ROBOTIC PROCESS AUTOMATION (RPA) IN HIGHER EDUCATION

A PRIMER TO BEGIN

Virginia Academic RPA Community of Practice (CoP)

AUTHORS

Dr. David K. Rehr, GMU

Jessa Barnes, UDig

VIRGINIA RPA ACADEMIC COMMUNITY OF PRACTICE PARTNER | **UDig** | **M SCHAR** School of Policy and Government GEORGE MASON UNIVERSITY

ROBOTIC PROCESS AUTOMATION IN HIGHER EDUCATION

Bringing greater effectiveness, efficiency, and enhancing student experience

A PRIMER TO BEGIN

Pressures continue to mount on America's higher education institutions. One unintended but expected consequence of the national conversation has been the call for restraints on college and university tuition costs and overall reduction of higher education expenses for America's youth. For example, the cost of tuition at public four-year institutions nationally increased 31.4% from 2010 to 2020, a substantial increase over just one decade. But after adjusting for inflation, college tuition has increased 747.8% since 1963. And these statistics do not reflect the cost of private schools which are no doubt even higher.

The national issue has to be addressed. Responsible institutions must seek ways to get costs under control to keep the value of college affordable in the minds of Americans, let alone honoring their pledge of equity and opportunity.

A partial and relatively new solution to help institutions reduce cost pressures is to adopt Robotic Process Automation (RPA) technology, also known as "software automation," applied to appropriate programs, so resources can be better used for additional and enhanced student achievement.

An additional incentive for educational institutions to adopt software automation is to increase quality assurance and reduce mundane and tedious work of administrative staff. In this way the institution can redirect employees to address higher-value issues that need attention and solutions, without witnessing increased expenses.

RPA is a relatively new software technology used to automate tasks and business processes — both in government and the private sector — to increase effectiveness and efficiency. Although it was used in the government (NASA was the first federal agency to use RPA in 2017) and the private sector, it is relatively untapped in higher education. With college challenges ever increasing, RPA applied to appropriate programs can serve as a competitive advantage.

The Virginia Academic RPA Community of Practice (CoP) was established at George Mason University in the Fall 2022 to spur greater use and implementation of software automation technology for all private and public schools in the Commonwealth. The mission of the CoP is to help public and private Virginia colleges and universities become acquainted, educated, and learn the power of software automation and how it can benefit institutions of higher learning to be more effective and efficient, and build higher levels of student experience.

Colleges and universities are using RPA to solve a variety of issues confronting higher educational institutions which don't immediately come to mind. They include:

ATHLETICS

- NCAA Eligibility Requirements
- Student/Athlete Enrollment
- GPA Qualifications compliance

AUDIT/FINANCE & HR

- Purchase Order Cycle Management
- Invoicing & Reconciliations
- Auditing & Sarbanes-Oxley Compliance
- Payroll Management
- Onboarding/Offboarding
- Leave/Travel Approvals
- Expense Reporting
- Credit Card Reconciliation
- Staff Expenses Management
- Financial Reporting (EOY)

ADMISSIONS

- Enrollments
- Academic Letters
- Admissions Requirements
- Post Interview Support
- Student Transcripts

ACADEMICS

- Grading Support
- Department Funding Support and Audits Procurement
- Purchase Order Prep/Fulfillment
- Invoicing
- Reconciliations
- Payment Management
- Supplier Enrollment

IT OR SHARED SERVICES

- Systems Access & Migrations
- Password Reset
- Call Center/Help Desk Support

STUDENT SERVICES & FINANCIAL AID (FA)

- Course Enrollment
- Student Registration
- FA Enrollment
- FAFSA Support
- Student Awards & Letters
- Scholarships Management
- Credit Transfer Support
- Alumni Relations
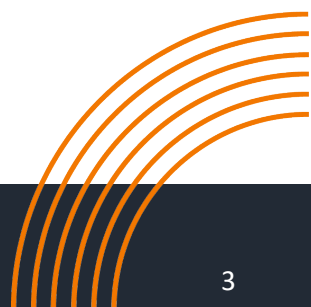
There are so many processes that can be enhanced through software automation on college campuses. But where to begin?

To be most effective, it is essential to take some time to review and understand the points below and consider these when evaluating which process(es) you should automate. When applied correctly, they should help you make smarter decisions and get the most out of your investment.

GOOD RPA CANDIDATE CHARACTERISTICS

Below you will find some of the core characteristics that help identify a good RPA candidate. Please note that these are just a few suggestions and not an exhaustive list of considerations.

1. ***The task is mundane and repetitive*** – Does someone complete the same task repeatedly, performing the same steps, in the same order? Does the task seem to lack excitement for the average person?

2. ***The task has little complexity and exceptions*** – What do the steps of the process entail? Does it involve multiple applications? Does it have a few logical exceptions or decision points along the way?

3. ***Automating the task has a high ROI*** – Does this process happen frequently and at a high volume? After running a cost-benefit analysis, do you see a high, positive ROI? You want to make sure that you are selecting an automation worth spending the time investment in developing.

4. ***The decision-making is objective, instead of subjective*** – Going along with point #2 above, are the decision points based on actual values rather than opinions? For example, if a value is $100, it should go down Path A, and any other value should go down Path B.

5. **The image above from Medium highlights a few other considerations** that may help determine a process that is a good RPA candidate.

Objective types of decision-making are great RPA candidates and relatively easy to configure, where-as subjective decisions can be extremely challenging to automate with consistency. Subjective decisions are discussed in the next section.

PROCESSES NOT WORTH AUTOMATING

Based on the previous section, one could assume the opposite would help determine bad RPA candidates' characteristics, and they would be correct. But let us explore those in more detail.

1. ***The task has high complexity and exceptions*** – Does the process integrate with different applications or antiquated systems? Does the process leverage a website or web-based application that changes frequently or uses an obsolete computer language? Are there a lot of different decision points throughout the process? It is important to determine if the possible benefits are worth the effort to develop an automation or not. Some answers to these questions, while they may be doable, may not be worth the effort to automate.

2. ***The decision-making is subjective instead of objective*** – When decisions are made based on opinions or points that are not binary, it makes it near impossible to automate. The one exception could be investing in an RPA tool with AI functionality or some other form of machine learning capabilities to use in conjunction with RPA. These processes should fall on the lower end of RPA worthy candidates list.

3. ***The cost-benefit analysis returns a low estimate ROI*** – When performing a cost-benefit analysis, you will see the estimated ROI after automating a process. There will be some cases where the estimated ROI returned low enough that it does not make sense to invest the time and energy required to automate. While every process is different, some examples of processes that often lead to a low ROI include tasks that a small number of people own, require minimal time and effort to complete and are performed at low frequency.

OUR SCHOOL HAS INVESTED IN RPA, NOW WHAT?

The statement made earlier that RPA "removes the human interaction component" may give some people the false impression that RPA will eliminate jobs. Are robots going to take over your institution, and humans are no longer needed? No, humans are always needed! This statement means that if you pick processes that fit the good candidate guidelines, your institutional employees should focus their time on more University higher value-add work or vision. Typically speaking, a process that can be automated is likely mundane and not a task a human would be excited to do consistently.

Studies have shown that companies that automate most of their mundane and repetitive tasks also help create more exciting jobs for the employees and result in higher-value outcomes. An article from VentureBeat in November 2018 states that "the McKinsey Global Institute this year forecasted that the portion of jobs calling for "low digital skills" may fall to 30 percent in 2030 from the current 40 percent, as jobs that require higher skills increase to 50 percent from 40 percent." Explaining that automation of repetitive tasks will allow humans to reskill and work on higher-value tasks.

Once you can ease any uneasiness that people could lose their job, you need to figure out the best way to implement, champion, and spread awareness of RPA throughout the organization. Most RPA solution providers recommend engaging with an implementation partner to get you up and running, especially if this is your first automation. These consultants may be a certified partner with the specific RPA vendor platform or have a lot of experience working with them or RPA itself. Many offer opportunities to do a business case analysis on processes to determine good RPA candidates, as well as building and maintaining any

automations that are created. This route avoids having to have an expert in house on the RPA tool, which could have various pros and cons depending on your company.

In the long term, you may want to maintain this in house. Creating an RPA center of excellence is highly recommended. This provides a central place for people to manage automation requests, create business cases, and prioritize processes for all things RPA. Remember that initial process analysis is critical to determine if a process is a good or not so good candidate for RPA.

FINAL WORD ON BUILDING AN RPA BUSINESS CASE

As discussed, RPA is a great tool to help you eliminate mundane and repetitive processes while allowing your teams to focus on value-add University priorities. The key is focusing on the processes that will provide you the most value by being automated. This value is both quantitative and qualitative. Quantitative in the sense of saving money, reallocating money elsewhere, or bringing in better financial results. While qualitatively, you may improve employee satisfaction if you can remove mundane tasks from your employee's plate and allow more time for student engagement.

Now is the time for your university to consider RPA adoption to create greater effectiveness, reduce cost pressures, drive efficiencies, and enhance student experiences. You only have one chance to make a good first impression with RPA at your University, so selecting the first process for automation is critical. Scaling will then be consequential.
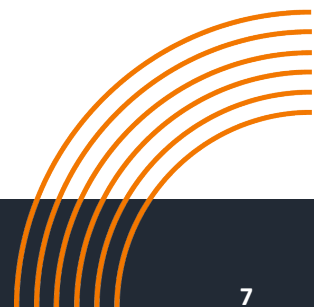
AUTHORS

Dr. David K. Rehr, GMU

Dr. Rehr holds a PhD in Economics and is a Director for the VA Academic RPA Community of Practice and Co-Founder of the RPA Initiative at George Mason University. He is on the Board of the Virginia Humanities Foundation.

https://schar.gmu.edu/

Jessa Barnes, UDig

Jessa Barnes is a graduate of Christopher Newport University where she received her degree in Marketing. Jessa helped start UDig's Intelligent Automation team and her expertise is in process discovery, analysis, and helping identify candidates for automation.

www.udig.com

To learn more about the Virginia Academic RPA Community of Practice, visit https://rpa-va.us/.