

**EDU WORLD 2022**

**Edu World International Conference Education Facing Contemporary World Issues**

**EDUCATION THROUGH TRANSITION BETWEEN CLASSICISM  
AND MODERNISM USING ROBOTIC PROCESS AUTOMATION  
TECHNOLOGY**

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**Abstract**

We can say that we are surrounded by technology at every path and trying to see life glued to the benefits of technology does not have a positive impact. When we think about the positive things we can say about technology, a first important and noteworthy aspect is the impact it has on educating and developing new generations. Who is actually responsible for a child's education? The whole society and the context where he is placed. The difference between these two time periods, classicism and modernism, represents the impact of technology on our daily lives. This major difference not only changed the way a person spends the life and survives as an individual, but it also influenced the way he grows, develops and learns from the earliest years of life. What does a child's education actually mean? Its guidance to follow a model that is appreciated and falls within a standard of "normal", normal imposed in fact by each person who leaves his mark on the construction of the little one as a future adult. All these novelties branch out so much that some of them I think can be adapted to a level of logic that is appropriate to the understanding of the little ones. This paper proposes the translation through education from the point of view of the management of some situations of analysis of use cases in the life of the adults that can be solved easily using the implementation of the technology of robotic process automation.

2672-815X © 2023 Published by European Publisher.

*Keywords:* Education, robotic process automation, technology, transition

## **1. Introduction**

The idea of guiding young people to understand and use the technology that comes to the aid of everyday life is based on reasoning to lead them to develop the ability of building a solution plan for each given problem.

Basically, these robots are software bots that are able to learn certain business flows and come to the aid of employees who are subjected to monotonous tasks that take up much of their time. The automation of such processes is easy to implement from a technological point of view, and the benefits are commensurate.

Educating new generations and guiding them towards a much clearer perspective of such a technology, not only can have a big impact on their future career, but also on learning to manage a problem, by synthesizing the steps necessary to solve it.

The possibility to organize in schools optional subjects in which such technologies are approached is quite easy to achieve because these programs do not require payed licenses, they have community options that are accessible to everyone and in addition to this benefit, also offers online courses with documentation suitable for those who want to study or learn on their own. With all these external attractions that are available at every step for the little ones, we are aware that in fact, the essence of life, gradually dissipates and everything around us ends up indirectly manipulating our daily lives.

In order to be able to summarize this transition in an optimistic light, we try to steer it towards directions that are intended for education, learning and facilitating the activities of daily life that came to overshadow human existence. Being able to capture children's attention can be quite a challenge, especially when the goal takes on a contour that is quite similar to educational activities, and they are increasingly refractory to these types of lessons.

This type of implementation and the very purpose it entails, namely the automation of tasks that are repetitive and monotonous, for example extracting data from invoices and entering them into the system can be quite easily folded on the wishes or computer activities of the little ones, is a revolutionary technology designed to help people to make their daily work easier.

### **1.1. Education through technology**

The educational system has long been stagnant, with little change or innovation in the way that students are taught. However, there is a new movement towards incorporating modern technology into the classroom, in order to better prepare students for the future. One of the most promising technological advances is robotic process automation (RPA). RPA is a form of artificial intelligence that can be used to automate repetitive tasks. This technology has the potential to transform education by making it more efficient and effective. For example, RPA could be used to grade essays or administer tests. This would free up teachers' time so that they could focus on more important tasks, such as helping students to understand the material. In addition, RPA could be used to create individualized learning plans for each student. This would ensure that each student received the best possible education, based on their own needs and abilities. As RPA technology continues to develop, it is likely that it will have a major impact

on education. The transition from traditional methods to modern technology is sure to be an exciting time for educators and students alike.

Robot process automation technology has been found to be an effective educational tool in the transition between classicism and modernism. This is because the technology allows for the implementation of new methods and procedures while still maintaining the old ways. By using this technology, educators can keep the old ways alive while also introducing new ideas and methods to their students. This type of transition allows for a more fluid education, as students are not forced to choose one side or the other. Instead, they can learn from both sides and make their own decisions about what they want to learn. This type of freedom is essential in order for students to truly engage with their learning and grow as individuals. Ultimately, by using robotic process automation technology, educators can provide a more holistic and effective education that meets the needs of all students.

The 21st century has been a time of great transition in terms of education. We have seen a move away from traditional methods of teaching, such as the lecture format, and towards more modern methods, such as interactive learning. This transition has been made possible by advances in technology, particularly in the field of robotics process automation (RPA). RPA technology is often used in educational settings to provide a more immersive and interactive learning experience. For example, RPA can be used to create virtual reality simulations of historical events or scientific phenomena. Additionally, RPA can be used to create digital timelines or infographics that help students visualize complex information. By using RPA technology to create engaging and informative educational experiences, we can help students better understand the world around them and prepare for the challenges of the future.

Education has come a long way since the days of chalkboards and textbooks. Early humans passed down knowledge through oral tradition, telling stories around the campfire that were meant to teach life lessons. As time went on, humans began to develop more sophisticated ways of teaching and learning. The invention of writing allowed for knowledge to be recorded and passed down from one generation to the next. The printing press made it possible to mass produce books, making information more widely available. Technology has revolutionized the way students learn, and the trend shows no signs of slowing down. Today, there are more tools and resources available to educators than ever before. And, in recent years, the advent of the internet and online learning has made it possible for people to learn from anywhere in the world. As we continue to evolve, it is likely that our methods of education will continue to change and adapt. Online learning platforms make it possible for students to learn from anywhere in the world, and mobile apps allow them to access their coursework from their pockets. Virtual reality and augmented reality are being used to create immersive learning experiences, and AI is being used to personalize instruction. As technology continues to evolve, so does education. The future of learning is exciting and full of possibilities. Thanks to technology, the sky is the limit when it comes to what students can achieve.

Amongst all these perspectives, RPA or Robotics Process Automation, has become quite popular in recent times owing to its various advantages. RPA can be used for automating various processes like creating student profiles, storing and retrieving data, issuing transcripts and so on. This not only saves a lot of time but is also quite accurate and efficient. In addition, RPA can also be used for generating reports and analyzing data. This helps in making better decisions with regards to the future of the students

as well as the institution. Hence, it can be said that RPA is playing a very important role in the field of education and will continue to do so in the years to come.

### **1.2. But what is actually the RPA?**

Robotic process automation (RPA) is the use of software to automate repetitive, rules-based tasks typically performed by human workers. RPA can be used to automate a wide range of business processes, including data entry, invoicing, order processing, and customer service. By automating these tasks, businesses can improve efficiency, accuracy, and compliance while freeing up employees to focus on higher-value work. RPA software is often referred to as a "digital workforce" or "software robotic" Taulli (2020). It is important to note that RPA does not require any programming; it can be configured to perform tasks according to pre-determined rules and procedures. As businesses look for ways to improve efficiency and cut costs, RPA is becoming an increasingly popular option.

When considering RPA, it is important to consult with an experienced provider to ensure that the solution is tailored to the specific needs of your business. Robotic process automation has the potential to revolutionize the way businesses operate and will likely play a major role in the future of work. Robotic process automation has the potential to reduce or eliminate the need for human intervention in many business processes. Robotic process automation has been used successfully in a number of industries, including banking, insurance, healthcare, and manufacturing.

### **1.3. What is the impact of technology in education?**

The way we learn has drastically changed since the dawn of civilization. Early humans passed down knowledge through oral tradition, telling stories around the campfire that were meant to teach life lessons. As time went on, humans began to develop more sophisticated ways of teaching and learning.

The invention of writing allowed for knowledge to be recorded and passed down from one generation to the next. The printing press made it possible to mass produce books, making information more widely available. And, in recent years, the advent of the internet and online learning has made it possible for people to learn from anywhere in the world. As we continue to evolve, it is likely that our methods of education will continue to change and adapt. Who knows what the future of education will look like?

### **1.4. Allow technology in children's lives?**

Technology has become increasingly prevalent in children's lives, both at home and at school. While there are many benefits to children's exposure to technology, there are also potential drawbacks. For children who already struggle with concentration or focus, screen time can make it even harder for them to pay attention. In addition, children who spend too much time in front of a screen can miss out on important social interactions and opportunities for physical activity. On the other hand, when used responsibly, technology can help children to improve their education and expand their worldview. So, from our perspective, the answer of the question is "Yes".

With so many resources available online, children can easily find information on any topic they're interested in. In addition, technology can help children to stay connected with their friends and family members, even if they live far apart. Ultimately, it is up to parents and educators to decide how much technology is appropriate for children, based on their individual needs and preferences.

## **2. Purpose of the Study**

Main objective that we proposed is to develop such a research in order to create a specialized program that aims to teach children robotic process automation. This perspective is much closer to reality due the evolution of technology in the last years. We face up an amount of problems and find solutions for the most important and daily activities of our lives, like studying and working.

The development of such a process can be easily seen from a business analysis implementation flow. From a business analysis perspective, RPA can be used to streamline and improve processes by reducing or eliminating the need for manual intervention. By automating tasks, businesses can improve efficiency and accuracy while reducing costs. In order to implement and RPA process, the analyst should know each step of a business process. Following this type of analysis, children can be taught to think about the actions they take on a daily basis, from an analytical and overall perspective.

A brief understanding consists in business flow, robotic process automation (RPA) is the use of software to automate repetitive, rules-based tasks usually performed by human workers. From a business analysis perspective, RPA can be used to streamline and improve processes by reducing or eliminating the need for manual intervention Tripathi (2018). By automating tasks, businesses can improve efficiency and accuracy while reducing costs.

Moreover, from a professional perspective, RPA is an emerging field with great potential. As businesses become more reliant on technology, there is a growing demand for skilled professionals who can help design, implement, and manage RPA solutions Mullakara (2020). Those with experience in business analysis, process improvement, and project management will be well positioned to take advantage of this opportunity.

### **2.1. Different perspectives**

It is no secret that technology has become increasingly integrated into our everyday lives. We use it for communication, entertainment, and even work. While there are many advantages to this technology trend, there are also some potential disadvantages, especially when it comes to children. For example, too much screen time can lead to children becoming isolated and disengaged from the world around them. Additionally, technology can be a distraction from school work and other important tasks. It is also important to consider the impact of technology on a child's developing brain Srikanth (2018). However, technology can also be used as a tool to enhance education and help children become more engaged in learning Wibbenmeyer (2018). When used correctly, technology can be a powerful asset in a child's life.

### **3. Research Methods**

In the social sciences, there are two primary research methods: quantitative and qualitative. Quantitative research is focused on gathering large data sets and using statistical methods to analyze them. This type of research is often used to test hypotheses and compare groups. Qualitative research, on the other hand, is focused on understanding a phenomena from the perspective of those who experience it. This type of research often uses in-depth interviews, focus groups, and observational methods. While both types of research have their strengths and weaknesses, they can be used together to create a more complete picture of a phenomenon. In many cases, qualitative research is used to generate hypotheses that can then be tested with quantitative methods. By combining these two approaches, social scientists can gain a deeper understanding of the complexities of human behavior Fleming (2019), Badea (2011).

With research methods, we focused on the roots of children, that are their parents. Technology has always been a controversial topic, with some people believing it to be a necessary part of life and others believing it to be an obstacle. However, technology can also be seen as a way to improve the work environment, including for parents who use this technology in the workplace. This technology can free up work time to educate their children. This technology can also help parents to be more efficient in their work, which can lead to spending more time with their children. In addition, this technology can help improve communication between parents and children. Therefore, technology should be seen as a way to improve the working environment of parents and not as an obstacle.

Parents' opinions are divided, but most tend to say that by using technology, children can be exposed to a wider range of learning opportunities, and parents can be more involved in their children's education. At the same time, by giving parents the opportunity to work from home, technology can help create a more flexible work schedule that can allow more time for parenting and childcare. In addition, technology can also help provide parents with access to educational resources that they would not otherwise have. As a result, technology can play an important role in children's education. Some parents even tend to reflect on their own childhood and perhaps on the path that their life would have taken if they had had the infinite possibilities available today.

Statistically speaking, this shows that this can lead to better academic performance and social skills. As a result, parents who use technology often find that their children are better prepared to succeed in the world. At this point an important factor is played by the role of the environment and the financial possibilities that characterize the family of the junior.

We also applied a benchmarking study in order to compare children's performance where technology and robotic process automation concepts are involved against those who don't have access and use these tools in a developing and learning way. The goal of benchmarking is to identify areas where children can improve their performance. Benchmarking can be used to compare any aspect of a student's evolution, including opening perspectives, increasing interest in evolution, curiosity and desire. There are several different methods that can be used for benchmarking, but the most common is to survey children's performance. Whichever method is used, the goal is to identify best practices that can be adopted in order to improve a children's overall performance due to technology involved.

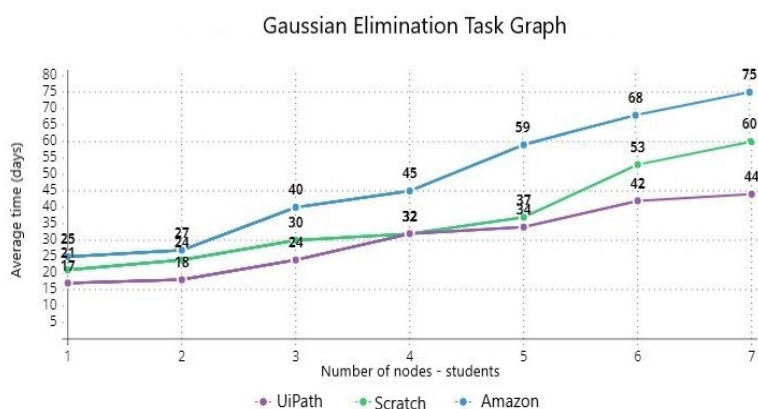
Numerous studies have been conducted in order to determine the effect of technology on children's performance in school. While some researchers believe that technology can be beneficial, providing a

means for children to learn at their own pace, others believe that too much technology can be detrimental, leading to shorter attention spans and a decreased ability to focus. In order to determine the effect of technology on children's performance, researchers often use task graphs. A task graph is a graphical representation of the tasks that need to be completed in order to complete a certain task. For example, a task graph for solving a math problem would include the steps of reading the problem, understanding the problem, solving the problem, and checking the answer. By looking at the task graph, researchers can see which steps are being completed correctly and which are being missed. In general, it is believed that children who are exposed to more technology have a higher chance of correctly completing all steps in the task graph. As a result, they are more likely to perform better in school overall.

Taking into consideration the perspective above, we computed a Gaussian Elimination task graph in order to analyze the results of number of nodes represented by children and the average time of their experience in robotic process automation technology. As main steps involved are the planning, collection, analysis and adoption Bodea (2000). Our benchmarking approach includes both qualitative and quantitative measurements. Therefore, we consider this research to be a mixed one.

In the following graph we aim to outline the major impact of this technology provided by UiPath to children. The comparison consists in identifying the children's ability to reason about certain situations according to the technologies they have at their disposal and their evolution after a longer period of its use, a period in which they are supposed to have already learned the basics and are already focused on exploration and deepening. This analysis aims to observe the moments when children's performance stagnates and what could be improved in a certain approach to teaching a technology, in order to perfect the variant on which we focused Sloan (1996), Cook (1995).

Therefore, we subjected to analysis both children who work alone and groups who work and learn in a team, in order to differentiate the impact that socialization has and with it the exchange of information and related ideas.



**Figure 1.** Gaussian Elimination Task Graph

## 4. Findings

As result of the graph Figure 1, can be observed the evolution of a logical reasoning with how the group of children is growing, so teamwork, socialization and debates have an obvious beneficial purpose, referring to each of the 3 technologies proposed for analysis. The observation time of the evolution and the concrete results is of maximum 75 working days, these being distributed in an intensive way of teaching and exercise during 5 months. Of course the study is applied on technologies taught by teachers who are specialized belonging to the departments of mathematics and computer science. Therefore, the illustration presented reveals the reasons why we want to implement this kind of approach and technology. Its results are remarkable in the evolution of children, an evolution seen through discipline, development of analytical thinking and thirst of knowledge. The illustration shows that the same number of children, depending on the technologies learned, reaches remarkable results in terms of logical thinking after a different number of study days, in our case 44 days of teaching and application activities. The difference between the technology we want to address and another version provided by Amazon is 31 days. Therefore, this is the reason why we opted for the technology provided by UiPath, because it is a very advantageous one in terms of the results obtained in an optimal time. These acquired skills not only help in implementation of robotic process automation solutions, but also in daily tasks and activities from now and even in the future.

The opening of the teachers from mathematics-informatics departments in schools, but also in high schools, to develop optional free courses is one of the most relevant aspects, that would include notions closely related to RPA.

Main topics summarize the following ideas: introducing robotic process automation in children's education for the first time and the expression of how robotic process automation can help the students excel in their education. Also, referring to a younger age, teachers in schools who agree to adopt such an optional curriculum, can outline the subject so that it is intelligible for children. So, after a period of time we can measure the benefits of robotic process automation in early childhood development.

From the perspective of high school subjects in computer science and computer technology, they can be assessed as being put together with RPA technology. Moreover, we can say that this new technology is much more attractive for all ages and would have the ability to capture the attention of students much easier than the subjects themselves. So, we will call these activities "Introducing a new way to learn with robotic process automation", "Our robotics help children learn in a fun and interactive way" and "Children will love our robots and the learning they provide".

Knowing that the parents' schedule is quite busy and most of them are struggling to cope with everyday life, we plan to offer an online course for several age groups. So, our products are affordable and easy to use, making it easier for parents to get their children started in robotics education and also children will have the chance to explore the world of robotics and programming at an early age with our products even from their homes.

These are debates we have had with teachers, parents, students and children, Figure 2, we want to contribute to the promotion of a new generation of programmers and engineers and what better way than by automating robotic processes?! Our courses will be accessible and easy to use in everyday learning, whether it is interactive or not.





**Figure 2.** Children and robotic process automation [source: [shorturl.at/IBC15](https://shorturl.at/IBC15)]

## 5. Conclusions

The ability to see a business analysis perspective is a skill that will be increasingly important for children in the future. As businesses move towards robotic process automation, the need for employees who can understand and analyze processes will increase. Children who are able to develop this skill at an early age will be well-prepared for the workforce of the future. Although robotic process automation offers opportunities for increased efficiency and cost savings in the public sector, there are also concerns that must be considered. The use of robotics raises important questions about the future of work and the impact on children's development. It is essential to weigh the pros and cons of using robotics before making decisions about their implementation. In order to help children see the business analysis perspective through robotic process automation, it is important that educators and parents provide opportunities for hands-on learning experiences with RPA tools. With enough exposure to these types of tasks, children can develop the ability to look at processes holistically and identify ways that technology can be used to improve efficiency.

The aim of this paper was to introduce RPA as a tool that could be used in an early childhood education classroom. Through the use of a simple case study, it was shown how RPA can be used to teach children business analysis skills. Future work could explore how other areas of business studies, such as marketing or human resources, could also be taught using RPA tools.

Robotic process automation, or "RPA" is a type of technology that is increasingly being used in businesses to automate tasks. While RPA can be used in a variety of ways, one potential use for it is to help children see a business analysis perspective through robotic process automation. By providing children with an opportunity to work with and learn about this technology, they can develop a deeper understanding of how businesses operate and learn to analyze concrete situations. Additionally, robotic process automation can provide children with an engaging and educational experience that can help them develop important skills for the future. As businesses continue to adopt RPA technology, it is important to consider how it can be used to benefit children and education.

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