Project code: 2019-1-IT02-KA201-063073

Co-funded by the
Erasmus+ Programme
of the European Union

KA201: Strategic Partnerships for school education

RoboPisces

"innovative educational ROBOtics strategies for PrImary SChool ExperienceS"

WP2: Curricula and tool development

D2.3.2: "Report on version v2.0 of the basic kits"

Responsible Organization: Università Politecnica delle Marche

Version 0.1 , Date: 01/03/2021

Table of Contents

Co-funded by the Erasmus+ Programme of the European Union

Preface

Main Authors for the deliverable:

Name of partner organization	Main authors
UNIVPM	Laura Screpanti
	David Scaradozzi
	Arianna Pugliese

Main Contributors for the deliverable:

Name of partner organization	Main contributors

History of Changes:

Date	Version	History of change
01/03/2021	0.1	Initial version of the report

1 Introduction

1.1 Scope and objectives of the deliverable

This deliverable is related to WP2 "Curricula and tool development" T2.3.4 "Basic Kits Version v2.0 finalization and school distribution" of the Work Plan (Annex I of the Monitoring and Evaluation Plan).

The scope of the deliverable is to report the development of v2.0 of the basic toolkit, which is the student's kit sent in December to the schools that were going to implement activities in the classroom.

Objectives of the deliverable are: to report the developments of the kits; to describe the toolkit that will be used for the first year of the school-based implementation; to briefly report its functioning; to highlight next steps in the development of the RoboFISH toolkit, which will be the advanced toolkit v0.1 (teacher's kit) and v2.0 (student's kit).

This report integrates the report D2.3.1 "Report on version v0.1 of the basic kits used during C1".

1.2 Introduction to basic toolkit v2

The RoboFISH basic toolkit v0.1 was accepted by teachers as the toolkit for the implementation of the basic curriculum. The difficulties they had in starting schools in September-October 2020 lead to a shift in the start of the activities, originally planned for October 2020 and delayed to January 2021. More difficulties came for Croatia that suffered the severe consequences of the pandemic and of the earthquake. Other schools were stroke by the restrictions and closures associated with the new wave of the cases of the COVID19. It took more time for them to adapt to the new situation and rules of their governments, and it took more time than expected to complete the online course on the fundamental topics and on the basic kit functioning (it closed on February). So, the feedback collected until November 2020 was the one that lead to the development and the shipment of basic toolkit v2.0, that happened in December 2020 to allow teachers to start the courses in January 2021).

Generally, there were no additions to the kit v0.1. Anyway, due to shipment restrictions, UNIVPM could not ship batteries, so schools did not receive another access point (RavPower RP-WD03) nor the batteries for PuppyC and BugC. Anyway, they can be purchased at any physical or online store dealing with consumer electronics (battery specifications: Li-ion 16340 rechargeable 3.7V 750mAh).

1.3 Structure of the deliverable

Chapter 1: description of the scopes, objectives and structure of the deliverable.

Chapter 2: description of the RoboFISH basic toolkit v2.0

Chapter 3: report of the shipment details

Chapter 4: report of the planned next steps in the development of IO2

2 The RoboFISH basic toolkit (v2.0)

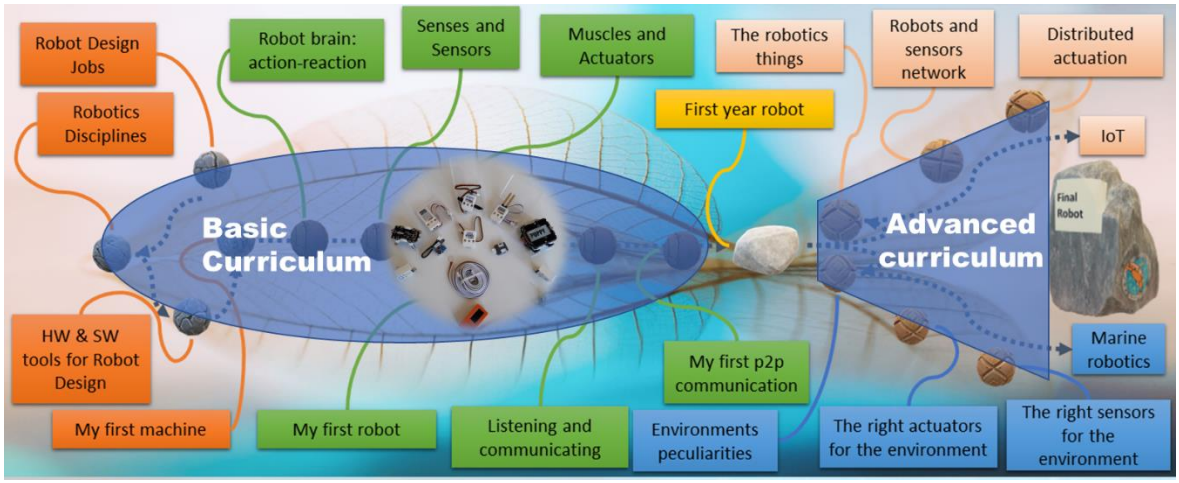
2.1 List of parts

The student's kit includes:

Component	Q.ty	Purchase link
USB C cable	1	https://www.amazon.it/AUKEY-Intrecciato-Ricarica-Trasmissione-Samsung/dp/B07X5L6NFL/ref=psdc_1486835031_t1_B01CFI3QDC?th=1
Central Unit+ ENV sensor + SPK	1	https://m5stack.com/collections/m5-core/products/m5stickc-development-kit-with-hat
I2C Extender cable (1m)	1	https://m5stack.com/products/4pin-buckled-grove-cable
I2C Extender cable (2m)	1	https://m5stack.com/products/4pin-buckled-grove-cable
I2C Grove-T Connector	5	https://m5stack.com/collections/m5-accessory/products/grove-t-connector-5pcs-a-pack
Sensor Button	1	https://m5stack.com/collections/m5-unit/products/mini-dual-button-unit
Sensor Joy Unit	1	https://m5stack.com/collections/m5-hat/products/m5stickc-joystick-hat
Sensor Moisture	1	https://m5stack.com/collections/m5-unit/products/earth-sensor-unit?variant=16804783882330
Sensor Angle	1	https://m5stack.com/collections/m5-unit/products/angle-unit
Actuator MiniFan	1	https://m5stack.com/collections/m5-unit/products/mini-fan-unit
Actuator Servo	1	https://m5stack.com/products/m5stickc-servo-hat?_pos=5&_sid=308ffde4f&_ss=r
Actuator BugC	1	https://m5stack.com/collections/m5-hat/products/bugc-w-o-m5stickc
Actuator PuppyC	1	https://m5stack.com/products/puppyc-w-o-m5stickc?_pos=8&_sid=308ffde4f&_ss=r
Loudness sensor	1	https://www.seeedstudio.com/Grove-Loudness-Sensor.html
box		https://www.ikea.com/it/it/p/samla-contenitore-trasparente-70102972/
box lid		https://www.ikea.com/it/it/p/samla-coperchio-per-contenitore-l-5-trasparente-10110300/

2.2 Relation to the RoboFISH curriculum

The identification of the fundamental topics of robotics led to the development plan also for the IO3, the RoboPisces educational curriculum. The basic kit v2.0 is the toolkit that will be used in the basic modules of the RoboPisces curriculum. It allows a wide spectrum of activities ranging from robotics to arts, science and environmental education. After the online training and after receiving basic activities form universities, teachers will adapt these activities to fit the needs of their learning environment (language and intermediate steps).



3 Shipment of RoboFISH basic toolkit v2.0

3.1 RoboPisces partner schools and associated

The kits were shipped by UNIVPM using the DHL courier to the schools originally involved in the project:

	RP school	Kits for students' activities
1	Croatia	5
2	Malta	5
3	Italy	5
4	Greece – Rafina	5
5	Greece - Rhodes	5

3.2 Stakeholders willing to receive the kit to implement the RoboPisces curriculum

The kits were also shipped to other project's partners and stakeholders to further commit and engage in the project activities:

Country	Name	Position	No. Of kits
Latvia	Linda Daniela	RP partner and expert in smart pedagogy	4 (sent)
Italy	Mariantonietta Valzano	primary school teacher	5 (to be shipped)

Italy	Paola Pazzaglia	primary school teacher	5 (to be shipped)
Italy	Antonella Puccetti	primary school teacher	5 (to be shipped)

4 Next steps

Next steps include:

- to develop and ship the RoboFISH advanced toolkit v0.1 (10 kits shipped to schools involved by June 2021)
- to develop key lessons on Marine Robotics (the use of the RoboFISH toolkit v2.0) by June 2021
- to develop key lessons on IoT by September 2021
- to develop and ship the RoboFISH advanced toolkit v2.0 (10 kits shipped to schools involved by the 1st November 2021)
- to develop 3 more key lessons on the 3D printer usage at school by December 2021