MAXIMIZING THE USE OF FORMS BY INCORPORATING THEM INTO THE COMPANY DATABASE

A Paper

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by

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Chapter 1

Introduction

Pre-filled forms are currently being utilized in many different settings and within a variety of companies and organizations. In today's fast paced world, everyone is looking for a quicker and easier solution to many day to day processes. Pre-filled forms have significant advantages to the "old-fashioned" paper document processing. Not only can pre-filled forms be customized to specific needs of a company, the end result is generally more accurate.

At TFI Family Services, forms are used on a daily basis by all employees. Information about families, children and providers must be tracked and then recorded into our company database, FACES. Many of the forms that are filled out require them to enter anywhere from two to 15 fields of text that are currently stored in FACES. Our agency needed a way to reduce the time spent filling out forms, and focus more on spending time with the children and families that are in the state system.

I am fortunate enough to be on the Procedure and Forms committee at TFI. We meet twice a month and our job is to update company procedures and forms that the entire agency will use. Being on this committee allowed me a chance to introduce pre-filled forms to the group and discuss the advantages of them. It was clear that this was a direction we needed to go, so this is how the pre-filled forms began to evolve for our agency.

The needs analysis that I performed was directed towards six different departments within the agency. Those departments included Family Preservation, Family Permanency, Resource Family Services, Care Management, Quality Improvement and Behavioral Health. There is a representative from each of these departments on the Procedures and Forms committee, so that was helpful for me when distributing and gathering the information.

TFI Family Services employs close to 325 individuals and these employees are spread out in 28 different offices across the state of Kansas. Our agency currently provides services to approximately 350 families in Family Preservation, 745 children in out of home care and 635 foster homes. Each of these programs is closely monitored and tracked based on contacts and interactions that are made by the workers. We rely solely on these workers filling out forms and then either mailing, electronically mailing, faxing or hand delivering these forms to the data entry staff. TFI is required to submit data to the state each month and this data has to be accurate and on time. Because our forms process takes so much time, we occasionally fail at getting accurate data to the state in a timely manner, and that is unacceptable. This result is a delay of payment to our agency from the state.

By incorporating pre-filled forms into our company database, we want to be able to pull specific information that already exists into the forms. In the end, this will hopefully save the workers time and reduce any typographical errors that may occur. My goal will be to eliminate the redundancy of text that is typed, reduce the time spent on filling out forms and increase the productivity of the employee with less time spent on forms and more time spent with the individuals we provide services to.

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Chapter 2

Review of the Literature

The Farm, Inc., or more recently known as TFI Family Services, is a not-for-profit child care agency with the corporate office located in Emporia, Kansas. TFI is a child placing agency that has served over 3,000 children in the last year, and our 26 offices provide comprehensive coverage in Kansas and Missouri. (website The Farm, Inc.) Founded in 1965 by Maxine Johnson as a summer camp for youth in northern Lyon County, the agency evolved into a foster care home with the stated goal of "keeping brothers and sisters together" (website The Farm, Inc.) The mission of doing what makes sense for the children remains, even though the entire make up of the agency has changed immensely.

TFI Family Services is now responsible for Foster Care and Reintegration Services in a 25 county area of Kansas. The administrative staff has quickly realized that one of the keys to the success of the agency would be the ability to provide both accurate and timely reports as well as to consistently improve services to families and children. The reporting part of our agency is just about where it needs to be, so now the focus is on improving services to families and children.

Many ideas were discussed and implemented when the need for improvement arose. All workers within the agency are required to complete the correct paperwork for every contact, visit, court hearing and phone call they make that pertains to a family or child. One committee suggested that there should be a way for workers to spend less time on completing these required forms, so that more focus could continue to be on the families and children.

TFI Family Services is fortunate enough to have a database that was created in-house. The company database (FACES), was implemented on January 1, 2004. FACES holds a massive amount of information on all of our children in Social and Rehabilitation Services (SRS) custody. We also store information on every case relationship to the child, every staff member of TFI, every Foster Home that a child has been placed, as well as daycare, transportation and mental health providers. Because all of this information is stored in one place, we thought that we would be able reduce double entry on the forms and generate pre-filled forms for the workers straight from the FACES program. This is one possible solution to helping the agency improve services to families and children. Workers would hopefully spend less time on entering information on required forms as well as reduce the risk of keyboarding errors.

Pre-filled forms are not a new concept. The difficult thing may be incorporating them into your own company database. Many companies are using them to enhance productivity, save costs and to increase efficiency. Many companies use a lot of paper for the many procedures that require the completion of forms manually. The process is not only time consuming but also quite inaccurate as employees or customers sometimes make mistakes when filling in the forms. ("K"-Line, 2003, 6)

There are currently many programs created to automatically set up pre-filled forms for companies. The goal for many of them is to reduce data entry time and minimize errors. Our agency agrees that if there are that many programs created to improve productivity, then this is definitely something that we must do in order to improve services to our families and children.

All digital documents are not created equally. (SAP AG, 2003, P. 4) There are digital documents that are manually filled out and then there are interactive forms that are customized with application data personalized for the targeted recipient. (SAP AG, 2003, P. 4) The ability to output intelligent digital documents is an advantage to any organization. The forms that our workers create, not only circulate within the agency, but are sent outside electronically to SRS, other agencies, and mental health providers. We are expected to send accurate information, but occasionally details get overlooked when entering data. Pre-filled forms would increase the communication with our current external parties.

One study by Rukzio, Schmidt and Hubmann, found the benefits of automatic form filling services on mobile devices. In this study they outline a system through which the user can be unburdened from the input of text through an intelligent automatic form filling process for mobile devices. (p. 1) Through the analysis of this study, they concluded which data a user has to type in when filling out a form as well as the behavior of people during filling out forms. (p. 1) The basic idea is that there is a personal assistant running in the background of the mobile device taking the user data and the content and the context of the form into account. This same type of concept is true for the pre-filled forms that will produced from our company database. Based on this information and corresponding rules the forms are filled. The user has only to control, correct and confirm this pre-filled form. (p. 6) No matter what the circumstance, pre-filled forms are going to end up saving time and money for any company.

A well-built form will help in securely collecting relevant information about a client. If a form is poorly built, it could leave the user with many problems. One major problem is a form in which the data can not be verified. Forms can be validated based on requirements, bad syntax, and appropriate or bad values. (Netline, 2000, p. 1) The most basic validation is determining whether a form field is required or not. In the forms that will be created for TFI Family Services, there will be no validation and no error message if a field is left blank. Syntax validation determines whether the format that information is provided is acceptable. (p.1) These types of checks would include things like social security numbers, phone numbers, zip codes and dates to ensure that the correct number of digits was used. Validation of syntax is actually written into the FACES program, so any fields that are filled by numbers of this type would have already been verified of the proper number of digits. One other type of validation is bad values checking. This goes beyond the format of an answer and ensures that the answer given is actually valid. This is not frequently done when validating forms, despite the fact that it can have a great impact on the quality of data that is collected. (p.1) If a bad values check were done on a child's referral date, it could determine that 11/06/1899 is probably an invalid answer. The format is correct, however we would not have a referral date of 1899. This type of validation would affect the type of forms we are using the most.

It will be important to find different ways to make the process run smoothly. The forms will need to be set up in a way that someone else could edit or create additional pre-filled forms the same way. There are many ways to correctly structure the code for these forms. The only rule to remember is to make your code readable, manageable and whenever possible, reusable. (Forta, 2000, p.47) I will be able to reuse the code from one form to the next and make the appropriate changes so each form will function properly. One problem with the reuse technique is manageability. (p.47) With so many bookmarks set up in each form, it will be crucial to get all of them named correctly in the code. Programmers often run the risk of introducing mismatched tags or typos, especially if you were to modify the form at a later date. (p.47)

Another issue that we may encounter is how the entire staff is going to be able to adjust to this major change in using forms. Many of them have a system of their own for creating and using all required forms. Implementing the pre-filled forms will be something new and it will probably be difficult for those employees who do not access FACES very often. According to one study, firm strategic and organizational adaptations coevolve with changes in the environment and new organizational forms can mutate and emerge into the existing population of the organization. (Lewin, Long & Carroll, 1999, p.535) For those employees who might have hard time adjusting to change, we will have to leave the blank forms available for use. I believe that with adequate training, the majority of the agency will eventually embrace the pre-filled forms.

Basically, we are searching for a way to bridge the gap between the raw data that exists in our agency database and the interactive form that must be created with the data. In order to make the pre-filled forms worth while, TFI Family Services would need to benefit from the use of these forms. The workers would need to spend less time filling out mandatory forms and the chance of errors would have to decrease drastically for this to be a success. By creating and implementing the pre-filled forms, we are hoping that workers will be able to spend less time filling out the forms. In the end, agency staff will ultimately have more time to focus on families and children.

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Them into the Company Database

Chapter 3

Design Model

I was able to develop a system in which some of our company's current forms were integrated within FACES. Once they were set up, specific fields within the forms were pre-filled as the workers accessed them. In order for me to determine exactly what I needed to do for this project, I followed the ISD Model Flowchart illustrated in Figure 1.

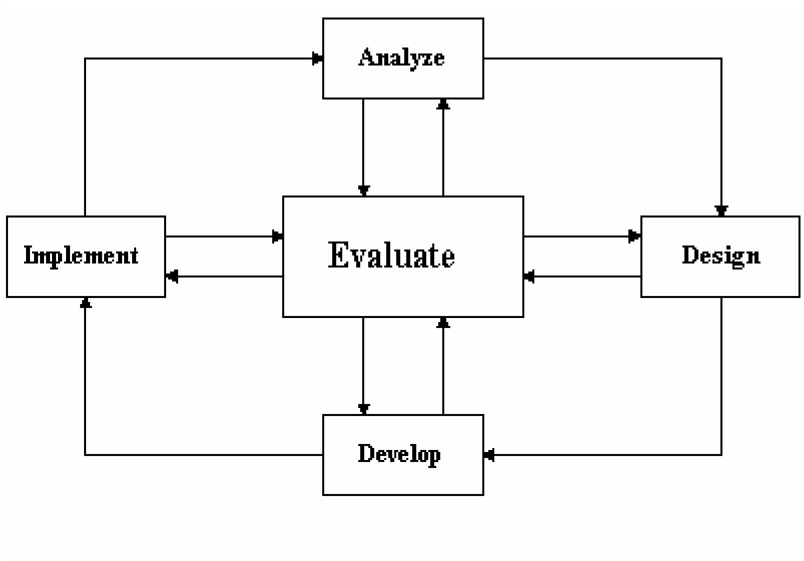

Figure 1. IDS Model Flowchart (Donald Clark, 1995)

Analyze

I began this project by analyzing the need for the pre-filled forms. Being on the procedure and forms committee for our agency put me at an advantage to easily get the information that I needed. Every member on the committee is at least at the supervisor level for their specific department. I discussed the need for pre-filled forms with the committee to determine if they all felt the need was there as well. I was able to present to them the advantages of pre-filled forms and how our agency would benefit from using them. I was not able to present any known disadvantages to this group because I was not real sure at the time what problems might occur when using the new pre-filled forms.

At the next committee meeting I distributed the survey (Appendix A) to each of the members. Each member was responsible for taking these surveys and making sure each worker in their department had the opportunity to fill one out. The purpose of this survey was to determine how much time was typically spent filling out forms and which forms were used most in each department. The survey was set up primarily with open-ended questions so that all departments could use the same survey form. Once the forms were given to all of the supervisors, I sent out an all agency email informing all employees that they would be receiving the survey. There were a total of 278 surveys distributed and 242 of them were returned to the supervisors and brought to the next meeting. I was very pleased with the number of workers that took the time to fill the survey out and get it returned to their supervisors before the next meeting.

Evaluate

With the data that was brought back to me, I sorted the surveys in order to determine the need in each of the departments. As a whole, our agency spends an average of 9 hours per week filling out forms. Ninety-four percent of all workers fill out the forms using the computerized form rather than the handwritten option. Of the forms that are completed and then sent to another person or department, 82 percent are forwarded by email, nine percent are faxed, seven percent are sent by mail and two percent are hand delivered. Based on this information alone, it seemed clear to me that pre-filled forms would be beneficial to the entire agency.

I then had to break down the surveys by the departments to determine which of the pre-filled forms would be used. Since we currently have over 250 forms, I decided to look at the top five forms for each department and get them set up and implemented first. I thought that if these were successful, then the rest of the forms could then be set up as well. Family Preservation and Family Permanency ended up being grouped together since they are so closely related and use the same forms. Their five forms include Child Move Checklist, Placement Referral Worksheet, Monthly Case Status Report, Pre-Assessment for RADAC referral, and Courtesy Supervision Request Form. The forms that are used most in the Resource Family Services department are the FACE Sheet, Disruption Report, Foster Care Assessment, Monthly Report and the Discharge Summary. The Care Management department receives many forms daily, but there were only three forms that they actually filled out. These forms are the Critical Incident Report, Acknowledgement and the Scoring Tool. The Quality Improvement department is in charge internal audits, so their forms included the Permanency Internal Audit Form, Resource Family Review, Case Plan Review, Aftercare Review and Behavioral Health Client File Review. The final department surveyed was the Behavioral Health department. The five most used forms for them are the Independent Contractor Monthly Report, Specific Grant Monthly Report, Substance Abuse Monthly Report, Discharge Summary and the Treatment Plan Update.

Design

Once I had determined which forms were going to be set up as pre-filled forms, I had to work on the design of each of them. All of the forms that are currently being used are set up as Word documents. I took each of the 23 forms and printed them off. I then had to decide what information could be pulled from the FACES database and inserted into each form. Most of the forms had the child's name or their KAECSES number, so those fields were easy to pick out. Because some children have more than one case, there were a few fields that were harder to decide if they could be included as the pre-filled portion. On the hard copy of each form, I highlighted the fields that I would need to code for pre-filling.

Evaluate

FACES was designed in a way that the information for each child is at multiple levels. I knew that it might be a little more challenging to pull information from different levels, so I went through each form again to see how many forms would need information from multiple levels. I also wanted to make sure that the workers did not have to enter information onto the form that was already in the database. There was one form that would need to pull data from the Person level, the Case level and the Placement level. This form was the Child Move Checklist.

Develop

Developing the pre-filled forms was a fairly long process. The first thing I had to do was rename each of the form fields on all of the forms. By doing this, it created a bookmark for that field that I was then able to reference in the code. I named the fields based on the form name and the description of the field. For example, the name field for the FACE Sheet would be called, "FaceSheetName".

I used Enterprise Manager to create a table that would hold the information about the forms. Each form name is stored in this table along with the path to open the form, the path to save the form, the template name and the stored procedure name. I then used Sequel to set up the stored procedure so that the information from FACES could be pre-filled in the specific forms. Once the code was created, I was able to use it for each form and then just change the information about the form name and the bookmarks. The entire development process took the most time and I had a lot of trial and error moments before I was able to get each of the forms to run properly.

Evaluate

I was able to develop all of the pre-filled forms on a spare server, so that nothing I did would affect the live information of our agency. This allowed me to test each of the forms to make sure they were all pulling the correct information at all times. I wanted to make sure I had most of the "bugs" worked out before any of the workers used them. I found a couple of forms that pulled the wrong information in the wrong fields, so I had to re-check what I had written and adjust it.

Implement

Before the forms were released, I trained all of the members of the Procedure and Forms Committee on how to use the pre-filled forms. I demonstrated how to use the forms while they followed along on their instruction pages. (Appendix B) Each supervisor had two weeks to train all of his or her staff on how the forms would be set up and used. An upgrade to the FACES database with the coding for the forms included allowed everyone with access to begin using the pre-filled forms. I sent out an all agency email informing everyone that they were in place and ready to be used. I also thought it was important to inform everyone that all of the blank forms were still located on the company's G: drive if they didn't feel comfortable using the pre-filled forms, or if anyone wanted to use the handwritten forms.

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Chapter 4

Results

The entire agency has had the opportunity to use the pre-filled forms. The main purpose of this project was to eliminate the redundancy of text that is typed and reduce the time spent on filling out agency forms. I also wanted to provide some instruction to staff on how to access and use the pre-filled forms within FACES. The ultimate goal was to increase productivity of the employee so that less time could be spent filling out forms. I feel that if these goals are accomplished, the Directors of each department will want all of the forms set up as pre-filled form within FACES.

The number of fields that were pre-filled varied from one form to the next. Some forms had just two or three fields that were filled, while another form had 29 fields filled. By using the pre-filled forms, the workers did not have to type in information that was already in the database. No matter how many field were filled in, these pre-filled forms definitely cut back the amount of typing that was required to complete a form. There were still some staff members that would rather use the handwritten forms, so the pre-filled forms did not benefit them at all.

The amount of forms that all workers are required to fill out has not changed. I wanted to make sure that the pre-filled forms would help reduce the time that each worker spent filling them out. Initially, those workers who do not frequently use the FACES database found it more time consuming to use the pre-filled forms. They were not used to navigating through the “tree”, so it was frustrating for some of them to try these new forms. One department had an additional training with the Director and Supervisors. They were encouraged to continue to use the pre-filled forms. Judging by the comments from the committee members, the pre-fill forms are definitely reducing the time spent filling them out. The true effectiveness probably can not be measured until all forms are implemented into the database for use.

I thought the instruction sheet that each employee received at the time of training was very beneficial. All staff members know how to fill out the forms, but some of them needed a reference to see exactly the steps to take to get to the form they needed.

Even though this project seems successful, there were some problems throughout the process. The biggest problem that we had to deal with was incorrect data that got entered onto the form because it was not entered correctly in FACES. Each time this problem was reported, I did my own research to see what exactly happened. I found that about forty percent of the time, there was human error by my data entry staff. About fifty percent of the time, the fax that data entry staff was reading to enter the information was not legible, so they had to make a guess at what the number or letters were. This occurred most often because our agency receives most of its information through fax by other agencies and SRS. If the fax has been copied and re-faxed, the text is very difficult to read. These errors get corrected in two ways. One is that the worker who is assigned to the child or family will report to me that the information is not correct. The second way these errors get corrected is once a month we reconcile with SRS. If our information does not match theirs, we make adjustments on our end. The remaining 10 percent of the errors are made when SRS sends the incorrect data to us. None of these errors occur very often, but when they do, it does cause problems when using the pre-filled forms.

According to the encounter data that is sent to SRS each month, our data within FACES stays accurate. According to TFI Family Services most recent board report (Appendix

C), we have an average of a 99.2% accuracy rate over the past nine months. This report shows the total number of children that are on our roster each month, along with the number of errors found when reconciling with SRS. This would be another advantage of having the pre-filled forms pulling information from FACES. We are currently averaging only 6 errors a month, so this would be a good indication that the pre-filled forms would be just as accurate. We currently do not track the errors that are made on forms by the workers. That would be difficult to track since so many of them are sent to other departments, other agencies or sometimes just filed.

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Chapter 5

Conclusion

I feel this project so far is a success in providing agency staff with a way to increase their productivity. I think that in order to be a more effective tool, the training portion for using pre-filled forms needs to be implemented better. My plan was to train the members of the Procedures and Forms Committee and they would be in charge of training their department staff members. I found that not all of the Directors and Supervisors are very good trainers and the staff members under them had the majority of the questions and problems. When it is decided to implement the remainder of the forms, I think it would be beneficial to train the company trainer and she could be in charge of instructing the new employees on how to use these forms from FACES.

I went into this project thinking it would be a success with very few problems. It was an eye-opening experience working with the committee members and realizing their level of computer skills is not where I thought it would be. These individuals of the agency know every policy and procedure, but when asked to perform a task on the computer, it was difficult for some.

I found that there was very little resistance is implementing the pre-filled forms. Everyone at this agency, from the top down, is constantly looking for ways to increase productivity because of the large case loads and extra work that is constantly required of everyone. I am looking forward to working more on this project and implementing as much as I can on the pre-filled forms.

From here I would like to get permissions to work on getting the rest of the agency forms incorporated into FACES as pre-filled forms. I now know that training is such a vital part in making this project successful, so I will be exploring different methods to train every staff member in each of the offices. I feel that once I have the approval of the Directors, the pre-filled forms will be very beneficial to everyone in the agency.

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Appendix A

Forms Survey - February 2006

Please answer the questions below as they pertain to you and your current job at TFI Family Services. We are in the process of setting up pre-filled forms to use within FACES and need your assistance in getting this started.

Please return this survey to your supervisor by February 24^{th}, so we can compile the results at the next Procedure and Forms committee meeting on the 27^{th}.
Thanks for your help!
LeAnne Bryant

1. Name of Department: ____

2. Please list the five forms that you fill out most often in your daily work.
____
____
____
____
____

3. How much time per week do you spend filling out company forms? ____________

4. How do you fill out most of your forms? (Circle one)

   By hand On the computer

5. How do you send most of your forms on once they are filled out? (Circle one)

   By mail By Email Fax Hand deliver

Appendix B

Pre-Filled Forms in FACES

The pre-filled forms are set up so that information that is currently entered into FACES will automatically fill in the form you need to fill out. These steps will walk you through using one of the pre-filled forms.

1. Within FACES, click on the Person Module 

to search for your specific child.
2. Search for the specific child by last name, first name. Hit **ENTER** once you have found the child's name you are searching for.
3. Click the **(+) sign** next to Contract in order to see the Case information.
4. **DOUBLE CLICK** on top of the child's current case.
5. The Case form for this child should now be open. (Figure 1)
6. Click on the **PRE-FILLED FORM** button at the top of the screen.
7. A list of the available pre-filled forms will now appear.
8. **DOUBLE CLICK** on top of the form that you want to run.
9. A Word document will be created with the information about the child already filled into the designated fields.

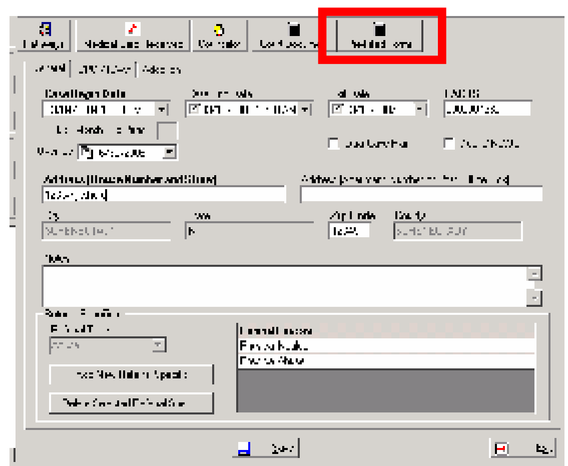

Figure 1

10. Continue to **TAB** through the rest of the document in order to fill out any additional information that might be needed. You are also able to change or edit any of the fields that are pre-filled if you need to.
11. Once all of the information has been entered into the form, Click the **FILE MENU** and choose **SAVE AS.**
12. Save this file on your desktop or another folder that you have set up for future reference.

Appendix C

TFI Family Services
Information Management Department
May 2006 Board Report

<u>Data Entry</u>:

- **Encounter data** with the three procedure code requirements for each OOH client to SRS has been consistently successful. March 2006 submission was 99.7%.

SRS PAYMENT ENCOUNTER ANALYSIS REPORT

July 2005 - March 2006				
MONTH	**ROSTER #**	**ERROR #**	**ACCURACY**	**ERROR REASON**
July 2005	682	5	99.3%	All 5 Errors - TFI
August 2005	686	6	99.1%	All 6 Errors - TFI
September 2005	714	11	98.5%	All 11 Errors - TFI
October 2005	728	8	98.9%	All 8 Errors - TFI
November 2005	712	14	98.0%	All 14 Errors - TFI
December 2005	720	5	99.3%	1 - SRS - 4 - TFI
January 2006	733	1	99.9%	SRS error
February 2006	763	3	99.6%	All 3 SRS errors
March 2006	775	2	99.7%	Both errors - TFI
OVERALL AVG	724	6	99.2%	