Paperless Graduate Admissions

Needs Assessment Report

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Executive Summary

At the end of the Fall 2011 application season, administration at the Graduate School of the University of Missouri decided to pursue a paperless application and admissions process for the Fall 2012 year. While many other departments within the UM-system, including the Graduate School's academic advising unit, use the ImageNow archival client to store records, the Graduate School's admissions team was faced with completely re-designing their processes to meet this new requirement. Various members of the team have different comfort levels with this new technology, and a needs assessment has been conducted in order to evaluate the best way to implement this new system and make sure all admissions advisors are using it in an efficient, correct manner. Initial data gathering suggested that certain advisors were unhappy with the transition and were uncomfortable with the new technology.

Data analysis actually revealed a marked improvement in advisors' attitudes after the paperless system was enacted, even if problems and inefficiency still existed. While several of the data-gathering techniques used suggested there might be serious issues going into the high-volume application season toward the end of the year, after surveys were issued several weeks later, there was a noticeable change in the feelings of all the advisors toward the new system, even certain members of the team stopped short of embracing the system wholeheartedly.

Problem/Opportunity Statement

When the University of Missouri's Graduate School administration decided that the admissions unit was going to transition to a paperless system for the Fall 2012 application season, little direction was given on how to adapt the application system, the imaging system, and MyZou seamlessly into a new admissions process. This, coupled with the fact that several of the more experienced advisors had developed their processes over nearly a decade without having to develop an advanced familiarity with new technology, has caused some problems during the initial stages of the transition.

The more experienced advisors have been reluctant to make the move, pointing out both in informal day-to-day chats as well as meetings with the department's supervisor the various issues with the idea – the worry they will be less efficient, the possibility that the technology will be unreliable, a concern with shredding documents, etc. While it has been made clear to the team that the transition to a paperless system is mandatory, there was a concern that if the advisors do not all learn to use the system quickly and

correctly, they will not be able to keep up with the high volume during the peak application season or, even worse, will misroute important student paperwork and lose electronic files completely.

The problem was initially verified by performing a review of performance/personnel records; before the official transition to the paperless system, the advisors were each tasked with back-scanning admissions files from the Summer 2011 and Fall 2011 semesters. All admissions files were kept on shelves in the back of the Graduate School, and while advisors started with approximately the same number of files, it quickly became apparent which advisors were working efficiently within the new system and which were struggling with the technology and falling behind on the project. (See Appendix A for more details.) While there was no additional hard data supporting the existence of the problem, all of the Graduate Admissions advisors recognized that there was a problem, and many meetings were held to attempt to come up with a solution with little actual progress being made.

Organizational Description

The University of Missouri is a not-for-profit large, land-grant research institution and the flagship campus of the four-campus University of Missouri system. Its mission is to provide all Missourians with the benefits of a world-class research university and to support teaching, research, service, and economic development work on behalf of all citizens. The University of Missouri currently enrolls approximately 26,000 undergraduates and 6,500 graduates.

The Graduate School is an administrative office within the University of Missouri that oversees all graduate programs and centrally coordinates and administers select graduate student services. The Graduate School Admissions Unit (GSAU) is comprised of five staff members who are assigned to help coordinate the application process for approximately 5,100 applicants annually, about 2,500 of which are international students. Graduate applicants can choose from approximately 173 different degrees and certificates that are organized across 90 individual academic programs.

Most of the Graduate School's funding comes from the University of Missouri's general operating budget, and because of a continual decrease in state funding, the Graduate School's portion of that budget has remained stagnant. Application fees were recently raised almost twenty percent in order to help offset this shortfall as both applications

and enrollment have increased. Because of the limited budget, and because of the University of Missouri's hiring freeze, the Graduate School has been limited in its ability to create new positions to coincide with the growth in application numbers and enrolled students. The GSAU lacks the support personnel of many other divisions within the University, such as undergraduate admissions, which has a dedicated team of people to process and scan documents.

Audience Analysis

The primary focus of the Needs Assessment was the five admissions advisors, who were tasked with creating a viable paperless admissions system by the administration of the Graduate School, which includes the Dean, Associate Dean, and Director of Graduate Admissions and Records. The primary job of the advisors is to process student applications, evaluate student credentials, and to assist students with their inquiries through the application and admissions stages.

The advisors range in age from 22 to 64 years old, and as of the beginning of the Needs Assessment, had experience in Graduate Admissions ranging from almost a decade to less than three months. The two more experienced advisors had developed their daily operating process – which had always included paper files to contain applicants' transcripts, financial records, test scores, etc. – over many years, while two of the newer advisors (one of whom has been employed at the Graduate School for about a year and a half, and the other for less than six months) had previously been admissions advisors at other institutions which already had a paperless admissions system in place.

All five advisors report directly to the Director of Graduate Admissions and Records, who has been overseeing the creation of the paperless admissions system while giving the advisors autonomy to fashion a system that best meets their day-to-day needs.

Primary and Secondary Data Sources

Primary Data Sources

The primary data sources include the five Graduate Admissions advisors, as all of them bring a unique perspective to what is needed in the new paperless system as the unit begins the transition away from paper files. The Director of Graduate Admissions and Records was also used as a primary data source, as he had been in close contact with other departments who had already transitioned to a paperless system, is familiar with the University's record-retention policies and other factors that may be important, and also oversees all of the admissions advisors.

Secondary Data Sources

The secondary data source used for this assessment was the count of the advisors' paper files from the Summer and Fall 2011 admission seasons, which they were tasked with back-scanning before the paperless transition.

Data Gathering Techniques and Instruments

Extant Data Analysis

Extant data analysis was performed on the secondary data source by measuring the number of files that needed to be back-scanned by each advisor before and throughout the paperless transition. Earlier in the summer, each advisor was told to back-scan their files – roughly 1000 files apiece -- from Summer and Fall 2011 into the new system in order to learn the new imaging software. Because a few members of the GSAU were reluctant to embrace a paperless admissions system and struggled with the new technology, progress on scanning these files was slow. Through the transition to the paperless system, weekly measurements (Appendix A) were taken of these files in order to determine potential problem performers.

Interviews

Two face-to-face interviews were conducted with the more experienced admissions advisors, both of whom have worked with the Graduate School for almost ten years. The goal of the interview was to collect their thoughts on how they viewed the changes in the performance expectations that affect their daily processes as well as how the

transition itself is being handled. The Interview Protocol (Appendix B) was designed especially to determine the actuals, feelings, and causes leading into the paperless transition; these sorts of things were discussed informally throughout many workdays, and occasionally more formally at group meetings with the Director of Admissions and records, but the Interview Protocol presented an opportunity to sit down with some of the advisors one-on-one to discuss the realities of the process.

Observations

Immediately after the paperless system was implemented, I sat with each of the problem performers for about a half hour and watched each process her new files using the new system. I designed the Observation Guide (Appendix C) to be highly flexible; because the work that the admissions advisors perform, even that which falls under the heading of "processing new applications," can be highly variable within any given hour, I did not want to be trapped within the confines of an observation report that I could not adjust for the data. This technique was designed to give me an accurate reading of the situation's actuals as I viewed how comfortable each advisor was using the new system and the problems they encountered.

Surveys

After the transition to the paperless system, a survey (Appendix D) was issued as a follow-up to determine whether there was a shift in attitudes after the process was actually implemented as well as to determine whether further training is needed for the problem performers going into the high-volume application system toward the end of the year.

Data Gathering Process

Extant Data Analysis

In each of the four weeks leading to the official transition to the new paperless system, extant data analysis was performed by measuring the number of files that needed to be back-scanned from the Fall 2011 and Summer 2011 admissions seasons. Because the volume of applications during those months is extremely low, this was the advisors' main duty, as once the peak volume of the applications started there would be no time to image these files. At the start of each Friday, the files were measured, in inches, and these measurements were recorded.

Interviews

Two face-to-face interviews were conducted during the workday (with the permission of their supervisor) with the two more senior admissions advisors. Since they did not have a choice on whether to go paperless, the conversation was focused more on their processes and how they view their role in the transition rather than solely their thoughts on the validity of the transition itself. The comments were then reviewed and assigned importance values of high, medium, and low for their relevance to the needs assessment situation.

Observations

I had originally decided to do an unobtrusive observation process, but during the first observation the performer wanted to ask me several questions about the tasks she was working on, so for the second observation I decided to have the performer verbalize her thoughts as they occurred while she was working through her files. During both observations, I sat with one of the advisors for about a half hour and watched each process new files using the new paperless system that was implemented on October 3. Their actions and comments were recorded in a table, with special emphasis placed on actions that were examples of motivation, mood, efficiency, understanding of tools, progress with developing new personal process, confidence in new tools, and expectations.

Surveys

Surveys were administered to the five members of the GSAU with instructions to return them within five business days. Each of the participants did return a survey, and they were promised that the results – which included potentially-identifying demographics information – would be kept confidential. The Survey protocol was designed to assess the actuals of and feelings about their familiarity and comfort with the new processes that had been developed after the transition to the paperless system, to see if progress had been made after the observations were performed and to help make recommendations about what further action might need to be taken on their behalf.

Data Analysis Process

When possible, collected data was analyzed to assess the actuals, optimals, feelings, causes, and solutions to existing performance problems; it is within this framework that data is analyzed below.

Extant Data Analysis

Once the number of each advisor's files was measured over the course of four weeks, the results were recorded into a table, which was converted into a graph, and analyzed in comparison to the other advisors. While some discrepancy between the numbers of files each advisor had left to scan can be expected because of vacation and sick days, other time-consuming projects, etc., the graph was created to show overall trends and progress over the course of a month in which this project was one of the advisors' primary goals.

The only significant problem encountered was that I discovered in week two that one of the advisors had nearly a foot-high stack of files sitting underneath her desk waiting to be scanned that I almost did not record in the data; it is possible, albeit unlikely, that the measurements from week one did not include files that were not easily visible on her or another advisor's desk.

Interviews

Interviews were only conducted with the two advisors who had been determined as potential problem performers after the extant data analysis, and their responses were examined to discover whether they shared similar apprehensions or concerns going into the paperless transition. A special focus was put on how they viewed their new roles within the team now that they are not the most knowledgeable about daily processes, since the processes they had spent years developing were no longer useful with paper files disappearing.

Observations

Observations were performed in the week after the interviews were conducted on the same two advisors that had participated in that technique, and it was easy to record things that had been discussed being the interview performed during the Observation. The Observation Guide was analyzed primarily for noted areas of inefficiency and hesitation; because speed and accuracy are so important once the peak application season begins, the Observations were a good insight into the actuals of how the two most experienced advisors were handling the paperless transition.

The biggest problem I ran into was that, with one of the advisors, my presence seemed to cause her to lose her confidence. Even though she had been using the new system for several days at that point, when I was sitting and looking over her shoulder, it caused her to question her every action – and to look to me for confirmation that she was doing things right. This could possibly have caused the observation to be less organic than if I had been observing her in a more unobtrusive manner, but in our small office there was not really an option for a more covert observation. However, this did speak to her confidence in using the new system.

Surveys

Because only five surveys were issued, it was easy to compare the results both among the advisors and to the findings of the other techniques used. Demographic information was not explicitly compared, but the other forced-choice answers were compared with those of the other respondents. "Strongly Agree" and "Agree" were considered positive responses, while "Neither Agree Nor Disagree," "Disagree," and "Strongly Disagree" were considered negative responses.

Responses to the open-ended questions were mainly used to determine advisors' feelings about the transition once it had taken place so that appropriate recommendations could be made for further training or change.

Data Table

Technique	Instrument	Source	Summary
Extant Data Analysis	Measurement of admissions files to be back-scanned	Summer 2011 and Fall 2011 admissions paper files	When one views the results plotted onto a graph, it is easy to see the progress each advisor made over the course of the month and identify problem performers. Two of the advisors lagged behind the other three, and it is these advisors who ultimately became the main focus of the Needs Assessment, as they admitted to struggling the most with the new technology.
Interview	Admission Advisor Interview Protocol	Graduate School Admission Advisors	Both advisors' comments suggested that they viewed the situation and the transition in a negative light. While they both had several unique concerns, they both did express the following apprehensions about the transition to a paperless system: • The inevitability that their daily processes – which each had spent many years refining for optimal efficiency – will be disrupted or slowed, which would be a hardship to the entire team during our busiest time • Confusion about why the unit even has to go paperless, as the old system served the team's purposes with few problems • A concern about shredding paper files after they are imaged; if the system goes down, everything will be lost

			Two Admission Advisors were observed. Many examples of inefficiency and hesitation were noted from both; both seemed unsure about the process, even though they had been using it in an admissions context for several days and for several months while back-scanning old files, and often made errors that they later had to go back and correct or forgot what they were doing entirely and had to start over.
Observation	Admission Advisor Observation Guide	Graduate School Admission Advisors	
Survey	Admission Advisor Survey Protocol	Graduate School Admission Advisors	Surveys were sent to 5 Admission Advisors, and five were returned. These surveys showed a marked improvement in the attitudes of all of the advisors, although they did show that further training may still be needed. Most of the responses were positive, with a few questions being given a neutral "Neither Agree nor Disagree" or "Somewhat Concerned" response.

General Data Summary and Interpretation

Data analysis revealed a definite improvement in the advisors' attitudes toward the paperless system after it had actually been implemented. In the weeks leading to the transition, the actuals of the situation – that certain advisers were unhappy with the change and were not comfortable using the new system -- were easy to determine between the Extant Data Analysis and the interviews performed. The Extant Data Analysis suggested that the cause of the problem was the advisors' unfamiliarity with the new system and reluctance to learn it, while the Interviews both solidified this view and added their Feelings – namely, a fear of giving up well-defined, efficient processes that had been created over nearly a decade. The Observations performed after the paperless transition suggested that the solution might be extensive training, as the two problem performers displayed a great deal of hesitation and inefficiency, but the Surveys issued several weeks later called that notion into question, as the results suggest that all five advisors are significantly more enthused about the paperless system after spending several weeks with it – even if a few of the advisors stopped short of fully-endorsing it.

Knowledge/Skill Needs-Details

Before the paperless transition, each advisor was given a lot of leeway with file management for her section of the alphabet. When the Director of Graduate Admissions and Records tasked the advisors with creating a paperless admissions system, it was assumed by all that this same freedom would apply even after paper files no longer existed. However, with those advisors who are not as comfortable using the new technology, this has caused a problem, and they have indicated they have trouble seeing the "big picture." More standardization – and documentation of what, exactly, the process is – would cause many of these problems to go away.

The primary knowledge that they need is a set, step-by-step process; while they know now how to use the technology, it seems they are still having trouble applying the extra steps while processing new files and admissions. There should be a set process for each of the following tasks:

- Handling new transcripts that arrive through the mail
- Storing international transcripts, and which documents should be retained or imaged
- Naming document types within ImageNow
- The step-by-step process for admitting new students
- Document retention with previously non-essential forms, such as change of advisor forms
- Whether to shred duplicate transcripts or send them to the departments

While each advisor was previously given freedom on these tasks, under the new system, doing so now is causing confusion and hesitation. Because the advisors' day-to-day process is entirely new, the opportunity to establish guidelines should be taken in order to ensure mistakes are not made and ambiguity is eliminated.

Recommendations

Training and/or resources should be established to provide the Graduate School Admissions Unit with the following knowledge and skills:

Perform standardized daily process for processing applications admissions

The Graduate School Admissions unit needs a standardized process, detailed in a written guide, about how to process all new documents and files with the new system. While most of the team seems to be handling the transition fine, the more technologically-challenged advisors are, to use their words, "losing the forest for the trees." A standardized guide would help to boost efficiency and confidence in the new system.

Records Retention and Naming Policies

Certain documents, such as change of advisor forms and non-essential emails, used to be left to each advisor's discretion whether to keep in a student's paper file. This, too, seems to be causing confusion among the advisors and should be standardized. It is recommended that a spreadsheet or guide is created with the proper way to name these documents in ImageNow if they are kept or whether to append them to the student's main application file, as this, also, seems to be causing a great deal of confusion.

Efficient way to check for mistakes

One of the biggest causes of inefficiency among certain advisors is a compulsion to check constantly for mistakes; once the peak application season starts, this "safety net" will cause a huge delay in files being processed in a timely manner. Files are already named in an easily-searchable manner, but they should also be backed-up somewhere after they are uploaded to the application in case they were not uploaded to ImageNow; if the student is admitted, and it is discovered the transcripts are not there, then they could be easily retrieved.

Appendix A

	Advisor 1	Advisor 2	Advisor 3	Advisor 4	Advisor 5
Week 1	80 inches	85 inches	70 inches	65 inches	80 inches
Week 2	75 inches	83 inches	60 inches	58 inches	70 inches
Week 3	73 inches	79 inches	49 inches	45 inches	55 inches
Week 4	70 inches	72 inches	38 inches	31 inches	40 inches
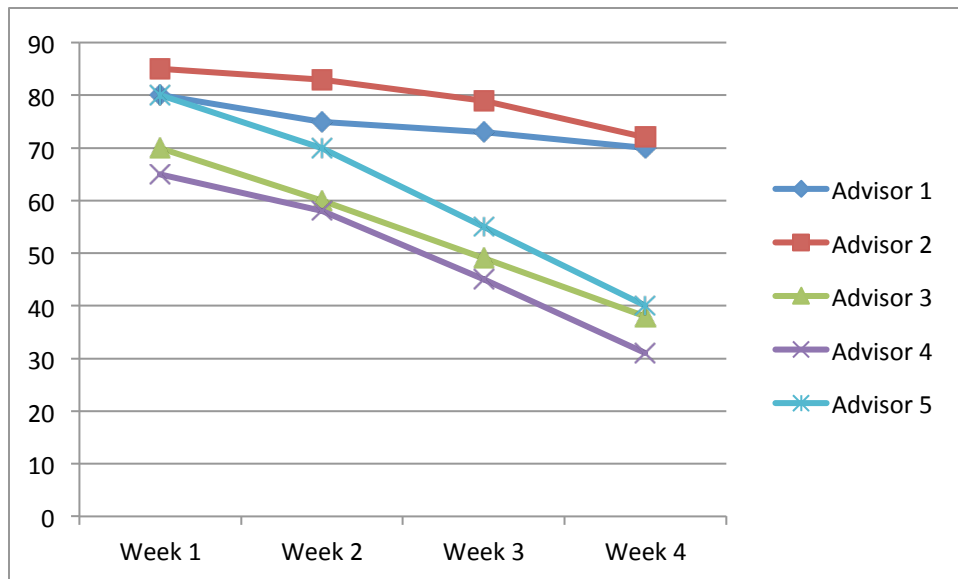
Progress between weeks 1-4 for each advisor:

Advisor 1   10 inches

Advisor 2   13 inches

Advisor 3   32 inches

Advisor 4   34 inches

Advisor 5   40 inches

Appendix B

<u>Interview Protocol</u>

Vision	What do you think the admissions unit is trying to accomplish by going paperless?
	What do you wish it would accomplish?
Expectations	What is your role in working toward this accomplishment? What do you believe you are expected to do?
	What would you like to be doing?

Feedback	How will you know when you are meeting these expectations?

What is a good way for you to find out how well you are meeting expectations? |

Tools	What resources (computers, books, tools, etc.) do you presently have to help you meet the expectations? What other resources do you need?
Environment	Is your work environment set up to help you be successful? How so?

	What barriers to success do you and your co-workers confront during this transition?
	How could these barriers be overcome?

Processes	In terms of getting things done, are processes (or systems) in place to help you be successful? (e.g., process for communicating with another division)
	How do you think through the process of doing your work?
	What kinds of help or training would you most like to receive? How would you like to receive this help?

Rewards	In what ways will you benefit if your group is successful?
	How do you think the applicants will benefit from the success of your group?

Interview Protocol

Recognition	How do others view your involvement in your group's work? (positive and negative) What kind of recognition should there be for involvement?
Incentives	In what way are you encouraged to do different things?

	What other incentives would lead you to do more?
Motivation	What led to your involvement in this kind of work? Why do you want to be involved?

Self-Concept	If our going paperless ends up being extremely effective, how would you see yourself in that picture? (Describe what you see.)
Capacity	What things about going paperless are just tough for you to deal with? (e.g., reading a computer screen; working in a loud environment)
Knowledge/Skill	What skills do you need to help you be successful during the transition?

	What skills are needed by the following people to help you be successful in your work? -supervisor -students -co-workers -academic programs

Organizational Culture (see below)	During the transition, how has the Graduate School gotten people involved in day-to-day tasks and decision making?
	
	     - Does this seem to work OK? How so?
	
	How does your organization respond to internal and external opportunities and challenges (i.e., disruptions)?
	
	     - Does this response usually work? How so?
	
	How consistent is your organization in terms of how it carries out day-to-day operations? How consistent is it in terms of working to achieve long-term objectives and addressing major challenges?
	
	     - Do the policies and procedures (formal and informal) used in your organization help achieve long-term stability? How so?

	Does your organization's culture, its resources, and activities fit together in such a way that the organization accomplishes things that are important?

Appendix C

<u>Observation Guide</u>

Date: _____

Adviser Name: _____

Observer Name: _____

During the observation, look to record examples of:

- Motivation
- Mood
- Efficiency
- Understanding of tools
- Progress with developing new process
- Confidence in new tools
- Expectations

Tool Being Used (Scanner, ImageNow, MyZou, web resource, etc.)	Behavior Observed	Performer's Thoughts/Comments/Questions	Observer Comments

Appendix D

Graduate School Paperless Admissions
SURVEY

> The purpose of this survey is to determine the challenges facing the team as we move toward going paperless in October as well as to help find potential solutions to these problems. All questions are <u>optional</u>, and all responses are <u>anonymous.</u> Thank you for your participation!

Background Information

The following questions will determine your prior experience with the admissions process and technology. Please place a check mark next to your selected answer.

1. How long have you worked in admissions at the Graduate School?
       __ LESS THAN 1 YEAR
       __ 1 - 3 YEARS
       __ 4 – 9 YEARS
       __ 10+ YEARS

2. Have you ever worked in admissions somewhere else, either at another division of MU or at another institution?
       __ YES
       __ NO

3. If you answered **"YES"** to question 2, did your previous job require you to use a paperless system for admissions?
       __ YES
       __ NO

4. How many years have you worked in a job that required you to use a computer **every day?**
       __ 0 – 3 YEARS
       __ 4 – 9 YEARS
       __ 10 – 15 YEARS
       __ 16+ YEARS

5. How would you respond to the following statement? **"I am good at using technology."**
   __ STRONGLY DISAGREE
   __ DISAGREE
   __ NEITHER AGREE NOR DISAGREE
   __ AGREE
   __ STRONGLY AGREE

6. How would you respond to the following statement? **"I think technology makes my life easier."**
   __ STRONGLY DISAGREE
   __ DISAGREE
   __ NEITHER AGREE NOR DISAGREE
   __ AGREE
   __ STRONGLY AGREE

Paperless System

The following questions are intended to help gather your thoughts about the Graduate School's new paperless admissions process. Unless otherwise directed, please place a check mark next to your selected answer.

7. How would you respond to the following statement? **"I think it's a good thing that the Graduate School is moving to a paperless system for admissions."**
   __ STRONGLY DISAGREE
   __ DISAGREE
   __ NEITHER AGREE NOR DISAGREE
   __ AGREE
   __ STRONGLY AGREE

8. How would you respond to the following statement? **"I feel comfortable scanning documents into ImageNow."**
   __ STRONGLY DISAGREE
   __ DISAGREE
   __ NEITHER AGREE NOR DISAGREE
   __ AGREE
   __ STRONGLY AGREE

9. The following concerns have been expressed both in the office and at team meetings over the last few months. For each of the items below, please circle "VI" if you are very concerned about it, "SI" if you are somewhat concerned about it, and "NI" if you are not concerned about it.

EXAMPLE: (VC)   SC
     NC

Issue	Very Concerned	Somewhat Concerned	Not Concerned
I am not confident in my ability to use the technology involved with going paperless	VC	SC	NC
I am worried that it will take me longer to do my job	VC	SC	NC
I do not trust the reliability of ImageNow	VC	SC	NC
I think it is unnecessary for us to go paperless -- the old system works fine	VC	SC	NC
I have not been provided with adequate training materials	VC	SC	NC

10. Do you have any other concerns about the Graduate School moving to a paperless system that were not listed in question 8?

    __ YES
    __ NO

If you marked **"YES"** above, please write your other concerns here:

11. How would you respond to the following statement? **"I feel that I have been provided with the training materials I need to help me use our new system."**

          __ STRONGLY DISAGREE

          __ DISAGREE

          __ NEITHER AGREE NOR DISAGREE

          __ AGREE

          __ STRONGLY AGREE

12. How comfortable are you with performing each step of the paperless admissions process? For each of the items below, please circle "VI" if you are very comfortable with that step, "SI" if you are somewhat comfortable with that step, and "NI" if you are not at all comfortable with that step.

        EXAMPLE: (VC)   SC

    NC

Step of Process	Very Comfortable	Somewhat Comfortable	Not Comfortable
Sorting incoming student documents	VC	SC	NC
Operating scanner to make electronic copy of transcripts	VC	SC	NC
Uploading transcript to ApplyYourself application system	VC	SC	NC
Uploading transcripts to ImageNow imaging system	VC	SC	NC
Managing application status through ApplyYourself without paper file to reference	VC	SC	NC
Retrieving archived records from ImageNow	VC	SC	NC

13. What do you like **most** about the new paperless system? Please explain in the space provided below:

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14. If there is one part of the new process that you think we should change before we go paperless, what would it be? Please explain in the space provided below:

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