

Double force. Applying indicators and qualitative measuring to the public library learning space

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Abstract:

Norwegian statistics generally maintain a high standard. Statistics Norway, is responsible for coordinating all official statistics in Norway. The actual collecting of library statistics, is handled by the National Library of Norway.

The demand for detailed statistics from the library community has been low, but this is slowly changing. In Norway, the county libraries serve as development agencies for public and school libraries in their region. At Buskerud County Library, we believe that to guide and support development as efficient as possible, we have to measure it.

The quantitative values offered by national statistics are weighted towards traditional library operations. This means that they barely touch upon the role of public libraries as learning arenas, which has been our main focus in this project. Buskerud County Library seek to improve the public library as a learning space. In order to measure the level and quality of change, we adopted and customized a well-known talent management tool, called the Performance-Potential Matrix. The result was the Buskerud Measuring Model. Testing our model, we discovered that the numeric results relied too much on the qualitative descriptions used in the process. We knew we needed to integrate more quantitative data in the measuring process if we were to raise the quality of the test results.

By combining our qualitative definitions with the quantitative data of the national statistics and indicators, we will get a better and more extensive knowledge base to support a continuous development of the library. This paper describes the use of the Buskerud Measuring Model on public library as a learning arena, and discusses how to implement the national statistics and indicators into the process.

Keywords: Measuring, indicators, learning, statistics,

1 BACKGROUND

The advance of the knowledge society rapidly changes the services libraries should provide. The libraries are under pressure from new digital media and the library users' changing usage patterns. The libraries are changing in order to take on new roles and services. Facilitating new forms of learning are one important role for the libraries. The English summary of the Danish report "The Public Libraries in the Knowledge Society" emphasizes the importance of lifelong learning and the role of the public libraries:

Lifelong learning becomes a strategically decisive factor to which the library can contribute in new ways. The library can support a positive societal development by on the one hand contributing to the digital information resources being exploited to the full, and on the other hand by creating an informal, open learning, inspiration and meeting place that encourages the public to personal development and societal commitment. (Danish Agency for Libraries and Media, p. 6, 2010).

Norway, with its 5 million inhabitants, has a scattered population with many small communities. About half of the Norwegian employees participated in non-formal education within the last year according to Statistics Norway. The widespread population makes distance learning especially important. The public libraries in Norway can play an important role as facilitators for lifelong learners. But how well prepared are the libraries to provide service to this user group? That is one of the questions the Buskerud Measuring Model aim to provide an answer to.

2 THE FOUR-SPACE MODEL

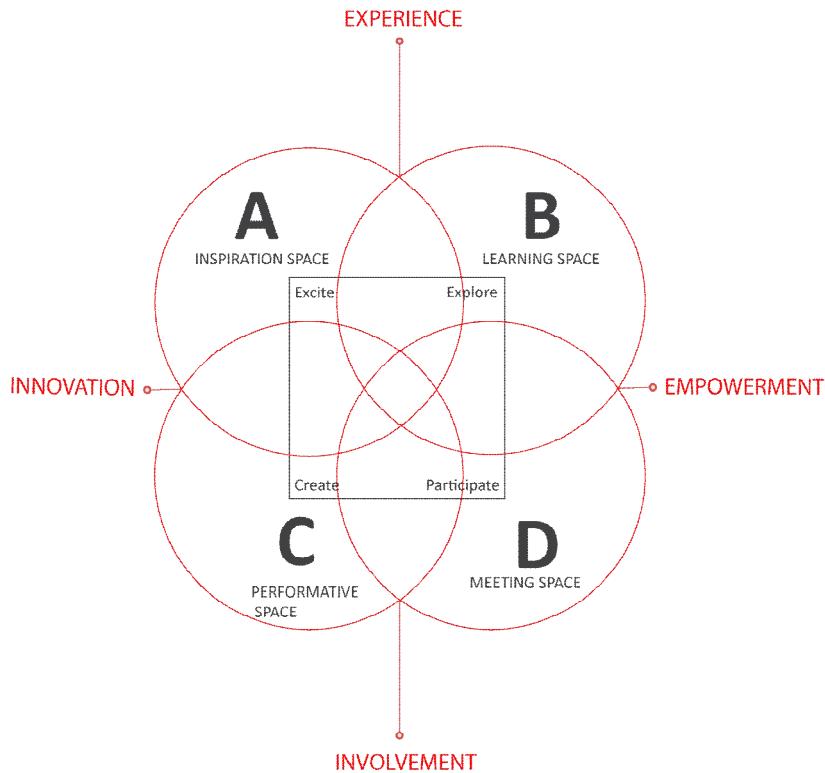


Fig. 1: The Four-space model

The Danish report from 2010, “The Public Libraries in the Knowledge Society” has made an impact in Norwegian library development and innovation. For the past three years it’s been used for both inspiration and prioritizing in library development.

The report presented a revised model for the library space, both physical and virtual, called the Four-Space model. The model outlines the library’s functions through a division into an inspiration space, a learning space, a meeting space and a performative space.

The learning space is particularly important for experience and empowerment. Learning in libraries is always an available service to all users. Learning comes in different shapes and forms as play, artistic activities, courses, lectures and many more (Jochumsen, 2012). In an article from 2012, Jochumsen and co-authors describe the advantages libraries have as learning space:

Learning is seen as a dialogue-oriented process that takes its point of departure in the user's own experiences and their wish to define their own learning needs and, not least, that it takes place in an informal environment (Jochumsen, p. 591, 2012).

3 THE NEED FOR LEARNING SPACES AND STANDARDS. INTRODUCING THE BUSKERUD MEASURING MODEL

Norway’s public libraries are facing significant and increasing challenges to provide satisfactory services to a wide range of students who use their local library and its facilities. Buskerud County is no exception. As an example, a survey of 32 students between the age of 18-45 conducted in the Drammen public library showed that they studied 15 different subjects belonging to 19 different institutions. One third was attending upper-secondary school as adults and two thirds were attending college or university.

In order for the public libraries to better meet the complex needs of this diverse user group, Buskerud County Library wanted to investigate what the different types of learning requires and how the public library can face these challenges. We had long been interested in working with standards, and partly inspired by the Michelin guide for restaurants, we decided upon constructing a model for measuring the public library as a learning arena. The result of this work was the Buskerud Measuring Model (BMM).

The Buskerud Measuring Model builds upon a rather well-known two-axial measuring model, known as the Potential/Performance matrix:

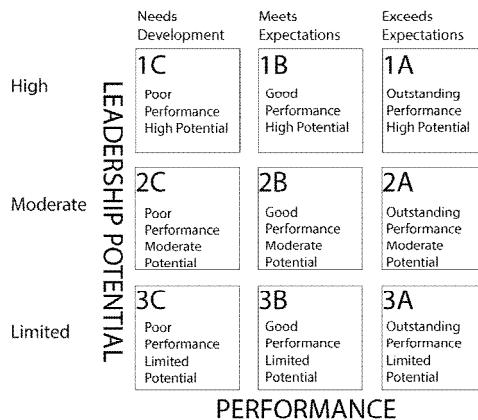


Fig. 2: The Original Potential/Performance Matrix

While the P/P-matrix is most often used for measuring the potential and performance of each employee in an organization or company, The Buskerud Measuring Model focuses not on the individual, but on the institution (the library) itself.

4 THE BUSKERUD MEASURING MODEL, STEP BY STEP

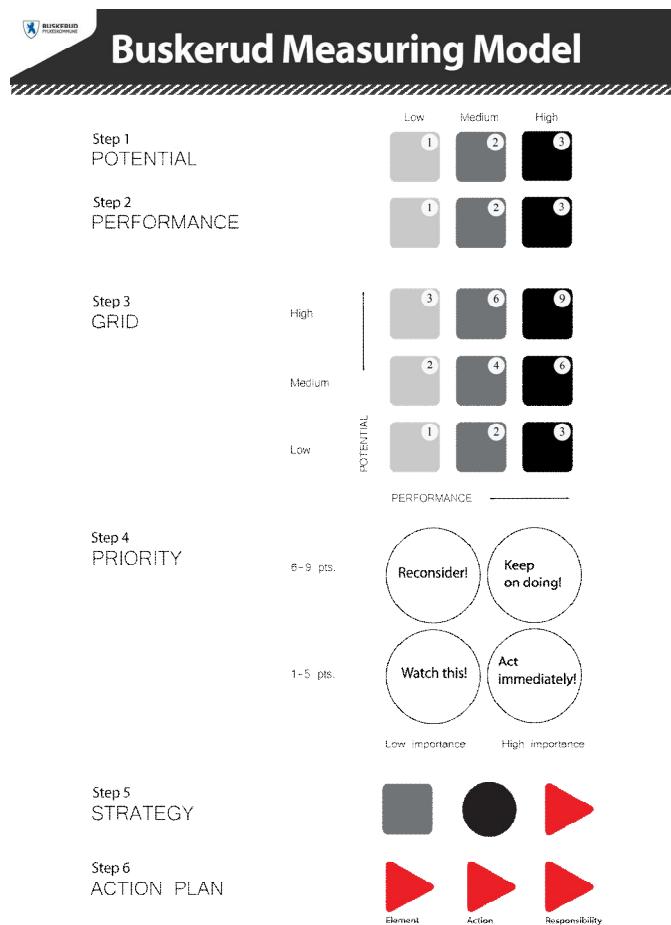


Fig. 3: The Buskerud Measuring Model

Hierarchy of terms

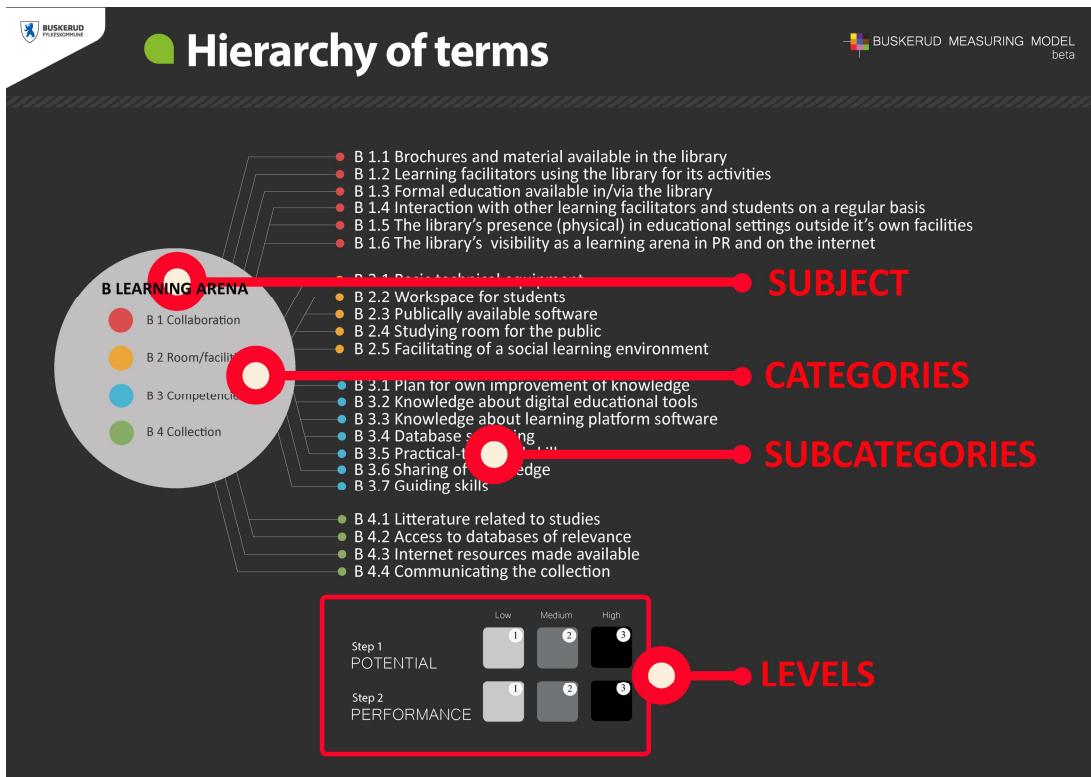


Fig. 4: The Buskerud Measuring Model: Hierarchy of terms

4.1 Introduction to Step 1 – Potential

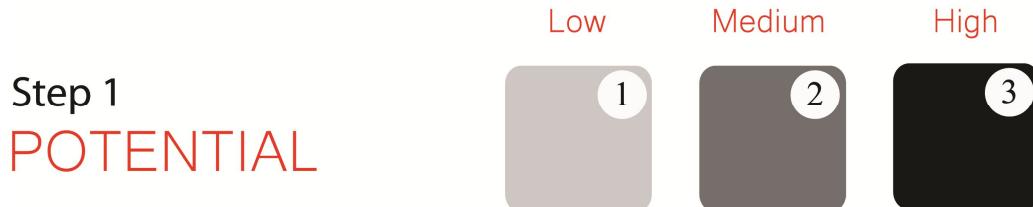


Fig. 5: The Buskerud Measuring Model: Step 1 - Potential

A High Potential can be described as an almost unreachable state, which still can be reached if all circumstances and effort are at their best. Sometimes, the circumstances make it too hard or impossible to reach the state of high potential. There will always exist factors outside the library that the library can't influence. That is when we describe the potential as medium - or low potential.

As seen in the illustration (Fig. 5), the potential is graded into three levels. These are Low-, Medium- and High Potential. As shown in the hierarchy of terms (Fig. 4), each subcategory is to be given the value of one of the levels Low-, Medium- or High Potential. To be sure that the measure of a subcategory is as correct as possible, the accuracy of the definitions that describes each level is of high importance.

4.2 Introduction to Step 2 – Performance



Fig. 6: The Buskerud Measuring Model: Step 2 - Performance

The categories and subcategories are the same for performance as for potential within each subject. Using the definitions of performance, the library can measure and thereafter improve its own performance. While the definitions of levels of potential are created mostly on a qualitative basis, we want the definitions of performance levels to rely more on quantitative measures to assure a higher accuracy of the measuring results.

Performance is also graded in the levels Low-, Medium and High Performance. Performance definitions are prepared in compliance with the definitions of potential within the same subcategory.

The graded measuring of performance results in both information on minimum practice, as well as definitions of “best in class” within each subcategory.

4.3 Introduction to Step 3 – Grid

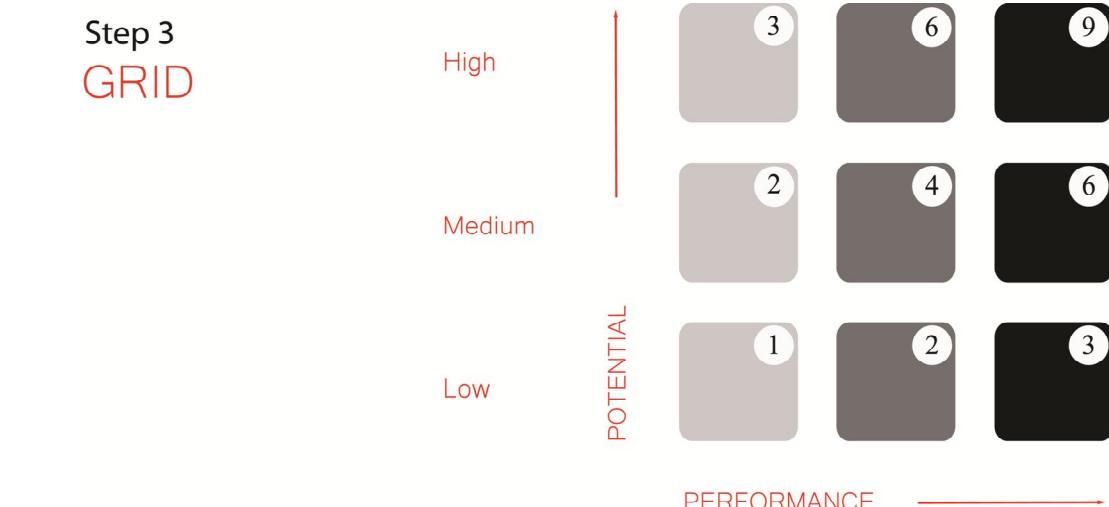


Fig. 7: The Buskerud Measuring Model: Step 3 – Grid

While Step 1 - Potential and Step 2 - Performance call for rather complex and time-consuming work on defining and grading the library, Step 3 - Grid, is more straight forward. The Potential and Performance scores of each subcategory are mounted onto either the vertical (potential) or horizontal (performance) axis of the grid.

By plotting the different sub-categories into the frames of the grid where they belong, their combined (multiplied) scores of Step 1 - Potential and Step 2 - Performance appear. Adding scores from each subcategory from the grid will show the result of the library's total score

within a category. Furthermore, adding the scores from the different categories' results in a total score for a whole subject, in our case, the Learning arena.

Step 3

GRID

Pre-measurement: Subcategories
Drammen library, August 2012 TOTAL SCORE: 25 / 63

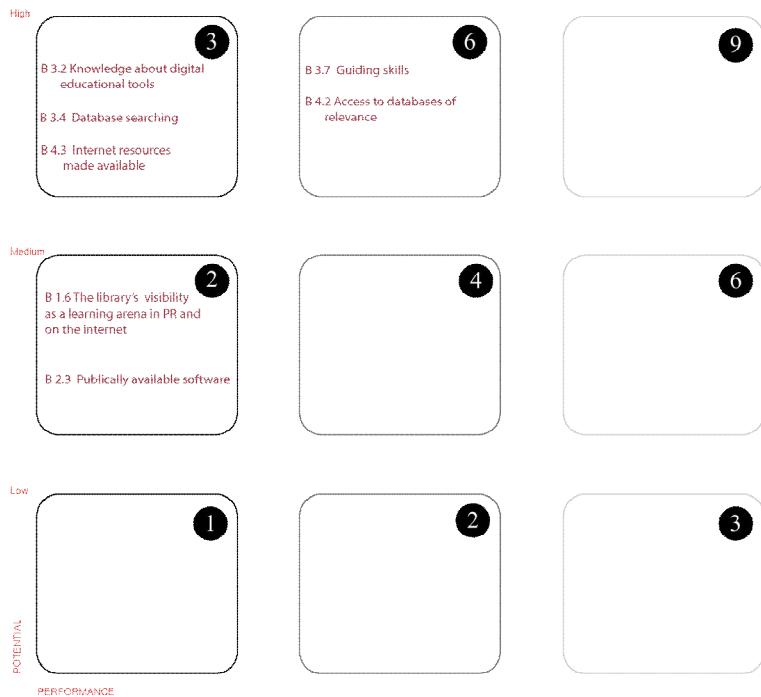


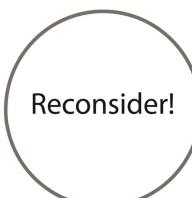
Fig. 8: The Buskerud Measuring Model: Step 3 – Grid –in use

4.4 Introduction to Step 4 – Priority

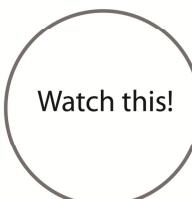
Step 4

PRIORITY

6–9 pts.



1–5 pts.



Low importance

High importance

Fig. 8: The Buskerud Measuring Model: Step 4 – Priority

The library will have to prioritize in which categories and sub-categories it wants to work to achieve a High Performance. Step 4 - Priority is about choosing which of the subcategories and/or categories you want to improve. On the basis of the scores from Step 3 - Grid, the

prioritization will not only rely on what you consider to be the most important, but also include information about the status of your library's performance, whether it is good or poor. This means that just as Step 3 - Grid, Step 4 - Priority uses two axes to deepen the task of prioritization. The vertical axis tells us how the library scores on each subcategory, and the horizontal axis shows whether a subcategory is considered to be of high or low importance to the library.

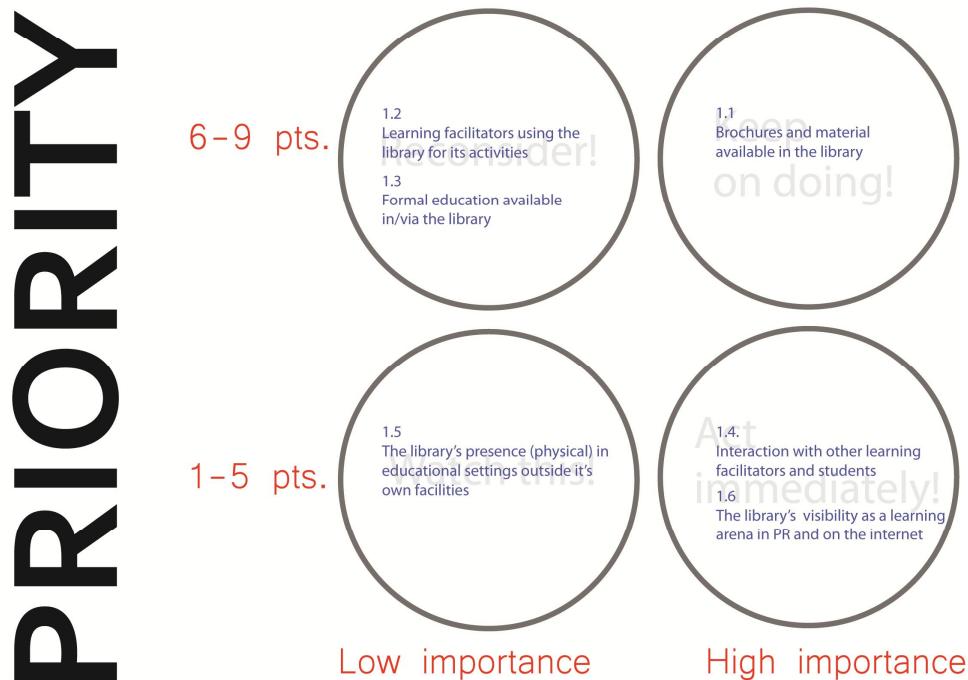


Fig. 9: The Buskerud Measuring Model: Step 4 – Priority –in use

4.5 Step 5 – Strategy, Step 6 – Action Plan



Fig. 10: The Buskerud Measuring Model: Step 5 – Strategy

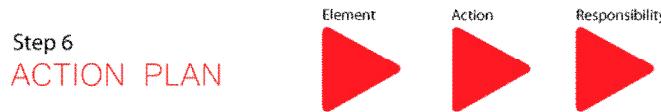


Fig. 11: The Buskerud Measuring Model: Step 6 – Action Plan

The Buskerud Measuring Model's last two steps are Step 5 - Strategy and Step 6 - Action Plan. These two steps were necessary to include in the BMM to complete the full circle. As a county library we want to offer complete solutions, as there are many of the libraries in our region that miss a strategy and an action plan to guide them in their daily work. The libraries

which already have a strategy can use the results from the BMM to supply their existing strategy with vital information needed for an action plan.

5 THE ELEMENTARY PARTICLES. DEFINING A PUBLIC LIBRARY LEARNING AREA

In our work with the public library as a learning arena, we first focused on dividing the public library's different roles into four different subjects, with Learning Arena being one of them.

Naturally, the background for this division was the Four-Space model presented in the Danish report "The Public Libraries in the Knowledge Society" (Danish Agency for Libraries and Media, 2010). As already shown, the Four-Space model operates with a broad definition of the concept of learning in the public library. The BMM's concept of Learning Arena however, takes on a narrower definition than that of "Learning Space" in the Four-Space model. In our Learning Arena we have a defined target group, which are students attending upper-secondary school, university or college. To achieve even more measurability, we have sought to divide the term "Learning Arena" into even smaller and more tangible entities. This has left us with the hierarchy of terms as illustrated earlier (Fig. 4), and yet another quadripartite:

B: LEARNING AREA

B1: Collaboration B2: Room/Facilities B3: Competencies B4: Collection

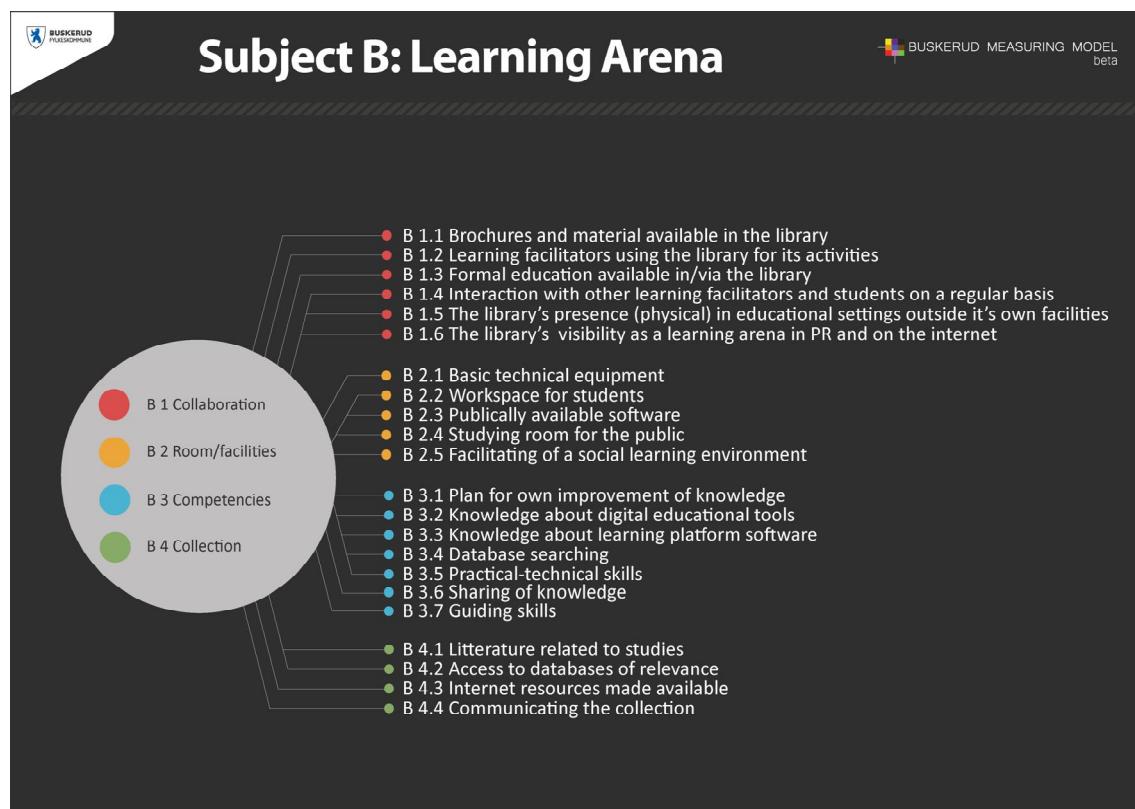


Fig. 12: The Buskerud Measuring Model: Categories and subcategories of the Learning Arena

Each subcategory is followed by three definitions for potential and three for performance. With 22 subcategories this leaves us with a total of 122 level definitions. The definitions are not yet meant to be universal or to be seen as a national standard for the public library as a

learning arena. They are mainly developed to fit the needs of the libraries participating in the local testing of the model. Still, the definitions can serve as a starting point for other libraries who want to try the BMM in developing their institution.

6 EXPERIENCES WITH USE OF THE MODEL IN TWO PUBLIC LIBRARIES

Our model was first presented in a manual that was published in the fall of 2012. The model was, and still is, a beta product. Consequently the version presented in the manual is under continuous development. The general response to the manual, along with the input from the two project libraries Ål and Drammen, gave us useful advice on how to improve the model.

The public libraries of Ål (4.700 inhabitants) and Drammen (65.000 inhabitants) tested the Buskerud Measuring Model as presented in the 2012 manual. The two libraries did not test the full range of the model's Learning Arena within the project period. Ål public library concentrated on B4: Collection, while Drammen public Library composed its own selection of subcategories.

Ål library commented that the model graphics were a bit hard to grasp, as they differed from a traditional linear way of thinking. Ål library found the definitions of the subcategory-levels to be the most challenging about the model. What they found, was that not all the contents of the level definitions necessarily fitted their library. So, while they managed to place the library in either the low, medium or high level without problems, they would like to see the definitions being more accurate. On the other hand, as Ål library commented, that would mean that a lot more variables having to be added to the definitions. Ål's conclusion was that "The project has helped the library to develop the collection to facilitate one of our increasingly active user groups. The model itself has - unfortunately - not been used very much as a process tool in the project." This was due to the model being too demanding to easily blend in along with other daily tasks.

Drammen described working with the model as "exciting, but demanding". Drammen had problems with grasping the term "potential", and was, like Ål, puzzled sometimes by the rather wide approach of the definitions. They sometimes felt that the gap between the levels was too large, and improvement hard to obtain. Drammen reported that the Buskerud Measuring Model's "key to success" lays in well composed level definitions.

Both libraries did actually obtain a higher score when they measured themselves after using the model, but we want to use their important input to improve our model right away.

In this paper, we have chosen to concentrate the improvement process to the following areas:

- **Integration of quantitative data.** Increasing the presence of quantitative data in the model by integrating the official set of national indicators for public libraries in Norway. By attaching numeric values from the national indicators to the Subcategory definitions, we hope them to become more clear and easier to use for the libraries.
- **User interface.** With its different categories, sub-categories, points and measures, the Buskerud Measuring Model demands quite a lot from its users. We therefore want to make the process of inputting data to be as free of friction as possible.

7 INTRODUCTION TO NATIONAL STATISTICS AND INDICATORS FOR PUBLIC LIBRARIES IN NORWAY

The National Library of Norway is responsible for collecting and publishing national library statistics for all library types. The public libraries collect data on more than 200 variables. A small range of these variables are made available in the national database run by Statistics Norway as a set of 13 indicators. In addition we have statistics generated from the libraries' local systems used for local library development. Many libraries also use the method of counting the traffic in the library to gain additional knowledge of how their users utilize library services.

By the end of 2009, efforts to develop national indicators for Norwegian public libraries were completed. The indicator set consists of a total of 30 indicators that emphasize the role of the libraries as:

- Social institutions
- Learning resources and learning environments
- Centres for literature and culture
- Arenas for cultural diversity

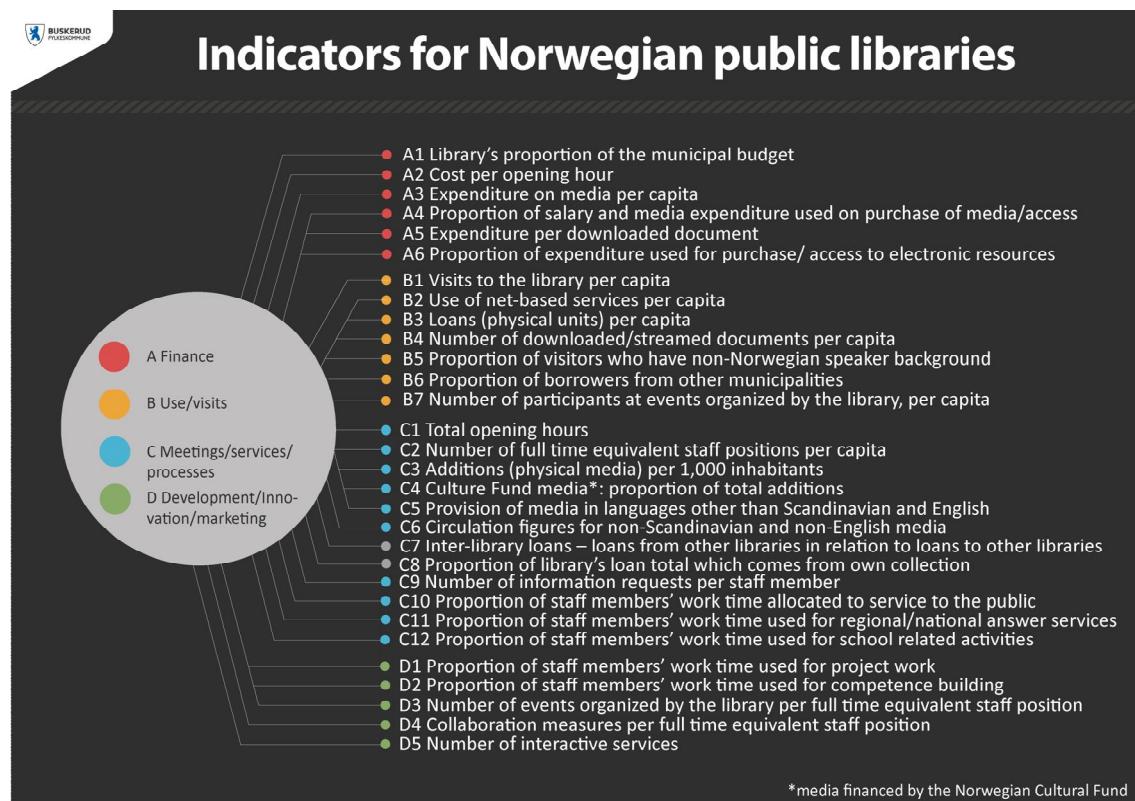


Fig. 13: The 30 National indicators for public libraries in Norway (ABM-Utvikling 2010)

The indicators are partly drawn from existing sources adapted to Norwegian conditions, and partly constructed by the indicator project group. The proposed indicators were published and discussed in an open process and also distributed as a consultation paper in the library field.

The White Paper No. 23 about the Norwegian public library sector (2008-2009) presented in the spring of 2009, expressed the importance of developing robust and adaptable libraries that

can provide all residents good library services. The White Paper strongly emphasized the importance of analysis and statistics.

Unfortunately, the library field sees little use of the indicators so far. There is little debate in the library field about the indicators and it may seem that few librarians know how to put them to use. The National Library of Norway has no incitement for the public libraries to start using the indicators and so far there has been little follow up on the indicators from the national level.

7.1 Integration of quantitative data into the Buskerud Measuring Model

In this paper we have worked with national statistical data from 2011 for the following indicators; *A3. expenditure on media per capita, B1. visits to the library per capita, B3. loans (physical units) per capita, B7. number of participants at events organized by the library*, per capita and *C4. culture fund media per capita*. This is to give an example of the ways in which indicators may be used in the model.

In order to be able to compare similar libraries, it is necessary to divide the municipalities into five different groups according to size. We have chosen to divide into the following groups: +50 thousand inhabitants, +20, +10, +5 and below five thousand inhabitants. Municipalities with less than five thousand constitute more than 50% of all libraries in Norway.

The most relevant correlation we see is between municipal size and number of visits per capita. Number of visits is also an important indicator for libraries as learning arenas. 3,6 visits per capita is the average for libraries with less than 5000 inhabitants. The average in Norway is 4,4 (2011). Smaller libraries will have fewer employees and as a consequence have fewer staff to give relevant guidance and fewer to keep the library open.

C4. Media financed by the Norwegian Cultural Fund, proportion of total additions (2011).
The table below shows the extent to which municipality size is important when it comes to dependency on media financed by the Cultural Fund.

Number of inhabitants	High score 25%	Medium score 50%	Low score 25%
+50 thousand	6-11	15-19	22-32
-5 thousand	6-34	35-60	60-92

The most interesting aspect in this table is the close correlation between the size of the municipality and the percentage score of dependency on the Fund. As a consequence, we risk that the smallest libraries are very similar in their collections without being adapted to local needs. The low score in the smallest libraries also indicates that there is little money to spend on books to users needing learning materials.

We have found that the most relevant national indicators to use along with the BMM are:

1. A3. *Expenditure on media per capita*
2. A4. *Proportion of salary and media expenditure used on purchase of media/access*
3. A6. *Proportion of expenditure used for purchase/ access to electronic resources*
4. B1. *Visits to the library per capita*
5. B2. *Use of net-based services per capita*
6. B3. *Loans (physical units) per capita*
7. B7. *Number of participants at events organized by the library, per capita*
8. C1. *Total opening hours*
9. C2 *Number of full time equivalent staff positions per capita*
10. C3 *Additions (physical media) per 1,000 inhabitants*
11. C4 *Culture Fund media (media financed by the Norwegian Cultural Fund): proportion of total additions*
12. C8. *Proportion of library's loan total which comes from own collection*
13. C10. *Proportion of staff members' work time allocated to service to the public*
14. C12. *Proportion of staff members' work time used for school related activities*
15. D2. *Proportion of staff members' work time used for competence building*
16. D4 *Collaboration measures per full time equivalent staff position*
17. D5 *Number of interactive services*

We first had to choose which indicators are relevant for which subcategories. Since Learning Arena is our main subject, not all of the 30 indicators are of relevance to us. As shown above, we have chosen to include 17 of the indicators that we found to be most useful in supplying the different subcategories with quantitative data.

The indicators and the subcategories are developed separately, and by different bodies, thus the degree of relevance each indicator has for the subcategory it is combined with, will vary.

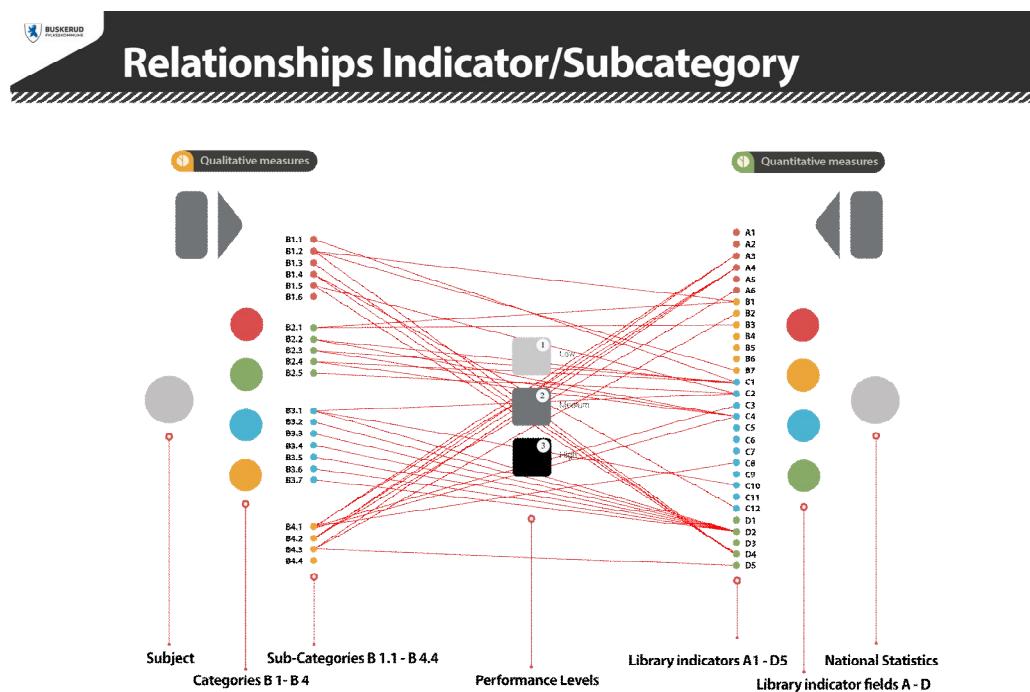


Fig. 14: Relationships between the Buskerud Measuring Model subcategories and the National indicators

In order to say something about the activity of a library we must include both visits and loans. Although these are total figures and include more than the library as a learning arena, the number give an indication of whether this is an efficient and well run library or not. The same applies to the percentage proportion of culture fund media in the collection. A library with a high percentage of culture fund media in the collection, one can assume lack adequate resources in other areas too.

8 . IMPROVING THE BUSKERUD MEASURING MODEL'S USER INTERFACE

There are supposedly many ways of making the model easier to use. Anyhow, the goal must be to make it easier for libraries to understand and use the model and the national indicators, but without losing any of its complexity.

At Buskerud County Library we have always had an extra focus on possibilities that web services can provide. One of the biggest companies that offer different web services is Google Inc. Their Google Forms, included in the Google Drive service, has helped us in achieving the goal mentioned above. By adding the BMM's structure of categories and subcategories to the form, the library can answer the large amount of questions that come with the model one by one.

The screenshot shows a Google Form titled "Buskerud Measuring Model - Learning Arena". At the top, there is a note in red: "*Må fylles ut". Below it, the section title "B4 COLLECTION" is displayed. Under this title, there is a sub-section title "B 4.1 Literature related to studies *". A note below it specifies: "1=LOW (Indicator C3 score: 22-32) 2=MEDIUM (Indicator C3 score: 15-19) 3=HIGH (Indicator C3 score: 6-11)". There are two rows of radio buttons for questions B.4.1.1 and B.4.1.2. For B.4.1.1, the radio button at position 3 is selected. For B.4.1.2, the radio button at position 2 is selected. At the bottom left are "Tilbake" and "Fortsett" buttons. At the bottom right, there is a note: "Dette innholdet er ikke laget eller godkjent av Google." and logos for "Drevet av Google Drive".

Fig. 15: Google Forms

We are surprised to see how much more inviting the use of the model becomes when presented with Google Forms, even when we have combined with all the additional information from the national indicators. In our opinion, this method of presentation should be considered to help libraries work with indicators in general as well.

Google generates graphical statistics from the answers given in the form. In our example (Fig. 16), the total score of each category is shown, together with the total for the subject (Learning Arena).

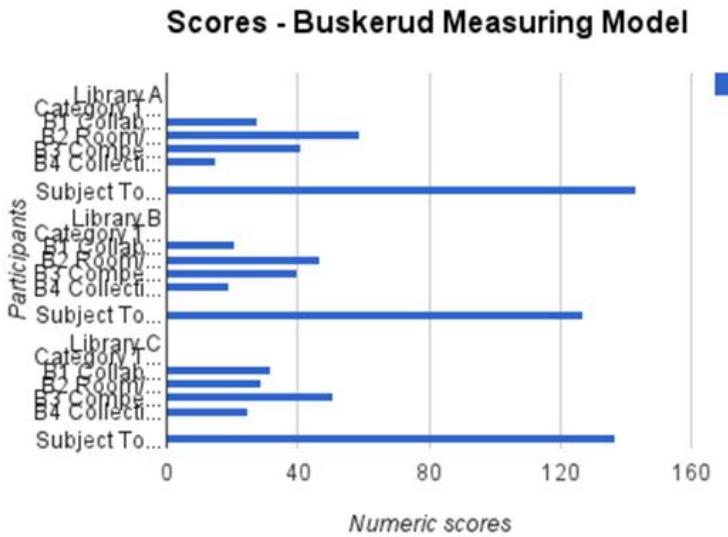


Fig. 16: Google Forms generated graphics

The generated graphics give a rather impressive and complete overview. For larger institutions, watching over numerous branches and/or libraries, the results should therefore be of particular interest.

9 CONCLUSION

In order to get a richer picture of the libraries as learning arenas, we needed to enhance the model with quantitative data. We feel that the use of standardized indicators is the right way to go. Unfortunately it is not always neither qualitative, nor quantitative data can give us the whole picture. We believe that the combination of the two leaves you with a more solid basis on which to take further actions and decisions upon.

In the case of our Learning Arena, there were few combinations of indicators and subcategories that was a perfect match. This can probably be seen as a confirmation that to combine qualitative data with statistical data is complex. Our experience however, has been that while the qualitative approach in the BMM needed to become better tailored for each library, the quantitative approach of the indicators might be a bit too rigid in order to suit the actual needs of the library in the process of improving itself.

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