

Is PDA a Beneficial Collection Development Tool for Libraries in Higher Education?

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Abstract

This paper's purpose is to investigate whether PDA is a beneficial acquisition method for libraries in higher education. Therefore an extensive literature review was conducted as well as interviews with five libraries to get insights in their motivation to engage in PDA, the implementation issues a library is faced with and finally how PDA performs compared to the traditional method. Because the literature used for this paper focuses on the United States and describes mainly PDA for printed books, the interviews conducted with Dutch libraries that have implemented PDA for digital content, give new and valuable insights to this research. Overall the findings show, that PDA is not a beneficial solution to all challenges the traditional collection method was faced with. However if the main goal of a library is to satisfy the customer, to improve the efficiency of the acquisition process and to keep the collection up-to-date, it can be argued that PDA is overall beneficial for libraries in higher education but not as a stand-alone acquisition method. Not all titles have an e-version available yet and the libraries do not want to fully rely on the patrons' choice, but have the possibility of collection specialists adding important titles. From a theoretical point of view, this paper contributes to existing literature by providing giving a comprehensive overview of PDA and is of external relevance since it gives advice to the University of Twente and can be used by other libraries that consider implementing PDA. Since some topics of this research are, to the author's best knowledge, not elaborated on by the literature, own definitions and assumptions are sometimes used.

Keywords: Patron driven acquisition, purchase on demand, user participation, collection development, user-initiated acquisitions

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1. Introduction

Traditionally, libraries acquired materials with the expectation that users may someday need an item (Way, 2009). However, this model of collection development was faced with many challenges. Explosive growth of information offered, the emergence of new technologies and a new generation of library users demanded the exploration of alternatives (Fischer, Wright & Clatnoff, 2012; Mouyal, 2007; Hodges, Hamilton & Preston, 2010; Brinkman Dzwig, 2013). In order to better meet the users' needs, the paradigm shifted from librarian-mediated to patron driven acquisitions (PDA) (Hodges et al., 2010). This method enables the user to participate actively in the acquisition process and instead of librarian-mediated "*just-in-case*" purchases; titles will only be bought when requested by the user (Way, 2009). In this paper the terms user, customer and patron are used interchangeably and describe the persons whose need is to get access to certain titles and who are therefore making use of the PDA program provided.

The increase of popularity of PDAs over the past decade (Tyler, Melvin, Xu, Epp & Kreps, 2011; Tyler, Epp, Kreps, Melvin & Xu, 2010) raised the question whether PDA is a beneficial solution for libraries to cope with those challenges. To answer this, multiple researchers investigated the topic and published different results: According to Tyler, Falci, Melvin, Epp & Kreps (2013), PDA programs have largely proven themselves and are well on their way toward becoming advisable, necessary, standard practices. It "*seemingly guarantees that its [the patron driven] purchases will be relatively heavily used*" (Tyler et al, 2011, p. 175) and enables libraries to become more cost effective and better at meeting the customer's needs (Tyler et al., 2010).

Although literature shows a high interest of libraries in PDAs there are still many concerns that have a discouraging effect on their adoption. Contradictory to the observation by Tyler (2011) that purchases will be relatively heavily used, the main concern is the narrow interest of the patrons in solely meeting their own immediate need (Tyler et al., 2011; Comer & Lorenzen, 2006) which could even result in collections with poor usage and little use value (Comer & Lorenzen, 2006; Tyler et al., 2010). Moreover the patrons will be less cautious with their spending than budget-bound librarians (Levine-Clark, 2010; Tyler et al., 2011) and will therefore select expensive materials that do not fit the library's collection priorities (Comer & Lorenzen, 2006). Librarians as selectors, however, are guided by a broad and deep knowledge of needs and interests of the department or university, as expressed through collection-development policies and approval plans (Tyler et al., 2011).

The opposition between the growing use of this new collection method and its positive effects on the one hand and on the other hand the numerous concerns, makes this research relevant. Besides

that, many local variations on the actual implementation of PDAs can be observed. This can include the amount of funding, the selection criteria and the degree of involvement by technical services in the pre- and post-order process, which makes the decisions making process more complex (Allen, Ward, Wray & Debus-López, 2003).

Existing literature only elaborates on the advantages and drawbacks of PDAs, or describes the implementation process at one particular university. This article will combine those elements and give a comprehensive overview of different approaches to PDA, which aims to help libraries to create an implementation strategy. Therefore this report will investigate the following question: **Is it beneficial for libraries in higher education to use PDA as a collection development tool?**

First, PDA will be defined to create a mutual understanding. Thereafter, to answer the research question, following topics will be analysed by comparing the literature with the experiences of five libraries which have already implemented PDA for e-content:

What are the main motivations to engage in PDA? Before considering implementing PDA it is crucial to see the value of PDA and how it differs from the traditional model.

Which types of PDA do exist? In order to get a full picture of PDA, libraries have to be informed about the different types which exist. This includes amongst others mediated versus unmediated PDA, the different kinds of acquisition namely loans, access and purchase as well as the different aggregators offering PDA to libraries under certain conditions.

How does PDA perform compared to librarian-selected collections? The reason why libraries would consider changing their current strategy is due to the new approach being more efficient. However researchers have different opinions whether PDA performs better than the traditional librarian selection. This depends to a great extent on the type of PDA and the context as e.g. the country in which is implemented in. Since the results are inconsistent, different opinions will be shown and elaborated on.

How do the conclusions from the literature differ from the interviews? Thereafter a discussion part will be provided comparing the results from the literature with the practical examples. This discussion builds a foundation to answer the following sub question.

Should the University of Twente implement PDA? In the context of the University of Twente an advice will be given and it will be made clear which topics have to be discussed before the actual implementation can take place.

To complete this paper a conclusion will aim to answer the question whether it is beneficial for libraries in higher education to use PDA as a collection development tool and limitations as well as further research possibilities will be described.

2. Definition of PDA

Many different synonyms for PDAs exist and can be used interchangeably, e.g. demand driven acquisition, patron selected programs, user driven collection, research driven acquisition model, patron initiated purchase, purchase on demand or user-initiated collection development (Swords, 2011, Guy, 2013). Moreover PDA is defined differently throughout the literature:

“Many see patron-initiated collection development as a way to take advantage of technology to move from just-in-case collecting to just-in-time collection development. In just-in-case collecting, libraries acquire materials anticipating that users may someday need an item, while in just-in-time collecting materials are not actually purchased until requested by a user” (Way, 2009, p.299).

“PDA is in opposition to the just in case model most libraries previously subscribed to, and it allows for the just in time model to flourish instead. Patrons are now able, through PDA programs, to purchase the book they need (if it is in the list of offered titles) using the library’s funds immediately” (Shen, Cassidy, Elmore, Griffin, Manolovitz, Martinez & Turney, 2011, p.20).

“Users request that a specific book, journal, or other item be added to a collection” (Guy, 2013, p.2) which allows them to participate directly in the collection development process. (Guy, 2013).

“Titles are bought if they met certain pre-established criteria generally focused on variables such as price, delivery, time, and appropriate content. After initial use by the requesting patrons, the books were added to the regular library collection” (Nixon, Freeman & Ward, 2010, p.120).

“Patron-driven acquisitions are a collection development tool that uses patron input to fulfil just-in-time information needs. With PDA, just-in-time purchasing decisions are shifted from librarians to their patrons” (Schroeder, 2012, p.11).

While all of those quotes stress the shift from a “just-in-case” to a “just-in-time” collection method, they focus on different elements of the process. For example, Way (2009) sees PDA as a way to take advantage of technology and points to this as a reason why the paradigm shifted. Guy (2013) on the other hand, defines the role of the patron in the acquisition and Shen et al. (2011) as well as Nixon et al. (2010) explain the process by highlighting the selection of titles on pre-established criteria and the use of the library funds.

These definitions do not refer to the difference in mediated and unmediated acquisition and the different acquisition options universities can choose from are lacking. Therefore, and to establish a mutual understanding, PDAs will be referred to throughout this paper as follows:

PDA is a collection development tool fulfilling “*just-in-time*” needs of patrons by letting them directly participate in the acquisition process. Instead of librarian-mediated “*just-in-case*” purchases, an overview of available titles is offered to the patrons (often on a platform). “*Just-in-case*” and “*just-in-time*” does not refer to time it takes to acquire a title, but to the point of time when the acquisition decision is made. Only if a title is requested by a patron and if it meets certain pre-established criteria, the material is acquired by the library “*just-in-time*” to fulfil the user’s need. Acquisition can be defined as gaining possession or obtaining something.¹ Using this definition, patron driven acquisition does not only include the purchase of titles but also its temporary usage via inter library loan for printed materials and short-term loans for electronic titles.

¹ <http://www.merriam-webster.com/dictionary/acquisition>

3. Methodology of Literature Search

Two different approaches were chosen to find appropriate literature for this paper. First of all, finding literature based on the snowball collection method and second, on well selected keywords, which will be explained later. After scanning through articles on Google Scholar, Scopus and Web of Science, three relevant and import articles were identified which formed the basis of the literature collection and were afterwards used to conduct the snowballing method. The first article was *“Patron-Initiated Collection Development: Progress of a Paradigm Shift”* by Hodges et al. (2010) which describes the history of PDA in a very detailed manner. Second, the article *“Patron-Driven Purchase on Demand Programs for Printed Books and Similar Materials: A Chronological Review and Summary of Findings”* by Tyler (2011) addresses all the sub questions of this report to some extent and especially stresses the different types of PDA. Last but not least the article *“Head First into the Patron-Driven Acquisition Pool: A Comparison of Librarian Selections Versus Patron Purchases”* by Shen et al. (2011) was selected. As the title indicates, its focus is on the comparison between the librarian and the patron selection and helps to answer the sub question on the performance of PDA. Those three articles cover the main questions of this report by referring to different aspects each and therefore build a good basis for a further collection of articles. To get more relevant titles, the references listed and the papers which cited those three articles were scanned and filtered based on their appropriateness. This process, which was facilitated by an application of Web of Science, was conducted with all new literature and continued until the circle closed and no new relevant literature appeared.

Since the selection via this method might be biased e.g. in terms of mutual characteristics between those authors, a second collection method was used to get a broad and comprising view on the topic. This method helps to create a good combination of keywords by identifying related, narrower and broader terms of *“PDA”* and *“higher education”* (Appendix A) and searching for them on Web of Science, Google Scholar and Scopus. This process had to be conducted several times since the combination of keywords had to be adjusted to narrow down or broaden the results. After reading through the abstract of multiple articles, which title and keywords appeared fitting, a preliminary selection was made of which the whole article was read through. The best articles of both methods were saved and inserted into a literature matrix, which compared them based on the most important aspects of the paper.

4. Literature Review

The following part of this paper analyses the motivation to implement PDA, different implementation issues, namely mediation, pricing strategies and PDA providers, and the performance of PDA.

4.1. Motivation to Engage in PDA

Traditionally, the ideal of a research library was to meet the needs of existing and future patrons (Hodges et al., 2010). This model was also known as “*just-in-case*” model of collection development (Hodges et al., 2010; Perdue & Van Fleet, 1999; Swords, 2011; Guy, 2013; Schroeder, 2012; Way, 2009; Shen et al., 2011) since libraries acquired materials with the expectation that users may someday need an item (Way, 2009). It was the bibliographer’s job to identify the best materials, and the acquisitions department was responsible for purchasing those (Hodges et al., 2010).

Although the idea of involving the patrons in the purchasing decision has existed for at least a century (Hostetler, 2010, Chadwell, 2009), the users were never given the full responsibility of acquiring materials. Instead their suggestions were taken into consideration by the librarians (Waller, 2013). However, circulation rates were poor; only 20 percent of the books purchased accounted for 80 percent of the total circulation (Fischer et al., 2012; Perdue & Van Fleet, 1999). Since the beginning of the twentieth century, academic librarians acknowledged the difficulty of predicting the needs of the customers (Tyler et al., 2011). In today’s rapidly changing world, meeting this challenge has become even more important. Therefore, libraries cannot stand still (Brinkman Dzwig, 2013). Due to a lack of space, increased cost of storing, an explosive growth of information offered, new technologies and a new generation of library users, the “*just-in-case*” model of collection development was faced with increasing challenges and demanded the exploration of new alternatives (Fischer et al., 2012; Mouyal, 2007; Hodges et al., 2010, Brinkman Dzwig, 2013). Hodges et al. (2010) even suggest that the pressure of economic factors banishes this collection method as economically feasible solution.

In order to better meet the users’ needs, the paradigm shifted from librarian-mediated to patron-initiated purchasing (Hodges et al., 2010) and from a “*just-in-case*” to a “*just-in-time*” collection development tool (Hodges et al., 2010; Perdue & Van Fleet, 1999; Swords, 2011; Guy, 2013; Schroeder, 2012; Way, 2009; Shen et al. 2011). This new collection method called PDA is based on suggestions made directly or indirectly by patrons who are now involved in “*shaping the development of the print collection*” (Waller, 2013, p.128).

In the 1990s, PDA of printed books was tied to inter library loan, which led to an immense increase in the adoption of PDA since titles did not have to be purchased but could be borrowed for a short period of time for less money (Tyler, et al., 2013; Hodges et al., 2010). This development was the start of a growing popularity of PDA among academic and public libraries and, according to Lugg (2011), made PDAs This development was the initiator of a growing popularity of PDA among academic and public libraries (Shen et al. 2011) and made it, according to Lugg (2011), “*one of the most discussed ideas in the world of library collections*” (Swords, 2011, p.7).

Since 2000 the PDA concept has been reapplied in the context of demand-driven purchases of electronic books (Shen et al. 2011) and in 2008 the two major book vendors, Blackwell and YBP Library Services, adapted their ordering databases, to supply e-books from aggregators World Cat Local (OCLC), MyiLibrary, EBL, and Ebrary (Hodges et al., 2010). In most cases, e-book PDA involves streaming e-books in the online catalogue and purchasing them when used by patrons. This has the advantage of reducing the waiting time of patrons compared to print titles (Guy, 2013) and not taking up expensive physical space in a library (Swords, 2011). Since loans of the physical collection are steadily declining and online as well as offline access to e-books can be made available, this concept has gained popularity over the years (Hardy & Davies, 2007).

4.2. Implementation Issues

Many variations on the actual process of PDAs can be identified, complicating the decisions making process (Allen et al., 2003) for libraries. One of the main variations is the decision whether one allows the user to acquire titles without mediation or if the library personnel have to approve the titles beforehand. The libraries can also choose to implement different acquisition methods next to direct purchase, namely inter library loan and digital access via short-term-loans. Last but not least the libraries have to choose a PDA provider to work with. In the following section three well established e-content aggregation platforms will be introduced.

4.2.1. Mediation

As discussed, PDA rules out the acquisition of a set of titles that patrons would not choose for their collections. The next step in this process is to let the user solely determine what to be purchased (Chadwell, 2009; Hodges et al., 2010). This means moving from mediated to unmediated PDA where the final decision making is shifted from the librarian to the patron.

Due to a lack in literature defining explicitly what mediated and unmediated PDA is, the following definition will be used throughout this paper: Mediated PDA is seen as a selection method, where a subject librarian gets a set of suggestions by the user and decides whether the title

is appropriate and should be purchased (Schroeder, 2012). Only if the request is approved, the title will be acquired. Via this method the library personnel has more control over the budget used and cannot only preselect titles but can also control the acquisition decision later in the process. Unmediated patron-initiated selection charges the individual librarian's collection budget as well but if a title is purchased, there is no approval process and patron notification when the book is available (Schroeder, 2012). Instead users find these titles in the online catalogue and purchase them unknowingly with their clicks entirely on their own (Fischer et al., 2012).

4.2.2. Pricing Strategies

The libraries can also choose to implement different acquisition methods next to direct purchase, namely inter library loan for printed titles and digital access via short-term-loans.

Access to Printed Titles via Inter Library Loan (ILL): To meet their patrons' needs in a timely and cost-efficient manner, many libraries started to borrow selected books requested through ILL about thirty years ago (Tyler et al., 2010; Gibson & Kirkwood, 2008). This process involves borrowing printed material demanded by a library user and then returning it to the lending library after a few weeks' use (Allen et al., 2003). Next to direct costs of lending, each library incurs costs associated with among others staff time, supplies, shipping, equipment, and network fees, from which the borrowing library typically incurs about two-thirds (Allen et al. 2003). Savings will be realised by lending, if the costs to purchase an item are higher than the cost of the ILL fees (Zopfi-Jordan, 2008). This acquisition method is not yet feasible for digital titles but restricted to printed titles only.

ILL is described as fast and economical (Hodges et al., 2010) and provides a quick turnaround time (Foss, 2008). It is not cost-effective to purchase every requested item, hence purchases should be limited to titles meeting pre-established criteria as publication years, author and content whilst drop-outs should be borrowed (Gibson & Kirkwood, 2008). According to Foss (2008) it is a long-term benefit to all users if ILL becomes a permanent part of a library's collection.

Tyler (2011) discovers that users tend to borrow inexpensive, high quality titles which would be suitable for the collection and easily obtained. Via ILL only one single user can be satisfied (Perdue & Van Fleer, 1999) although the books borrowed are often requested multiple times, which results in multiple ILL-borrowing fees for the same item (Tyler, 2011). Moreover problems can occur if a title is not available. This can be due to requests of very recently published books which are difficult to fulfil since the owning libraries' copies are either still on order, or have already been lent out (Anderson, Freeman, Hérubel, Mykytiuk, Nixon, & Ward, 2002; Allen et al., 2003). In these situations, a user's request may simply go unfilled (Allen et al., 2003). Purchased books however can

be added to the collection (Zopfi-Jordan, 2008) and yield a re-usable capital asset to a library (Tyler, 2011). In addition, a research conducted by the Association of Research Libraries discovered that the cost of borrowing books approaches the cost of buying them when all costs are taken into account (Jackson, 1998).

Access to Digital Titles via Short Term Loans (STLs): Different e-content aggregation platforms offer libraries the choice whether they want to purchase titles chosen by patrons or to just give the patrons limited access to them. Both acquisition and access can be either mediated or unmediated which depends on the platform and the choice of the specific library. Through purchase, the selected titles become a permanent part of a library's collection (Foss, 2008) and therefore libraries can decide whether users can download or save acquired titles.

Via access, titles are made available to users without the library being obliged to buy them. This can be either “*access only*” via STLs with libraries paying a percentage of the selling price for each view or there are also platforms which offer a combination between access and purchase. This implies that after a certain amount of STLs a purchase will be triggered. The advantage of this method is that the titles which are accessed several times are likely to continue being requested in the future and buying it would therefore be cheaper than multiple STL fees for the same item (Tyler, 2011).

4.2.3. Different PDA Providers

Amongst the e-content aggregation platforms for PDA, three established, well known and important ones are introduced below. They offer partially patron driven purchases and patron initiated STLs. Due to a lack of literature on this topic, the information below is taken from aggregators' websites² and the research paper by Claeysens (2011) for the Royal Library The Hague.

	EBL	Ebrary	MyiLibrary
# of titles available	Nearly 350,000 titles	Nearly 400,000 titles - PDA (2011): 180346 - STL (2011) 121570	250,000 titles, and additional 5,000 titles being added monthly
Mediated or Unmediated	- PDA: Both possible - STL: Both possible - Combination: Libraries can choose to automatically purchase those e-book titles after a specified number of uses, or pattern of demand has been established	- Libraries can select their collection refined by subject, publisher, price, date and other key parameters - Short-Term Loans in conjunction with PDA for mediation.	PDA: Unmediated. (only mediation tool: sum paid in advance)
Overall Access Time for STL	STL: choice between 1 day, 1 week, 2 weeks or 4 weeks loan	STL: choice between 1 day and 1 week loan. After 3 loans obligatory acquisition	

² <http://www.eblib.com/>; <http://www.ebrary.com/corp/>; <http://www.myilibrary.com/Home.aspx?ReturnUrl=%2f>

Costs	Hosting Fee: - 10% per purchased book with a maximum of \$5,000 (if less than 3,000, plus \$750) Price per Book: - PDA: Depending on pricing by the publisher. STL: Pay-per-view feature: 1 day: 10-15% of s.p.; 1 week: 15-20% of s.p.; 2 weeks: 20-25% of s.p.	Hosting Fee: - 5% per purchased book with a minimum of \$250 and a maximum of \$1,500 Price per Book: - PDA: Pricing per title is at publisher list price for single-user access and 150% of list price for unlimited multi-user access where available. STL: Pay-per-view feature: 1 day: 10% of s.p.; 1 week: 15% of s.p.	- Flexibly priced to suit any budget - Pay selected sum in advance - \$500 annual platform fee - \$350 download model
Trigger for Acquisition/ Access	- PDA: 5 minutes reading, copying, printing, downloading or x times STL - STL: 5 minutes reading, copying, printing, downloading	- PDA: 10 minutes reading, copying, printing, downloading or 3 times STL - STL: 10 minutes reading, copying, printing,	
Functionality and Accessibility	- PDA: Multi-user access - STL: Single-user access - Read aloud for all titles. - Full text search across catalogue - Browse full-text for students for free before borrowing and for faculty before purchasing - Non-Linear Lending (max 325 loans a year) - Online and offline access solutions.	- Free access to first 10 min or 10 pages - PDA: choice: multi-user or single-user access STL: single-user access	- Free access to first time a title is viewed - Flexible authentication, - Comprehensive search and retrieval capabilities - Annotate and store searches and notes for access at a later date
Integration	Integrates seamlessly with several collection management and catalogue systems	Offer the unique ability to upload and integrate their own digital content on the Ebrary platform with DASH!™ (Data Sharing, Fast).	Integration into OPAC systems, making it easy to find and view e-books alongside your other information resources, supported by good quality MARC records
Extra information	Stand-alone acquisition tool or side-by-side with EBL's upfront title-by-title selection option		Easy-to-navigate user interface allows for fast access to electronic information

Table 1: Comparison of PDA Providers

E-book Library (EBL): According to their website, EBL provides cost-effective access to titles “when they are needed, as they are needed” enabling the users to catalogue and display thousands of e-books. The platform features nearly 350,000 titles from hundreds of academic publishers and among its numerous library customers all around the globe, prestigious academic and research institutions are included”. Instead of creating a model that tries to satisfy all libraries, they follow a very flexible approach which is customized to each customer and their specific needs. Customers can choose between patron driven purchase, STLs or a combination of both where a title is bought after a specified number of uses or patterns of demand. PDA as well as STL can be mediated or unmediated, depending on the customer's choice and can be either a stand-alone acquisition tool or side-by-side with EBL's upfront title-by-title selection option. Moreover it integrates seamlessly

with several collection management and catalogue systems as the *"Online Public Access Catalog"* (OPAC) or OCLC. End users can browse through the full-text for free and after 5 minutes of reading or copying, printing and downloading, a title will be acquired via PDA or accessed by a one day, one week, two weeks or four weeks loan. A read-aloud option for all titles, a full text search across the catalogue and online as well as offline access solutions enhance the functionality and accessibility of the e-books.

Ebrary: Ebrary currently has more than 4,500 library customers around the world and more than 500 publishers distribute their e-books on the Ebrary platform. With nearly 400,000 titles it offers more e-books to their customers than the competition and enables them to upload and integrate their own digital content on the Ebrary platform. A customer can pre-select titles of the catalogue, refining by subject, publisher, price, date and other key parameters which will then be offered to the end users. This can be in the form of STL, direct purchase or a combination of both. An access or acquisition of a title is triggered after ten minutes or ten pages of reading, copying or printing a title by the end user. After the third loan an obligatory acquisition will be made. Via STL only one end user can access the title; however with PDA customers can choose whether they want to give multi-user or single-user access to the e-books

MyiLibrary: MyiLibrary defines itself as *"an industry-leading e-content aggregation platform for public, academic and professional libraries around the world"*. The platform works with reputable commercial publishers and has hundreds of libraries as customers that have access to 50,000 titles, with an additional 5,000 titles being added monthly. MyiLibrary has a flexible pricing strategy, aiming to suit any budget, where a sum is agreed upon and paid in advance and from which a selection of titles that will be offered to the end users is made. The first time a pre-selected title is accessed is free to the library; thereafter it will be automatically purchased. Comprehensive search and retrieval capabilities facilitate the usage as well as annotations, store searches and notes for access at a later date. Moreover an easy-to-navigate user interface allows for fast access to electronic information. MyiLibrary is integrated into OPAC systems, which makes it easy to find and view e-books alongside other information resources.

4.3. Performance of PDA

To show the advantages and disadvantages of PDA, the circulation rate, costs, user satisfaction, content and sustainability of the collection will be compared to the traditional method. As traditional method, this paper refers to the selection and acquisition of titles by librarians such as collection specialists. There is no unitary result since universities might be using different variation of PDA,

have different budgets and have a different context in which PDA is implemented e.g. the need for non-English PDA titles.

4.3.1. Circulation Rate

Compared to the “*just-in-case*” collection development model, it is observed that titles circulate more frequently (Foss, 2008; Hussong-Christian & Goergen-Doll, 2010; Nixon et al., 2010; Perdue & Van Fleet, 1999; Schroeder, 2012; Tyler et al., 2010; Tyler, 2011; Way, 2009) receiving at least one initial use (Waller, 2013) whilst a high percentage of traditionally purchased titles have never circulated (Nixon & Saunders, 2010). It can be argued that this increase in usage is because it is highly likely that those books will interest other patrons in the future (Nixon et al., 2010) e.g. other students tackle the same research assignments in subsequent semesters (Waller, 2013) at least in the short term (Anderson et al., 2002).

Anderson et al. (2002) found at the Purdue Library for Humanities, Social Sciences and Education that 68 percent of the Books on Demand titles acquired during the project’s first two years have circulated at least once after the initial use compared to the 36 percent of titles normally acquired. Fischer et al. (2012) observed at the University of Iowa in 2009, that user-selected titles were used twice as often as librarian-selected. A research made by Shen et al. (2011), finds that e-books even “*out circulate*” (p.205) “*just-in-case*” selected titles.

4.3.2. Costs

Costs vary strongly between the pricing strategy used, e.g. if STLs are utilized, or if titles are acquired directly. One of the biggest scepticisms of universities against PDA is their fear that overall costs will increase. Libraries with fixed budgets do not like open ended commitments and are afraid that the budget will be reached early in the process (Hardy & Davies, 2007) although PDA is often described as a cost-effective collection development method (Nixon et al., 2010). Tyler et al. (2011) observed at the University of Nebraska-Lincoln that ILL PDA books did, on average, tend to cost a bit more than did books acquired through traditional means, but this is according to them, of little or no importance when circulation performance is taken into account. At the Sam Houston State University the following development was witnessed for PDA with e-books: “*Overall, patron selections averaged less than \$100, as did librarian selections, indicating that patron and librarian choices were similar with regard to cost*” (Shen et al., 2011, p. 14).

4.3.3. Quality of Content

According to Hodges et al. (2010), a conflict exists between building a balanced collection for the future and giving patrons what they want now. The concern was therefore raised that patrons, in

buying for immediate need, will change the nature of academic collections over time. PDA might polarize collection levels between introductory works and narrowly focused research materials and the content available through e-book aggregators is only a fraction of the titles published each year. However, an academic research library requires more content and is therefore still dependent on the expertise of subject librarians (Hodges et al., 2010). Contradictory to this statement it is argued that PDA titles fulfil actual needs expressed by patrons, whereas most titles acquired via traditional means, just fulfil perceived needs (Waller, 2013). As Rawlinson (1981) puts it: *“a book of outstanding quality is not worth its price if no one will read it”* (Rawlinson, 1981, p.2188). Throughout literature it is observed, that patron selected titles are actually appropriate, form a useful addition to a library's collection (Anderson et al., 2002; Hardy & Davies, 2007; Tyler et al., 2010; Reynolds, Harrell, Pickett, Smith, Tucker & van Duinkerken., 2010; Fischer et al., 2012; Tyler, 2011) and would have been ordered anyway if asked, or if the collection development funds had been larger (Perdue & Van Fleet, 1999).

At the Newton Gresham Library an extensive research was conducted by Shen et al. in 2011 comparing the quality of titles acquired via PDA versus traditionally acquired ones: *“a comparison of the numbers shows that librarian and patron selections overall were remarkably similar in their content levels, with the exception that librarians selected significantly fewer popular titles than patrons. For the most part, whereas patron selections included additional popular titles, librarian selections instead included additional advanced academic titles, which was not especially surprising”* (Shen et al., 2011, p.213). Reynolds et al. (2010) documented the following statistics at the Texas A&M University: *“When asked to comment on user requests aligning with current collection development policy, 62.5 percent of the librarians agreed that most requests had aligned; 37.5 percent stated that few of the requests were aligned. 88 percent said that they have not needed to adjust their collection development policies in response to users' needs”* (Reynolds et al., 2010, p.250), indicating that the selections via traditional means and via PDA do not have significant differences.

4.3.4.Sustainability

It is observed throughout literature that patron selected titles meet the immediate short-term needs of patrons, while the regularly purchased titles are being selected to build a sustainable selection (Allen et al, 2003; Hussong-Christian & Goergen-Doll, 2010; Sense & Fonseca, 2013; Price & McDonald, 2009). In the librarian-centred model of acquisitions, resources are selected carefully, based on different criteria such as authorial and publisher reputation and discipline-specific expertise, whereas convenience is prioritized in the patron-centred model (Swords, 2011) and only meets the

“immediate needs” of the patron (Sense & Fonseca, 2013). A study by Tyler (2011) at the University of Nebraska showed that titles selected by patrons would result in libraries purchasing *“expensive, idiosyncratic, and possibly redundant books to meet particular patrons' narrow and ephemeral needs. Books, that would not be suitable for the purchasing libraries' collections, that would experience relatively little circulation, and that would have, as a result, comparatively poor use value”* (Tyler, 2011, p.03). Anderson et al. (2002) disagree with this statement and emphasize that the potential longevity of collection cannot be generalized, but depends on the subject. They observe at the Purdue University, that the sections history and English hold the interest of researchers for a long period of time, while a title from the section political science is more likely to become outdated in the future will be more likely outdated in the future. Fischer et al. (2012) hold a different opinion on this topic. They state that PDA titles have the same potential long term value as the ones they had acquired by traditional means.

Overall it can be concluded that it is difficult to assess the long term value of PDA titles. Collection specialists might have more knowledge on what will be relevant in the future and make more conscious acquisition choices not only focusing on an immediate need. It can also be argued that with PDA titles will be read at least one time while many books purchased via traditional collection methods never circulate (Brinkman Dzwig, 2013).

4.3.5. User Satisfaction

Overall, patrons are satisfied with the *“just-in-time”* collection method (Allen et al., 2003; Foss, 2008; Nixon et al., 2010; Levine-Clark, 2010; Reynolds et al., 2010; Waller, 2013). Especially a quick turnaround time is, according to Hussong-Christian and Goergen-Doll (2010), of high importance to the patrons and a fast delivery of needed materials with PDA generates goodwill amongst them (Allen et al., 2013; Hussong-Christian & Goergen-Doll, 2010; Waller, 2013). Besides that, patrons show high levels of satisfaction with the quality of the titles acquired and their usefulness for the collection (Allen et al., 2003).

In 2007, the Texas A&M University Library adopted PDA for print books with an approval plan and observed the following: *“97 percent [of the patrons] were satisfied with the overall service; of these, 61percent indicated they were very satisfied. The survey showed that 70 percent of the respondents increased their library usage as a result of the service. Users were asked whether materials in general were received in the time frame expected; 90 percent responded positively”* (Reynolds et al., 2010, p. 247). At the University of Denver PDA was introduced for e-books together with the platforms Ebrary and EBL. Research by Levine-Clark (2010) shows that patrons

gave this program an average 4.74 overall satisfaction rating on a five-point Likert scale and that 56 percent of the patrons indicated that the PDA items were ones that they would want to borrow again.

5. Reflection on Literature Review

According to the literature review provided earlier in this paper, the following conclusions can be drawn:

The motivation to engage in PDA is especially driven by the need to change, due to poor circulation rates (Fischer et al., 2012; Perdue & Van Fleet, 1999), the difficulty of predicting the needs of the customers (Tyler et al., 2011) and an explosive growth of information offered (Brinkman Dzwig, 2003) which challenges the “*just-in-case*” collection development method.

Extensive research exists on the performance of PDA titles compared to the traditional method: PDA titles circulate more frequently (Foss, 2008; Hussong-Christian & Goergen-Doll, 2010; Nixon et al., 2010; Perdue & Van Fleet, 1999; Schroeder, 2012; Tyler et al., 2010; Tyler, 2011; Way, 2009) and patron selected titles are appropriate and form a useful addition to a library’s collection (Anderson et al., 2002; Hardy & Davies, 2007; Tyler et al., 2010; Reynolds et al., 2010; Fischer et al., 2012; Tyler, 2011). According to literature, patron initiated acquisitions do not lead to a sustainable collection (Allen et al., 2003; Hussong-Christian & Goergen-Doll, 2010; Sense & Fonseca, 2013; Price & McDonald, 2009), although Anderson et al. (2002) and Fischer et al. (2012) observe the opposite. The comparison of overall costs resulted in many different opinions: Nixon et al. (2010) states that “*literature is convinced that the patron-driven acquisitions model has proved itself [to result in a] cost-effective collection*” (Nixon et al., 2010, p.121). Tyler et al. (2011) find that PDA in conjunction with ILL for printed books is slightly more expensive and Shen et al. (2011) do not recognize any difference in price between PDA with EBL and the traditional method of acquiring books. Literature found that patrons are satisfied with the “*just-in-time*” collection method (Allen et al., 2003; Foss, 2008; Nixon et al., 2010; Levine-Clark, 2010; Reynolds et al., 2010; Waller, 2013). Reasons therefore are the provision of a quick turnaround time (Hussong-Christian & Goergen-Doll, 2010; Allen et al., 2013; Waller, 2013), the quality of the titles acquired and their usefulness for the collection (Allen et al., 2003).

The articles used for this paper do not explicitly describe the implementation issues of PDA, especially regarding e-books. To get more insights into the different aggregators, mediation issues and pricing strategies further research is conducted in the following part of the paper. Moreover, literature has a strong focus towards the implementation of PDA at libraries in the United States. Not really appropriate. Suggestion: By conducting interviews with libraries in the Netherlands that have introduced PDA for e-content, this paper extends the knowledge on PDA implementation in countries other than the US.

6. Methodology of Data Collection

In order to give the University of Twente a suitable advice and relevant data, libraries that belong to a similar macro environment were chosen for the interviews. This includes being situated in the Netherlands and, if possible, being a university library. To do so, all the libraries which participated at the workgroup “Collection Management” of the UKB, which is a consortium of thirteen university libraries and the Royal Library of the Netherlands, were contacted via e-mail and asked to participate in this research. From those libraries, seven replied from which five were willing to conduct an interview. The reasons the two libraries cancelled were that they have not implemented PDA yet and are still in their planning phase. The libraries which approved the request were the Library of the Technical University of Delft (TUD), the Royal Library The Hague (KB), the University Library Utrecht (UU), the VU University Library Amsterdam (VU) and the University Library Leiden (UL).

All the interviewees received an e-mail before the actual interview with a couple of sample questions so they could prepare themselves and have all the information necessary. The interviews were conducted with one (TUD, UU, VU, UL) or even two persons (KB) responsible for the implementation of PDA and were open-ended interviews. Via this interviewing method, full and meaningful answers are encouraged and the answers tend to be more objective and less leading than closed-ended questions. A cognitive map providing an overview of all relevant topics was used by the interviewer to overcome missing out on any essential aspects (Appendix B). This cognitive map was preferred to a list with questions, since it allows more flexibility during the interviews. Instead of having to follow a specific order of questions it helps to react to the answers of the interviewees and to ask good follow-up questions.

The interviews were recorded and transcribed (Appendix C) which makes the results more accurate and reliable, because no important details were left out or remembered incorrectly. To fill any last gaps and to avoid misunderstandings, a couple of questions were sent to the interviewees after the interview via e-mail. The data from the interviews and the information from the follow-up emails were afterwards coded according to points of interest (Appendix D) and summarized in tables which compare the results of the different libraries regarding the following aspects: General Information, motivation to engage in PDA, budget, stakeholder involvement, implementation issues, alternative collection methods, access conditions and performance of PDA. These tables form the basis for the analysis in the following part of the paper.

7. Empirical Research

In this section, the different implementation strategies of PDA for digital content at the five Universities in the Netherlands will be described and compared to each other. To do so, the libraries will first be shortly introduced:

7.1. Introduction of Libraries for Interviews

In the following abstract the different libraries which were interviewed are introduced including the interviewee representing the library:

	TUD	KB	UU	VU	UL
Type of Library	University library	Royal Library	University library	University library	University library
Number of Students/Library Members and Employees	18,781 Students; 4,440 full time Employees (2012)	16,975 Members, 302 Employees (full-time, part-time, project) (2012)	30,152 students; 6,500 employees (excl. medicine) (2012)	24,517 Students; 4,669 Employees	23,034 Students; 4,185 Employees (2013)
Purchasing policy	E-preferred policy	E-preferred policy	Both e-books and paper books, depends on faculty	Both e-books and paper books	Both e-books and paper books
Interviewee	Mrs. Brinkman Dzwig	Mr. Claeysens and Mr. Lemmen	Mr Zonneveld	Mr Schalken	Mrs Caneda Cabrera
Function of Interviewee within Library	Initiator of PDA project	Mr. Claeysens: Executed research and implementation of first PDA program Mr Lemmen: Currently managing the collections department and contacts with publishers, intermediates for licenses and contacts with the publishers	Part of the project team, makes the spread sheets and the managing of the figures and data	Head of the department which is responsible for collection management, information management, information literacy, the library guests and logistics.	Project leader and also collection specialist for one of the collections
Scale of PDA	University wide	<i>"Context and Reference"</i> collection	International collections, film, economics and social sciences	All titles available via certain publishers	Library & information Science and History of Science
Starting Date	2011	January 1 st , 2012	March 2012	2012	May 19 th , 2014
Stage of Implementation at Point of Interview	Already launched	Already launched	Pilot	Pilot	Just launched the pilot

Table 2: General Information

All libraries, except of the Royal Library The Hague, are university libraries, which implies that most of their users are students. With 30,152 students and 6,500 employees (2012)³, the UU is the biggest university that takes part at this research. It is closely followed by the VU with 24,517 students and 4,669 employees⁴ and the UL with 23,034 students and 4,185 employees (2013)⁵. The TUD is the university library with the fewest students, 18,781, and employees, 4,440 (2012)⁶. Since the KB is not a university library, the size is measured by its 16,975 enrolled members and 302 employees (2012)⁷. Whilst the VU and the UL both purchase print and digital titles, the UU has different purchasing policies per faculty and the TUD as well as the KB have an e-preferred policy. This means that a print title will only be bought if a digital version is not available. Due to the KB not being a university library, they are following a different goal: Instead of providing materials that suit to the curriculum of the studies, they want to collect everything that is published about the Netherlands as a preservation purpose, independent of the usage per title by the patrons. Next to this main collection they have the “*Context and Reference*” collection, which is just an additional service to the users and for which mainly e-titles are bought.

At the TUD the interview was conducted with Mrs. Brinkman Dzwig, initiator of the PDA project which was already launched in 2011. This makes the TUD the first library in the Netherlands that introduced PDA as a purchasing method. At the KB, Mr. Claeysens and Mr. Lemmen were interviewed: Mr. Cleanses conducted the research and implementation of first PDA programme at the library in January 2012, whilst Mr. Lemmen is currently managing the collections department contacting with publishers and intermediates for licenses. Mr. Zonneveld was the representative for the University of Utrecht. He forms part of the project team, makes the spread sheets and manages the figures and data. At this library, PDA was introduced in March 2012, the same year in which the VU started their PDA project as well. Mr. Schalken, the head of the department that is responsible for collection management, information management, information literacy, the library guests and logistics, was interviewed on behalf of the VU. Last but not least, Mrs. Mrs Caneda Cabrera provided information on the launch of PDA at the UL, which took place in March 2014. She is project leader as well as collection specialist for one of the collections and introduced PDA together with a metadata expert, a colleague who is working in the acquisition department for e-books and another collection specialist.

³<http://www.uu.nl/university/utrecht/NL/profiel/cijfersenfeiten/Pages/default.aspx>

⁴<http://www.vu.nl/nl/over-de-vu/profiel-en-missie/cijfers-en-naslagwerken/vu-in-cijfers/index.asp>

⁵<http://over.leidenuniv.nl/feitencijfers/cijfers.html>

⁶<http://www.tudelft.nl/over-tu-delft/feiten-en-cijfers/>

⁷http://www.kb.nl/sites/default/files/docs/kbjaarverslag2012_0.pdf

As one can interpret from the starting dates of the introduction of PDA, all libraries are in different stages of their implementation: While the TUD and the KB have already launched the project, the VU and UL are still in their pilot. The UL just launched their pilot the day the interview was conducted. Despite those differences they have all the following in common: As already mentioned they are all located in the Netherlands, except of the KB they are all university libraries, they have all introduced PDA for e-content only and they all use PDA as an additional acquisition tool. These similarities make a comparison in their motivation, implementation issues and performance of PDA very interesting, since they are all exposed to similar macro-economic influences but implement PDA differently and therefore give different insights to the reader.

7.2. Motivation to Engage in PDA

Several push and pull factors can be recognized which have motivated the libraries to engage in PDA. Push factors can be defined as the negative conditions or causes that motivates one to change the current acquisition model, while pull factors are those factors that make PDA an attractive option.

	TUD	KB	UU	VU	UL
Push Factors	<ul style="list-style-type: none"> - A lot of books were never been used - Decrease in library budget - New generation of library users - Pre-defined selection will never completely match users' expectations 	<ul style="list-style-type: none"> - <i>"Context and Reference"</i> collection is "just" a service provided to customers and hence has to be facilitated - No interest in buying books 	Desire to experiment	<ul style="list-style-type: none"> - Change in HR: from specialists to generalists - "Just-in-case" is inefficient - Decreasing budget - Some books were never been used - Lack of knowledge about users' needs - Need for process optimization - Lack of transparency 	<ul style="list-style-type: none"> - Time spend in selection - Users are only involved in indirect way - Customers want titles right now
Pull Factors	<ul style="list-style-type: none"> - New technologies - "Just-in-time" access - Get users involved - Up-to-date collection - Offer by EBL 	<ul style="list-style-type: none"> - Access from home - EBL is integrated in OCLC - More books available 	n/a	<ul style="list-style-type: none"> - Value for money → at least one user - Enabling quick access to online content - Need of less resources - Processes is automated to large part - Overview on user statistics 	<ul style="list-style-type: none"> - Patron decides what will be bought - Very quick access to titles

Table 3: Motivation to Engage in PDA

7.2.1. Push Factors

The TUD, the VU and the UL observed that the traditional method of acquiring books was insufficient and required some changes: Some of the preselected books had, according to them, never been used and do not match user needs (TUD & VU) since they are only involved in an indirect way (UL). Moreover, a new generation of library users has different demands such as

having quick access to titles, which cannot be met by the traditional method (TUD & UL). Too much time is spent in the selection of titles (UL), which makes the “*just-in-case*” model inefficient and demands for process optimization (VU). A change in the nature of the collection specialists from a specialist to a generalist, a lack of transparency (VU) and a decrease in library budget (TUD and VU) are other push factors which were recognized. Unlike the other libraries, the KB and UU had different reasons: the desire to experiment with different acquisition tools for digital and printed books (UU) and the lack of interest in purchasing books for a certain collection which is not core of the library (KB).

7.2.2. Pull Factors

After having recognized the need to change, there are certain factors which make PDA as a new acquisition method attractive to the libraries: New technologies are allowing for a “*just-in-time*” access to PDA titles (TUD, UL & VU), access from home for the users (KB) and an automation of the processes (VU). Since the patrons are directly involved in the acquisition (TUD & UL) a title is at least used one time which increases the value for money (VU). The collection will automatically be kept up-to-date (TUD) and more titles will be offered to choose from (KB), although fewer resources will be needed (VU). Via this method more metadata will be available and can be used in terms of statistics on the patrons and their usage behaviour (VU). In addition, EBL made offers to the TUD suggesting to introduce PDA with them as an aggregator and the fact that the aggregator is integrated in OCLC makes it attractive for the KB.

7.2.3. Discussion

Except for the UU all the Universities recognized push as well as pull factors which shaped their decision making. The main reasons is the traditional system being insufficient and inefficient in meeting the customer needs. The libraries hope to overcome this by making use of the “*just-in-time*” method which is more customer centred, efficient and transparent.

7.3. Implementation Issues

Different implementation issues have to be considered before implementing PDA. This includes deciding on the degree of stakeholder involvement, getting informed about the variations of PDA, identifying different acquisition models one is going to use next to PDA and determining the access conditions.

7.3.1. Stakeholder Involvement

To assess stakeholder involvement, the following part will elaborate on the role of the patrons, library personnel and faculty members during the implementation of PDA.

	TUD	KB	UU	VU	UL
Patron	They were not told about PDA → afraid of patrons requesting too many books	They were not told about PDA → Told them that a lot of titles are available via EBL → No reason why to tell → Did not want to bother the patron	They were not told about PDA	They were not told about PDA → Afraid of patrons requesting too many books → afraid patrons will not request books because they do not want to spend library budget	They were not told about PDA → Afraid of patrons requesting too many books → Other universities advised not to tell patrons
Library Personnel	- Some information specialists were involved in implementation process - ICT support for technical problems	Where informed about the change	- Some collection specialists are part of the project team regulating the implementation	- All the collection specialists were part of the pilot - Meeting with all the former collection specialists - Smaller meeting with representatives of the alpha, beta, and gamma science - Made sure all the other collection specialists are also committed by sending them information	- Only Mrs Caneda Cabrera and a colleague of her (both collection specialists) are working on the project - Other collection specialists are informed but not affected yet
Faculty Members	No, they found out in an intuitive way and it works well	Not a university library!	- Did not tell Faculties yet - Plan to do so in the future	Only informed the regular POC (FBC / facultaire Bibliotheek commissies)	- Did not tell Faculties yet - Plan to do so in the future

Table 5: Stakeholder Involvement

Patrons: All the libraries had in common that they did not tell their patrons about the implementation of PDA. A reason not to involve them was that they were afraid this would manipulate user behaviour and that it would result in patrons requesting too many titles (TUD, UU, VU & UL). The KB was the only library that was not afraid of this trend and argued that they did not want to bother the patron and that there is no reason to tell them. They even encouraged the patrons to read books by advertising the increase of titles available.

Library Personnel: In contrast to the patrons, the library personnel were informed about the implementation process from the beginning (TUD, KB, UU, VU & UL). Although not everyone is directly involved, PDA is managed at all universities by a small team, providing information to the personnel is regarded as important. This is because the introduction of PDA might have major implications on the working field of collection specialists (KB, UL & VU). Instead of selecting

books for purchase they have to filter the titles available for PDA, approve them (if process is mediated) and work project related instead of faculty or subject related (VU (in the pilot) & UL).

Faculty members: Faculty members can be identified as non-student members of a faculty, including employees and researchers. Since they are also making use of the library collection they can overlap with the “*patrons*” defined earlier in this section. Some libraries did not tell the members of different faculties everything about the introduction of PDA, though they are planning to do so in the future (TUD, UU & UL). The UL first wants to implement PDA for more subjects before discussing the topic with the university staff. The UU on the other hand did not report to them about the budget used for PDA because the costs first have to be spread and made sustainable. Although the TUD has not told the employees of the faculties about the implementation, they found this out intuitively, which worked out well for the library. The VU only informed faculty members which are influenced by the introduction of PDA. It has to be kept in mind that the KB is not a university library and therefore this question is not applicable to them.

Discussion: The reason why those stakeholder groups are differently involved is the following: PDA, once it is implemented, has direct consequences on the working fields and processes of library personnel. They have to be informed and engaged in order to make PDA work. The introduction of PDA does, however, not have direct influence on the faculty members. Their interest is, that students have access to all relevant titles, no matter via which means it will be acquired. As long as the quantity and quality remains, and it is financed through a central budget, it will not affect them negatively. But if a library decides to finance PDA with the faculties’ budget, they should be informed and persuaded that PDA is a beneficial method for them. Since the titles still remain free to the patrons and they do not recognize a difference in accessing them, PDA does not directly influence the users in their working processes. Eventually more titles will become available and though they might have to request a title, it will be available quickly. Therefore and to not bias their user’s behaviour, many libraries do not involve them in the implementation of PDA.

7.3.2. Different Variations of PDA

When implementing PDA, one has to decide how to approach it in order to suit the libraries’ needs. This includes choosing the right provider of PDA, the pricing strategy, the type of mediation and the pre-filtering selection criteria.

		TUD	KB	UU	VU	UL
Aggregator		EBL	EBL	EBL	With publishers (Wiley, Elsevier, Brill and Cambridge University press) directly	EBL → Want more aggregators for the future
Pricing Strategy		No STLs → Would have bought titles anyways	Only STL → Only additional service to customers . Do not intend to keep titles	Combination → 3 STLs trigger purchase → Changed to 8 STLs	EBS Model: → Agree on a minimum expenditure in advance → STLs for half a year → Afterwards buy titles if minimum 5 hits (increased to 15) → Fixed Minimum/ Maximum Budget	No STL → Want to evaluate type of customers first → Maybe change thereafter
Mediation		Mediated → In fact always approve → Want to drop in future	Unmediated	Unmediated → First unmediated, → too many purchases were triggered → Then mediated → too time consuming	EBS Model: Mediation in terms of purchase afterwards	Mediated → Want to collect data on nature of patron; only possible via mediated PDA → Future: unmediated
Selection Criteria	Price	Max €200	No	Max \$280	Max €250	Max €130
	Language	Only English	No	Only English	No	Only English
	Subject	Get lists from faculties	Everything besides science, technology and medicine	No, university wide trial	Take out very general management sections	Only important subjects for library information science
	Educational level	Only academic	No	No	No	No
	Timelines	No	No	2012 or newer	No	No
	Publishers		No	List of publishers they included	Have PDA with publishers directly	Started but has to add more publishers
	Origin	No	No	No	No	From Europe or US

Table 6: Different Variations of PDA

PDA Providers: Except for the VU, all the libraries have chosen for EBL as an aggregator for PDA. This decision was made due to the integration of EBL in OCLC (KB), not being obliged to buy titles after a certain number of STLs (KB) and already having worked with EBL before (TUD). The UL is starting their pilot with EBL but want to contact more aggregators in the future to diversify and to take advantage of better price deals. The reasons why the VU chose to contact the publishers

directly instead of working with an aggregator are digital rights management issues and being in a better position for negotiations on prices, since no third party wants to profit from the deal. In the future however they are planning a pilot with EBL to get experience with the benefits of aggregators.

Pricing strategies: Although most libraries have chosen to work with EBL, the pricing strategies used differ from one another. The TUD and the UL have chosen for direct purchase to keep the image simple for the user (TUD & UL), because they would have bought the titles anyway (TUD) and to evaluate the nature of the patrons (UL). The UL is considering changing this strategy once they have the information needed. Since PDA is only implemented at the “*Context and Reference*” collection, which is not the core of the KB, they have chosen for STLs only. This implies that no purchase will be triggered because the library does not intend to keep the titles used via PDA. The UU, on the other hand, uses three STLs as a trigger for purchase. To stimulate the distribution of costs, the limit of three STLs was increased to eight STLs. By making use of similar model to EBS, the VU agrees with the publishers (Wiley, Elsevier, Brill and Oxford University Press) in advance on a minimum amount to spend and gives the patrons free access to the titles selected for approximately six months. Thereafter the library buys from the money invested, all the titles which were used at least five times. In advance they agreed with the publisher on a minimum and maximum amount to spend and if books were not used often enough they do not have to buy them. The usage was, against the expectations, really high and they increased the level of minimum usage to acquire a title from five to 15 times to stay within the budget.

Mediation: The TUD and the UL are making use of a mediated PDA with collection specialists approving the requested titles. The reason therefore was for the TUD to have control over the purchasing process and for the UL to get information on the users, which is only possible by requesting titles. Both want to drop mediation in the future and to let the patron solely decide. In contrast, the KB and UU have an unmediated PDA model. The UU started with an unmediated model, but changed back to mediation because of a very high number of purchases. It then switched back to unmediated PDA since the process of approving was very time intensive. The usage is increasing again very rapidly, but because of a larger and central budget this method became feasible. The time intensive process of approving was also the reason for the KB to decide against mediation. With the EBS like model, the VU are not having the problem to decide between mediation and letting the users decide. They give access to every book the patron likes but decide afterwards, based on the usage, which ones to buy.

Striking is that the two libraries with a larger budget for PDA have chosen against, whilst the libraries with a smaller budget chose for mediation. It can be assumed, that if a larger budget is available one can focus is on process optimization and libraries with a smaller budget are more concerned that the money might not be sufficient in the long term if mediation would be dropped.

Pre-Filtering of Offered PDA Titles: To prevent patrons from acquiring too expensive materials which are not in the profile of the library, the list of PDA titles available are often pre-selected. All of the libraries interviewed have done such a filtering to some extent. The TUD has set their price limit to €200 and selected only English and academic titles. The KB made a broader profile and selected everything EBL had except for science, technology and medicine, making even the most expensive titles available. A maximum of \$280 was set by the UU on the acquisition of titles. They have to be in English and from 2012 or newer. There is no selection based on subject, since it is a university wide trial, but on the publishers included. The VU took out very general management sections like Dummies books offered by the publishers and set a price limit to €250 above which they could decide whether they want to buy them or not. The university with most selection criteria is the UL; they restricted the titles available to a maximum of €130, to the English language, to important subjects from library science and which have to be from Europe or the US. They started to limit it to some specific publishers, but have to insert more publishers to give a comprehensive selection of titles.

It can be recognized that all universities selected the PDA titles based on subject and on price (except of the KB that has a larger budget available and a different goal) which matches with their concerns that PDA titles might be of lower quality than titles acquired via traditional means and that the budget will not be sufficient for the long term. It is likely that the universities want to counteract and prevent those issues, via these selection criteria.

7.3.3. Collection Methods Used Next to PDA

There are several reasons why the libraries are making use of different acquisition methods next to PDA: Some titles do not have an electronic version yet, or are not available via the PDA aggregator. Others stress that PDA is not sufficient as a stand-alone acquisition method and not suitable for all collections.

	TUD	KB	UU	VU	UL
Selection by librarians	n/a	For the “ <i>Netherlands</i> ” collection	Yes	Yes	Yes
EBS	Yes	No	With Elsevier, Wiley& Cambridge	Their PDA is based on EBS model	No
Approval Plans	For both e-books and printed books	n/a	Approval Plans for printed books for selected subjects	No	For printed books
Title-by-Title	does not happen very often	Only if the title is not available in PDA	Yes	If titles has to be bought in print or costs more than €250	Only if necessary
Subscriptions with publishers	Yes	approximately 8000 journals for the “ <i>Netherlands</i> ” Collection	With some publishers e.g. Springer → cheaper than PDA	No	No
User suggestions	Yes e.g. for expensive books	Yes, but budget restrictions or policy reasons can prevent acquisition	Yes	Yes	Yes

Table 7: Collection Methods Used Next to PDA

Traditionally the TUD used approval plans as an acquisition tool for both e-books and paper books. After having implemented PDA they still make use of approval plans and additionally order books title-by-title, if an extra book is needed, and get suggestions to buy certain books by users. The TUD is implementing PDA for printed books in the future.

The KB makes a difference between the “*Context and Reference*” collection and the “*Netherlands*” collection, which is the main topic of the library. In the first collection, PDA is implemented with extra title-by-title purchases and user suggestions if a book is not available via PDA. The second collection still uses its traditional acquisition methods including subscription with publishers and selection by collection specialists. The reason not to implement PDA there is that most Dutch books are not available at an e-content aggregation platform and that all Dutch books should be purchased as a preservation purpose and not only the ones selected by patrons.

The aim of the UU is to experiment with as many acquisition tools as possible. For different faculties they make use of different models and implemented PDA for economic, social sciences, international collections and film. Besides that, the UU also make use of evidence based selection (EBS) for e-books with several publishers, buy printed books via approval plans, have subscriptions with some publishers and get user suggestions. If a title is not available via one of those methods, a title-by-title purchase is also possible.

The VU is still in its pilot phase and is therefore “*working as usual*” with PDA being an additional method to experiment with. “*Working as usual*” includes selection by collection specialists, title-by-title purchases and user suggestions. The library doubts that PDA is a perfect

solution which could be a stand-alone acquisition tool since there will always be titles which are not available in a digital version and have to be purchased differently. The plan for the future is to acquire up to 80 percent of the titles via PDA.

In contrast to the VU, the UL wants to increase the variety of acquisition methods used to better meet customer needs. The UL is already making use of selection by collection specialists, title-by-title purchases if necessary, approval plans for printed books and user suggestions. Plans for the future include making agreements with several aggregators and to maybe implement PDA for printed books.

It is remarkable that all the libraries interviewed are using PDA as an additional acquisition tool and do not solely depend on it. A main reason therefore is that they have implemented PDA for digital content and nowadays not all titles have an e-version available. Moreover they do not want to fully rely on the patrons' choice but have the possibility of collection specialists adding important titles.

7.3.4. Access Conditions

Every aggregator has different demands on the degree of access the patrons can be given. As can be seen in the comparison between the aggregators earlier in this paper, libraries also have the possibility to choose from various packages, e.g. how long a loan is available to the patron, at different prices.

	TUD	KB	UU	VU	UL
Platform	Catalogue, EBL website	Catalogue (OCLC), EBL website, OPAC → encourage customers to use OCLC	Catalogue (ALEPH), EBL and external search engines	Discovery tool, external search engines, publishers' websites	Discovery tool
Free Access	Browse five minutes for free	First five minutes	First five minutes	n/a	First five minutes
Trigger	Print, copy, download, five minutes of reading	Print, copy, download, five minutes of reading	Print, copy, download, five minutes of reading	Counter statistics	n/a
Access after acquisition	Read online & offline (max 28 days) → depends on publisher	Read online and offline (STL available for max 1 week, than download again)	Read online and offline (max one day for STL & purchased titles)	Read online and offline (depends on publisher)	Unlimited → might change in future when implementing STLs

Table 8: Access Conditions

The libraries interviewed have agreed upon the following access conditions: The TUD, the KB and the UU are using EBL and therefore their patrons can access the titles via EBL and their library website. A discovery tool is used by the VU and the UL instead of the catalogue for the PDA titles. Via this method the metadata is saved in a cloud and shows the titles that are available but not yet

bought by the library; once purchased they will be added to the catalogue. External search engines, as Google Scholar or Scopus, can also be used to find PDA titles (VU & UU) as well as Online Public Access Catalogue known as OPAC (KB). Once a patron has found a title of interest, he can access it a couple of minutes for free (TUD, KB, UU, VU & UL). Thereafter, or after copying, printing or downloading the book, it has to be requested or directly acquired by the library (TUD, KB, UU, VU & UL). Once acquired the titles can either be read online or be downloaded. Each library has its own restrictions to offline access. The TUD permits a maximum access of 28 days, depending on the publisher, the KB restricted it to one week, the UU to one day and the UL does not limit their access to a certain time frame.

7.4. Performance of PDA

According to the interviews, the libraries seem to be satisfied with PDA as an acquisition tool, despite a lack of hard facts on its performance. Since the UL has not started their pilot at the time of the interview they do not have any actual results but expectations of what might happen in the future.

	TUD	KB	UU	VU	UL (expected)
Cost	"PDA is not costing much more"	€175,000	- In beginning: higher than expected - Now: As expected - Many statistics	n/a	Do not know what is going to happen
Circulation Rates	- "Really well used" - Have done some statistics	Requested information, but not available yet	- Have statistics - Similar to before but at least used once - Most books are well used	Used more than expected	Does not know what is going to happen
Quality of Content	- Content is "fine" - Restricted offer at platforms for technical subjects	- No statistics - "Overall quality might be a little lower because the quantity increased"	- Recognized differences - Minimized them by pre-selection	- Question: what is quality? Content or usage - Different opinions	More concerned about quality of offer by aggregators than selection by patrons
User satisfaction	Planning to do a survey → Responsive? → No complaints: assume satisfaction	No survey, assume that patrons are satisfied	Planning to do a survey → hard to ask right questions	Not planned on short notice	Intend to do one
Sustainability	n/a	n/a	n/a	Statistics by Wiley: "not only relevant at one point but also better used later"	Does not know what is going to happen

Table 9: Performance of PDA

7.4.1. *Circulation Rates*

Regarding the circulation rates of PDA titles, the TUD and the UU have some statistics available showing that the materials are well used (TUD & UU) and similar to traditional methods, except for the minimum usage of each item by the patron who triggered the acquisition (UU). The VU observed that the usage was higher than expected and the KB has requested information regarding this topic. Including the initial use of the first patron, the results show that the usage of a title with PDA is generally higher than via the “*just-in-case*” model, which indicates that by directly involving patrons in the acquisition process, more user needs will be met. However more extensive statistics would be necessary to confirm this trend.

7.4.2. *Cost*

The TUD recognized that PDA is “*not costing much more*” and the UU has several statistics on the costs. In the beginning the library started with an unmediated PDA, which exceeded the expected costs. Because of this increasing trend they switched to a mediated PDA to have more control on the expenses and after having a higher budget available they switched back to an unmediated form of PDA. The other libraries have not done comprehensive analyses on this topic yet. Therefore the question whether PDA costs more than traditional acquisition methods cannot be answered, but it can be seen from the statistics from the UU, the costs depend strongly on the type of mediation which is used.

7.4.3. *Quality of Content*

Some interviews stressed that the quality of the content has to be divided between the selection of the patrons and the offer by aggregators (TUD & UL). They state that they are not concerned about the quality selected by patrons (UL), which is observed to be fine (TUD), but emphasize the lower quantity, especially for technical subjects (TUD), and quality of the offer by aggregators (TUD, UL). The VU questioned the term quality, whether it is about the content or the usage by patrons, which has brought up many discussions within the library, e.g. researchers recognizing that essential titles are missing. They do not provide specific statistics but have different opinions on this matter. The KB and the UU find a decrease in the quality of content of patron selected titles. To minimize this difference the UU has done thorough pre-selection of PDA titles and the KB, though they do not have any statistics yet, trace the decrease in quality back to the increase in quantity.

Overall it can be said that there can be a lack of important titles in the collection by making use of PDA. This can be either due to the choices made by patrons or the offer provided by aggregators. However all libraries still use alternative collection methods such as user suggestions and title-by-

title selections next to PDA which helps to resolve this problem. As a stand-alone acquisition tool collections might run the risk of a lower quality, but if a title is missing, it can be added manually.

7.4.4. User Satisfaction

None of the universities have analysed the satisfaction of their patrons about the new collection method. They argue that it is difficult to ask the right questions (UU) and that the number of respondents will not be representative for all patrons (TUD). Instead they assume the patrons are satisfied because the amount of complaints and questions did not rise compared to the traditional method (TUD & KB). Despite the concern of a survey being inefficient, the TUD and the UL are planning to conduct a survey in the future.

8. Reflection on Interviews

When reflecting on the results from the interviews, the following conclusions can be drawn: Except for the UU, all the Universities acknowledged push as well as pull factors, which shaped their decision making: Opposed to the traditional system, which is seen as insufficient and inefficient in meeting the users' needs, the "*just-in-time*" method is more customer-centred, efficient and transparent. Moreover a new generation of library users has different demands and too much time is spent in the selection of titles which makes the "*just-in-case*" model inefficient and demands for process optimization. Some interviewees stress the importance of central financing. This implies that costs do not have to be divided over the faculties, which enables the library to experiment and to invest in multidisciplinary collections. The degree of influence of PDA on the working process of stakeholders stands in direct relation to their degree of involvement. The library personnel are informed at all the universities, since PDA, once it is implemented, has consequences on their working fields and processes. Faculty members and patrons were both not informed by most of the libraries since they are not directly influenced by PDA, and the libraries did not want to manipulate user behaviour. Regarding the pre-filtering of titles, it can be observed that most universities selected the PDA titles based on subject and on price which matches with their concerns that PDA titles might be of lower quality than titles acquired via traditional means and that the budget will not be sufficient for the long term. Moreover, it has to be kept in mind that the libraries interviewed are using PDA as an additional acquisition tool, since not all titles have an e-version available and because the libraries do not want to fully rely on the patrons' choice.

Looking at those results, it can be seen that the libraries provide rich information on the implementation issues of PDA. They have analysed different PDA providers, access conditions and variations of PDA in great depth, which forms a useful addition to the literature that has so far focused more on the performance of PDA. Although not a lot of significant data and statistics are available to the libraries on the performance of PDA, the interviewees affirm to be overall satisfied with PDA. It can be observed that this statement is made out of a libraries' point of view since the budget is within the profile, more titles are available and processes will be optimized. However, satisfaction is not investigated from the patrons' perspective, due to the difficulty of asking the right questions and the low representativeness of the sample. Despite those concerns, all of the universities mentioned that they are planning to get more insights on the satisfaction of the patrons in the future. The literature, described earlier in this paper, complements these results especially by investigating the patron satisfaction.

9. Discussion

As already pointed out, the literature and the interviews focus on different aspects of PDA. Compared to the literature, which is predominantly about PDA in the United States, the interviews are only conducted with Dutch libraries. Moreover the literature analysed in this report focuses on PDA for printed books, whereas the libraries interviewed have all implemented PDA for e-content only. A reason why the Dutch libraries have all introduced the acquisition method for digital titles is the immediate availability of books, the fact that they do not have to be stored and being able to allow multiple-access to a title. Last but not least, both parts concentrate on different elements of the implementation, as can be seen in the next part of this paper. By making use of both the literature and the interviews, different points of view can be provided and a comprehensive overview can be given.

9.1. Motivation

When comparing the motivation to engage in PDA between the interviews and the literature, many similarities can be recognized: The libraries interviewed stated that the traditional system was insufficient and inefficient in meeting the customer needs. Fischer et al., (2012) and Perdue & Van Fleet (1999) approve this and emphasize the problems of poor circulation rates. Moreover, a difficulty in predicting what the user wants (Tyler et al., 2011) can be identified and the traditional collection method seems to be not economically feasible (Hodges et al., 2010). The “*just-in-time*” method on the other hand is according to both the interviews and literature (Hodges et al., 2010) more customer-centred, efficient and transparent. The KB and the UU added two motivations which stood out by being different from other motivations described in the literature: the desire to experiment and the interest in not buying but only lending books that are not core of the collection.

9.2. Implementation

Compared to the literature, the libraries interviewed investigated the existing implementation issues very extensively: Most of them have selected the PDA titles based on subject and on price, which matches with their concerns that the collection might be of lower quality and that the budget might not be sufficient for the long term. This can be confirmed by the suggestion of Sense & Fonseca (2013) that the use of a clear set of criteria for pre-filtering titles as well as librarian mediation, are the most effective method to avoid collections that are not in the libraries best interest. Unlike the other implementation issues, many case studies exist, describing the selection criteria used by certain libraries (Fischer et al. 2012; Hardy & Davies, 2007; Schroeder, 2012; Way, 2009).

The involvement of stakeholder groups is another well discussed topic in the interviews: While library personnel are informed from the beginning, the faculty members and patrons are not told, to prevent a manipulation of user behaviour. Some articles discussed in this paper confirm that patrons should not be knowledgeable about the introduction of PDA (Fischer et al., 2012; Hardy & Davies, 2007), because it is a time consuming process to inform them accurately and the risk of frustration exists, if they do not see any value in the implementation of a project (Luyet, Schlaepfer, Parlange & Buttler; 2012).

Another aspect, which is not mentioned by the literature or interviews, is that a library must be conscious about what they want to achieve via the implementation of PDA. This is especially of value for choosing a provider: When working with an aggregator the processes of the library will be made more efficient, while selecting a distributor will positively affect the quality of the selection. If a contract is made with a publisher one can be sure that all important titles available can be acquired. Moreover a higher purchasing threshold as well as the lack of a third party, which wants to make profit, influences positively the money spent. With an aggregator, the whole acquisition process can be outsourced and fewer employees have to be assigned to selecting books, which can result in savings for the library. Moreover a higher quantity of titles will be available but might lack a certain quality publishers can provide.

9.3. Performance

As already explained, the performance of PDA can be investigated from two different points of view; from the library's perspective concentrating on the overall costs, circulation rate, quality of content and sustainability and the satisfaction of the patrons. While the interviews only focused on the first perspective, literature has found the following results which are approved by a great majority of researchers:

PDA titles circulate more frequently (Foss, 2008; Hussong-Christian & Goergen-Doll, 2010; Nixon et al., 2010; Perdue & Van Fleet, 1999; Schroeder, 2012; Tyler et al., 2010; Tyler, 2011; Way, 2009), have a similar level in quality of the content compared to the traditional method (Anderson et al., 2002; Hardy & Davies, 2007; Tyler et al., 2010; Reynolds et al., 2010; Fischer et al., 2012; Tyler, 2011; Shen et al., 2011) and the acquisition method is cost efficient (Nixon et al., 2010), but patron initiated acquisitions do not lead to a sustainable collection (Allen et al, 2003; Hussong-Christian & Goergen-Doll, 2010; Sense & Fonseca, 2013; Price & McDonald, 2009). The libraries, do not provide over many significant statistics and hard facts on these aspects, but describe

themselves as overall satisfied with this acquisition method. In most cases the costs of PDA do not exceed the budget, titles are better used with PDA and the quality of titles is appropriate.

Regarding the satisfaction of the users, the libraries interviewed, have not done any analysis yet. They argue that it is difficult to ask the right questions and that the number of respondents will not be representative for all patrons. Instead they state that the patron is unknowing of the implementation and will not recognize any difference in acquiring books except of more titles being available. Moreover, the amount of complaints and questions did not rise compared to the traditional method. With this as reasoning they argue that the patrons are satisfied. In contrast, literature analyses patron satisfaction very extensively. They conclude that patrons are satisfied with the “*just-in-time*” collection method (Allen et al., 2003; Foss, 2008; Nixon et al., 2010; Levine-Clark, 2010; Reynolds et al., 2010; Waller, 2013) based on surveys and interviews they have conducted. It can be assumed that this accordance of results from the literature supports the assumptions of the libraries that their patrons are satisfied.

9.4. The Influence of PDA on the Supply Chain

Boddy (2011) describes the Porter’s five forces model (Porter, 1979) as a “*useful tool for identifying the competitive forces affecting a business*” (Boddy, 2011, p.371). The model identifies five forces, the “*threat of new entrants*”, the “*power of buyers*”, the “*threat of substitutes*”, the “*power of suppliers*” and the “*competitive rivalry*” which shape the micro environment of a company. In the following part it will be analysed how PDA impacts the two forces “*power of supplier*” and “*power of buyer*” and how this will influence the supply chain of a library.

A supply chain is a system of organizations, people, activities, information, and resources involved in moving a product or service from the supplier to the customer. With the “*just-in-case*” acquisition method the library personnel selects the titles which are found to be an important addition to the collection. (1) They request those titles and (2) the suppliers, in this case the publishers, provide them to the library. After receiving the titles, the librarians integrate the books title-by-title into the catalogue. This process is carried out in the back office, which can be defined as the internal operations of an organization that are not visible to the general public. (3) Thereafter patrons can access those titles immediately.

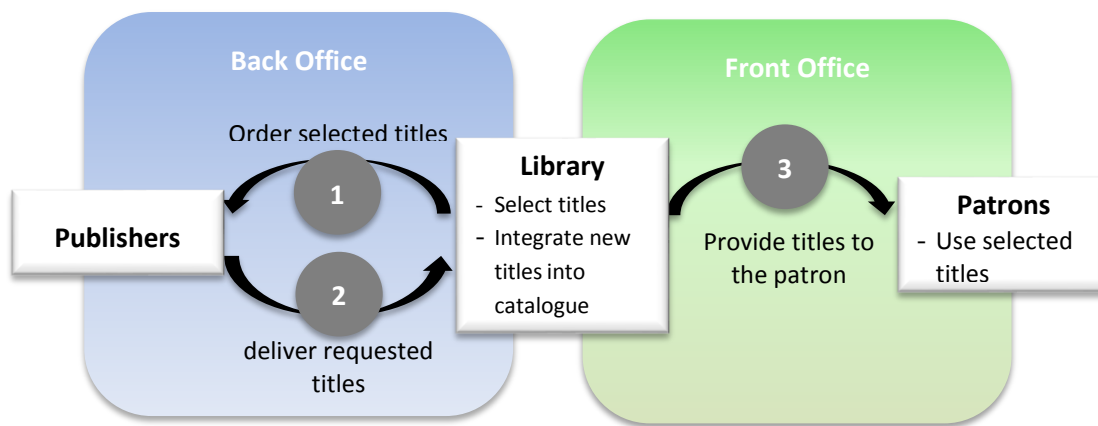


Figure 1: The supply chain for the “just-in-case” acquisition method

As it can be seen in the picture below, the “just-in-time” acquisition method has a great impact on the distribution of power in the supply chain of a library: (1) Collection specialists out-select titles offered by the aggregator which do not fit into their profile, e.g. too expensive materials, only English books etc. Pre-established criteria facilitate this process which is a one-time effort and can be applied until the library decides to change it. (2) Thereafter the selected titles are integrated by the aggregator into the discovery tool or the catalogue and made available to the patron. Depending on whether a library has chosen for mediated or unmediated PDA, the patron can acquire the titles directly from the aggregator (3), or sends out an acquisition-request to the library which approves the title and forwards the acquisition to the aggregator. After receiving the purchasing request, the title will be directly uploaded to the catalogue by the supplier.

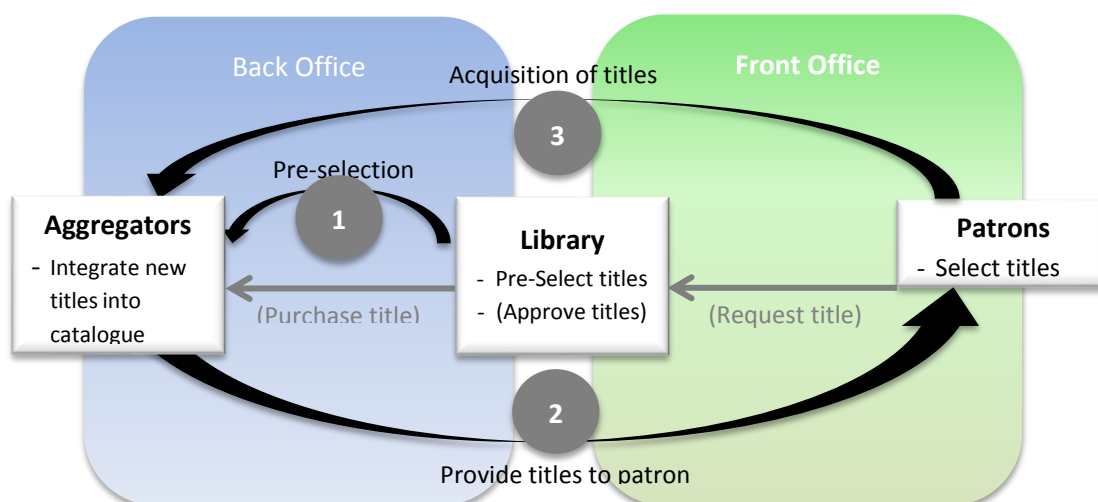


Figure 2: The supply chain for the “just-in-time” acquisition method

This model shows that the “*power of buyers*” and the “*power of suppliers*” increases with PDA and that the two stakeholder groups play a more important part in the supply chain. By integrating the front and the back office, the library hands over its work to them and the librarians get acquainted with a different type of work: Instead of handling and selecting single books, they regulate the acquisition process by pre-selecting and if applicable, by approving the patron requests. This optimizes the working process and requires fewer resources compared to the traditional method (VU).

According to Porter (1979), the micro environment is a zero-sum game, from which each stakeholder group wants to profit from. By giving more power to the suppliers, they can “*exert their bargaining power on participants by raising prices and reducing the quality of purchased goods and services*” (Porter, 1979, p. 140) and a high power of buyers can negatively influence the profitability of a company.

By implementing PDA, a win-win situation can be recognized instead of a zero-sum-game, since all the parties involved are satisfied and profit from PDA as a new acquisition tool. By integrating the back and front office, several benefits can be observed: The customer service improves by directly addressing the patrons’ needs and by providing more books to choose from. Cost can be reduced due to an automation of processes and a decrease in resources needed.

However giving more power to the buyers and suppliers can result in a higher strategic risk. The library often fears passing their tasks to the other stakeholder groups, because they are afraid that this shift in power will have a negative impact on their operations, over which they will have less control. To reduce this risk, many libraries limit the power of the patrons, by not telling the patrons about this new acquisition method. Since they still believe the titles are acquired via the traditional method, they do not consciously participate in the process. This information asymmetry gives the library some power in preventing an explosive acquisition of titles were the patron exploits his opportunity of “*limitless ordering*”.

10. Advice to the University of Twente

Compared to the libraries interviewed earlier in this paper, the University of Twente is with 9161 students (2013)⁸ a relatively small university and currently information specialists as well as specific contacts within a department are responsible for the selection of titles. The interviewees, introduced earlier, have made some useful suggestions to the University of Twente:

“If you start a PDA don’t make it too big and complicated in the beginning [...] because users will not understand it. It is better to start from a simple model and later try to extend it. [...] And set your budget and try to stay in your budget because you can really buy hundreds of titles if you like but I don’t think it is wise” (TUD, Appendix C, Transcript 1).

“It is very important to know, what the target group of the university is. [...] Is it important to the library to have the most recent titles in their collection? Because then you need direct licenses for publisher and it will be very costly to have PDA” (KB, Appendix C, Transcript 2).

“Experiment and get a lot of money available” (UU, Appendix C, Transcript 3).

“You can do some first filtering but you shouldn’t do that too much because than you are trying again to predict yourself what to buy. [...] trust in the fact that the user knows what he or she wants. [...] Start the pilot, if you see some problems look at the ways to solve it, not at the hurdles which prevent you to start. Start with budget from a central sponsor and it is learning by doing and I think it is important to talk to a lot of others to get more knowledge” (VU, Appendix C, Transcript 4).

“I think it is really important to see what the customer wants [...]. I think in 80-90 percent of the cases you have to change the way in which you are doing things. [To figure out customer needs] you can ask them directly [...] and of course you can also follow a little bit the literature [...]. So I think it is a combination of different things” (UL, Appendix C, Transcript 5).

From those advices one can gain a lot of valuable insights and tips on how to implement PDA. To make the advice more detailed and explicit, the author proposes the following:

PDA is a valuable opportunity for the University of Twente because it helps to make processes more efficient, automated and adjusted towards satisfying customers’ needs. To figure out how to best implement it and to evaluate some first results, a pilot is a useful tool the university library should consider. As suggested by the VU, an additional central budget for the pilot has the advantage of not

⁸ <http://www.utwente.nl/feitenencijfers/onderwijs/kerncijfers/>

putting pressure on collection specialists or faculty but can be used to experiment and learn lessons. Since the employees, who are now responsible for selecting titles, will not be negatively affected by a cut in budget or a new responsibility, the PDA pilot will be confronted with less skepticism.

When deciding to engage in a pilot for PDA, one has to decide which provider to work with. To prevent the costs from exceeding the budget available, one can either choose to work with mediation or to work directly with publishers, like the example of the VU described earlier. Since extensive mediation stands in opposition to the aim of automating processes and meeting the users' needs, more arguments support the second option: By working directly with the publishers, the library has better negotiation power, can set a maximum and minimum amount to spend and has more flexibility in agreeing to these terms. Moreover it guarantees a high quality of the selection and makes a lot of titles available to the users without paying a STL or being obliged to purchase all. Mediation will still remain a strong tool in deciding which of the most used titles to purchase, but one does not have to restrict the access of the titles for the patrons. Although the offer of titles would increase, the library would not run any financial risk. Another advice to the University of Twente would be to only include the titles which are purchased into the catalogue. This makes a clear distinction between the resources the library possesses and those which patron can access but do not belong to the library.

The patrons should not be knowledgeable about the introduction of this pilot. It would manipulate user behaviour and make the overall picture more complicated. In contrast, the library personnel and all the people who will be directly affected by PDA should be informed. They should be told how their working processes would change and why it is necessary and beneficial to engage in this new acquisition method. Only if everyone works as a team the implementation will be a success. Last but not least, one should not underestimate the significance of measuring the results of PDA. This implies to concentrate on both the satisfaction with PDA out of the library's perspective and as well out of the patron's point of view. The first can be measured by looking at the overall cost, the circulation rate, the quality of content and the sustainability of the collection. But not only have those results to be taken into consideration, also the satisfaction of the patrons should be investigated in order to analyse whether PDA is really beneficial for everyone.

To best introduce PDA, one can always learn from others and get advice from libraries which have already experience with PDA. Although the interviews conducted already give a comprehensive overview on how they have implemented it, there is a lot more one can learn, e.g. on how to negotiate with the publishers.

11. Conclusion

As discussed in the introduction, the “*just-in-case*” method of collection development is nowadays faced with many challenges such as the explosive growth of information offered, the emergence of new technologies and a new generation of library users which demand the exploration of alternatives (Fischer et al., 2012; Mouyal, 2007; Hodges et al., 2010; Brinkman Dzwig, 2013). Plenty of research has been conducted investigating whether PDA is a solution to those challenges and how it performs compared to the “*just-in-case*” model. Some suggest that PDA programs have proven themselves (Tyler et al., 2013), others however observed that it could result in collections with poor usage and little use value (Comer & Lorenzen, 2006; Tyler et al., 2010). The diversity of contradictory propositions makes it relevant to answer the question “*Is it beneficial for libraries in higher education to use PDA as a collection development tool?*”

Different analyses were conducted in this research paper to answer this question: Existing literature was evaluated and compared to each other as well as interviews were carried out to get insight into the practical realization and performance of PDA. From the research conducted, the following conclusion can be drawn: PDA is not a beneficial solution to all challenges the “*just-in-case*” collection method was faced with. On the one hand, it is not clear if it leads to a sustainable collection and if the overall costs actually increase or decrease. Moreover, it results in a variety of new risks the traditional model was not faced with such as the decrease of control over the acquisition process. On the other hand, it increases the efficiency of processes by integrating the front and back office of the library creating a win-win situation for all stakeholders involved, who seem satisfied with this acquisition method.

Mrs Brinkman Dzwig (2013), correctly points out the following “*We do not collect for ourselves, not to satisfy our ambitions nor to prove our skills. The purpose of a library is to provide services to its users*” (Brinkman Dzwig, 2013, p.2). Keeping this in mind one can support the statement that PDA is beneficial for libraries in higher education but not as a stand-alone acquisition method, since not all titles have an e-version available and the libraries do not want to fully rely on the patrons’ choice, but have the possibility of collection specialists adding important titles.

From a theoretical point of view, this paper contributes to existing literature by giving a comprehensive overview of PDA in terms of its different existing types, the motivation of libraries, different implementation strategies and its performance compared to traditional methods. Besides that, this paper is also externally relevant since it gives advice to the University of Twente and can be used by other libraries which consider implementing PDA.

12. Limitations and Further Research

Due to an insufficient support from the literature used in this paper, the author sometimes uses own assumptions and opinions to create definitions e.g. for mediation, STLs and e-content aggregators. Moreover the interviews conducted are all with libraries within the Netherlands, which have implemented PDA for e-content only and have given advice to each other on how to implement PDA. The literature complements this by having a different focus. The majority of research was conducted in the United States and describes PDA for both printed and digital titles. To better compare the literature with the interviews it would be interesting to either concentrate on one country or to conduct a research with libraries located at different places. This would help to eliminate the bias of equal external factors shaping the decision making process of the libraries interviewed. Moreover topics like mediation and pricing strategies for digital content and the involvement of stakeholders in the implementation of PDA would be valuable to investigate in order to get more insights.

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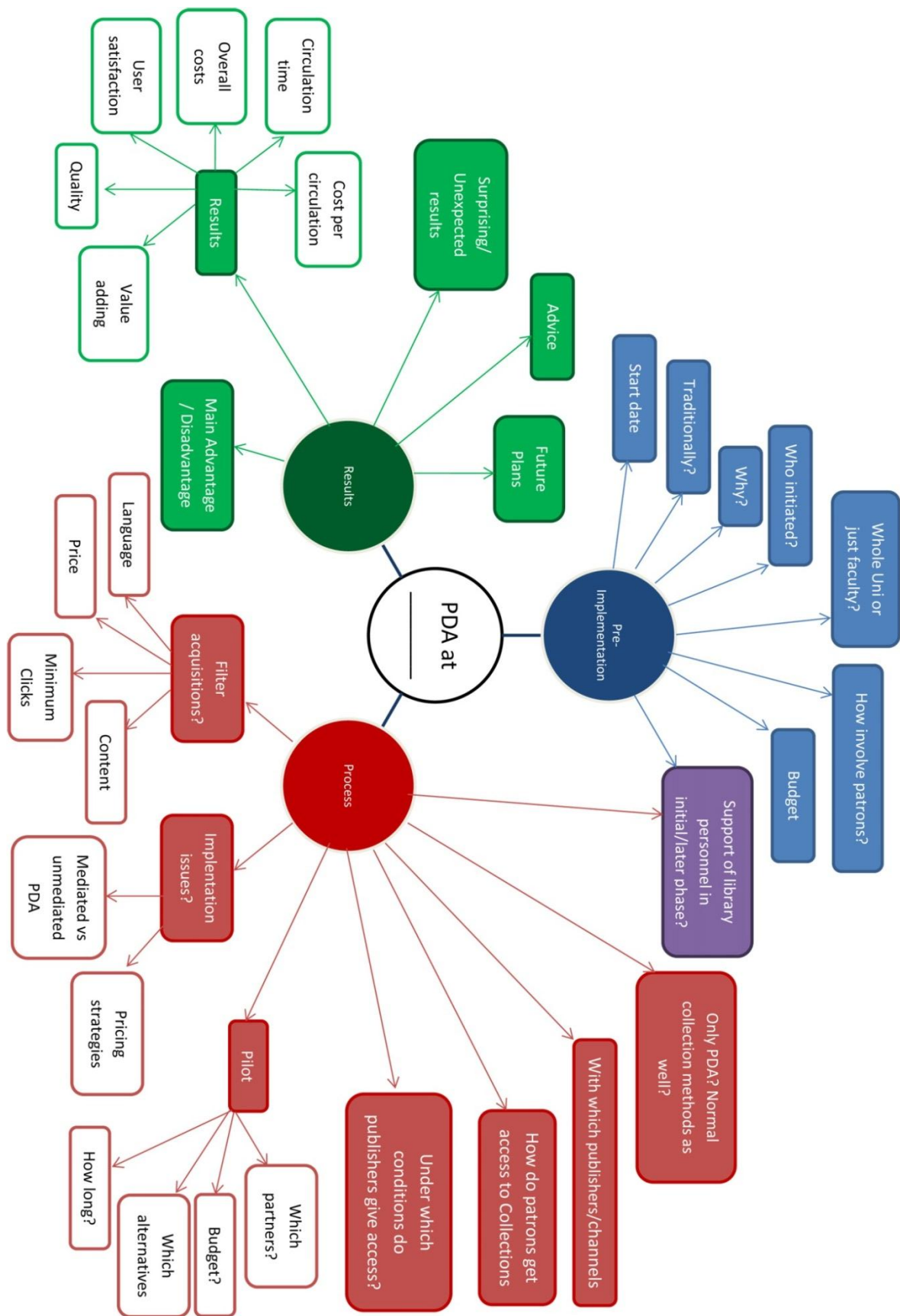
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Appendix A
Keywords for Literature Collection

	Related Terms	Broader Terms	Narrower Terms
PDA	Demand Driven Acquisition, Patron Selected Programs, User Driven Collection, Patron Initiated Purchase	Book Collection Methods	Faculty Expedited Acquisition, Suggest a Book Acquisition, Holds Queue Acquisition
Higher Education	Post-Secondary Education, Tertiary Education, Third Level Education	Education, Libraries, Schools	Universities, Academies, Colleges

Appendix B

Cognitive Map



Appendix C

Transcripts of Interviews

Transcript 1: Interview with Mrs Brinkman Dzwig (University of Delft; 24.04.2014)

Traditionally you had approval plans for both e-books and paper books, right?

Yes indeed, and then at a certain point we recognized that a lot of books were never been used so we thought we let the users decide and buy them just in time at the moment when the user needs them. So the books that have a digital edition were moved from an actual sending to our EBL plan. We got them like this. You can see here [points to computer] these are all the books on the EBL platform which are available in our system. So if you search for a title you can see here if it is already bought or if you have to request it.

So the users access the titles over the same website of the library of the University of Delft as before?

Yes and they don't see a difference in fact if they have it or don't have it. They can browse through the book in five minutes and if they think this book is something they need they can request the purchase. And if you do that and you enter your address, name and everything they get notified when the book is there and it takes seconds, it is very quickly purchase. That's how it works. It is really easy without any short time loans or anything because we think it complicates the picture for the user. These are books we would have bought anyway because it is very much within the profile of books we already have and which we really need but we just don't buy them in advance. And in fact that's all. We still do mediation so there is always someone who is looking at the request and can approve or can reject it but in fact we always approve. Something must really be crazy, like by accident a very expensive book or we already have it by a different channel or something and then we reject it, but it actually never happens. But we want to drop this mediation and let the users really decide in the future

And this project is already university wide?

Yes, yes and that is the problem, that for instance the architecture people were the very first to discover and then they were just ordering and ordering. And this was something we were really scared of, because like how do we channel this, but of course you can't so you have to trust that the next people who discover it will balance and this happened after two / three weeks. We did not advertise it at all because we were afraid that it will go too quickly and people just discover how it

works and we got two or three emails within a year so it means it is fine and that was an easy part and of course we know that in the beginning someone will be first and someone will be later but by sometime everyone will discover this is the way to order books. And so also what we did was limit the price per book, because in the beginning there were some really expensive books in it and we think that very expensive books can better be purchased by acquisition suggestions and we will not just put it here. That was one lesson. Another lesson was that we set the limit of 10000 euros as kind of deposit and they went close to the limit we decided we take the next step to be unlimited spending of money. But there is actually really hardly any limitation in fact we just put it there and by clicking and by buying books and it I really good.

Who was initiator of the whole project here?

Yes that was me. We already had EBL as our provider for e-books and they always told us, they were more or less the first who did it at all. And it looks like the old concept and I was very hesitating at first but at a later part we decided to, I decided to, take charge and at the time when we started, about three years ago we had the first approval plans and now everyone has it but at this time we were one of the first

Did you have a lot of support from your library personnel during this whole project?

Some information specialists were working on it but you know not that much. No I have one person working with it and I had a physics specialist in the beginning and we needed some ICT in the beginning because there was a little ICT thing here, because EBL is working with credit points. It means that you have 360 credit points per year and every time you use a book you lose a point and in the New Year you get again 360 points and if you have read a book you have to buy it again. But if the same user is coming within 24 hours it counts for one use. So if you click on one book 10 times within 24 hours it counts for one use. And to identify the user they needed a special ICT thing to register the one user and of course it is also good because with this identification you can also know what kind of users you have. E.g. students from the faculty, staff and that is also good for statistics that you can follow your users through.

Did you run a trial project beforehand?

Yes we did a trial for physics first for three of four month and then we thought it went so well we can just do it for the rest as well.

Did you consider any alternatives to PDA?

Well no because we think it must be clear for the user and with e-books we have like 12 platforms for e-books and for each platform all those books are in catalogues or discovery systems and if someone clicks on a book it does not know if it is a real book or something else and they don't understand the difference in the books. I think the more complicated the more complicated you make it for the users. So far, so good and I know that EBL and Ebrary are merging so we will probably be wider but we just stick to this action now and take another later.

Did you have to increase you budget for PDA?

Yes what was before for the paper books is what we are using now. So we did not have to widen it. We are now in the middle of PDA for paper books. So we are setting it up we are in the middle of the process, we are almost ready. You probably know how it works, it's the same process, but you order a book. And of course we expect to see different problems because they are not instantly available but it takes two or three weeks before it comes. But we will see how that works. Our library has an e-preferred policy, meaning that if there is an e-book available we choose it. This means that we have less and less paper work since almost every book has nowadays an e-version and we buy less paper and do not have to store it. So the focus is narrowing so there will be not that much books to be bought by this PDA but there are still books which are only on paper so we want them also to be in this pool. When I was at a conference there was a university from Dublin who did PDA for printed books, just as we want to do it, which was very interesting. They were really satisfied.

And you want to launch the PDA for printed books already in the near future?

Yes, yes it is almost there. The only problem is I think that you cannot see the difference in the book being reserved and the book being something. So it is just a technical problem we have to solve so it is almost there.

Is the purchase then solely done by the patrons or do the library personnel still control the process?

No, no we still have the possibility to add a book if we need it, If we cannot find it here or if it is not on the list, but that does not happen very often.

Will the printed books also be available via the EBL webpage?

No they will be here on our webpage in the catalogue. You can click here on either articles or books. Here you can see we have already our books in this database. When it says here [shows] it is a paper book and this is an e-book. But it does not make any difference. So if you are in the catalogue you

don't know what is what. You click on it and then you can order it. You cannot see anything if it is a PDA book or not. PDA books are amongst here and only by clicking on it says you can request it because it is not available yet you can see it is a PDA book. They are not separate from the rest.

What are your experiences with the content covered by PDA?

Yes the content covered is fine but all those platforms are very wide for non-technical subjects and when it comes to what we need, it gets narrower and narrower of what I had to clean up of what I saw. Like some art and religion things. I don't know all kind of things that we are not interested in and finally there is some cleaning there. So they are very general most of those platforms of non-technical libraries or universities. So if they say they have 200 titles you must not think it is two hundred titles for you.

You worked with Blackwell right?

Yes, yes but Blackwell is bankrupt since last year and out of the picture. So we just do business with EBL just like this one. It was a combination between EBL and Blackwell but not anymore. There are still Blackwell e-journals but not Blackwell as we need them.

So how do you see now how a title is available? Blackwell did that before right?

Now we just have profiles at EBL and we say we want this subject and this edition and this publisher so a whole set of profiles and they tell us what they have for this subject and we said them our holding periodically so we don't get things duplicated. It is not as if someone sends us books anymore that we already have as e-books. So we send them our holdings every month and they check if there is an edition in their own catalogues and are checking if there is an edition.

So they trigger the purchase for printed books as well then?

Yes they do.

Did you consider different pricing strategies?

What you can do of course with PDA is short-term loans and that you can say two or three or four times. This was not only too complicated but also too expensive. You can say that you pay for several loans and then you pay for the whole book so it is always more and it is a book that we want to have. And therefore it is not important if someone looks at it once or twice or three times. For us it is enough that someone shows interest. So that was our reasoning, because if you have a very wide pool of books like general universities have they say in fact that it is too much and if three people are

interested you might buy the book but we have very narrow profiles and we know that we want to buy this book and we don't want to pay in advance because we don't know if someone will borrow the book so it is a little bit of different way of looking at it.

Which criteria do you take into account for making your acquisition plan?

Yes, first thing is of course subject, so from faculties you know we have very specified lists of subjects that are interesting and within those subjects we look at the level of if it is academic or undergraduate and the publishers that we want to have. At the next look we have the language only in English but you have that probably too at your university. We don't have anything that is in Dutch. And yes what else... I think that's all... What else...

Price?

Price, price yes we have set a limit to 200 euros. So more expensive books have to be ordered separately but there is also evidence based selection. It is like PDA but afterwards. Elsevier has that for example. You take the whole thing for one year and at the end you look at the usage and then you say we want to keep what was really used. So it is a kind of PDA but it is not PDA in advance. So there are different models of course. This is something you are planning in fact yourself and the other thing is that you can have a trial and you can access everything and in the end you can say, well, this and this will be used.

So why didn't you decide for this type of PDA than?

Later Elsevier came with this and they said, well, this is what we have, but you have to pay in advance and you have to use this money. So, like, if we pay them 40000 you can choose books for 40000 euros. It does not matter which books, we take books which were mostly used but of course you can also say give me all yellow books or something. It does not matter, you can choose whatever you like for this 40000 in the end.

I guess it is difficult to set this budget in advance?

Yes exactly. But it is also coming for e.g. Cambridge University it can be university press or it can be from deGreiter. So there are different platforms coming with this and it is based on your experience after one year. So it is also kind of PDA because it is not determined by the usage.

So the contents are covered with your PDA and in your article you say that it is cost efficient. What are other advantages and disadvantages you have recognized?

That we have books which are actually being used. In the end you pay less because you don't buy anything just in case. So you really hope that actually everything you buy will at least once be used. We had made the experience that all the material we had was just standing in the shelf and was not very used so it is a waste of money. Waste... I mean some day someone will come and borrow this book but if it is in PDA with one click it is available so it is like we have it, it is not something we need to order or is coming but it is here in a matter of clicking and in the mind for the user it is transferring and not as if we don't have it.

And are there also some disadvantages?

Disadvantages, it is very difficult to stir it and make a balance between the faculties. So if you say, we have a budget for e-books and if someone is very quick he can make this budget very quickly. So we still need to figure out how to balance it a little bit, because this is something very quickly. And also, those are books with limits on download and printing and so on and this is very difficult to explain to the user about those rules. We also have springer books which are without any rights and they can do whatever they like unlimited and so on and they ask why this is possible and this is here not possible.

So to what extend do the users generally have access to the titles? Can they download them?

Well the most of them they can read online of course, like [shows on screen] you can do many things as dictionary, copy print or whatever and you can download. And then you can... but it is limited. You can download it for a certain amount of time but then it is disappearing.

Do you know for which time period you have access to the download?

It is different; I think the maximum is 28 days. From this publisher for example you cannot download and print the book for example. PDF of e-books is not very handy on mobile devices so Ebrary is something you can easier make bigger or something, it is flexible and it is allowed in a limited way to download it on your advice but of course it is not the idea to print the whole book if it is an e-book. Springer books for instance they have a, but it's not PDA, but they have a bottom which says 'my copy' I don't know if you have heard of it, and then for 25 euros you can buy and print but it's not for the libraries but just for the end users. And it is black and white and it is not beautiful but you know it is a printed book. So €25 is not that much so they have this possibility to prevent printing all the time because you know people printing whole books, it is a little contradiction between buying an e-book and then printing it anyways. They offer this print version if

you really want to read it in the train or something. But we cannot click on it; it is only for the end users.

So the amount of time you can download a book depends on the publisher then right?

Yes, well some allow it and this is an indicator. EBL have different publishers so e.g. this is an Elsevier book see.

Do you get a lot of requests from students that they would prefer a printed book over an e-book?

Yes, of course. But our library is going digital anyways and this was not something I invented but was started in 2003 or 2004 or something like that so it was a long time ago and we started with journals and at that time there was a lot of “whoa” we want print but now with e-journals no one is ever saying a word and it is much easier and the same happens with books now. Some people are complaining but they are getting used to it. And we have no logistics, no lost books, and no limitation of users that can borrow it.

Yes it does not depreciate anymore.

Yes and this is a technical university like yours so there is not much reading in fact. There are no like thrillers or something, it is just technical books, so nobody will really read the whole book and it is much easier to search through the whole book and to make notes and you know all those functionalities that are. E-books are in a way much more flexible because you have a dictionary, you can highlight, whatever..., search through the whole book.

Did you get any feedback of the users on whether they are satisfied with PDA compared to before?

No, we did not start it yet, we intent to do it but our experience with surveys is that they are very poorly answered, like 100 people answer it and we have 18000 students so it I not very representative. Of course some of them are going to tell us something but it is not very, you know... we did such kind of surveys but they were not you know... not really responsive and we don't know if they are representative for the whole population. Those who don't like it thy do not bother to respond. But it is of course good to do it once.

As long as no complaints and not a lot of questions arise that is already a good sign.

Yes exactly that's true.

Did you measure to some extent if the circulation rate of the books has increased?

Oh yes, that's what mediation is for, oh you mean if they are read more often? Yes we have those user statistics. We have platforms for user statistics and they are really well used, yes.

Do you know the approximate circulation time of those books?

I know that there is one book read 4000 times or so yes the ten most used books are really impressive because you can never make it with paper book because people borrow it for a month and you can calculate how many years it would take to borrow it 4000 times. I cannot tell you exactly because we have those statistics somewhere but not just here. What is also always interesting from publishers is that we get turnaways were you know what people were trying to find a book on the internet that we don't have. So many people e.g. don't look at the catalogue but go on google scholar and they find the book and they click and that's how they come in the library. So they also find books that we don't have and those statistics also tell us that we maybe need to buy something that we do not have yet.

Do you have the overall impression that the users are satisfied with your pre-selection, or do they often ask for titles which are not on the list?

No, not that often. We have some suggestions for acquisitions, but now that we have PDA it is much less.

But you said that you only include the books in the acquisition plan that you would have bought anyways. So how can it be that those requests are less now?

Yes this is because now the books we insert are more than what we had before. We have here in this pool e.g. 8000 books, where we have bought some 800 already, I don't know exactly. But see here [shows on screen] we have 9000 in this pool and we have bought, I don't know, a few hundreds. 9000 titles are quite a lot to choose from. And it seems they are happy with it, and as long as nobody complains I don't see any reason to change it.

Okay I think we have covered more or less all the questions I have. Just some details I was wondering. I could not read in your paper when you have started considering and implementing this project exactly?

Oh I think we have started about three years ago when I was in Barcelona. Three years. Two and a half years ago. And then the whole model was ready but we didn't start yet, and when we started it

was about in 2011. And this thing just started 10 month ago. And we are really expecting more, more of the noise, more complaints, more questions, but it is really quiet.

Okay I think that we are finished now. Maybe to close this interview, do you have any advice for the University of Twente which you have to consider while implementing PDA?

I think if you start a PDA don't make it too complicated in the beginning. We started with only purchase not STL. You can say if someone clicks 3 times buy it or something like that but don't make it too big and don't make it too complicated because users will not understand it. And I think it is better to start from a simple model and then try to extend it maybe than the other way, because you can spoil the whole thing by making it too complicated. I think we had the good luck that people understood it from the beginning and if we now make it more complicated they will hardly notice. And think of your budget. Set your budget and try to stay in your budget because you can really buy hundreds of titles if you like but I don't think it is wise.

Transcript 2: Interview with Mr. Zonneveld (University of Utrecht; 12.05.2014)

Can you maybe tell me something about your specific role during the whole process?

I am part of the project team. I make the spread sheets and the managing of the figures and data. I try to find out, how things really are. And I think it is really interesting to see what new developments can mean for acquisition.

What was your main motivation to start with PDA?

I think we wanted to experiment. Just try how it works, if it [PDA] was possible.

So it was not because of a need to change, through e.g. too high costs?

No.

Okay so just to experiment?

Yes. We are also experimenting with other e-book purchases.

Which ones?

EBS models, Evidence based selection. We made an agreement with a publisher. It has many e-books available. At the end of the year we decide which ones to use from a certain amount of money. We have done it e.g. with Elsevier, Wrigley, Cambridge.

But you are using EBL for PDA right?

I think we started with PDA at EBL in March 2012. Just to experiment. We started with two collection profiles, one for international collections and one for film. We made a profile with a selection of publishers and years we want to have in the collection for PDA. And then we put everything in our catalogue and let the patrons just use them.

Which catalogue are you using?

ALEPH

And the EBL collection could be integrated in ALEPH without any problems?

We get a list of titles and we just put it in our catalogue.

Via which website do users have access to the titles? Via ALEPH or via the EBL website?

Also via EBL but most of the time I think they find them via our catalogue.

You are working with STLs right?

Yes.

But in combination with acquisition or just STLs?

Yes we bought in the beginning after the fourth STL. So three times STL and then the fourth time it is bought.

Do you know who initiated this project?

I think it was the central collection development department and the reference libraries from humanities and later also from law and social sciences.

Do the users know that you have introduced PDA?

No, the users don't know anything about PDA. They just use the books.

Can you tell me something about your pilot with PDA? Because it says in the presentation [Presentation by Anne Rutgers] that you want to go from unmediated to mediated PDA before going on air [*Voordat we live gaan... van mediated naar unmediated*]?

We started... wait I show you on the computer. [Excel document; analysis of results year 2012] We collected all kinds of information on who buys etc. If we take a look at the costs, we started unmediated and costs rose far too high. We had around ---\$ available at the beginning and we almost used all in one month. And then we decided to switch to mediated, and immediately the costs dropped [wrong word: increased to a lower rate]. And we removed some older years from the profiles.

But now PDA is university wide or just for some faculties?

Yes. In 2013 we also had a trial for economics and social sciences. For these subjects it was far more difficult to make a profile.

Why?

Because we had a limited budget and because there was more of an overlap between other subjects e.g. between economics and economic history which is part of history. Sometimes there is also an

overlap with social sciences in the subject economic behaviour. So it was difficult to get a good profile.

So the collection specialists, who selected books before, made this profile?

Yes, but we made a profile. So we take a look at the titles from EBL and said we want this and that.

And on which criteria did you make this selection? Price, language...?

Yes. It has to be in English.

For the whole University?

No, no this was just economics and social sciences.

So you have different selection criteria per faculty? Do some faculties offer Dutch book via PDA?

We had that. But we have only done PDA with English titles.

How are you doing it now?

We are still in a trial, university wide. No subject differences. We do it [*the selection*] with a list of publishers we want to have, years: from 2012 on; price: 280\$ most and with an STL percentage of 15%.

What do you mean with STL percentage of 15%?

STL is short term loan and the price of that loan is max 15% of the selling price determined by the publisher.

Do you have the impression that this model now works better [university wide; unitary selection]?

It works perfectly now. I show you the latest developments [opens document on computer; shows number of STLs in 2012 per month on a bar chart]. You can clearly see the summer dip. In the first month it was unmediated, this [next months] is mediated.

With STLs, how long do the users have access to the titles?

One day.

Read only, or can they also download it?

They can also download it and after one day they don't have access anymore. With the first STL we ask the user who they are, student, researcher, which faculty etc. so we can do the statistics.

When is a STL triggered?

The STL is triggered after 5 minutes of reading

But if a title is purchased, how long do they have access then?

Also one day. But they can have another one next day. So here this is also 2012 [opens new document on computer; report of last week on expenditure]. It [*the expenditure*] is getting bigger and bigger, we have now available almost 50,000 titles. We started in August, so we are trying to do the pilot for the whole study year, from august to august. But the users follow the use of the library. It is busy in the library they also use more e-books.

Do you have PDA-only or do you acquire titles as well via traditional means?

Yes, of course we do also other acquisition, because not everything is available via EBL and not everything is available as an e-book. We still buy print.

But you are not buying print titles with PDA?

No, but other things.

What other things are you doing?

With print we have an approval plan. For example for Dutch law and French. So everything that is published in the Netherlands and that fits in our profile at the vendor, not at the publisher and then we get it. And then we have a week to decide if we want to keep it or not. But most of the time we want it.

So you acquire e-books via PDA, EBS and traditional means?

And we buy packages. E.g. we buy everything from Springer.

And they are not in the EBL catalogue?

No, they are not in [*our*] the EBL catalogue. Yes they are in the [*general*] catalogue of EBL but it is cheaper for us if we just buy them directly from Springer.

How does EBS work together with PDA?

We exclude those publishers from PDA.

So you have EBS just for some publishers?

Yes I think this year it is with Wrigley and Elsevier it think. Last year with had it as well with Cambridge I think.

So you pay a fixed sum in advance, and after the period you can buy from that budget the titles you want? And in the period users have unlimited access to all titles?

Yes they can use everything. And for paper books we also experiment with patron involvement. We send out awareness titles and then the patrons, mainly the researchers at the faculty they can say, we want this one and that one, and we buy that. So we are experimenting with a lot of thing.

How long does it take for a user from requesting a title until actually having access to it?

If it is an e-book they can use it within a few minutes

But it is mediated right?

No that was in 2012, now it is completely unmediated.

Oh okay, so you went from unmediated to mediate back to unmediated?

Yes

And why did you decide to change it back to unmediated?

Because it [*selecting and approving*] took too much time.

But you decided to do mediate because costs were exploding. How is it now?

Yes it is exploding now as well. But what we have now, that is a great difference from before, we have now a central budget and that is larger, so we can have a lot of books without any time spend in selecting and approving. But also here we had some limits in spending [*opens document on computer; 2013; expected vs real costs*]. Our costs are now nearly at \$---

And what is your max budget?

---\$. We try to manage that until august 2014. But we have also changed some things in-between the semester. We almost used all the money at some point and at Christmas we had to put in some extra money and then we expected it to go on like this *[increase at the same rate which is higher than expected]*, then somewhere here *[about January 2014]* we decided to switch from 3 STLs to 8 STLs and buying the ninth.

Oh okay but when you have a book which is used very often it is more expensive to pay for 8 STLs before acquiring it?

Yes, but when you look here, *[opens file on computer; expenses on STL vs expenses on acquisition]* almost half of the costs were in buying the books *[2012/2013]* and here we decided to change to 8 STLs *[shows graph below; 2013/2014]*. But that is more of a delay of costs, the longer you wait the more books will be bought, etc.

Since your new PDA program is now university wide, I saw a statistics that some faculties are using more of the budget than others [Presentation; Anne Rutgers]. Is that a problem for you?

It can get a problem. But for now we are buying it from a central budget so that is not a problem, as long as others have other advantages from the central budget. For instance when others are buying Elsevier and Wrigley books that are more beta science focused, and PDA is much more concentrated on humanities and law and social sciences. But I can show you how our customers use it *[opens file on computer; same graph as in presentation by Anne Rutgers; about use of different user groups]* Staff bought 11%; Bachelor students bought 40 %, Master students 1%. And then divided over faculties *[point to graph next to it; same graph as in presentation by Anne Rutgers; about use of different faculties]* Humanities 50%, Law 30%, Social Science 9%, but medicine e.g. only 1%.

So for those with a low percentage you buy more books with traditional methods?

Yes, this is only PDA expenditure. I think our total budget for books is about \$---. And about \$---of it are for PDA.

Can you tell me something about the results as .g. feedback from customers or quality of selection?

We are going to make a survey but it is very hard to ask the right questions. Most of the users just use the books they can find and they don't remember how it was before.

And did you recognize that the titles bought via PDA are used more often?

That is very difficult to see, but I think it is almost the same. But I have to take a closer look again. I think it was half a year ago.

Oh okay because it is said that 20% of the books bought are responsible for 80% of the circulation.

Yes! But that is the same for PDA I guess, only that it is used at least one time. Here you can see [opens new document on computer; table that shows usage per title by all users; in minutes]. But you can also see how long one user reads a book. But most books are used very well.

But wouldn't it be cheaper, to buy the books which are e.g. course materials in advance because many people will borrow it and then you don't have to pay for 8 STLs.

Yes maybe, but you don't know in advance which books it will be. And study books are required material and we always buy that separately. And once we get a list from EBL we always match it with the books we have here.

Who does this matching?

We do that.

Did you recognize any difference in the quality of titles with PDA?

There are differences of course. But we made a list of publishers so we preselect them on quality by publisher. When we started we had a close look and we removed all the cooking books and the travel guides etc.

So what do you think were the main advantages and disadvantages of PDA?

That you have a lot of titles available, more than before. We have now 50,000 titles available

Do you know how many you had available before?

Only those that you buy. I think it is 5,000-10,000.

Any other advantages?

It is now immediately available, within a week. If a title is available on EBL it is also available in our catalogue. So we don't have to wait until someone has selected the titles

And you don't have a problem that some titles are not immediately available on EBL but after e.g. half a year?

No, no, no they have also very recent titles. But that depends on the publisher. Some publishers have titles available immediately and some with a delay of one month, tree months, half a year.

And that is not a problem for you?

I don't think so. But still, if a patron wants a book, we can still buy it. He just has to ask it.

And any disadvantages?

Hmm... When you don't have a central budget you have to divide the costs, and that can be a problem. And we have to talk to the faculties, when the pilot is over in the beginning of next study year, if they want to have STLs or still want to buy things. I think the faculties are not that far already. We have to explain a lot I think.

Why do you think they are not ready yet?

Because we did not talk about that yet.

So you did not only keep it a secret from the end users, but also the faculties?

We are telling them we are doing this, but we don't tell them anything about the budget. So I think next month, we are going to develop some models how to spread the costs and how to make this sustainable. I think it will work, but it will lead to some discussions.

Do you have any other future plans besides ending the trial and making the PDA sustainable?

Yes, we are also trying to figure out how to make relations between the EBS and PDA models. One of the ideas is e.g. that Taylor and Francis is now a big part of our PDA and we are now negotiating with them about an EBS model, because we use so many books of them now.

Is it cheaper to have them on EBS than PDA?

Yes, because than you don't have the STL prices. And that should save us half the costs. Because we have now ---\$ STL costs and ---\$ purchasing costs [*for Tayler and Francis titles*].

Do you have an advice for our university?

Experiment and get a lot of money available.

Appendix D

Coding Terms per Category

	Term Used for Coding
General Information	Type of Library
	Purchasing Policy
	Interviewee + his Function Within Company
	Scale of PDA
	Starting Date
	Stage of Implementation at Point of Interview
Motivation to Engage in PDA	Push Factors
	Pull Factors
Budget for PDA	Amount Available
	In Context
	Minimum Amount
	Sufficient?
Stakeholder Involvement	Patron
	Library Personnel
	Faculty Members
Implementation Issues	Aggregator
	Pricing Stratgy
	Mediation
	Selection Criteria
Collection Methods Used Next to PDA	Collection Methods Used Next to PDA
Access Conditions	Platform
	Free Access
	Trigger
	Access after aquisition
Performance of PDA	Cost
	Circulation Rates
	Quality of Content
	User satisfaction
	Sustainability
	Others