in the classroom)
- *Materials and Resources* (Necessary for the development of the activity)
- *Evidence and Results* (How it has been evaluated; what impact it has shown; results)
- *References*

UNESCO. (2021). *UNESCO education strategy 2014-2021*. Retrieved from: https://unesdoc.unesco.org/ark:/48223/pf0000231288_spa
INCLUD-ED Consortium. (2015). *Successful Educational Actions for Inclusion and Social Cohesion in Europe*. Springer International Publishing

2. Inventory of Best Educational Practices

2.1. Students

Dialogic Literary Gatherings

What is it?

A Dialogic Literary Gathering (DLG) is a Successful Educational Action in which participants decide to read a book from the classic literature as these are the greatest works of literature, and share their ideas around it with their peers on the basis of the egalitarian dialogue. DLG can be implemented across different disciplines, using as a tool other greatest works of human kind in the field of music, arts, science...

How does it work?

Firstly the students choose a book and democratically agree on the number of pages to be read before the next gathering. They read the chapters before the gathering (i.e., at home, with their families, by themselfs) and select the paragraph he or she liked the most or that caught his/her attention to share with the other participants during the session. In the DLG session students are placed in a circle, so as everyone can see each other. There is a moderator, who is in charge of dynamizing the interactions based on the principles of Dialogic Learning. The moderator listens, chairs and may participate on an equal basis with the participants and ensure the rules are respected.

The rules of the DLG are the following: everyone can participate, you need to raise your hand to talk, everyone should respect other opinions, those who have participated the least will have priority to share, participants will co-construct the meaning of the text, and discuss its relevance for their daily lives. Doing so, they discuss deep and complex issues, such as love, death or global issues. The key factor is that the participants explain and justify their ideas supported by arguments.

Materials and Sources

Access to classic literature texts (books, e-books, photocopies etc.). Thus, Dialogic Literary Gatherings do not imply major costs for schools, nor for students, because they use resources already available in the educational community (family, community members and the students themselves) to enhance all students' learning.

Evidences and Results

- Dialogic reading (reading mediated by varying voices, experiences, and cultures, that changes from an individual to a collective experience) generates an understanding of a text which can never occur reading alone.
- DLG improved the quality of life of children, making them feel loved and accompanied, in the context of the digital divide caused by the COVID-19 pandemic and the subsequent disconnection between children and schools.
- Increases vocabulary, improves oral expression, comprehension, critical thinking, reasoning skills (with validity claims)
- DLG have been found to improve the family atmosphere and thus, to increase children's interest in reading, and generally, in school.
- Inspires discussion of difficult topics concerned with citizenship and life dilemmas initiated by the participants.
- The classic text diminishes social and cultural gaps and empowers (especially) the less privileged social groups, in reading literature thought of as for the elite.

References

Flecha, R. (2000). *Sharing Words: Theory and Practice of Dialogic Learning*. Rowman & Littlefield.

Flecha, R. (2015). *Successful Educational Action for Inclusion and Social Cohesion in Europe*. Springer Publishing Company.

García-Carrión, R., Villardón-Gallego, L., Martínez-de-la-Hidalga, Z., & Marauri, J. (2020). Exploring the Impact of Dialogic Literary Gatherings on Students' Relationships With a Communicative Approach. *Qualitative Inquiry*, 26(8–9), 996–1002.

Santiago-Garabieta, M.; Villardón-Gallego, L.; García-Carrión, R. & Duque, E. (2022). The Development of L2 (Basque) Oracy Skills Through Dialogic Literary Gatherings, *SAGEOpen* doi: 10.1177/21582440221079894

Khalfaoui-Larrañaga, A.; Alvarez, P.; Gutiérrez-Esteban, P. & Flecha, R. (2021) "I Also Like it that People Care about Me." Children's Dialogues on Values, Emotions and Feelings in Dialogic Literary Gatherings. *Journal of Language, Identity & Education*. doi: 10.1080/15348458.2021.1956318

López de Aguileta, G.; Torras-Gómez, E.; García-Carrión, R. & Flecha, R. (2020) The emergence of the language of desire toward nonviolent relationships during the dialogic literary gatherings, *Language and Education* doi: 10.1080/09500782.2020.1801715

Interactive Groups

What is it?

Interactive groups are a form of classroom organization that so far has generated the best results. It consists of grouping all the students in the class into four or five small groups which are as heterogeneous as possible with respect to level of learning, gender, language, motivation, and cultural origin.

How does it work?

Students are divided into heterogeneous groups with the same number of participants, and in each group there is an adult (school volunteer, family member and/or member of the community) who is in charge of facilitating the interactions among the students. The teacher prepares different instrumental learning tasks, as many as there are groups (usually 4) and the activity is changed every 15 to 20 minutes.

Students perform the tasks by interacting with each other through egalitarian dialogue. The adult is not in charge of explaining the theory, but of making sure that all members of the group participate and contribute in solidarity to find a solution to the task.

Each time they finish one of the activities, all participants in the process jointly evaluate how the activity has been developed, focusing on whether they have helped each other, or whether they have interacted to find collaborative solutions.

Materials and Sources

High level learning activities and resources are used in subjects such as mathematics, languages, natural sciences, or social sciences. They can be written comprehension texts or mathematical problems. The focus is on the interactions that occur when performing the activity. It is also important to bear in mind that the activity should be a cognitive challenge for the students, since if they are very simple, they will not take long to solve them individually and the idea is that they should look for common solutions.

Evidences and Results

- The use of interactive groups diversifies and multiplies interactions and makes the work time more effectively.
- It is therefore a form of inclusive grouping that improves academic outcomes, interpersonal relationships and coexistence.
- For students: improved academic performance, increased self-esteem, habitual signs of cooperation and help, improved interpersonal relationships, improved reasoning and deduction skills, increased dialogue, improved coexistence.
- For teachers: continuous feedback, reflection on teaching practice, adjustment of objectives, methodological strategies and resources.

References

Flecha, R. (2015). *Successful Educational Action for Inclusion and Social Cohesion in Europe. Springer Publishing Company.*

Khalfaoui, A., García-Carrión, R., Villardón-Gallego, L., & Duque, E. (2020). Help and Solidarity Interactions in Interactive Groups: A Case Study with Roma and Immigrant *Preschoolers. Social Sciences,* 9(7), 116. *MDPI AG.* http://dx.doi.org/10.3390/socsci9070116

Valls, R., & Kyriakides, L. (2013). The power of interactive groups: how diversity of adults volunteering in classroom groups can promote inclusion and success for children of vulnerable minority ethnic populations. *Cambridge Journal of Education,* 43(1), 17–33. doi: 10.1080/0305764X.2012.749213

Zubiri-Esnaola, H.; Vidu, A.; Rios-Gonzalez, O. & Morla-Folch, T. (2020). Inclusivity, participation and collaboration: Learning in interactive groups. *Educational Research.* https://doi.org/10.1080/00131881.2020.1755605

Díez-Palomar J., García-Carrión R., Hargreaves L., Vieites, M. (2020) Transforming students' attitudes towards learning through the use of successful educational actions. *PLoS ONE,*15(10): e0240292. https://doi.org/10.1371/journal.pone.0240292

Díez-Palomar, J., & Cabré, J. (2015). Using dialogic talk to teach mathematics: the case of interactive groups. *ZDM Mathematics Education,* 47(7), 1299–1312. doi: 10.1007/s11858-015-0728-x

Valero, D., Redondo-Sama, G. & Elboj, C. (2018). Interactive groups for immigrant students: a factor for success in the path of immigrant students. *International Journal of Inclusive Education,* 22(7), 787-802. doi: 10.1080/13603116.2017.1408712

Zhang, L. J., & Zhang, D. (2020). Dialogic discussion as a platform for constructing knowledge: Student-teachers' interaction patterns and strategies in learning to teach English. *Asian-Pacific Journal of Second and Foreign Language Education,* 5(1), 1-24.

Zero Violence Brave Club

What is it?

The Zero Violence Brave Club or "Brave Club" is an action that is part of the Dialogic Model of Conflict Prevention and Resolution. This model has its main theoretical bases in Preventive Socialization, as well as in Dialogic Learning. The Brave Club is a classroom-based intervention that focuses on conflict resolution through dialogue, as well as its prevention through socialization towards non-violent models.

How does it work?

To implement the Brave Club the first step is to create the "Club" with the students, where all pupils are considered brave because they all comply with the necessary respectful and non-violent behaviour to be part of this group. The second step is to create the appropriate classroom climate to report the aggressors and to encourage witnesses to make a protective "shield" around the victim. The third step is to establish clear norms and rules to avoid violence, as violence is never justifiable. In fourth place, when a student assaults, he or she leaves the 'Brave Club' as it does not meet the only condition to belong to it: the respectful and non-violent treatment. Lastly, it is necessary to emphasize that the 'Brave Club' must incorporate all the spaces of interaction of the school. This ensures that when a conflict occurs, it is managed at that specific moment and shared by the entire school community and fundamentally the peer group.

Materials and Sources

Cardboards, velcro, and photos of the students should be posted on the walls of the classroom. One of the cardboards will be for those who have brave attitudes and the other for those who have violent behaviours.

Evidences and Results

- The framework of coexistence is accepted and is legitimate for all.
- The model encourages assemblies and more dialogue spaces where everyone participates and where all arguments are equally heard.
- The entire community is committed to the creation of a better space for learning.
- This model improves learning because pupils feel the school is a safe place free from violence, improves coexistence and relationships inside and outside the school environment.
- It can prevent violence in relationships, and enhance procedural ethics and deliberative democracy.

Other relevant information

Flecha, R. (2015). *Successful Educational Action for Inclusion and Social Cohesion in Europe*. Springer Publishing Company.

Villarejo-Carballido, B., Pulido, C.M., de Botton, L., Serradell, O. (2019). Dialogic Model of Prevention and Resolution of Conflicts: Evidence of the Success of Cyberbullying Prevention in a Primary School in Catalonia. *International Journal of Environmental Research and Public Health*, 16, 918. doi: 10.3390/ijerph16060918

Rios-Gonzalez, O., Puigvert, L., Sanvicen, P., Aubert, A. (2019). Promoting zero violence from early childhood: a case study on the prevention of aggressive behavior in Cappont Nursery, *European Early Childhood Education Research Journal*. doi: 10.1080/1350293X.2019.1579544

Roca-Campos, E., Duque Sanchez, E., Rios-Gonzalez, O., & Ramis-Salas, M. (2021). The Zero Violence Brave Club: A Successful Intervention to Prevent and Address Bullying in Schools. *Frontiers in Psychiatry*, 12, 855. doi: 10.3389/fpsyt.2021.601424

Tutored Library

What is it?

It is one of the Successful Educational Actions which offers extension of learning time for all students. Students have this space in the school, which is managed by families and community members, where they can study and do homework after school.

How does it work?

In this space students get involved in their own learning process. The library space remains open outside school hours (during the afternoon, midday, weekends...), so that everyone has a place to learn with free and open access. This extension of learning time is carried out with volunteers whose role is to promote mutual help and optimize interactions between students of different ages, who often meet in this space. The library can be physically organized in work corners, in which various activities are carried out: homework follow-up, dialogic reading, information search for projects, computer activities, etc.

Materials and Sources

Family involvement, by inviting them and people from the community to participate in this space.

Evidences and Results

The extension of learning time at school through the tutored library increases student's involvement in their own learning process, thus preventing absenteeism or dropout among the most disadvantaged students. This is also an inclusive alternative that overcomes segregation during school time for students who need reinforcement. In the Tutored Library, the learning of all students is accelerated through interaction with diverse people, which especially benefits students with Special Educational Needs.

Other relevant information

Rodriguez-Oramas, A., Morla-Folch, T., Vieites Casado, M., & Ruiz-Eugenio, L. (2022) Improving students' academic performance and reducing conflicts through family involvement in primary school learning activities: a Mexican case study, *Cambridge Journal of Education*, 52:2, 235-254, DOI: 10.1080/0305764X.2021.1973374

Macías-Aranda, F., Sordé-Martí, T., Amador-López, J. and Simon, A.A. (2019), "Moving Towards Roma Inclusion in Spain Through Successful Educational Actions", Óhidy, A. and Forray, K.R. (Ed.) *Lifelong Learning and the Roma Minority in Western and Southern Europe*, Emerald Publishing Limited, Bingley, pp. 139-162. https://doi.org/10.1108/978-1-83867-263-820191012

2.2. Teachers

Teaching one topic to all grades and at varying levels of difficulty using differentiated activity

What is it?

A multigrade classroom (MG) consists of a single class that contains two or more grade levels. The students are grouped according to their grade level or even their age group, and sometimes separated by spaces, and there is only one teacher who is responsible to teach all the students.

Therefore, multi-grade classrooms have one teacher teaching learners of different ages and levels in a single classroom at the same time. With the purpose of being able to take care of everything and everyone, it is proposed this strategy: teaching one topic to all grades and varying levels of difficulty using a differentiated activity.

How does it work?

Teachers start their lesson as a general whole, i.e. the first part of the lesson, and the discussion is addressed to everyone and then they are left to interact. Afterwards, the groups are given different tasks or activities appropriate to their grade level following the discussion. For this, the teacher prepares two different tasks. According to multigrade teachers who have implemented this strategy, it allows students in the lower grades to have a preview of possible topics they will encounter in the next grade. While for students in the upper grade, the lower grade lessons serve as a reminder. This grants participants enough time to review the concept being studied. For example, in math, number and number sense are taught in the first trimester of grades 1 and 2, but at different levels of difficulty.

Materials and Sources

Different tasks or activities can be prepared. These need to be appropriate to each grade level.

Evidences and Results

The presence of certain words, concepts, themes or characters and comparisons within sets of texts were analyzed. In addition, thematic analysis was used to generate themes on multigrade teaching challenges to search for concepts appearing to capture the essence of the phenomenon under investigation and allows a theoretically flexible approach to analyzing qualitative data.

Suggestions: this strategy achieve better results when the lessons of the two groups are connected or fall under the same theme. Further, the curriculum for multigrade is best delivered in an integrated sequence of learning activities where the class can concentrate on a theme and becomes the focus of all learning activities for the whole class, and not on individual subjects.

Also, it is worth emphasising that the groups usually bring together students from the same grade, but there are cases where students in lower grades are curious about the activities of the higher grades and sometimes request the same activity.

References

Bongala, J.V., Bobis, V.B., Castillo, J.P.R. and Marasigan, A.C. (2020). Pedagogical strategies and challenges of multigrade schoolteachers in Albay, Philippines. International Journal of Comparative Education and Development, 22 (4), 299-315. https://doi.org/10.1108/IJCED-06-2019-0037

Ballesteros, M., & Ocampo, R. O. (2016). Best practices of multigrade teaching in luna, Apayao, Philippines. *International Journal of Novel Research in Education and Learning, 3*(6), 61-73.

Shareefa, M. (2021). Using differentiated instruction in multigrade classes: A case of a small school. *Asia Pacific Journal of Education, 41*(1), 167-181.

Santangelo, Tanya, and Carol Ann Tomlinson. "The application of differentiated instruction in postsecondary environments: Benefits, challenges, and future directions." International Journal of Teaching and Learning in Higher Education 20.3 (2009): 307-323.

Jump-jump strategy

What is it?

In a multigrade classroom the students are grouped according to their grade level and sometimes separated by spaces, and there is only one teacher who is responsible to teach all the students. With the purpose of being able to take care of everything and everyone, the "jump-jump strategy" is proposed.

How does it work?

"Jump-jump strategy" or teaching one grade while others work independently.

This strategy is characterized by the fact that, at the beginning of the lesson, the teacher treats each grade separately and not as a whole.

To carry it out, a different topic must be prepared for each grade. First the teacher attends one half of the class, discusses and gives an activity to work in, and then the teacher moves to the other half of the class to discuss and give their specific activity as well. While the other class is busy doing activities, the teacher moves to the other group and vice versa.

Materials and Sources

A different topic must be prepared for each grade.

Evidences and results

Suggestions: this strategy is effective if the lesson focuses on individual or group activity and less on class discussion, because the teacher has enough time to visit the students' work.

Potential Setbacks: prolonged discussion with one group may disturb the other group.

References

Bongala, J.V., Bobis, V.B., Castillo, J.P.R. and Marasigan, A.C. (2020). Pedagogical strategies and challenges of multigrade schoolteachers in Albay, Philippines. *International Journal of Comparative Education and Development,* 22 (4), 299-315. https://doi.org/10.1108/IJCED-06-2019-0037

Innotech, S. (2012). Quality indicators of multigrade instruction in Southeast Asia. *Seameo Innotech Research Updates, SIREP Report, (3).*

Msimanga, M. R. (2019). Managing the use of resources in multi-grade classrooms. *South African Journal of Education, 39(3).*

Peer teaching or tutoring

What is it?

In a multigrade classroom the students are grouped according to their grade level and sometimes separated by spaces, and there is only one teacher who is responsible to teach all the students. With the purpose of being able to take care of everything and everyone, peer teaching or tutoring is proposed.

How does it work?

Recent studies propose changing the teaching methodology to group work and cooperative learning strategies. They consider learner-centered strategies to be more effective in blended classes. This, on the one hand, makes them efficient and on the other hand flexible with regards to the use of time. In addition, teachers appoint "little teachers" in charge of the group, usually the advanced learners. They serve as tutors to students who need help within the group. Thus, students are encouraged to help each other and work together.

Materials and resources

No extra materials are needed.

Evidences and results

Several studies reveal that peer teaching or tutoring is an effective and reliable strategy be it in MG (Moliner & Alegre, 2020a,b; Muthambi, 2015). For MG, peer tutoring fits well because it saves time, and it is easier to organize and assign tutoring pairs in cross-age groups (Ballesteros & Ocampo, 2016).

Suggestions: the teachers interviewed recommended not mixing students at another grade level within the class. They fear that the upper grades will do all the work, making the lower grades passive.

References

Bongala, J.V., Bobis, V.B., Castillo, J.P.R. and Marasigan, A.C. (2020). Pedagogical strategies and challenges of multigrade schoolteachers in Albay, Philippines. International Journal of Comparative Education and Development, 22 (4), 299-315. https://doi.org/10.1108/IJCED-06-2019-0037

Moliner, L., & Alegre, F. (2020a). Peer Tutoring Effects on Students' Mathematics Anxiety: A Middle School Experience.

Moliner, L. and Alegre, F. (2020b). Effects of peer tutoring on middle school students' mathematics self-concepts. PloS One,15,4, e0231410.

Muthambi, S. (2015). Implications of Peer Tutoring as a Multigrade Teaching and Learning Strategy for Learner Performance in Selected Multi-Grade Schools. A Dissertation Paper. University of Venda.

Ballesteros, M. & Ocampo, R. (2016), Best practices of multigrade teaching in Luna, Apayao, Philippines. International Journal of Novel Research in Education and Learning,3, 6, pp. 61-73.

Dialogic Teacher Training

What is it?

It seeks to promote evidence-based dialogic training among teachers, allowing them to better sustain their educational practice on the most relevant educational theories and the latest scientific developments in the field. Participants engage in critical reflection on how to better translate evidence-based knowledge into their teaching practice.

How does it work?

This dialogic training allows teachers to work in close collaboration and continuous dialogue with the reality experienced in schools, being a meeting point between the information provided by the international scientific community and the knowledge accumulated in educational practice, in order to be able to offer answers adapted to the diversity of socio-educational realities.Through dialogic training, a space is built where egalitarian relationships can develop and favor a structure of teacher training that alleviates the power relationships that have traditionally prevailed between the training of power that have traditionally prevailed between training consultants and teachers, between trainers and teachers, between teachers and families or other educational agents that participate in the teaching spaces. An example of these are the Dialogic Pedagogical Gatherings.

Materials and resources

Access to the principal databases such as scopus and web of science and evidence-based books.

Evidences and results

The scientific quality of the texts selected for the training session and the critical dialogues teachers engage in, enables teachers to base their practice on evidence that lead to improve student learning and development.

References

Hardman, F., & Abd-Kadir, J. (2010). Classroom discourse: towards a dialogic pedagogy. The international handbook of English, language and literacy, 254-264.

Hetherington, L., & Wegerif, R. (2018). Developing a material-dialogic approach to pedagogy to guide science teacher education. *Journal of Education for Teaching, 44*(1), 27-43.

Mercer, N., Dawes, L., & Staarman, J. K. (2009). Dialogic teaching in the primary science classroom. *Language and education, 23*(4), 353-369.

Roca-Campos, E., Renta-Davids, A. I., Marhuenda-Fluixá, F., & Flecha, R. (2021). Educational Impact Evaluation of Professional Development of In-Service Teachers: The Case of the Dialogic Pedagogical Gatherings at Valencia "On Giants' Shoulders". *Sustainability, 13*(8), 4275. https://doi.org/10.3390/su13084275

Rodriguez, J. A., Condom-Bosch, J. L., Ruiz, L., & Oliver, E. (2020). On the shoulders of giants: benefits of participating in a dialogic professional development program for in-service teachers. *Frontiers in psychology*, 5.

Mentoring beginning teachers: Primary Education Program

What is it?

Many qualified teachers are assigned to rural schools, as this is where the needs tend to be greatest. However, there are generally no structures in place for the induction and mentoring of beginning teachers.

While school principals expect a strong injection of new blood and ideas into the system and an ability to act as experienced teachers when they arrive, in most cases they are not sure what needs to happen on the ground.

To address this situation, mentoring of beginning teachers in primary schools is proposed: here, you would find a cluster-based mentoring program with a powerful agency for the professional development of teachers, especially in rural areas.

How does it work?

Primary Education Program for supervisors in primary education (SPEs), learning coordinators (LCs) and resource persons (RPs): The program specifically focuses on 'mentoring' as it allows the professional relationship to grow between individuals based on their needs, abilities and available resources. Therefore, throughout the program participants get ample opportunities to explore mentoring skills in order to work effectively and help their colleagues in their professional growth. Furthermore, critical thinking and reflective practice are common themes, which are embedded across the program.

The course participants explored alternatives for enhancing their understanding about the role and philosophy to improve their mentoring skills. Moreover, the participants engaged in 'hands-on and minds-on' activities in order to enhance their content knowledge in core subject areas and learn new ways of integrating different subjects at the primary school level.

This phase of the program focuses on the theoretical and practical aspects of the role of a mentor as a role model, sponsor, encourager, counsellor and friend to a less skilled or less experienced person for the purpose of promoting the latter's professional and personal development. Through the process of activity-based learning the participants enhanced their pedagogical content knowledge in core subject areas and developed ways of integrating different subjects.

The participants acquainted themselves with a variety of professional development approaches for working with their cluster teachers. They developed mentoring skills such as peer coaching, team teaching and designing workshops together. The mentors learned how to provide support, encouragement and guidance to their cluster teachers.

Evidences and results

During the second phase, the field based component, the mentors returned to their respective contexts to practice their newly acquired knowledge, skills and attitudes. Mentors engaged in teaching, shared their experiences of real classrooms situations and received critical feedback which they incorporated in their successive teaching practice.

The data sources for this study include informal conversations, classroom and field observations, and the reflective journals they maintained throughout the program. The program was developed as a field-based program spread over a period of three months and specifically focused on developing the participants' skills of 'mentoring' that allowed the course participants to establish professional relationships between individuals based on their needs and available resources. Throughout the program participants were provided opportunities to explore mentoring skills in order to work effectively and help their colleagues to grow professionally. Furthermore, 'critical thinking' and 'reflective practice' were common themes that were embedded in the program.

The program helped them to enhance pedagogical content knowledge and skills through activity based learning, while realizing the importance of students' in the learning process helped them to think about their own practices. As mentor teachers assist their protégées in improving their teaching, they also improve their own professional competence. Several studies have documented the positive effects of mentoring on the mentors themselves. The quality of teaching by mentors improves. Mentors benefit by applying cognitive coaching skills with their students such as listening, asking inquisitive questions, providing non-judgmental feedback, and by reassessing their classroom management.

References

Manwa, L., Mukeredzi, T. G., & Manwa, L. (2016). Rural school teaching in Zimbabwe: Mentoring experiences of'beginning'primary school teachers. Australian and International Journal of Rural Education, 26(2), 63-76.

Rodriguez, J. A., Condom-Bosch, J. L., Ruiz, L., & Oliver, E. (2020). On the shoulders of giants: benefits of participating in a dialogic professional development program for in-service teachers. Frontiers in psychology, 5.

Vazir, N., & Meher, R. (2010). Mentoring in teacher education: Building nurturing contexts and teaching communities for rural primary school teachers in Sindh, Pakistan. Journal of Educational Research, 13(1), 123–143.

2.3. Family

Family Education

What is it?

Family education aims to open the school environment to the families to improve their instrumental education and at the same time to improve their participation in the school and the society.

How does it work?

It consists of proposing a training for the family oriented towards improving skills and essential knowledge important for life in today's society, in order to provide the opportunity to help their children with their homework, to support them in academic issues, the reading... and much more.

Generally, parent-teacher meetings are conducted once a year. Indeed, most teachers contact parents only when their students have academic or behavioral problems. From this point of view, it may be be too late for preventing trouble and failures. In order to prevent that, Family Education proposes that families (parents, aunts and uncles, grandparents...) are in charge of deciding what is to be learned and when and how it will be done. Families meet, gather everyone's requirements and consider possibilities for starting training.

They decide on the timetable and which days to train on. The families themselves are the ones who interact, engage in dialogue and decide on which training to aim for and also how it will be undertaken.

- Families proposed what they want to learn and when this would be possible.
- People in the community and volunteers are sought to provide this training.
- Normally a mixed commission is in charge of organizing the various trainings.
- Language, ICT, Literacy, Mathematics trainings are prioritized.

Evidences and results

Previous research have shown that this action contributes to higher self-esteem, perception of well-being and self-confidence thereby, increasing their capacity to participate in discussions and debates, in both students and families. It increases the skills and job opportunities for adults increasing their confidence, and the possibilities for parents to help their children with their homework, creating new meaning about learning and education.

Additionally, it increases the expectations regarding parent's future and that of their children by increasing the motivation to continue studying. It also creates and reinforces social networks.

Materials and resources

Access to information and training to do so.

References

Garcia Yeste, C., Morlà, T., & Ionescu, V. (2018). Dreams of Higher Education in the Mediterrani School Through Family Education. *Frontiers in Education,* 3(79). doi: 10.3389/feduc.2018.00079

Girbés-Peco, S., Gairal-Casadó, R., & Torrego-Egido, L. (2019). Participación de mujeres gitanas y marroquíes en la formación de familiares: beneficios educativos y psicosociales. *Cultura y Educación,* 1-26. doi: 10.1080/11356405.2019.1656487

Serradell, O., Ramis, M., de Botton, L., & Soler, C. (2019). Spacesfree of violence: the key role of Moroccan women in conflict prevention in schools. A case study. *Journal of Gender Studies.* doi: 10.1080/09589236.2019.1620096

Family involvement as a support resource

What is it?

They are a series of creative teaching practices which present relevance, ownership of knowledge, control of learning and innovation while involving parents, teachers and students.

How does it work?

Families can be involved by the common work between them and the teachers preparing different activities such as:

- Projects linked to the families' cultures (e.i. production of a cookbook)
- Projects linked to celebrations taking place in the immediate environment (e.i. Book Day, Christmas)
- Spontaneous activities (e.i. Chinese language workshop given by a Chinese mother) result of daily interactions between teachers and parents
- Projects linked to the school environment

Teachers also include families by:

- Including the parents in the process of constructing the learning taking place in the classroom
- Family education through documents, tutorial sessions or lectures (i.e.: emotional education of children and key issues for parents and stressed mothers)
- Setting up strategies that contribute to families being the ones designing involvement actions

Moreover, teachers promote family expression with activities such as:

- 'Families count a lot' activity
- Promoting family interaction when preparing classroom activities

Materials and resources

Participation of families.

Evidences and results

- Creating a framework for shared action
- Empowerment of the families through decision-making
- Building a climate of trust and confidence
- Strengthening the link between the classroom, the school, the families and the community
- Generating a collaborative environment
- Educational development

References

Epstein, J. L., Sanders, M. G., Sheldon, S. B., Simon, B. S., Salinas, K. C., Jansorn, N. R., ... & Williams, K. J. (2018). *School, family, and community partnerships: Your handbook for action*. Corwin Press.

Monarca, H., y Rueda, C. S. (2013). Orientación educativa y desarrollo de prácticas participativas con las familias. *Revista de Educación Inclusiva*, 6(3), 120-133.

Simon, S. (2017). A study of primary school parents' interaction with teachers' in Malaysia. *International Journal of Educational and Pedagogical Sciences, 11*(2), 359-366.

Turnbull, A. P., Turbiville, V., & Turnbull, H. R. (2000). Evolution of family–professional partnerships: Collective empowerment as the model for the early twenty-first century.

Educational guidance and development of participatory practice with families

What is it?

It consists of diverse actions focused on the promotion of the families' participation. These actions are standardized and vinculated to families taking part in the schools while empowering themselves.

How does it work?

These practices are divided in five groups:

1. Joint decision making practices
    a. Participation in the School Council (with the aim of being represented and taken into account)
    b. Parents as class delegates (with the aim of having representation in the class their children attend)
    c. Spaces for joint decision-making (center and classroom assemblies, working committees...)

2. Reflect on the design and development of the Educational Project
    a. Joint working groups of teachers and families (oriented to the analysis of: choice of themes, sharing expectations...)
    b. Assemblies for the joint discussion of issues and needs of the school
    c. Meetings for follow-up work with pupils
    d. Joint assessment days

3. Participate in teaching tasks
    - Participation in teaching processes
    - Support groups (inside the classrooms/ inside or outside school hours)

4. Develop joint training processes
    a. Talks
    b. Training programs
    c. Literary gatherings (horizontal and self-managed)
    d. Film debate

5. Develop activities to promote the school's connection with community resources through the involvement of families
    a. Day trips (participation in children's trips or exclusively parent trips)
    b. Leisure activities in playground time
    c. Extracurricular activities (conducted by families)
    d. Celebratory activities

Materials and resources

Participation of families.

Evidences and results

- Family involvement forms part of school life.
- Expression and communication is encouraged.
- Children's feelings are accepted and considered in the class.
- Families' situations and interests are taken into account in teaching and learning creative processes.
- Constructive relationships are created between teachers and families due to the collaborative work.
- Families design involvement actions.
- Family involvement provides support to respond to the diversity of the scholar population.
- These strategies help to include groups of disadvantaged families as well as the pupils themselves.
- They help teachers get to know students and their families better.
- They allow families to know the school's dynamics and values.
- Promotion of the sustainable development of the community.

References

Dove, M. K., Zorotovich, J., & Gregg, K. (2018). School community connectedness and family participation at school. *World Journal of Education, 8*(1), 49.

Soler, M., Morlà-Folch, T., García-Carrión, R., & Valls, R. (2019). Transforming rural education in Colombia through family participation: The case of school as a learning community. *JSSE-Journal of Social Science Education, 18*(4), 67-80.

Vigo Arrazola, B., & Soriano Bozalongo, J. (2015). Family involvement in creative teaching practices for all in small rural schools. *Ethnography and Education*, 10(3), 325-339..

2.4. Community

Inclusion of the community in school activities

What is it?

Inclusion of the community in school activities in order to achieve a convergence and a partnership of different sectors.

How does it work?

The inclusion of the community in school activities can be reached through the use of spaces, such as the church or other emblematic buildings, to share the traditions and accumulated knowledge and include it in a school framework.

Different collaborations can be organized. For example, students can help in events that take place in common spaces and learn from different sectors; and community members can also collaborate in school events, creating an exchange of collaboration and a partnership.

Materials and resources

Spaces that are part of the historical context, communication with the sectors in charge, exchanges of collaboration.

Evidences and results

School education can produce and strengthen a common knowledge that can improve living conditions of peasant populations, through the systematic access to the accumulated knowledge that is linked to traditions and roots.

References

Díez, J., Gatt, S., & Racionero, S. (2011). Placing Immigrant and Minority Family and Community Members at the School's Centre: the role of community participation. *European Journal of Education, 46*(2), 184-196.

Pauletti, J., & Wirzbicki, S. M. (2018). As relações entre escola e comunidade na concepção de professores que atuam na Educação do Campo. Revista Brasileira De Educação do Campo / Brazilian Scientific Journal of Rural Education, 3(1), 153-176. https://doi.org/10.20873/uft.2525-4863.2018v3n1p153

Vaughan, C., Gack, J., Solorazano, H., & Ray, R. (2003). The effect of environmental education on schoolchildren, their parents, and community members: A study of intergenerational and intercommunity learning. *The Journal of Environmental Education, 34*(3), 12-21.

2.5. Multiple stakeholders

Learning Communities

What is it?

It is a project based on a set of successful educational actions aimed at social and educational transformation. This educational model is in line with international scientific theories which highlight two key factors for learning in today's society: interactions and community participation.

How does it work?

Learning communities are based on the dialogical conception of learning, according to which knowledge is constructed from the interactions we share with others. Thus, in schools that are organized as learning communities, families, teachers, students and other members of the community coordinate and collaborate to implement successful educational actions, so that each school draws on the knowledge that all members of the community can bring to it, while sharing with them the responsibility for the education and full development of the children.

These characteristics can result in: a collective life-long learning culture, a commitment to professional development and improved student outcomes, enthusiasm and professionalism, a sense of inclusion and openness, sharing and building of a common vision, vitality and empowerment, clear channels of communication and reflective dialogue.

The sense of belonging of all children is transversal to the learning communities because they are based on the dialogic learning. This implies that all voices should be heard, and everyone can contribute on an egalitarian basis to the construction of knowledge. That is why the learning communities have inclusion at their core, and they generate this sense of belonging to a group and to a community. Moreover, they are based on interactions, with teachers or other adults in the classroom, but also among students themselves, among equals. Finally, another key element is establishing a trust relationship between parents, teachers and school staff. This trust helps in the inclusion of all families in the school.

Evidences and results

All schools that choose to become a learning community share the goal of improving the results of the students by providing greater opportunities of success for all, and promoting the social cohesion of the whole community. These improved outcomes are visible in students' instrumental learning, but also in terms of their values, emotions and feelings.

Most respondents reported an improvement in staff morale and an increased commitment to the concept of the learning school as a result of changes in their schools, along with improvements to student learning outcomes and morale.

The most common improvement observed, however, was in the relationship between the schools and parents; a result of the genuine effort made by respondents to involve parents more meaningfully in the life of the school.

References

Álvarez Cifuentes, P., & Torras Gómez, E. (1). Comunidades de aprendizaje: actuaciones para el éxito académico y la transformación educativa. *Padres Y Maestros / Journal of Parents and Teachers*, (367), 6-10. https://doi.org/10.14422/pym.i367.y2016.001

Cocklin, B., Coombe, K., & Retallick, J. (2014). Learning communities in education. Routledge.

Tinto, V. (2003). Learning better together: The impact of learning communities on student success. Higher Education monograph series, 1(8), 1-8.

Luyten, H., & Bazo, M. (2019). Transformational leadership, professional learning communities, teacher learning and learner centred teaching practices; Evidence on their interrelations in Mozambican primary education. Studies in educational evaluation, 60, 14-31.

Cristóvão, A. M., Candeias, A. A., & Verdasca, J. L. (2020, January). Development of Socio-Emotional and Creative Skills in Primary Education: Teachers' Perceptions About the Gulbenkian XXI School Learning Communities Project. In Frontiers in Education (Vol. 4, p. 160). Frontiers Media SA.

Luyten, H., & Bazo, M. (2019). Transformational leadership, professional learning communities, teacher learning and learner centred teaching practices; Evidence on their interrelations in Mozambican primary education. Studies in educational evaluation, 60, 14-31.

Voulalas, Z. D., & Sharpe, F. G. (2005). Creating schools as learning communities: Obstacles and processes. Journal of Educational Administration.

European Project: https://www.step4seas.org/

Project R3: Rural, Remote & Real

What is it?

The main objective is to promote real scientific-technological practice in rural schools and training centers.

How does it work?

Students will have access to remote experiments using the Internet, i.e. a real experiment, not virtual or simulated, where the student's hands and eyes are on the web interface, on the mouse, on the webcam. Thus, from a browser, the student will be able to complete a scientific-technological experiment without being in front of it.

Evidences and results

This project is currently being implemented. Expected results and products:

1. Rural, Remote and Real Web Page. It will include the catalog of remote experiments, their didactic material (for the teacher and for the student), experiences of use, discussion forums and teachers' network.
2. Web page of each school. It will be included in the Learning Management System of each school (if they have one) and will have specific information for each school and teacher center.
3. Usage results. Each center and teacher will have a detailed report for each student: number of accesses, time of use, interaction with the experiment, etc.

Materials and Sources

The student, the teacher and the school only need a computer/tablet and Internet connection.

References

In these link you can find more information about the project:
https://proyecto-r3.ingenieria.deusto.es/index.html
https://www.deusto.es/cs/Satellite/deusto/en/university-deusto/deusto-lanza-el-proyecto-r3-para-fomentar-las-vocaciones-stem-en-las-escuelas-rurales-mediante-experimentos-remotos/noticia?cambioidioma=si

Community garden project

What is it?

A community garden is created at school, in a less used area, and students participate in its cultivation, emphasizing the labor of field workers through workshops and lessons.

Additionally, the community participates through a contest where people working in different sectors of the rural area act as a jury to reward the best garden in the school, strengthening the link between community members, families and students. Students benefit from the outcome of the garden, since they take home the production surplus and they can bond with their family and motivate to plant their own garden at home.

How does it work?

In the first stage, workshops and lectures supported by the municipality take place at school in order to appreciate the work of field workers, land cultivation, balance of the environment and the importance of gardening at home, among others. In the second stage, students start planting different seeds and in the third phase, community members act as a jury in a championship to choose the best home garden. It is a way to make a stronger bond between school, family and community.

Evidences and results

Community gardens are an important tool for the school in order to teach the values of the area they live in, but they also bring up debates about fundamental issues, such as socio-environmental issues, the importance of co-working, good cultural and eating habits, etc. Additionally, families get involved through the dialogue and the understanding of the importance of gardening along with the students. Finally, the community participates through the workshops, by sharing their knowledge and the value of the field work; and the municipality supports the project, benefiting from its impact too.

Materials and Sources

Space at school to plant the community garden, seeds and tools, resources to conduct workshops and lessons, and community participation.

References

Blair, D. (2009). The child in the garden: An evaluative review of the benefits of school gardening. *The journal of environmental education, 40*(2), 15-38.

Castro, D. C., Samuels, M., & Harman, A. E. (2013). Growing healthy kids: a community garden–based obesity prevention program. *American journal of preventive medicine, 44*(3), S193-S199.

Datta, R. (2016). Community garden: A bridging program between formal and informal learning. *Cogent Education, 3*(1), 1177154.

Pereira, J. L. d. G., & Fernandes, F. D. P. (2017). Projetos pedagógicos nas escolas comunitárias do Espírito Santo: Propostas que se somam à educação do campo. Revista Brasileira de Educação do Campo, 2(1). doi: 10.20873/uft.2525-4863.2017v2n1p23

3. Technology in the Classroom

REACH - Rigor, Equity, and Access through Collaboration in Higher Education

What is it?

It is a digital teaching platform to further and assess the use of 67 evidence-based practices collaboratively through six formative assessments.

How does it work?

Through 4 steps, teachers reflect on six formative assessments: 1) evidence-based practices, 2) plan of instruction, 3) impact obtained, 4) accomplishment shared.

Evidences and results

The teacher candidates, graduates, and faculty extend collaboration opportunities by increasing the interaction about the content of the platform with other colleges and experts. Also, it is effective for teaching students with disabilities to ensure inclusive learning settings for all. For teachers and teacher candidates in rural areas, the possibility to work synchronously or asynchronously increases their highly qualified training opportunities in effective and evidence-based practices, removing communication barriers.

References

Bondie, R. (2015). A digital teaching platform to further and assess use of evidence-based practices. Rural Special Education Quarterly, 34(1), 23-29. https://doi.org/10.1177/875687051503400106

TeenACE for Science (TAS)

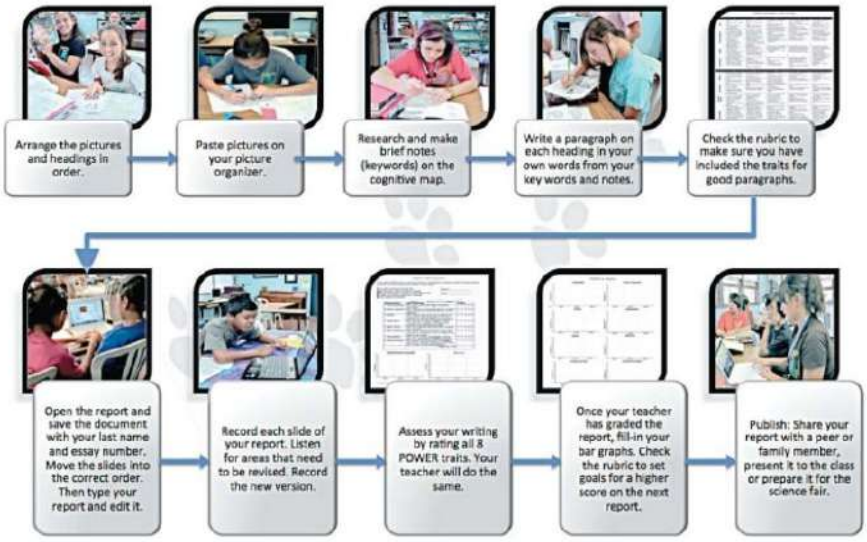
What is it?

It is an educational practice that employs multimedia technology, Universal Design for Learning (UDL) and Self-Regulated Strategy Development (SRSD) for support writing skills in science.

How does it work?

The process is developed in 5 steps: 1) the teacher prepares the materials of typical science reports, including: descriptions of experiments, factual topics, original research investigations using the

scientific method; 2) the students search, collect and organize the required information individually or in pairs; 3) the student creates a draft document to present, 4) the student records, listens, revises and presents the presentation. From step 2 to 4, students are provided with guides to scaffold the writing process with POWER 8 materials (which include: pick a topic, picture organization, outline, organize, write words, write sentences, evaluate and edit, revise and present); and 5) the teacher monitors and evaluates the process using Curriculum-Based Measure (CBM) Assessment.



This figure illustrates the steps in the TeenACE for Science writing process using computer technology and the POWER 8 tools (rubrics, CBM Assessment of the eight writing skills, and graphing chart to record progress toward mastery of each writing skill).
Source: Hitchcock, C. H., Rao, K., Chang, C. C., & Yuen, J. W. (2016). TeenACE for science: Using multimedia tools and scaffolds to support writing. *Rural Special Education Quarterly, 35*(2), 10-23. https://doi.org/10.1177/875687051603500203

Evidences and results

Through a mixed-methods study, research examined students' results on expository writing skills in science after the implementation.
The pre-post tests and curriculum-based measures used to explore the progress show that students manage to accomplish significantly higher scores regarding writing fluency and samples. The intervention was considered by the teaches as high quality, relevant and useful.

References

Hitchcock, C. H., Rao, K., Chang, C. C., & Yuen, J. W. (2016). TeenACE for science: Using multimedia tools and scaffolds to support writing. *Rural Special Education Quarterly, 35*(2), 10-23. https://doi.org/10.1177/875687051603500203

Open Educational Resources through ICTs to create interactive classrooms

What is it?

This intervention combines the use of Open Educational Resources (OER) and ICT to promote teacher training and the implementation of interactive environments in classrooms. In this way, students actively participate in the dialogue together with teachers.

How does it work?

Teachers from disadvantaged rural areas integrate the use of OERs and ICTs in their classrooms. While sharing resources for pedagogical training in collaborative teaching methodologies and activities to be carried out in the classroom, they create interactive classroom environments, fostering interaction among students through the use of a variety of ICTs materials.

Materials and resources

Teachers are connected to a network of colleagues via email lists. This not only gives them access to a network of teachers and stakeholders, but also increases the opportunities for sharing available training and classroom resources on OER.

Evidences and results

When teachers transform their interactive classroom models with students into more interactive ones, their results improve and their motivation for learning increases. By introducing ICT and sharing OER, teachers enhance their pedagogical knowledge, their ICT skills and their teaching methods. With the acquired pedagogical knowledge and with the aid of ICT they were able to provide students with effective work opportunities and inquiry-based learning environments for their learning.

References

Haßler, B., Hennessy, S., & Lubasi, B. (2011). Changing classroom practice using a schoolbased professional development approach to introducing digital resources in Zambia. Itupale online journal of African studies, 3(1), 17-31.

OER4Schools professional development programme

What is it?

The project aims to promote research-based teaching and training with OER4Schools tool.

How does it work?

By applying the OER4Schools programme in the classroom, consisting of 6 didactic units, students are challenged with a range of mathematics and science activities. Through the use of mobile technologies, students are proposed to solve the problems posed in reflective collaboration. Emphasis is given to student participation and mutual scaffolding on the part of the teachers.

Materials and resources

A multimedia programme known as OER4Schools is employed to support mathematics and science learning through open educational digital technology tools in the classroom.

Evidences and results

The results of the implementation of OER4Schools show a significant increase in teachers' expectations towards students. Participation in the programme led students to actively participate in group work guided by the technological resources offered. This was beneficial in developing students' engagement and understanding of the subject, solving problems collaboratively.

References

Hennessy, S., Haßler, B., & Hofmann, R. (2016). Pedagogic change by Zambian primary school teachers participating in the OER4Schools professional development programme for one year. Research Papers in Education, 31(4), 399-427. DOI: 10.1080/02671522.2015.1073343
OER4Schools: http://www.oer4schools.org

School-based Simulated Internships

What is it?

This is a programme where students carry out role-play activities combined with practical experiences of the real world of trades.

How does it work?

Students are encouraged to work in collaborative groups to design and develop real-world solutions to the global challenges of international telecommunications companies.

Materials and resources

For the development of the collaborative and dialogic activity of the students, they create videos as a result of their learning process. The videos include the presentation of the projects designed by the students, trying to provide answers to the challenges they have received.

Evidences and results

The results show that the students have developed the skills required in the world of work, such as: the ability to collaborate in groups, communication skills and the ability to solve problems, in an effective way. All this is the result of the approach developed on the basis of the evidence that fosters strategies that promote learning, such as: commitment to the ideas of the other classmates developed on the basis of a set of ground rules, positioning the teachers as mediators, making the students aware of the importance of working together, suggesting a relevant challenge in which they are involved and a suitable space in which to develop the activity both physically and digitally.

References

Twiner, A., Major, L., & Wegerif, R. (2021) 'Collaborating2Create': A conceptual tool to develop learners' capacity for collaborative creativity through Virtual Internships in schools. Online repository of the American Educational Research Association https://doi.org/10.17863/CAM.69932

Twiner, A., Major, L., & Wegerif, R. (2022). School-based Simulated Internships to support dialogic collaboration and authentic links with the world of work: a design-based research study. Irish Educational Studies, 41(1), 51-69. DOI: 10.1080/03323315.2021.2022515

Mercer, N., R. Wegerif, and L. Dawes. 1999. "Children's Talk and the Development of Reasoning in the Classroom." British Educational Research Journal 25(1): 95–111.

Dialogic Use of ICT

What is it?

Based on the principles of Dialogic Learning, the use of ICT can lead to a more democratic and horizontal participation which is open to all. The dialogic use of ICT involves the promotion of these types of spaces, for instance, by inviting community members to participate in discussions, consultations or blogs related to the school or the village. ICT can promote a collaborative learning process in which the diversity of interaction stimulates the construction of knowledge.

How does it work?

Different strategies can be developed in respect to both diversity and equality. ICT allows traditional models that tend to homogenize reality or participation to make way for more plural and democratic ones.

The use of ITC is seen as a crosscutting tool, although not as an end in itself. The aim is to overcome the inequalities generated by the digital divide, to accelerate children's academic progress, and to improve the community's overall opportunities.

Evidences and results

The democratising force of ICT has led to many examples of how people can organise themselves into movements involving solidarity, and how they used it as a tool to coordinate each other and carry out joint actions. The dialogic use of ICT helps to empower the whole community from a critical perspective. As a consequence of this learning, children find that adults acquire a greater critical capacity for the use of ICT and therefore enrich the interaction they share, while at the same time promoting their autonomy in relation to ICT use. In turn this interaction between teachers, family members, and children, increases the well-being of the whole community, and the traditional problems of conflict or distance between the school and the family are overcome. The children also feel that they are in a more positive environment, and this promotes greater self-esteem for all the people involved.

References

Gatt, S., & Sordé, T. (2012). ICT Alone Is Not Enough, The Whole Village Is Needed. A Community-based and Dialogic Approach to Technology in Schools. International Journal of Educational Psychology, 1(2), 153–174. https://doi.org/10.4471/ijep.2012.09

Hesterman, S. (2011). A contested space: The dialogic intersection of ICT, multiliteracies, and early childhood. *Contemporary Issues in Early Childhood, 12*(4), 349-361.

Wegerif, R., & Mansour, N. (2010). A dialogic approach to technology-enhanced education for the global knowledge society. In *New science of learning* (pp. 325-339). Springer, New York, NY.

4. Other Resources

In this part you would find relevant materials and activities that may be useful for the next Work Packages, but that do not meet the inclusion criteria to be considered best practices. It can be useful, for example, to compile some ideas of previous works in order to design the virtual platform or to see how the projects were developed. It is structured in three categories:

1) EU-funded projects

2) Rural projects

3) Support to develop visual skills

a. EU-funded projects

In this section you will find educational projects financed by the European Union that have already been completed. All of them have the common characteristic of having been developed in a digital environment.

Creations

What is it? CREATIONS aims to improve the skills of young people in STEM (science, technology, engineering, mathematics) and to pool talent to scientific careers by giving students and teachers opportunities to experiment with many different places, activities, personal identities. Also, it simulates the work of the scientist and researcher in the classroom, promotes a better understanding of how science works and enhances students' science related career aspirations. It encourages and empowers science teachers to affect change. It implements and promotes inquiry-based science teaching and learning. Additionally, it ensures that learning and (self)creating takes place in emotionally rich learning environments. Finally, it disseminates and exploits the results.

Materials and Resources This project has a toolkit with useful tools and links for anyone who facilitates creative science education. Here you can find resources to help you define and plan creative science teaching and learning, including good practice examples, planning, workshopping activities and teaching resources, including approaches to Inquiry Based Science Education.

Link http://creations-project.eu/

The Penjii Project: Penji protects the planet

What is it? Eramus+ Funded Research Project, "Promoting Green Skills through Games". The aim of the project was to support the area of sustainability education in primary and secondary schools through Game-Based-Learning.
Materials and Resources A fun new game for smartphones and tablets to support Climate Action Education.
Link http://penjiithegame.com/

EduHack

What is it? Edu-Hack is an initiative supported by the Erasmus + Programme of the European Union in order to develop a capacity building methodology that utilises online courseware and EduHackathons, whereby teaching professionals will learn how to produce digitally-supported learning experiences and will have the opportunity to experiment with creative models and approaches to teaching and learning, with a focus on fostering collaborative learning and student engagement.
Link https://eduhack.eu/course/

Go-Lab Initiative

What is it? The Go-Lab Initiative facilitates the use of online laboratories and inquiry learning applications for science education in schools. This project received funding from the EU's Horizon 2020 programme. The aim of the Go-Lab Initiative is to facilitate the use of online laboratories and inquiry learning applications for science education in schools. The Go-Lab Initiative provides the Go-Lab Ecosystem for teachers, where they can find various online labs and create customized Inquiry Learning Spaces. Furthermore, the Go-Lab Initiative conducts training for teachers all over Europe on the topics of Inquiry-Based Science Education in schools and the use of the Go-Lab Ecosystem.
Link https://nextlab.golabz.eu/initiative

Scientix

What is it? Scientix promotes and supports Europe-wide collaboration among STEM (science, technology, engineering and maths) teachers, education researchers, policymakers and other STEM education professionals. This project received funding from the EU's Horizon 2020 programme. It aims to promote and support a Europe-wide collaboration among STEM teachers, education researchers, policymakers and other educational stakeholders to inspire students to pursue careers in the field of Science, Technology, Engineering and Mathematics (STEM).

Materials and Resources

http://www.scientix.eu/resources

Link http://www.scientix.eu/home

Sundial

What is it? Aimed at children between the ages of 8 and 12, it provides five structured lessons as an introduction to various astronomical subjects. Any lesson typically consists of a presentation and supporting form for the teacher, and on occasion accompanying printable materials. All lessons are provided in Dutch and English. They aim to contribute to this general discussion by training a number of young scientists in the fields of computer science and astronomy, focussing on techniques of automated learning from large quantities of data to answer fundamental questions on the evolution of properties of galaxies.

Link

https://www.astro.rug.nl/~sundial/outreach.php

https://www.astro.rug.nl/~sundial/science.php

b. Rural education

This subsection includes projects specially designed for teaching in rural areas.

Rural DEAR Agenda (Development, Education and Awareness Raising)

What is it? The EU Development Education and Awareness Raising (DEAR) Programme supports projects that engage Europeans in global issues related to social, economic and environmental development. It is unique among EU International Partnerships programmes as it works primarily with people in Europe, highlighting their interconnectedness with the rest of the world and the importance of sustainable development, both locally and globally. The DEAR programme works with European civil society organisations (CSOs) and local authorities (LAs) to foster critical understanding of complex sustainable development issues. Though both education for sustainable development and global citizenship and awareness raising, the programme promotes the Sustainable Development Goals (SDGs).

Link

https://dearprogramme.eu/
https://ec.europa.eu/international-partnerships/programmes/dear-development-education-and-awareness-raising-programme_en

Pride of Place

What is it? The EU-funded project 'Pride of Place' aims at developing an up-to-date and sustainable educational program for secondary education in rural areas across Europe. The project is unique in the purpose of raising awareness on the importance of development of Pride of Place and offering a ready-to-use and tested curriculum. Moreover the project aims at developing a parallel curriculum for teachers which will support and increase pupils' 21st century competences.

Link https://prideofplace.eu/project/

Creaction

What is it? Virtual European class based on TwinSpace, with the eTwinning platform. It allowed students to collaborate to create a common website, online magazines, art exhibitions, launch campaigns, step into action with local associations, make school a safer and happier place by analysing their social media habits, become aware of their status as Europeans, of their common values and culture.

Link https://creactionproject.weebly.com/

Bioengineering at the Rural School

What is it? The "Bioengineering at the Rural School" project, led by the Strategic Initiatives unit of the Institute for Bioengineering of Catalonia (IBEC), is being projected to different European countries in an event organized by the European Network eTwinning, the European online platform for school education, where primary and secondary school teachers from all over Europe have connected to learn, first hand, about different strategies to follow to connect schools in rural environments with cutting-edge education in different fields.

Link https://ibecbarcelona.eu/ibecs-bioengineering-at-the-rural-school-project-makes-the-leap-to-europe/

Green S.E.E.D.S

What is it? The "Toolkit GREEN S.E.E.D.S." is a curriculum especially designed to meet the needs of the teachers who work in small, decentralised schools. It is made up of 5 modules of three units each, which cover all the issues related to teaching and working in small classes. It has been written by the University of Vigo and Synthesis Center LTD, with the support of all of the Partners, with particular reference to the training on the toolkit contents, where the modules were tested.

Link

https://www.greenseeds.eu/resources-en/toolkit

RuralSchoolCloud project

What is it? This project aims to improve the quality of learning and teaching in small rural / dispersed schools in Europe, by exploring, adapting and improving several innovative European ICT based methodologies, that allow to respond to the different needs that teachers face when designing their classes, as well as in improving their professional competences.

This initiative developed into a wider project, where all rural schools in Galicia were appointed, and another step was taken, creating a "network of school clouds", where learning and sharing is easy among different schools, opening a door to more possibilities to explore: teacher training, distance learning to isolated students, group learning, language learning with other schools from different countries, etc.

Link https://e-learning.cesga.es/rsc/news

Didactic module for teaching and learning in rural multigrade schools

What is it? The teaching and learning modules are a support material for teaching in multigrade classrooms. They are available for the subjects of Language and Communication, Mathematics, Natural Sciences and History, Geography and Social Sciences.

The modules have been organized by thematic axes, in accordance with the Basic Education Curricular Bases, facilitating class planning and student learning activities, in an integrated process in which students from different grades share their learning experiences and where the teacher faces the challenge of managing several teaching actions simultaneously.

Materials and Resources Each module contains:

- General orientations;
- Diachronic and synchronic matrix of Learning Objectives;
- General matrix by class and course;
- Integrated lesson plans;
- Student workbook;
- Assessments for the completion of the process..

Link https://rural.mineduc.cl/modulos-multigrado/

Piccole Scuole

What is it? Indire have allowed some schools on the smaller islands and in the mountain areas of Italy to experiment with joint working thanks to distance learning models and the use of technologies such as IWBs and videoconferences.

Materials and Resources *The Notebooks* came out of the need to document the good practices that emerge from the activities of teachers working at Small Schools that are a part of the national network. The demonstrable practices are also often the result of research/training interventions carried out by Indire researchers who are following small schools in innovation interventions. This Notebooks are strategic devices for the "democratization" of innovation given that they can be reused in further training sessions and also for self-education, thus initiating change and improvement in teaching/learning in educational contexts considered "minor" until recently.

Link https://piccolescuole.indire.it/en/notebooks/

FOPROMAR

What is it? The main objective of this project was to propose a permanent training plan and initial training proposals to cover the competence needs of new rural teachers through

1. Identification and analysis of the specific competencies of the rural teacher linked to the territorial dimension of the school (social and natural environment).
2. Identification and analysis of the latent knowledge in the rural school related to the territorial dimension of the school (social and natural environment).
3. Elaboration of the proposal for a permanent training plan and initial training proposals.

Materials and Resources

https://fopromar.files.wordpress.com/2019/11/informe-final-proyecto-e-fopromar.pdf

Link https://fopromar.wordpress.com/resultados/

c. Support to develop virtual skills

In this subsection, you would find open access projects with the main objective to improve the use of ICT and e-learning resources in schools.

Project Up2DigiSchool

What is it? The Up2DigiSchool project is based on the experience of Up2U project and aims at improving the current situation in digital education in Europe. Due to the many lockdowns caused by COVID-19 in spring 2020, schools moved from face-to-face to online teaching and learning to support the continuation of the education. For many teachers and students it was a whole new experience of education. It was also a great opportunity to explore new tools and pedagogical approaches, as well as to support developing new digital skills and competences of students.
Materials and Resources Learning Scenarios Repository: A pool of scenarios will be available for the users based on the different users' needs and requirements and an E-learning platform will also be created as part of the project.
Link https://up2digischool.eu/educational-platform/

European Distance and e-Learning Network (EDEN)

What is it? The European Distance and e-Learning Network (EDEN) exists to share knowledge and improve understanding amongst distance and e-learning professionals. It seeks to promote policy and practice across Europe and beyond.
Link https://www.eden-online.org/

Mutual Open and Online Skills

What is it? The objectives of this project were to improve the use of ICT and open education resources in the curriculum of European high schools to stimulate new approaches to learning.
Link
http://www.moos-online.eu/project/

eXeLearning

What is it? Open source tool that facilitates the creation of educational content without the need to be an expert. It also serves as an integrator of multimedia content since it is possible to insert elements such as videos, audios, applets, web pages and other resources developed and available in other tools and platforms.
Link https://exelearning.net/

"EDIA" Project (Educational, Digital, Innovative and Open)

What is it? Open project that promotes and supports innovation and didactic experimentation in the classroom through the development of open educational resources and the formation of networks of teachers and educational centers. It also serves as an integrator of multimedia content, since elements such as videos, audios, applets, web pages and other resources developed and available in other tools and platforms can be inserted.
Link https://cedec.intef.es/proyecto-edia/

Procomún

What is it? Network of open educational resources, where you can search, view and download learning objects in standard formats and with open licenses for pre-university education. Prepared to be used directly in the classroom or to be modified and adapted to different contexts or needs. It incorporates semantic technology that links it with other similar digital networks.
Link https://procomun.intef.es/en

EU Rural Virtual Classroom

Inventory of best practices