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## **Selling Books Online: An Evaluation of Australian and Swiss E-Shops**

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### **Abstract**

*The Extended Web Assessment Method (EWAM) is an evaluation tool specifically created for the assessment of electronic commerce applications. One of the oldest evaluation methods of its kind, EWAM has been revised and improved over the years. The method is based on an evaluation grid that includes a set of criteria with which to appraise the quality and success of e-commerce applications. The focus is on consumer perspectives and the specific features of the Internet as a medium. In this paper, we used the EWAM tool for the comparative analysis of Australian and Swiss Web sites in the retail sector, more specifically for the evaluation of e-shops whose main business is selling books. The findings show that most of the Web sites assessed do not fully meet the expectations of consumers.*

## **1. Introduction**

The Internet has been increasingly used to facilitate online business transactions, not only between different business entities, but also between business entities and consumers. In the area of Business-to-Consumer (B2C) electronic commerce, the Internet is commonly used by businesses in various sectors to reach consumers online. Anecdotal evidence indicates that there has been a growing interest in online shopping in many regions, notably in the United States, United Kingdom, Europe and Australia (Scott 2003, Barnett and Alexander 2003, Kutz 1998, Morganosky and Cude 2000). Online shopping has many potential benefits to consumers, particularly in terms of convenience and time saving. In addition, the retailers will ultimately reap significant benefits as it will lead to more efficient use of personnel and simplification of building infrastructure (Morganosky and Cude 2000, Slonae 2000).

In this paper, we demonstrate the usefulness of evaluating Web sites based on the perception of consumers in order to identify their strengths and weaknesses. This will in turn assist practitioners to develop better online shops. For this purpose, the Extended Web Assessment Method (EWAM), an evaluation tool which was developed at the University of Applied Sciences Basel in Switzerland was employed. When starting our work we realised that there exists a variety of different approaches for Web site evaluation (e.g. Barnes and Vidgen 2001b, Yoo and Donthu 2001). In 2002, there even was a (double) Special Issue on “measuring e-commerce net-enabled organizations” in the Information Systems Research Journal (Andersen et al. 2002, Koufaris 2002, Kim et al. 2002, McKinney et al. 2002, Devaraj et al. 2002). In the end, EWAM seemed to be the most suitable for our needs. The method comes with teaching material for instructors, builds on the classic transactions phases which are usually an integral part of E-Commerce syllabi, and comes with a tool for online data collection and a graphics report. The current version of EWAM is widely used in research, teaching, and consulting. In this study, we evaluated a number of Australian and Swiss Web sites in the book sector using this tool. This study is part of a larger-scale project which attempts to compare the maturity level of Web sites in these two sectors from various countries.

In the next section, we provide a short overview of the Extended Web Assessment Method (EWAM) tool. A detailed description can be found in Schubert (2002). We then describe the web assessment conducted in this study and present the findings selectively. Finally, conclusions are drawn and some limitations to this study are outlined.

## **2. The Extended Web Assessment Method (EWAM)**

### **2.1 Background of the Extended Web Assessment Method (EWAM)**

The Web Assessment Method defines an evaluation grid with a set of criteria for appraising the quality and success of existing e-commerce applications. In addition to a rigorous focus on consumer perspectives, success in implementing an offer of products and services is considered with reference to the specific features of the electronic medium.

The Web Assessment Model examines the three classic **transaction phases** of electronic markets, which include information, agreement, and settlement phases. A fourth element, the **community component**, is integrated as a link between the actual purchase transaction and the necessary trust relationship in the virtual realm. Where marketing aspects are concerned, the Web Assessment Model focuses on the special features inherent in the Internet. The assessment criteria, together with the transaction phases and

community component, are derived from the **characteristics of the electronic medium**, which include hypermedia presentation, database interface (expert system), 24-hour access, anonymity, ubiquity, configuration possibilities of the user surface, integration with the customer, and asynchronous communication. Another important paradigm that needs to be considered is **performance marketing**. The underlying idea of **performance marketing** is that the client should not only be sold the core product, but be offered a range of complementary products to maximize customer satisfaction.

The method was fundamentally revised in the summer of 2000. Besides taking account of new research findings, especially in the Internet marketing field, it also incorporates the Technology Acceptance Model established for the acceptance of information systems (Davis 1985) and the Theory of Reasoned Action (Fishbein/Ajzen 1975).

## **2.2 Evaluation Criteria**

The Extended Web Assessment Method builds on the original Web Assessment Method and integrates findings from the Technology Acceptance Model and several alternative approaches (Barnes and Vidgen 2001a, Zhang and von Dran 2001, Liu et al. 2000, Van der Heijden 2000, and Spiliopoulou 2000). It defines an evaluation grid made up of a set of criteria with which to appraise the quality and success of e-commerce applications. The focus is on consumer perspectives and the features of the Internet as a medium. A successful e-commerce application must meet the needs of the user in accordance with “Perceived Usefulness” (Criteria USEF1–USEF15) and “Ease of Use” (Criteria EOU1–EOU8). Under the headword “Trust” (Criteria TRUST1–TRUST2), questions about the subjective norm are also taken into account. Trust is the *sine qua non* of e-commerce, for business will not be transacted in situations where there is no trust. The importance per criterion is recorded on a scale of “unimportant” (–2), “less important” (–1), “important” (+1), and “very important” (+2).

Like ServQual (Parasuraman et al. 1988), an instrument for assessing service quality, EWAM is based on a double evaluation for each criterion. Figure 1 shows the two steps of an evaluation. In the first step, the assessor declares the subjective *importance (expectation)* of an attribute. The value “+” is interpreted as follows: “It is important that Web sites in the retail sector are easily found by the customer.” The next step is an *evaluation (experience)* of all the Web sites in the concerned sector. The aggregation of the importance ratings of the assessors (step 1) is an important prerequisite for the generation of results. In cases where importance is low (–2), the actual evaluation values (Step 2) are almost annihilated. The lower the importance value of a criterion, the smaller the impact of this attribute on the overall score. This procedure has the advantage of levelling out extreme values for expectations and taking into account the different experience levels of the assessors.

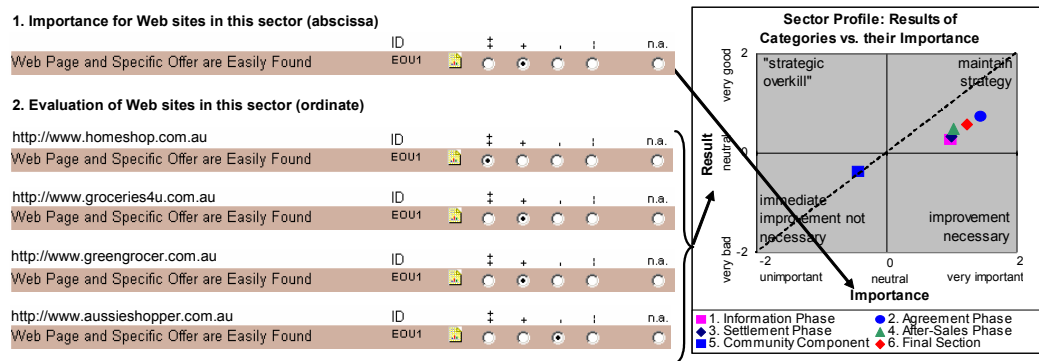


Figure 1: Two-step assessment: (1) Importance Ratings, (2) Web Site Evaluation

Data is collected over the Internet with an on-line questionnaire (the EWAM tool).

In data analysis, the EWAM tool defines three profiles for drawing up meaningful evaluations of any Web site under examination:

- Sector Profile: the profile of the relevant sector.
- Company Profile: the profile of the Web site.
- Best Practice Profile: the profile of the best of breed in the relevant sector.

EWAM judges Web sites purely from the customer’s point of view. Thus a Web site that obtains the best EWAM result is not necessarily the most successful in financial terms, since success is influenced by other factors such as e-business relevance of the offer, profitability, backend integration, and financing aspects.

### 3. The Web Evaluation Study of the Australian and Swiss Book Sector

The participants of the study were students enrolled in Electronic Commerce classes at the University of Melbourne, Australia and the University of Applied Sciences Basel, Switzerland years 2004 and 2005 respectively. In Australia, seven Web sites of online bookshops were evaluated, including the Web sites of the two largest Australian book stores, namely Angus&Robertson and Dymocks. Only Booktopia and Readers’ Refuge are pure players that do not have physical stores. Each Web site was assigned to two tutorial classes. A tutorial class consisted of 20 students on average. Although the participation was voluntary, we encouraged the students to perform the evaluation since the participation gave them an opportunity to explore what consumers would expect when shopping books online and this knowledge would be useful for their subsequent assignment related to establishing an online shop.

In Switzerland, five Web sites of online bookshops were evaluated, including the Web sites of two national book stores (Books and Jaeggi) and a local book store in Basel (Bider & Tanner). The other players, Amazon and Buch, are pure online players. The Web sites were assessed by 18 students in a tutorial class. Table 1 shows the Web sites evaluated and the number of assessors for each Web site assessed in this study.

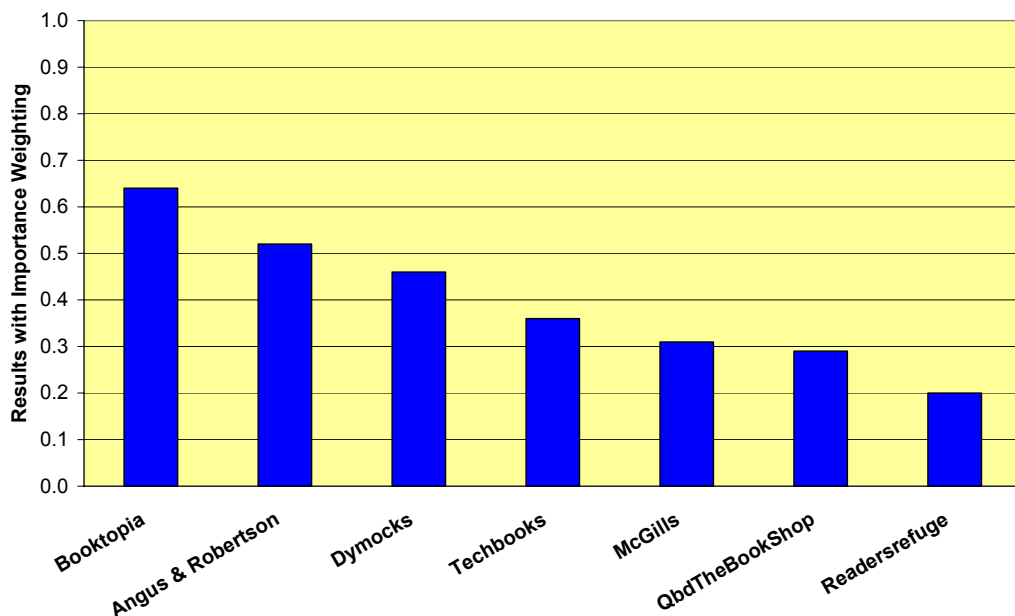
*Table 1: The Web sites evaluated and number of assessors for each Web site*

Australia		Switzerland	
Online Book Stores	No. of Assrs	Online Book Stores	No. of Assrs
Angus&Robertson	14	Amazon	15
Dymocks	09	Bider & Tanner	14
Booktopia	31	Books	13
McGills	08	Buch	16
QBD The Book Shop	17	Jaeggi	16
Reader's Refuge	12		
Technical Book Shop	12		

For the evaluation of the Web sites, the students used the EWAM tool. Before the evaluation process started, the students were thoroughly instructed in the use of the tool. The training of the assessors is an important learning process that confronts them with the basics of high-quality e-commerce services. Data were submitted by the students online and analyzed centrally by the authors.

### 3.1 Australian Results

Figure 2 shows the summary of the overall evaluation of the seven Web sites. The figure indicates that Booktopia, which is one of the pure players, appears to be the best Web site, followed by Angus&Robertson and Dymocks. By contrast, the other pure player, Reader's Refuge, received the lowest score. Other Australian book stores' Web sites including McGills, QBD The Book Shop and Technical Book Shop scored much lower than Booktopia, which is the Best Practice Company in this study.



*Figure 2: Summary of the overall Web evaluation (Australia)*

Figure 3 further shows the Web evaluation result in each phase used in the EWAM tool for all Web sites. Consistent with Figure 2, Figure 3 indicates that the Best Practice Company, Booktopia, was rated higher than other Web sites in all phases, except for the Final Section. Particularly, Booktopia appears to have a strong performance in the Agreement Phase (scored at 1.02), Settlement Phase (scored at 0.94) and After-Sales phase (score at 1.07). Angus&Robertson was rated higher than Dymocks in the Information Phase, Agreement Phase, Settlement Phase and Final Section. Reader’s Refuge, the worst Web site in this study, has a comparable performance with the other three Web sites, particularly in the Agreement, Settlement and After-Sales Phases. As indicated in the figure, the assessors are generally not satisfied with the Community Component of all Web sites evaluated. Only Booktopia received a moderate rating of 0.40.

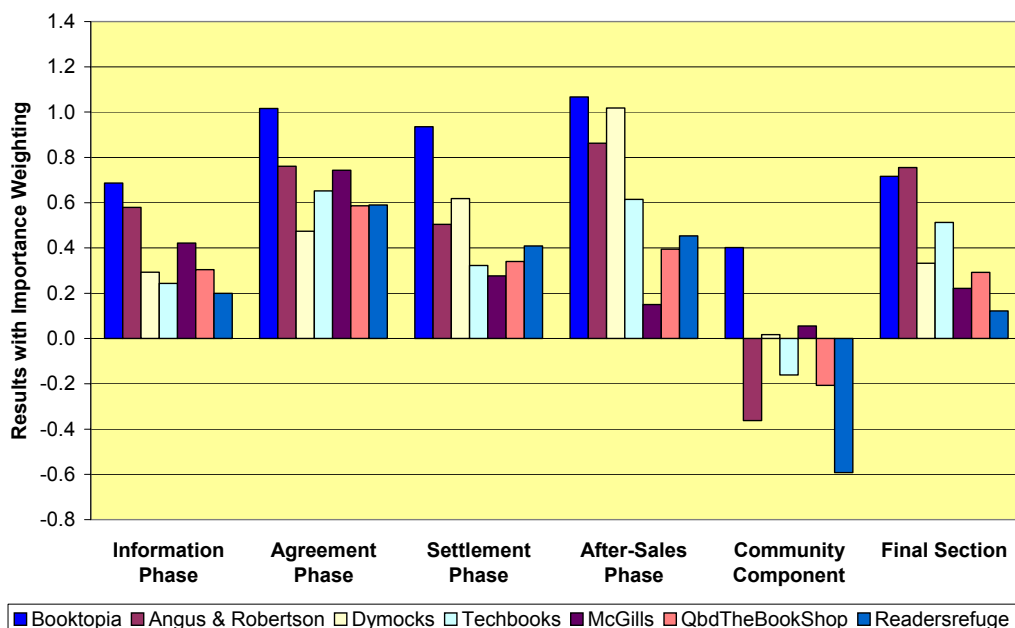


Figure 3: Summary of the company profile (Australia)

A closer look at the results in each phase reveals that for the Information Phase, Angus&Robertson and Booktopia received a very similar rating for the “Accessibility of the Web Sites” (A&R: 1.38, B: 1.40) and “Structure of the Contents” (A&R: 1.18, B: 1.18) criteria, which are two important criteria that the assessors emphasized in this phase. For other important criteria in this phase, including “Quantity of Information” (rated at 1.23 for its importance) and “Quality of the Content” (rated at 1.41), Angus&Robertson received a higher rating than Booktopia. For “Passing on Price Benefits”, Booktopia received the highest score of 0.53, followed by QBD The Book Shop (scored at 0.44) and Reader’s Refuge (scored at 0.38). Booktopia is a pure player that does not have to run a physical store as in the case of Angus&Robertson and, therefore, it can offer lower prices compared to other bookshops in this study. The findings also indicate that, in general, the assessors are not satisfied with all the Web sites in terms of “Passing on Price Benefits”.

For the Agreement Phase, both criteria assessed were rated to be important. They include “Design of the Ordering Procedure” (rated at 1.56) and “Models and Methods of Pricing”

(rated at 1.18). For the “Design of the Ordering Procedure” criterion, Booktopia has the highest score (1.15), while Angus&Robertson, McGills, Reader’s Refuge and Technical Book Shop received a similar rating (close to 1.00). These Web sites have a clear ordering procedure which enables customers to buy multiple items conveniently. By contrast, Dymocks does not allow customers to easily return to the list of products after placing an item in the shopping basket, while QBD The Book Shop’s ordering procedure seems to be complex by the inclusion of additional instructions. This gives an explanation why Dymocks and QBD The Book Shop received a low rating of 0.59 and 0.58, respectively.

For “Models and Methods of Pricing”, Booktopia, Angus&Robertson, McGills and QBD The Book Shop were rated only at about 0.60. Thus, this is consistent with the previous finding revealing a lack of satisfaction of the assessors of the prices offered by the online bookshops in Australia. The additional shipping costs which are still considered to be high by consumers particularly lead to this lack of satisfaction with the prices although some of these online book stores do offer lower prices than the traditional brick and mortar stores for some books.

For the Settlement Phase, “Integration of EC Applications” (rated at 1.17 for its importance) and “Tracking and Tracing” (rated at 1.08) are two criteria deemed important by the assessors. For the former, McGills received the highest score (0.69), followed by the Best Practice Company (0.66) and then Reader’s Refuge (0.63), while for the latter, the Best Practice Company takes the lead, rated at 0.85, followed by Dymocks (0.68) and then Angus&Robertson (0.46). For “Integration of EC Application”, other Web sites show a rather consistent performance. Many of the online book shops assessed offer limited options of payment. For “Tracking and Tracing”, McGills and Technical Book Shop received a very low rating of -0.67 and -0.31, respectively. The other two Web sites, QBD The Book Shop and Reader’s Refuge, also receive a relatively low score of 0.36 and 0.23, respectively in this criterion. Only Booktopia offers a link for customers to track order, while Dymocks enables customer to enquire about order by providing a contact number. These facilities of order tracking were considered not to be adequate by the assessors.

For the After-Sales Phase, the results indicate that both criteria assessed, namely, “Access to Customer Support” and “Performance of Customer Support”, are considered important by the assessors, rated at 1.29 and 1.14, respectively. For the first criterion, Angus&Robertson received the highest score (0.94), followed by Dymocks (0.91) and Booktopia (0.90), while for the second criterion, Dymocks takes the lead, rated at 1.12, followed by Booktopia (0.79) and Angus&Robertson (0.81). Other Web sites have a moderate and consistent performance in “Access to Customer Support”, but a rather low score for the “Performance of Customer Support”, particularly for McGills (-0.11) and QBD The Book Shop (0.13). Most of online book shops assessed provide adequate information on how to obtain help online, except for McGills. McGills does not explicitly offer online help and does not provide any specific contact numbers to assist online customers. This provides an explanation on why it received the lowest score for both categories in this phase. By contrast, Dymocks provides a comprehensive list of email addresses of staff members who can assist customers in various problem areas and, therefore, received a very good rating in this phase.

None of the criteria in the Community Component is considered important by the assessors and, therefore, it is not worth exploring the results further in this category. For the Final Section, several criteria are considered important, including “Availability of the System” (rated at 1.73), “Design of the User Interface” (1.59), “Increasing Productivity by Gaining Time” (1.12), “Trustworthiness of the Business Partner” (1.27) and “Trustworthiness of the Website” (1.36). Most of the Web sites evaluated received a high

score which is above 1.00 for the “Availability of the System”, except for McGills (scored at 0.40). The assessors are not satisfied with the design of the user interface of most of the Web sites, particularly Dymocks and QBD The Book Shop, which are rather complex and confusing. The results in the other four criteria vary considerably and most of the Web sites do not receive a good score. Only Angus&Robertson and Booktopia appear to have a consistent performance across the criteria. The assessors, particularly, were not satisfied with the design of the user interface of Dymocks (rated at -0.13) and the productivity gain from McGills (rated at -1.12). This is consistent with the fact that the design of the ordering procedure of both sites is unclear. Not surprisingly, for the “Trustworthiness of the Business Partner” and “Trustworthiness of the Web Site” criteria, Angus&Robertson (scored at 1.09 and 1.10, respectively) and Dymocks (scored at 0.64 and 0.84), two of the largest Australian bookshops, received a higher rating than the Best Practice Company (scored at 0.64 and 0.84).

Figure 4 compares the strategy evaluations for the Best Practice (Booktopia), Worst Practice (Reader’s Refuge) and Sector Profiles. Ideally, the evaluation result for each category should lie on or above the diagonal as shown in the figure. The figure shows that for the Best Practice Company, the results of the assessment in all categories lie very close to the diagonal, although most of them are slightly below the diagonal, except for the Community Component. In addition, all results are in the “Maintain Strategy” grid. This suggests that Booktopia has a satisfactory performance in all categories, as the users’ expectations meet the actual assessment. The fact that the result for the Final Section is the farthest from the diagonal indicates that there is an opportunity for improvement across various criteria assessed in this category. The figure also shows that although the Community Component of Booktopia was rated quite low at 0.40, the result on the evaluation grid actually lies above the diagonal. This is because the Community Component is not considered to be important by the assessors and, therefore, the current performance of the Community Component of Booktopia meets the expectation of users in general.

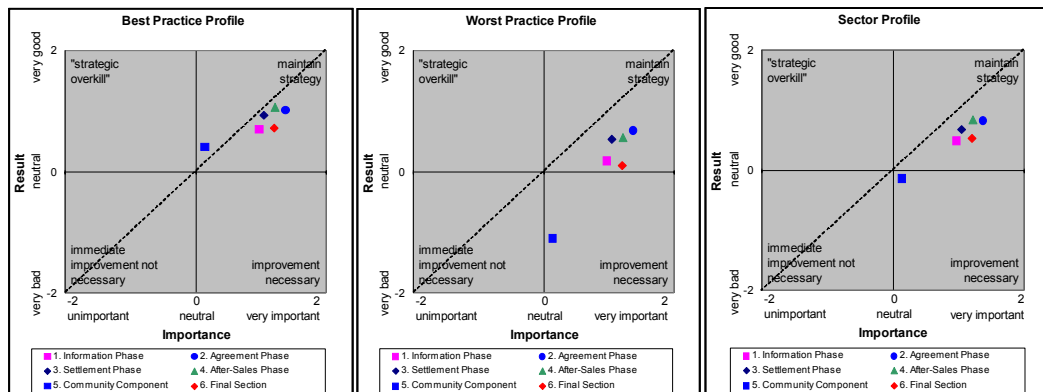


Figure 4: Strategy evaluation for the best practice, worst practice and sector profiles (Australia)

For Reader’s Refuge, the company with the worst Web site performance, the evaluation strategy indicates the need for improvement in many categories, particularly for the Community Component, since the result lies far below the diagonal and it is within the “Improvement Necessary” zone. For other categories, although the results are still within the “Maintain Strategy” zone, they are actually quite far below the diagonal. In regards to the Sector Profile, Figure 4 depicts that the overall results are better than Reader’s Refuge

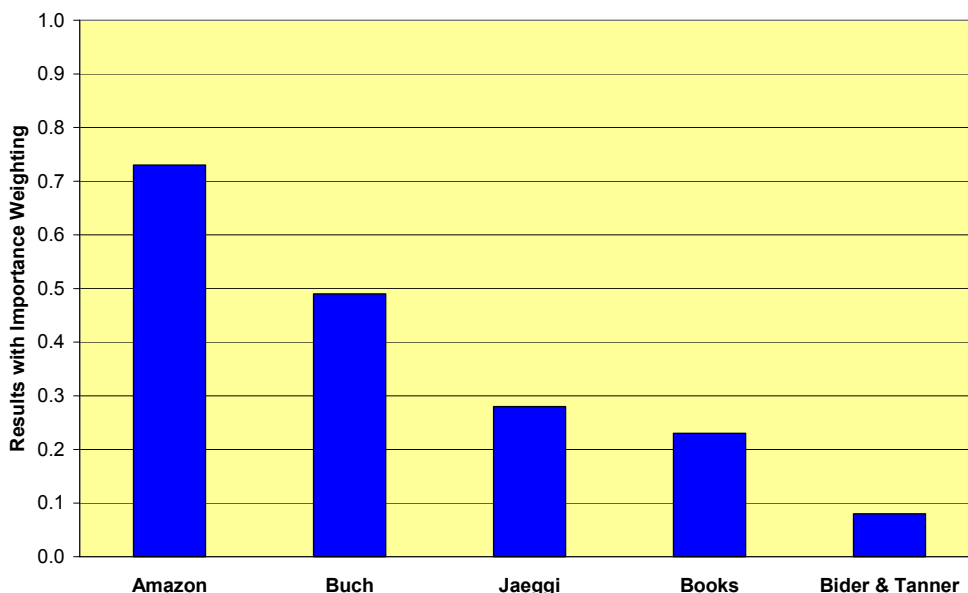


in all aspects, but there are opportunities to improve the performance in various categories.

In summary, the results of the Australian study reveal that the majority of the Australian Web sites in the book industry sector still lack of sophistication in many aspects. The two largest Australian bookshops, Angus&Robertson and Dymocks, have a reasonable performance in many categories assessed in this study. The results also demonstrate a strong competition between these two largest bookshops and Booktopia, the Best Practice Company, in terms of their Web site performance. While as a pure player, the Best Practice Company does not obtain as much trust from consumers as the two largest companies do, its overall performance outweighs Angus&Robertson and Dymocks, as revealed in this study. However, none of the Web sites can offer price benefits satisfactorily to consumers at this stage. Other Web sites assessed need to improve their performance in many aspects in order to be competitive as they are still far behind the performance of the Best Practice Company and the two largest bookshops in Australia.

### 3.2 Swiss Results

Five online bookshops were included in the Swiss part of the study as shown in Table 1. Figure 5 shows the summary of the overall evaluation of these five Web sites. The figure indicates that Amazon, which is one of the pure players, appears to be the best Web site, followed by Buch, which is also a pure player. By contrast, the other bookshops, which also run a brick-and-mortar store, namely Jaeggi, Books and Bider & Tanner, received much lower scores. The Web site of Bider & Tanner, one of the biggest local bookstores in Basel, received the worst result. Amazon came out as the Best Practice Company not only in the Swiss study but in the overall study including Australia.



*Figure 5: Summary of the overall Web evaluation (Switzerland)*

Figure 6 further shows the Web evaluation result in each phase for all Swiss Web sites. Consistent with Figure 5, Figure 6 indicates that the Best Practice Company, Amazon, was rated higher than other Web sites in all phases, except for the After-Sales Phase.

Particularly, Amazon appears to have a strong performance in the Final Section (scored at 1.23), Information Phase (scored at 0.96), Agreement Phase (scored at 0.76) and Settlement Phase (scored at 0.70). Amazon has a shortcoming in the After-Sales Phase (scored at 0.63). In this phase Buch and Jaeggi reached higher results (scored at 1.07 and 0.96, respectively). The latter shops reached similar scores in the Agreement Phase, After-Sales Phase and in the Community Component, but Buch with slightly better results. In the other phases, Buch scored higher with roughly 0.3 points. As indicated in the figure, the assessors are generally not satisfied with the Community Component of all the Web sites evaluated. Only Amazon received a positive score of 0.13. Bider & Tanner, the worst Web site in this study, shows an acceptable performance only in the Agreement Phase.

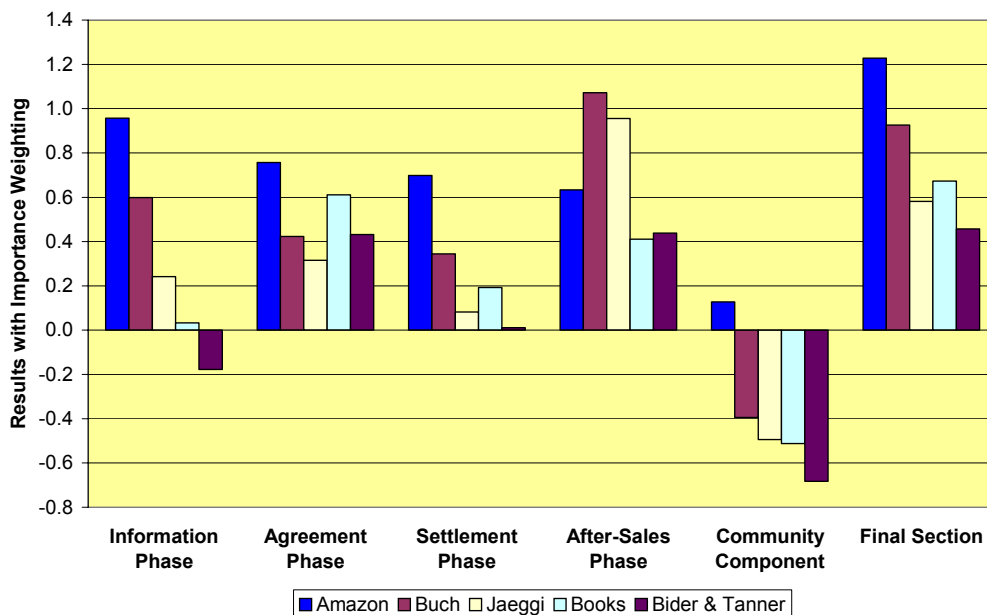


Figure 6: Summary of the company profile (Switzerland)

For the Information Phase, the criterion “Structure of the Contents” is considered to be the most important (rated at 1.81 for its importance). Buch reached the best result for this criterion (1.49). The Best Practice Company Amazon scored at 1.02, the worst case Bider & Tanner only reached 0.51. The second criterion in the importance rating is “Accessibility of the Web Site and Products” (rated at 1.75 for its importance). Here, Amazon reached 1.88 and Buch 1.29. Another important criterion is the “Quality of the Content”, which was rated at 1.63 for its importance. The leading companies show similarly good results of 1.10 (Amazon) and 0.96 (Buch). The other three companies showed a worse performance rated at 0.54 (Jaeggi), 0.49 (Books) and -0.28 (Bider & Tanner).

In their comments (qualitative evaluation), the assessors pointed out the strength of the accessibility of the products of Amazon. All products can be easily found despite the vast product range. Categories, subcategories and a search function facilitate the product search. Product recommendations as well as reviews and lists of favourites provided by other customers support the selection of products. Hypermedia are profitably used, particularly with the option to listen to CD tracks. In the case of Buch the assessors emphasized the accessibility of the Web site and the clear structure of contents, categories and subcategories.

For the Agreement Phase, the criterion “Design of the Ordering Procedure” (rated at 1.44) seems to be of much more importance than the criterion “Models and Methods of Pricing” (rated at 0.40). Prices for books in Switzerland are legally binding – the vendor is not free to set his own prices. This explains the low rating for pricing models and methods. Regarding the design of the ordering procedure, Books reached the best result (1.32), followed by Buch (1.03). The other bookshops received disappointing results of 0.64 (Bider & Tanner), 0.61 (Amazon) and 0.46 (Jaeggi).

The ordering procedure of Books seems to be muddled at first sight but after a short time of orientation the ordering procedure proves to be clearly structured, fast and efficient. The ordering procedure of Buch describes what to do step by step. To go back during the process is always possible. In view of the fixed prices in the Swiss book sector, additional shipping costs are not appreciated by the customers.

For the Settlement Phase, the criteria “Integration of EC Applications” (rated at 0.43 for its importance) and “Tracking and Tracing” (rated at -0.73) are two criteria deemed not very important by the Swiss assessors. This stands in contrast to the Australian rating. In Switzerland, the most important criterion in the Settlement Phase is the “Integration of Generic Services”. Amazon reached the best result (1.15), followed by Books (0.96) and Buch (0.78).

Regarding the “Integration of Generic Services”, the assessors appreciate variety. Amazon offers different payment systems, e.g. payment on invoice, credit card and direct debit. Shipment of products is possible in different ways, e.g. normal shipment and express shipment (DHL). Buch additionally offers pickups points in cooperating bookstores which the customer can visit and get the books himself (for free).

For the After-Sales Phase, the Swiss results indicate that the “Performance of Customer Support” is considered more important than “Access to Customer Support”. These criteria rated at 1.00 and 0.56, respectively. For the former criterion, Buch reached the best result (1.28), followed by Amazon and Jaeggi (0.98). For the latter criterion, Jaeggi and Buch reached satisfactory results of 0.94 and 0.87, respectively. By contrast, the Best Practice Company, Amazon, obtained the worst result and only scored at 0.29.

Regarding “Customer Support” assessors again appreciate variety. The customer support of Jaeggi and Buch is accessible via an online contact form, email, letter, phone and fax. The customer support of Amazon is only accessible via an online contact form and email. Mails from Amazon cannot be answered directly by the customer (invalid email address). This fact hampers the dialog with Amazon.

As already seen in the Australian results, none of the criteria in the Community Component is considered important by the assessors. Nevertheless, it is worth mentioning that Amazon is the only bookshop which offers community functionality. The criteria “Access to a Virtual Community”, “Profiting from Relations in the Community” and “Benefiting from Content Available in the Community” rated between 0.27 and 0.1. The assessors considered “Profiting from Relations in the Community” as the most important criterion in this group (rated at -0.23).

A closer look at the community functionality of Amazon shows that the main advantage for the customer arises from reviews and ratings of other customers as well as from recommendation systems based on collaborative filtering. The customers themselves have no close relations and do not generate additional value (e.g. customer empowerment).

For the Final Section, the same criteria as in Australia are considered important, including “Availability of the System” (rated at 1.57), “Design of the User Interface” (1.31), “Increasing Productivity by Gaining Time” (1.38), “Trustworthiness of the Business Partner” (1.56) and “Trustworthiness of the Website” (1.69). In Switzerland, all Web sites evaluated received a high score above 1.00 for the “Availability of the System”.

Regarding the criterion “Design of the User Interface”, the assessors preferred the Web site of Buch (1.29), followed by Jaeggi (0.88) and Amazon (0.77). A clear effect of an increasing productivity was seen only in the case of Amazon (1.39) and Buch (1.24).

From the assessors’ point of view, Buch has the best user interface. The assessors appreciate its ease of use, clarity, speed and availability. This is also valid for Jaeggi. At Amazon, outstanding personalization and recommendation features attract customers.

The criteria “Trustworthiness of the Business Partner” and “Trustworthiness of the Web Site” are the most important of all 26 criteria measured. For these criteria, the highest rating was received by Books, the online business of the Swiss bookstore Orell Füssli (scored 1.71 and 1.56, respectively). Orell Füssli runs physical bookstores in several Swiss cities. Amazon also reached high scores of 1.34 and 1.65 for these two criteria. Although a pure online player, Amazon has become a known brand over the last years. Jaeggi, another bookstore which runs physical stores in Switzerland, also obtained very good results of 1.37 and 1.41. The other two bookshops Bider & Tanner (0.96 and 1.28) and Buch (0.95 and 1.15) received moderate but still good results.

Figure 7 compares the strategy evaluations for the Best Practice (Amazon), Worst Practice (Bider & Tanner) and Sector Profiles. The figure shows that for the Best Practice Company, the results of the assessment in all categories lie above the diagonal. This means that the expectations of the users are exceeded. In addition, all results are in the “Maintain Strategy” grid, except the Community Component. From the point of view of the Swiss assessors, the community functionality is more prevalent on the Web site than would be required looking at the importance ratings. Amazon is clearly over-performing in the community area.

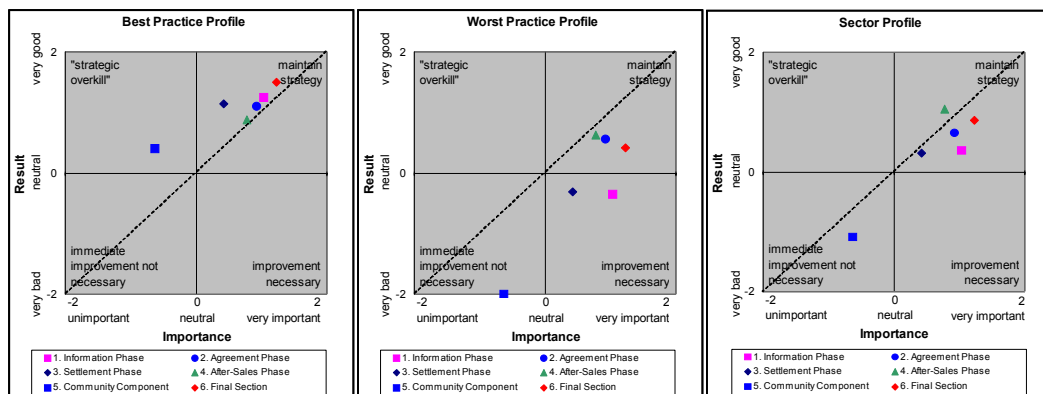


Figure 7: Strategy evaluation for the best practice, worst practice and sector profiles (Switzerland)

For Bider & Tanner, the company with the worst Web site performance, the evaluation strategy indicates the need for improvement in many categories, particularly for the Information Phase and also for the Settlement Phase. The results in these two categories are below the diagonal and are thus within the “Improvement Necessary” zone. For the Final Section, although the result is still within the “Maintain Strategy” zone, it is actually quite far below the diagonal and therefore it indicates an opportunity to improve the performance. For the Community Component, we see a very bad result, but because of

the low importance of the Community Component in the book sector, an immediate improvement is not necessary.

With regards to the Sector Profile,

Figure 7 shows that the overall results represent a very high maturity of the evaluated Web sites in the book sector. The results of all categories are located near the diagonal. The most improvement could still be achieved in the Information Phase.

In summary, the results of the Swiss study reveal that the majority of the Swiss Web sites in the book industry sector have a satisfactory performance and meet the customers' needs. As in Australia, the Best Practice Company (Amazon) is a pure player and does not obtain as much trust from consumers as the online shop (Books) of traditional Swiss bookstores. Regarding the potential for improvements, several criteria were identified which could be improved – even in the case of the Best Practice Company. The online shop of Bider & Tanner, a local bookstore in Basel, will need more improvement to be competitive as it is still far behind in terms of performance compared with the other bookshops.

### 3.3 Comparative Analysis of the Bookshops in Australia and Switzerland

Although Australia and Switzerland differ in many respects, the results of the study demonstrate that consumers' expectations (importance ratings) regarding online bookstores are rather homogenous in both regions (cf. **Error! Reference source not found.**). The analysis of the importance ratings indicates that the expectations vary among the different phases and components of the transaction process. Other studies showed that these ratings also vary between different industries (Schubert/Dettling 2001). In order to improve the design of a Web site it could be useful to analyze the importance rating in the relevant sector and concentrate design activities on the most important phases or on specific criteria.

*Table 2: Importance ratings in Australia and Switzerland*

Phase/Component	Australia	Switzerland
Information	0.98	1.03
Agreement	1.37	0.92
Settlement	1.05	0.42
After Sales	1.22	0.78
Community	0.14	-0.63
Final Section	1.21	1.23

In comparing the two countries, there are a couple of observations which we would like to point out.

#### *Pure online players show the best performance in the online environment*

In Australia, Booktopia, which is one of the pure players, was perceived as the best online book store. In Switzerland, Amazon, which is the most famous pure player worldwide, was rated as best practice profile. It was followed by Buch, which is also a pure player.

Table 3: Overall results for each Web site

Australia		Switzerland	
Online Book Stores	Overall Res.	Online Book Stores	Overall Res.
Booktopia	0.64	Amazon	0.73
Angus&Robertson	0.52	Buch	0.49
Dymocks	0.46	Jaeggi	0.28
Techbooks	0.36	Books	0.23
McGills	0.31	Bider und Tanner	0.08
QbdTheBookShop	0.29		
Readersrefuge	0.20		

*Brick-and-mortar companies enjoy a higher level of trust*

Well-known brick-and-mortar players are more trustworthy than pure online players. Amazon is an exception because the company has managed to build up a known brand over the last years. In the Swiss study the two criteria for trust were most important for the assessors. The Australian best practice business is a pure player and does not obtain as much trust from consumers as the two largest brick-and-mortar companies.

*Community features are only a nice to have feature for many assessors but seem to be a valid means to attract customers*

None of the criteria in the Community Component is considered important by the assessors in both countries. Along the same line, the assessors were generally not satisfied with the Community Component on all the Web sites evaluated. Only Amazon received a positive score of 0.13. Amazon demonstrates that recommendations based on collaborative filtering represent a service that attracts customers. Assessors mentioned in their qualitative remarks that they are not interested in contributing to the community but rather browse the Web site for information.

*Fulfilment is particularly important in online sales*

The study shows the importance of the smooth support of the fulfilment process. Payment and logistics are still critical aspects of online sales processes. Many of the online bookshops assessed offer limited options of payment. Amazon is a role model in offering a variety of different payment systems, e.g. payment on invoice, credit card, and direct debit.

The additional shipping costs still prevent many customers from buying online. Shipment of products needs to be comfortable for the user. An interesting approach is the provision of pickup points (e.g. offered by Buch) where customer can go and get the books themselves. Pickup points also accept cash payment and are thus a solution for both, delivery and payment.

*The level of maturity is advancing but there is still room for improvement*

This study indicates that online bookstores in Australia and Switzerland still show room for improvement. The bookshops in both countries have reached a similar degree of maturity (cf. Table 3). Nevertheless, the Swiss Web sites were judged to have a “satisfactory performance and to meet the customers’ needs” whereas the Australian assessors found that “the majority of the Australian Web sites in the book industry sector still lack of sophistication in many aspects”.

#### **4. Final Remarks**

Web assessment is very ambitious and labour-intensive work. There are a number of requirements that the assessors have to meet in conducting a Web assessment using the EWAM tool:

1. They need to fully understand the criteria of the Web assessment form and thus must be thoroughly instructed.
2. They must be experienced Web users.
3. They must take the time to go through all four transaction phases for each Web site assessed (including delivery and payment!).

An empirical study with a limited sample set, such as this current study, can only reflect a partial and somewhat biased picture of current practice in the two sectors. The bias exists because the students share similar opinions of e-commerce and they are homogeneous (since they attended the same electronic commerce class, their opinions tend to be less universal than if they were hand-picked at random). Furthermore, the participants of this study are not representative of the hundred thousands of Web users in Australia and Switzerland. Nevertheless, since the EWAM tool is a highly knowledge-requiring process, we cannot ask a random sample of people to do the assessments. In addition, although the Web sites chosen for evaluation were not very diverse the number of serious players in the on-line world is still limited. Therefore, the limited number of participants and the Web sites assessed in this study should not invalidate the findings obtained. These findings have been confirmed by the subsequent qualitative evaluations as described in this paper.

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