

BE·COMIS

FINAL REPORT

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Acknowledgements

The BE-COMS project is co-funded by the Erasmus+ Programme of the European Union.



Co-funded by
the European Union

How to cite this report

DITES (2023). Building E-COMpetencies at Schools. Final Report from the BE-COMS PROJECT. BE-COMS Consortium. Rome, DITES Research Centre, Link Campus University.

The European Commission support for the production of this publication does not constitute an endorsement of the contents which reflects the views only of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

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ACKNOWLEDGEMENTS

This report is the outcome of the ERASMUS + BE-COMS Project “**Building E-COMpetencies at School**” (Project Code: 2021-2-IT02-KA210-SCH-000050392), a small partnership to promote European citizenship and digital culture and competencies for teaching and learning in the digital era.

BE-COMS involved four partners: DITES research centre (Digital Technologies, Education and Society) at Link Campus University as an Applicant, Entropy Knowledge Network (Italy); Maude Studio (Spain); and DARICA Ilce Milli Egitim Mudurlugu (Turkey).

We thank all the associated partners and collaborators who, in different ways, have contributed to ensuring the success of the project: the High School "G. M. Angioy" of Carbonia in Sardinia, the Isacco Newton and Teresa Gullace of Rome for their participation in all projects activities for teachers and students.

We also thank Professor Cristiana Pivetta (High School "G. M. Angioy" Carbonia) for her testimony during the first workshop dedicated to teachers and all the expert trainers who participated in the several project activities: Dario Carrera, Angela Macrì, Eliseo Sciarretta from Italy; Abdulkadir Emre Posos, Deniz Çiçek, Derya Çakır, Yiğit Boztepe, Serkan Gürkan from Turkey; José Antonio Baca, Isabel Balbontin, Francisco Cerrato, Sara Dávila, Miguel Franco, Álvaro Ladrón, Lorena Mora Lucena, Noelia Olvera, Rosario Ramírez and Emilio Sola from Spain.

Over two years, the BE-COMS project gathered more than 230 teachers, trainers and 200 students. The main results of the project are summarised in this report. We thank all the schools, teachers, students and colleagues for their trust, openness, and commitment to the project.

Further, we thank the teachers and friends belonging to the EDU HUB community of practices for their active participation in the works shops dedicated to teachers and all collaborators and students who support the realization of peer labs for students and teachers: Elena Fasoli; Luca Gulisano; Gianluca Della Puppa, Giovanni Di Gennaro; Sergio Pappagallo; Elvira Parente; Elisa Pistone; Luca Torchia.

Thanks to the European Commission for co-funding the BE-COMS project through its Erasmus+ programme. The first success of the project is represented by the fruitful collaboration and friendship relationship among all the partners.

Lastly, I have the pleasure of personally thanking all the partners, collaborators, project staff and colleagues from the Research Office of Link Campus University for working together in the framework of virtuous and constructive relationships.

Stefania Capogna
Project's Scientific Director

EXECUTIVE SUMMARY

New approaches to Teacher Professional Development have highlighted the need to focus on a set of key components to provide effective TPD at scale, such as professional learning support, collaboration and reflection with peers, a variety of formats and platforms to make content available for different contexts, peer evaluation or a career-oriented strategy for professional learning (Darling-Hammond et al., 2017, TPD@Coalition for the Global South, 2021). This literature allows us to understand the key factors to improve professional learning. Still, it needs to pay more attention to the dimension of *teacher agency* in responding to, adapting to, and transforming their practices to address the need to deliver quality teaching.

New education sources are a solution and a challenge for students and schools. Online learning is an important tool for the future, especially for the digital transformation produced by the COVID-19 pandemic. Moreover, a positive and well-organized experience related to online learning should influence digital maturity today, a demanded core competence in today's job market.

Educational Institutions must review teaching paradigms, organization, management, evaluation processes, relations systems and competencies framework for managing and teaching. Online delivery challenges school institutions and policy-making (Horizon Report 2016).

Every project's partner underlines that the pandemic has demonstrated that having an education and training system fit for the digital age is essential. In 2020, the European Commission launched an open public consultation on the impact of COVID-19 on education and training, the related switch to distance and online learning and the vision for the future of digital education in Europe. highlighted that:

- almost 60% of respondents had not used distance and online learning before the crisis;
- 95% consider that the COVID-19 pandemic marks a turning point for how technology is used in education and training;
- respondents expressed that online learning resources and content need to be more relevant, interactive and easy to use;
- over 60% felt that they had improved their digital skills during the crisis, with more than 50% of respondents wanting to build upon them;

To respond these needs, the project organized **3 close correlated actions** aimed to:

- **promote the exchange and sharing of good practices** between different European partners, favouring the cooperation and the experience exchange among teachers and trainers;
- **sharing best practices and dissemination of educational resources and methodology** inspired by the logic of gamification in education and professional training to favour a teaching student's centred approach;
- **disseminate digital culture and competencies for improving teaching methodologies** in the digital era and active participation;
- **facilitate a transformation of teachers' perspectives by bottom-up initiatives**, such as communities of practice, among other examples of teacher network initiatives on the use of technology to access the technology and training but also to ensure it will be integrated as part of their regular practice over time;
- **contribute to the dissemination of best practices** among different partners in the European Community, favouring the inclusion of marginalized regions by the newcomer;
- **increase capacity and professionalism to work at the EU/international level** and establish cooperation networks and partnerships among different educational institutions (universities, research centres, training institutions, digital developers);
- **contribute to pushing new way of teaching in the education sector** towards increasing a digital environment and a teaching approach based on digital solutions
- **support active European citizenship** by sharing educational paths for active citizenship for teachers, trainers and students
- **promote paths through the enhancement of digital resources** in teaching practices, valorizing the use of digital tools during the project.

Keywords:

Best practices, Community of practice, digital competences, school, teachers, students

INTRODUCTION

The European project **BE-COMS - Building E-COMpetencies at Schools** - (2021-2-IT02-KA210-SCH-000050392) started on the 1st of March 2022 and concluded on the 1st of November 2023. It fell into the category of small-scale partnerships funded by the Erasmus+ programme. The main objectives of the project were:

- the spreading of best practices at the European level and the creation of a bridge between countries, enhancing the axis and the Mediterranean dialogue;
- the promotion of methodologies and skills capable of dealing with the digital challenge.

BE-COMS intended to involve new and small organizations, encouraging inclusion processes aimed at people with fewer opportunities through:

- the collaboration and sharing of experiences and good practices between different countries and channels;
- the improvement of technologies and digital resources for teachers and students through workshops and the promotion of peer labs aimed at encouraging innovative thinking;
- the promotion of active citizenship and digital identity from a European perspective through transnational activities.

Through sharing experiences and good practices, the project aimed to strengthen teachers' digital skills, **share educational innovation paths and construct and strengthen European networks and collaborations**. For this reason, the BE-COMS project built a partnership (Italy, Spain, Turkey) among universities, research centres, training institutions, and business companies, including various approaches and experiences.



BE-COMS contributed to enhancing digital technologies by involving middle and high schools in sharing paths of good practices and experiences to promote cooperation and innovation about:

- the use of active methodologies and digital resources in teaching practice to improve teaching methodologies in the digital era (A1-A3)
- the use of educational resources inspired by the logic of gamification in education and vocational training (A1-A3)
- the promotion of digital citizenship in the framework of European cooperation (A1-A2-A3)
- the building of a community of interest for the development of innovative projects and initiatives aimed at supporting schools in the digital age (A2-A4)
- the creation of peer labs among teachers and trainers to favour the inclusion of targets with less opportunity (A3).

BE-COMS had as its objective 4 main activities

A1: WORKSHOPS

A2: Edu Hub

A3: Peer Lab

A4: Contamination Lab

From March 2022 to November 2023, the project consists of the DITES research centre, Link Campus University (Applicant), coordinated in partnership with Maude Studio SL (Spain), Entropy Knowledge Network s.r.l (Italy) and **DARICA Ilce Milli Egitim Mudurlugu** (Turkey), as expected by the partnership, were carried out as a timesheet.

However, the project's triumph can be attributed to the multitude of collaborative partners who embraced the proposed activities and actively contributed to implementing each initiative.

The list of Associated Partners is available at the following link: <https://be-coms.unilink.it/partnership/>

ACTIVITIES



The European Commission support for the production of this publication does not constitute an endorsement of the contents which reflects the views only of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

A.1 WORKSHOPS

for sharing best practices



To improve teachers' and trainers' professionalization and the attention to building online learning/teaching, the BE-COMS project foresaw workshops for sharing best practices, ideas, methodologies, and experiences among educators afferent to different educational contexts in an intercultural logic.

The good practice workshops were aimed at middle and high school teachers, educators, and trainers from the vocational centre. They were organized in a hybrid way to encourage the participation and inclusion of categories with fewer opportunities and residing in different countries.

The workshops were organized in two separate sessions of **16 hours each**, both directed by the Spanish partner **Maude Studio S.L.**

The two workshops were hybrid and involved 139 teachers, trainers and educators. The first focused on the Teaching-Learning Model, while the second concentrated on Teaching/Learning methodologies for engagement and inclusion.



WORKSHOP 1

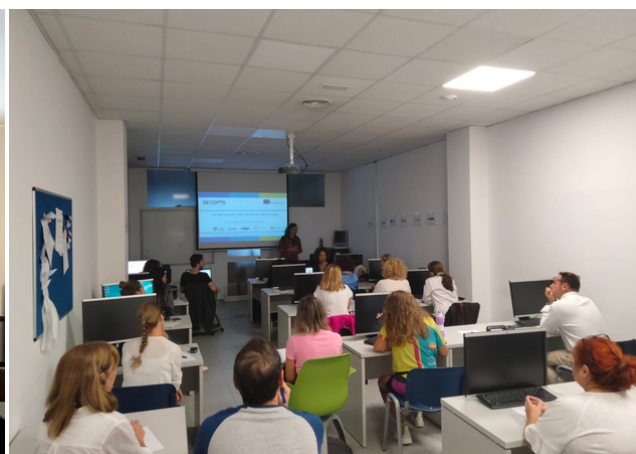
GOOD PRACTICE WORKSHOPS FOR TEACHERS, EDUCATORS AND TRAINERS

The first workshop, held on **13 and 14 October 2022, in Málaga** focused on innovative teaching and learning methodologies through the presentation of the [DIG4LIFE project](#) and involved 66 participants.

While sharing the best experiences illustrated by each of the partners, we focused in particular on the issue of *theories and methods useful and necessary to integrate digital in teaching practices* and to meet the renewed learning needs of 21st-century students, the so-called "digital natives".

Objective:

- Sharing best practices for improving digital teaching methodologies and skills based on the student's student-centred paradigm (self-evaluation, discovery learning, based learning model, inclusive teaching/learning methodologies, etc.).
- Improve teaching skills (including digital skills) for teachers, tutors and staff.
- Support teaching staff in adapting their curriculum and methods to online teaching.
- Facilitate the development of peer-based social support networks among students and staff, particularly helping the underrepresented, disadvantaged, and vulnerable.



WORKSHOP 2

TEACHING/LEARNING METHODOLOGIES FOR ENGAGING & INCLUSION PARTICIPATION AND COMPENSATION

The second workshop occurred on March 2 and 3, 2023, in **Málaga**. It focused on engagement, inclusion, participation and compensation techniques and involved **73 participants**.

Digital tools and methodologies for equity, accessibility and inclusion in education, as well as useful scenarios and development possibilities, were presented. This was an opportunity to encourage active and stimulating discussion among the participants.

Objective:

- Sharing best practices for innovative and engaging methods to favour inclusion targets with fewer opportunity
- Digital methodologies, resources and tools for inclusion and empower digital skills for learners;
- Digital resources for educational, inclusive, compensatory and participation use



THE RESULTS ACHIEVED WITH THE W1 AND W2 FOR SHARING BEST PRACTICES ARE:



- Disseminated effective practices and strategic tools for monitoring and enhancing company performance.
- Facilitated increased collaboration among European stakeholders, educational institutions, and companies, providing added value that transcends local boundaries.
- Fostered synergies among partners and countries to cultivate a shared European culture and broaden the collaborative network for upcoming projects.
- Advocated for a global culture of integration aligned with the United Nations' objectives.
- Enhanced visibility and institutional reputation at the European level for all partners.
- Bringing newcomers closer to ERASMUS projects.
- Design new joint initiatives to follow up the successful collaboration built within the BE-COMS project.

NUMBERS

of participants



WORKSHOP 1

ITALY (10) participants

SPAIN (24) participants

TURKEY (32) participants

(66) participants

WORKSHOP 2

ITALY (22) participants

SPAIN (33) participants

TURKEY (18) participants

(73) participants

WORKSHOP (139)

total amount of participants

32 from Italy
57 from Spain
50 from Turkey

A.2

EDU HUB

To favour dissemination of different project results and to engage schools by community of teachers and calls for ideas.



The activities of the workshops converged within the **EDU HUB community of practices**, promoted and animated by the **DITES research centre** of Link Campus University. A community of practices formed by teachers, experts, and trainers are all co-interested in actively and responsibly governing the great challenges that the triple digital, ecological, and social transition poses to the educational system at all levels of society. **EDU Hub** is an open community of practices that, by enhancing the networking opportunities, wants to allow all those who work in the world of education, training, guidance and social innovation to:

- build alliances to generate value;
- share good practices, experiments and experiences made for sharing them and promoting dissemination, sharing and social innovation;
- participate in training activities and/or experiments carried out through projects promoted by the DITES centre;
- become active agents of social innovation;
- participate free of charge and actively in the peer lab and contamination lab courses designed by the DITES research centre, which promotes the initiative

Joining the EDU HUB community is free, and it allows you to:

- receive the free quarterly newsletter of the Research Center with the extract from the journal **Quaderni di Comunità. Persone, Educazione e Welfare nella Società 5.0**
- be informed about training initiatives and conferences in which to participate for free
- be informed about the calls and contests promoted by the DITES research centre and the journal Quaderni di Comunità. People, Education and Welfare in the 5.0 society.

The EDU HUB community was born under the impetus of the **RE-EDUCO** and **DIG4LIFE** projects. It continued its activities within the BE-COMS project to establish itself as an autonomous collaboration space to generate value and enhance talent.

To join the EDU HUB Community, register by filling out the form at [this link](#)



In the BECOMS project, the EDU HUB promoted opportunities for exchange and research through the organization of transnational round tables, conferences and calls for papers on the issues of digital teaching transformation through **3 activities**.

A2.1 - Sharing best practices and ideas

For this activity, the Applicant, facilitated by the DITES research centre, made the official website of the research centre available to animate a section dedicated to the project: <https://be-coms.unilink.it/>

A2.2 - Call for ideas

A call for ideas was opened to encourage the exchange of good practices and innovative ideas on Technology Enhanced Learning for engaging and inclusive learning.

Call for paper & idea n. 2 / August 2023, for the Academic Journal *Quaderni di Comunità. People, Education and Welfare in Society 5.0* (ISSN: 2785-7697).

- **15 Abstract has been collected for the Essay section**
- **4 contributions to the Education Rubrics**
- **3 contribution for the Empowerment Rubric**

A2.3 - Special Issue for dissemination

The DiTES Research Center organized one special issue for the n.2/2023 issue **of the Journal *Community Notebook. People, Education and Welfare in Society 5.0*** in English aimed to disseminate good practices. The call for papers was named *Teaching Enhanced Learning for Engaging and Inclusive Learning*.

Teaching Enhanced Learning for Engaging and Inclusive Learning is discussed and debated in an interdisciplinary context and focused on the opportunities to stimulate the learning processes of education, as well as the risks of cognitive limitation, through technological support within formal (such as school) or informal educational contexts (such as playroom).

A.3 PEER LAB

To encourage the exchange of good practices and innovative ideas on Technology Enhanced Learning for engaging and inclusive learning.



The consortium organized **two peer labs**, the first aimed at school staff and the second at students. Peer labs aimed to stimulate the creation and exchange of innovative ideas among participants, the adoption of methodologies to engage learners through student-centred approaches, and, finally, the knowledge and dissemination of digital tools and resources to support the teaching-learning process.

PEER LAB FOR TEACHERS

This activity took place at DARICA Ilce Milli Egitim Mudurlugu's headquarters **in Turkey on 26 and 28 April 2023**, involving 79 participants: 14 from Italy, 39 from Spain and 60 from Turkey. During this peer lab entitled *Good Practices and Innovative Ideas on Technology Enhanced Learning for Engaging and Inclusive Learning*, the following topics were addressed:

- **artificial intelligence in education,**
- **use of Serious Games in teaching:** Dig4Life Serious Game
- **self-assessment of digital competencies for citizenship**
- **designing a hackathon for students:** teachers faced a hackathon about a real education problem on digital skills. The aim was to present ideas and win the chance to be the next project proposal idea for the next Erasmus + call. The panel was composed of members of project partners, teachers who had won the previous call for ideas, and students.

This activity resulted in:

- a teaching experience focused on the last digital solution for learning, inclusion, compensation
- an experience with a simulative environment (Dig4Life) on digital skills
- a new methodology and “how to” to concretize constructionist approach and to gamify teaching
- a storyboard co-designed during the session on a core theme for teachers
- new ideas about education methodology about Digital Skills.



PEER LAB FOR STUDENTS

The Peer Lab for students took place in **Italy, Spain and Turkey on the 27 and 28 of September 2023**. During this activity, the 128 participants have been actively involved in a hackathon inspired by the SelfAssessment: DIG4LIFE Serious Game under the leadership of Entropy.

Objective: Empowering Students for digital learning and society

The PL for students was organized face-to-face for 2 days to empower them in digital skills through the Hackathon competition and TED methodology.

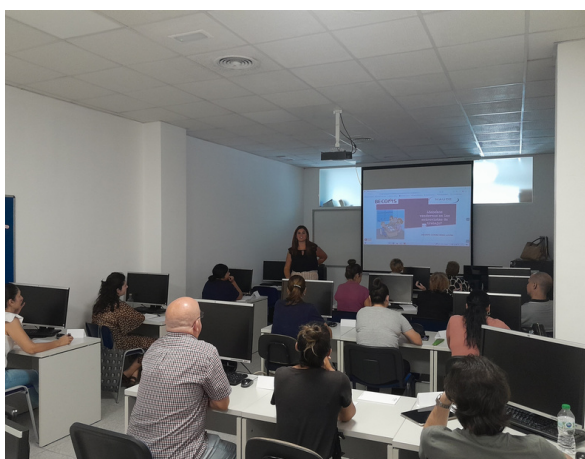
Activity: Students brainstorm on how to use technology to create social impact and thus how to lead change. Afterwards, they work in groups to propose innovative project ideas. The aim was to encourage students with different technical backgrounds to develop new ideas and to improve their problem-solving skills. Students were invited to reflect on their future and whether the path of study they are following can adequately prepare them for what they would like to be in the future, with particular reference to the skills required by the world of work.

After this moment of community reflection, the students involved were divided into groups, and the task assigned to them was to:

- identify and motivate the skills they believe are most in demand in the world of work
- identify which of the skills identified are developed at school and which are not addressed
- develop and present a design idea to bridge the schoolwork gap, with particular reference to digital skills

This activity resulted in:

- New ideas: “Mind the gap! ...between school and work/life”



NUMBERS

of participants



PEER LAB FOR TEACHERS

ITALY 14 participants

SPAIN 39 participants

TURKEY 60 participants

113 participants

PEER LAB FOR STUDENTS

ITALY 85 participants

SPAIN 15 participants

TURKEY 40 participants

140 participants

total amount of participants

PEER LAB **253**

99 from Italy

54 from Spain

100 from Turkey

A.4 CONTAMINATION LAB

to promote the contamination of practices, knowledge and competencies among target groups involved.



The contamination labs aimed to enhance participants' creativity and support **creative and sustainable ideas**. They also allow participants from different disciplinary fields to get to know each other and work together in the Digital Era, developing their IT competencies and planning, organizational, and communication capabilities. This activity aimed to help teachers, trainers, and students develop new ideas, methodologies and educational settings by comparing different experiences.

During this activity, the participants were asked about topics strictly related to the main aim of the BECOMS project.

Each partner organized a session of contamination lab to favour a discussion in a small group where the interviewer invited a group of participants and asked them questions on a designated topic.

BE-COMS contamination labs focused on school organizational transformation focusing on five main topics:

- e-leadership
- mismatch work supply-demand in digital innovation
- digital transition: e-competences and soft skills
- education system: social innovation and local change
- digital risks and implications on teachers and students



The Contamination Labs were realized in hybrid mode during the **final conference hosted** by Darica National Education Directorate, on 13 October 2023

Building e-Competences at school Between Technology Enhanced Learning and Social Innovation.



The event communicated and shared the work done to develop digital and entrepreneurial skills among teachers and young students. In addition, during the event, the winners of the hackathon and peer labs for students had the opportunity to present their ideas to a board of experts and the invited stakeholder audience, receiving guidance and feedback on their proposals.

This conference disseminated the overall results of the Project, involving **94 participants**.



Moreover, to increase the possibility of creating positive results and cooperative networking, the consortium organised **3 local Contamination Labs** in Italy, Turkey and Spain, involving a total of **69 participants**.



NUMBERS

of participants



**FINAL
CONFERENCE**

94

participants

**CONTAMINATION
LAB**

local

ITALY

33

participants

SPAIN

12

participants

TURKEY

24

participants

CONTAMINATION LAB

181

total amount of participants

FINAL PUBLICATION

Teaching Enhanced Learning for Engaging and Inclusive Learning

No. 2 (2023)

Community Notebook. People, Education and Welfare in the Society 5.0

This journal issue addresses the topic of "*Teaching Enhanced Learning for Engaging and Inclusive Learning*" in the digital age (edited by Ida Cortoni, Veronica Lo Presti, Eleonora Sparano). The topic is certainly not new in the international scientific debate, which is interdisciplinary in nature; it is part of the themes underlying the studies of Digital Education and Digital Literacy, but it represents an issue that is always at the forefront insofar as it is affected by technological innovations and sociocultural changes that digital culture progressively stimulates and promotes in different educational environments. In this sense, digital education in teaching and learning processes needs to be scientifically recognized in academic circles, institutionalized by emphasizing the methodology and evaluation strategies that educational media practices have been experimenting with for several years, for a systematization of interventions, scientific literature and critical reflections on the topic. Within this issue, the focus is on the assessment methodologies and strategies activated in the digital education perspective, with special attention to best practices in different educational contexts, from elementary school to university.

Published: 2023-09-01

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NUMBERS



EXPECTED

ACHIEVED

WORKSHOPS	100	139
PEER LAB FOR TEACHERS	50	113
PEER LAB FOR STUDENTS	50	140
CONTAMINATION LAB	90	181

PARTNERS

BE·COM·S



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Link Campus University mission is to promote research, studies and training activities. LCU has significant experience in project management and active participation in national and international networks. The mission of LCU and of the **DITES Research Center** (Digital Technologies, Education & Society) are totally in line with the project objectives focused on the enhancement of technologies with a view to individual, organizational and community empowerment, to be carried out involving all public and private actors, institutional and collective in all forms: education, training, work, accompaniment, edutainment.



Maude Studio S.L. is a training centre established in Spain, experts in formal training. Maude has more than 40 years of experience in the field of vocational training, especially in the field of public administrations and associations dedicated to the promotion of labour insertion and the improvement of the professionalism of people who, both unemployed and active, need to improve their professional skills to adapt to an increasingly demanding and professionalized labour market, thus helping to improve the business competitiveness of companies.



Entropy Knowledge Network is a consultancy enterprise, that works on managerial training, organizational development, and new technologies applied to learning. EKN Works for 13 years on embedding constructionist methodology inside complex learning path – blended learning and online learning. To reach this goal since 2008 has developed two different authoring tools to made digital simulations (Serious Games) that allows teachers and trainers to realize digital experiential learning. Serious Game's Editors provide specific feedback and support co-design methodology: used by trainers/teachers to let students/participants develop their own scenario applied to a specific issue.



Darica National Education Directorate (DIMEM) is a non-profit local public body located in Kocaeli and responsible for administrative affairs of formal and non-formal education. With the scope of Erasmus+ program and its priorities, we aim to integrate this program to our local studies and gain internalization, increase the capacity of our directorate, and offer to students and teachers to cooperate with Europe to share good practices and educational&professional attainments.

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