SHAPING STUDENT COMPETENCE IN ROBOTIC PROCESS AUTOMATION - CASE STUDY

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Abstract. Cooperation between universities and business is currently the basis for economic development. The synergy effect achieved as a result of this cooperation is already, and will be even more, the key to the development of the society of the future. Universities in cooperation with the business environment undertake joint activities to provide students with the opportunity to supplement their theoretical knowledge with practice. At the University of Economics in Krakow (UEK) as part of the Controlling course implemented in the field of Modern Business Management, the workshop Robotic Process Automation (RPA) in Controlling was carried out. The workshop was conducted by RPA Coaches representing First Byte sp. z o.o. The aim of the course was to understand the students' work and develop their own RPA digital robot using the WIZLINK tool software. The aim of the article is to indicate the competences provided for in the study program, which received additional support through the participation of students in practical workshops.

Keywords: Digital workforce, Exchange of good practices, Information management, Wizlink software

Introduction

WIZLINK tool software is a proprietary innovative product of the South African class, which was developed using public funding offered by the National Center for Research and Development (NCBiR). The initial concept of the solution is based on the use of access to a computer program through the user interface.

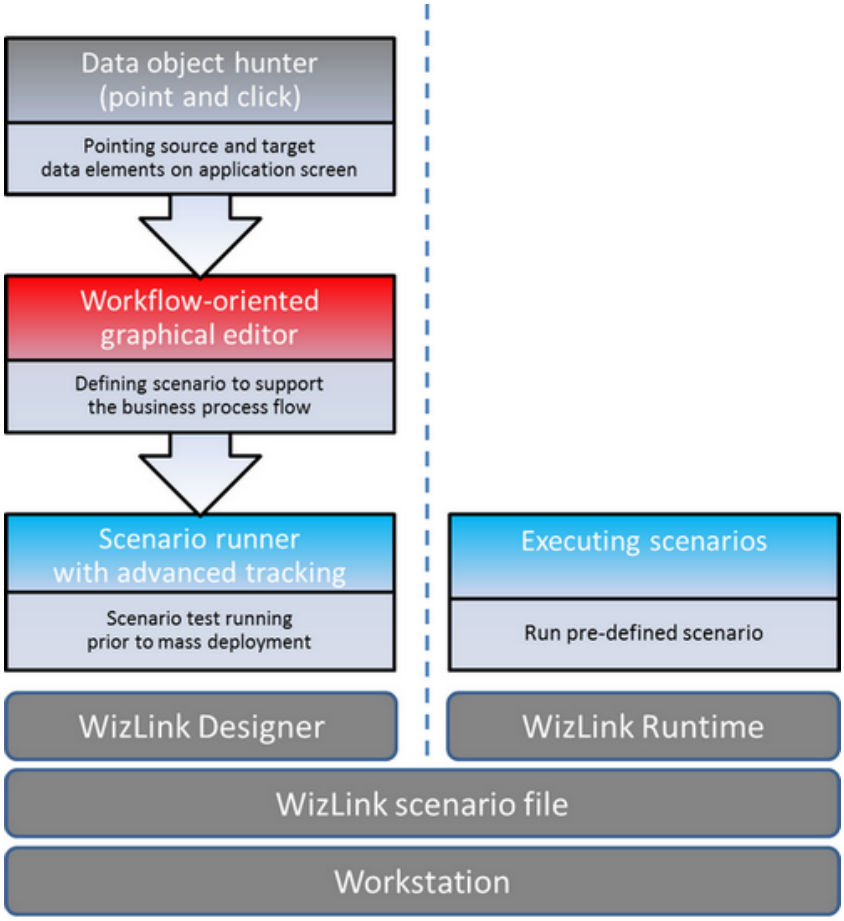

Figure 1.WIZLINK Architecture (Source: First Byte internal materials)

In this way, both access to the data displayed on the application screen and control of its operation is possible - as far as the application itself allows the user (e.g. data entry, menu navigation). The essence of the WIZLINK tool software is to solve the problem of access to data in the application without interfering with its source code, internal data structure, database structure or IT architecture of the application by

people without programming competence. In this way, the work of human hands is replaced when performing elementary operations using business software (IRPAAI, 2019; RPA 2017; Gródek-Szostak et.al. 2018; Ochoa Siguencia et.al. 2019).

The WIZLINK tool software consists of two components. The basic element that is used to create and run the robot scenario is WIZLINK Designer. It is an intuitive module working in the workflow logic that allows by creating elements and connections between them to create a robot scenario. The ready scenario after testing and acceptance is run using WIZLINK Runtime. The WIZLINK tool software is classified as Zero-Code. This means that its user can be a person without programming competence. However, it is important to know the issues of the business process that will be described in the robot scenario.

The robot scenario is developed in a dedicated WIZLINK screen editor. This process consists of indicating the elements of the application to which the robot is to refer and the activities that the robot is to perform. The script recording is therefore intuitive, it does not require programming work. RPA digital robots are used wherever the work is definable, repeatable and based on planned processes / tasks. Their way of working is similar to the user's action in implementing rule-based tasks. With the help of the WIZLINK tool software, a robot (working scenario) is created that automates human activities (but not decisions) and only performs what the human was authorized to do.

The WIZLINK utility software uses keyboard and mouse controls to take action and intercepts and interprets GUI elements of existing applications. As a result, we have fast, secure and flexible building and validation of business processes / worflow based on many applications and systems, and in some cases - application integration. Previous implementations in commercial applications allow for the following conclusions:

- organizations have great potential for RPA applications - analysis of selected (indicated by managers) business processes in order to develop a scenario for a digital robot each time revealed subsequent areas of candidate for covering a new or radically rebuilt robot scenario,
- training in methodology is needed to properly evaluate and choose a business process for automation.

Subsequent built scenarios provide information on the success factors of using the tool in organizations that focus on RPA.

Student workshops from Robotic Process Automation

In cooperation with UEK and First Byte sp. z o. o. As part of the Controlling course at the Modern Business Management course, the ROBOTIC PROCESS AUTOMATION (RPA) IN CONTROLLING workshop was carried out. The workshop was attended by 26 students who, based on the license granted by First Byte sp. z o. o. Worked on the WIZLINK software.

According to the requirements of the subject syllabus, course participants should broaden their knowledge and deepen their skills in using modern IT tools to support activities related to the implementation of the controlling function (Kuraś et.al. 2009). The aim of the workshop was by developing a digital robot scenario to draw students' attention to the following aspects of employee functioning in business practice:

- the need to deepen knowledge and broaden skills that are not always within the individual canon of employee specialization but result from development plans / implemented changes in the organization employing the employee (the need to be flexible and adapt to changing working conditions),
- the need for efficient use of software for business applications (proficiency in text editing,
- knowledge of concepts, methods and principles related to solved business problems,
- ability to read and understand legal acts related to issues for which the employee is responsible,
- the need to work in focus, systematically perform the next steps in the problem being solved.

The students' task was to build a robot enabling verification of contractors in the so-called white list VAT. Pursuant to the provisions that entered into force in Poland on 01/09/2019, each entity making a payment for delivered products / services with a value exceeding PLN 15,000 is obliged to verify the data of its contractor. The verification process in practice consists of the following steps:

- extracting the necessary data from the invoice for verification,
- entering this data on the website of the Ministry of Finance of the Republic of Poland,
- saving on the local disk the file generated on the MF website containing the verification result.

Positively verified data can be the basis for making payments for products included in the verified invoice. The transfer preparation process itself was not covered by the prepared robot scenario. This operation requires a bank account, which cannot be simulated during academic classes.

Robotic Process Automation in the opinion of students

Students participating in the classes have previously received a license and access to the installation version of the tool with information about the need to install the WIZLNK tool software and arrival for computer classes. This requirement has

already proved to be a challenge. Students as a population of people are not subject to decisions on a uniform approach to equipping with computer equipment. In this regard, training conducted for the organization takes place in much more comfortable conditions for trainers. It did not happen that the participants from enterprises did not have the software installed and thus there were no delays at the start of the training.

From the students' point of view, as people who have no practice, the problem seemed simple and trivial. They did not perceive its significance in the context of:

- responsibility for incorrectly made payments (without the required verification) - the problem of responsibility in the organization for actions taken in accordance with applicable regulations,
- a large number of contractors whose data needs to be verified daily - meeting the introduced regulations requires the organization to build and possess competences, which depending on the scale of the phenomenon may translate into occupying the job positions and the need to perform a tedious, repetitive and not creative sequence of activities.

The explanation of these issues was the starting point to justify the need to use a tool to improve and relieve employees of monotonous actions. Having prepared positions and understanding the business justification, the presentation of the tool began and the determination of subsequent activities that were to be recorded in the emerging robot scenario. At this stage of the course, very different competencies were revealed in the use of the computer keyboard and the follow-up of actions in accordance with the instructions received from the teachers. An important perception, it seems, is the conclusion about the need to improve typing so that this will not be an obstacle in the future to applying for attractive jobs. Classes in the substantive part ended with launching the saved robot scenario at each workstation and observing the effects of its work. For the needs of the final launch of the scenario, the participants received a set of correct data from invoices allowing for successful verification of the contractor on the Ministry's website.

Questions and comments

The following issues dominated in the summary, questions and comments that the participants shared:

- it is worth using the opportunity and participating in classes to collect certificates confirming the deepening of knowledge and skills that can be used to build your own advantage on the labor market,
- the ability to work efficiently on a computer is an important asset and it is worth improving it,
- knowledge of the concepts, methods and principles related to solved business problems is not only a matter of passing the academic exam but the basis of communication in the organization and it is worth remembering the concepts that were introduced in the content of already completed subjects,
- the ability to use the content of legal acts, understand their provisions and interpret in the context of their own organization is a significant advantage on the labor market,
- the discipline of participants and work in focusing on their own position without distraction and involvement of other participants and addressing only the lecturers with questions and problems is a condition for the efficient work of everyone.

These observations, which were articulated by the students, probably could have been formulated, because the meeting was conducted by practitioners who were willing to share their comments related to their work as well as their assessment of changes in the labour market. These were certainly the factors that ultimately caused a high grade rating. Participants evaluated both the goal and its implementation, as well as the organization and course of classes. In all these criteria they set high and highest marks, which gave the participants undoubted pleasure.

Conclusion

Students, under the watchful eye of trainers, had the first robot available to build, thus gaining their first experience, so that in the future they could take up work, e.g. RPA developer and RPA business analyst. Robotic Process Automation is for the time being a quiet economic revolution that is gaining new business areas. In retrospect, it can be no less an event than a technological revolution in the industry. This is one of the key and breakthrough stages in configuration and development of change development. Whoever first starts implementing South Africa solutions, ten in the business field will leave the competitive far behind.

It is worth emphasizing that systematic own research conducted for several years has indicated the existence of a problem in the daily operation of business applications at the positions of end users (Kajrunajtys, Malik, Gródek-Szostak, 2017). They confirm the observations of other researchers, thus confirming the need for educational work. Educated staff is the basis for thinking in the direction of rational strategic management of IT tools in organizations.

Acknowledgements

This work was developed within "Adult social inclusion in a digital environment" [ASIDE] project. The project is been implemented by INBIE in collaboration with SHEM - Turkey, FUE-I - Spain, ITC – The Czech Republic. The Strategic Partnerships for adult education, Cooperation for innovation and the exchange of good practices project n^0 2019-1-PL01-KA204-065689intends to support inclusive education and digital skills, improving the competences in digital social inclusion of adult social educators and adult social volunteers.
The research was carried out by Researchers of INBIE, Faculty of Sport and Tourism Management' at Academy of Physical Education in Poland in collaboration with researchers from International Management Institute at Cracow University of Economics- Poland.

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