LIB
LAB

better libraries, better learners

Elena Marengoni

797015 a.a 2014/2015

Tutor: Fabrizio Maria Pierandrei
Co-tutor: Fenne Van Doorn - TU Delft

POLITECNICO DI MILANO
School of Design
Msc in PSSD

"La cultura è fatta di sorprese, cioè di quello che prima non si sapeva, e bisogna essere pronti a riceverle e non a rifiutarle per paura che crolli il nostro castello che ci siamo costruiti."

Bruno Munari - *Da cosa nasce cosa*

INDEX

LIB LAB

ITA

L IB LAB è un percorso di ricerca e progettazione partecipata che nasce dall'esigenza di aiutare insegnanti e bibliotecari nella scuola primaria a predisporre un servizio biblioteca più efficace nel motivare i bambini all'apprendimento. Se è vero che una biblioteca scolastica migliore può supportare i ragazzi con più successo e che diventa oggi sempre più cruciale insegnare ai bambini a fare un uso autonomo e critico dell'informazione, è anche vero che tradurre questa esigenza in una proposta di servizio biblioteca comporta un grosso investimento di risorse e competenze, che non sempre sono disponibili all'interno del contesto scolastico. Da qui la proposta di LIB LAB, un intervento di facilitazione esterna, che mira a colmare il divario tra ricerca teorica ed implementazione e che vede coinvolti tutti gli attori del sistema nell'analisi della situazione attuale, nell'individuazione di sfide progettuali ed infine nella identificazione di soluzioni. LIB LAB ha adottato un approccio di "grounded theory", in cui nessuna ipotesi è stata costituita a priori dell'intervento sul campo, ed ha posto l'attenzione soprattutto sugli aspetti di fruizione del servizio biblioteca. Il lavoro è stato svolto lungo un periodo complessivo di circa 6 mesi ed ha visto coinvolte 5 scuole, 2 istituti internazionali con sede in Olanda, una scuola Montessoriana olandese e due scuole pubbliche italiane. A conclusione del percorso di ricerca, sono stati ottenuti i seguenti risultati: le singole scuole partecipanti hanno avuto la possibilità di sviluppare proposte progettuali a miglioramento del servizio biblioteca, mirate rispetto alle esigenze del contesto. In una delle scuole è stato possibile svolgere un percorso di sperimentazione, testando l'efficacia di alcune soluzioni progettuali sul lungo periodo (4 mesi). Infine, a partire da quanto osservato e dagli esiti delle attività co-generative, sono stati individuati una serie di fattori, intesi come "ingredienti" dell'esperienza di fruizione, atti a renderla più motivante. Ciascuno di questi si presta ad essere ulteriormente testato e monitorato in molteplici contesti, al fine di verificarne validità ed efficacia.

LIB LAB

ENG

L IB LAB is a participatory research and design process that spawned from the need to support teachers and librarians in primary schools to set up a library service that can better motivate children to learn. If it is true that a better school library can more successfully assist students and that toady it becomes increasingly important to teach students how to make a critic and autonomous use of information, it is also true that translating this need into the actual design of the library service implies a significant investment of resources and competences, that are not always available within the scholastic context. Hence LIB LAB, an external intervention of facilitation, that aims at filling the gap between theoretical research and implementation and that involves all the actors into the analysis of the status quo, the definition of design challenges, the identification of possible solutions. LIB LAB has adopted a "grounded theory" approach, in which no hypotheses have been formulated prior to entering the field. The study has especially been focused on the fruition of the library service. The research has taken place over a period of approximately 6 months and has involved 5 cases, 2 international schools based in The Netherlands, a Dutch Montessori School and two Italian public schools. At the end of the study, the following results have been achieved: the single participant schools had the chance to develop design proposals to improve their library service, in response to specific contextual needs. In one of the schools, it has been possible to carry out a long-term experiment (4 months), testing the effectiveness of some design solutions. Finally, taking a starting point in what has been observed and in the co-generative sessions, a series of factors have been identified, to be seen as "ingredients" of the experience of fruition of the library that can better motivate children toward learning. Each of this factors would need to undergo further testing in multiple contexts, so to assess its validity and effectiveness.

CHAPTER 1
LIBRARIES TODAY

Introduction

"
Instruction does not cause learning; it creates a context in which learning takes place, as do other contexts. Learning and teaching are not inherently linked. Much learning takes place without teaching, and indeed much teaching takes place without learning. (Wenger 1998)
"

T This research project first of all spawns from a personal interest around designing for children, an interest that has been cultivated over the last three years and a half in various forms and through different projects. Designing for kids is often not only about satisfying certain consumers' needs: there is in fact much more at stake in relation to what is the meaning of the product that is being designed for an individual who is in development and needs adequate support through this phase of his life. Offering something to children, whether it's an experience, a physical artifact or something else means in fact having the chance and the responsibility to impact on their future by relating to their present and walking next to them: their adult future is not a far-away reality but is already being shaped everyday. As Bruno Munari used to say, men and women of the future society are already here with us and are now 3,5 ,7 ... years old [1].

Today, one of the hot topics around children is education. The education system is a particularly complex field, where public institutions and laws often have the final say in shaping the service that is actually delivered to the children. But next to this, there's a deeper and much more lively layer, which is made of people, spaces, actions and everyday experiences. We live in an historical moment where education seems to be often the center of the debate, especially when it comes to the way we deal with information and the way we teach children to use it. I have truly asked myself what could be the contribution of a service designer within this picture. How could my skills cater for the needs of teachers and children and really make a difference in what they experience everyday? And this is where my journey unfolds: eyes and mind look around at the whole world, but feet and hands are solidly grounded into reality.

THE GROWING IMPORTANCE OF LIBRARIES

The debate about the role of education in today's society is particularly rich and it especially revolves around the way educators should convey information and facilitate learning in a rapidly changing and
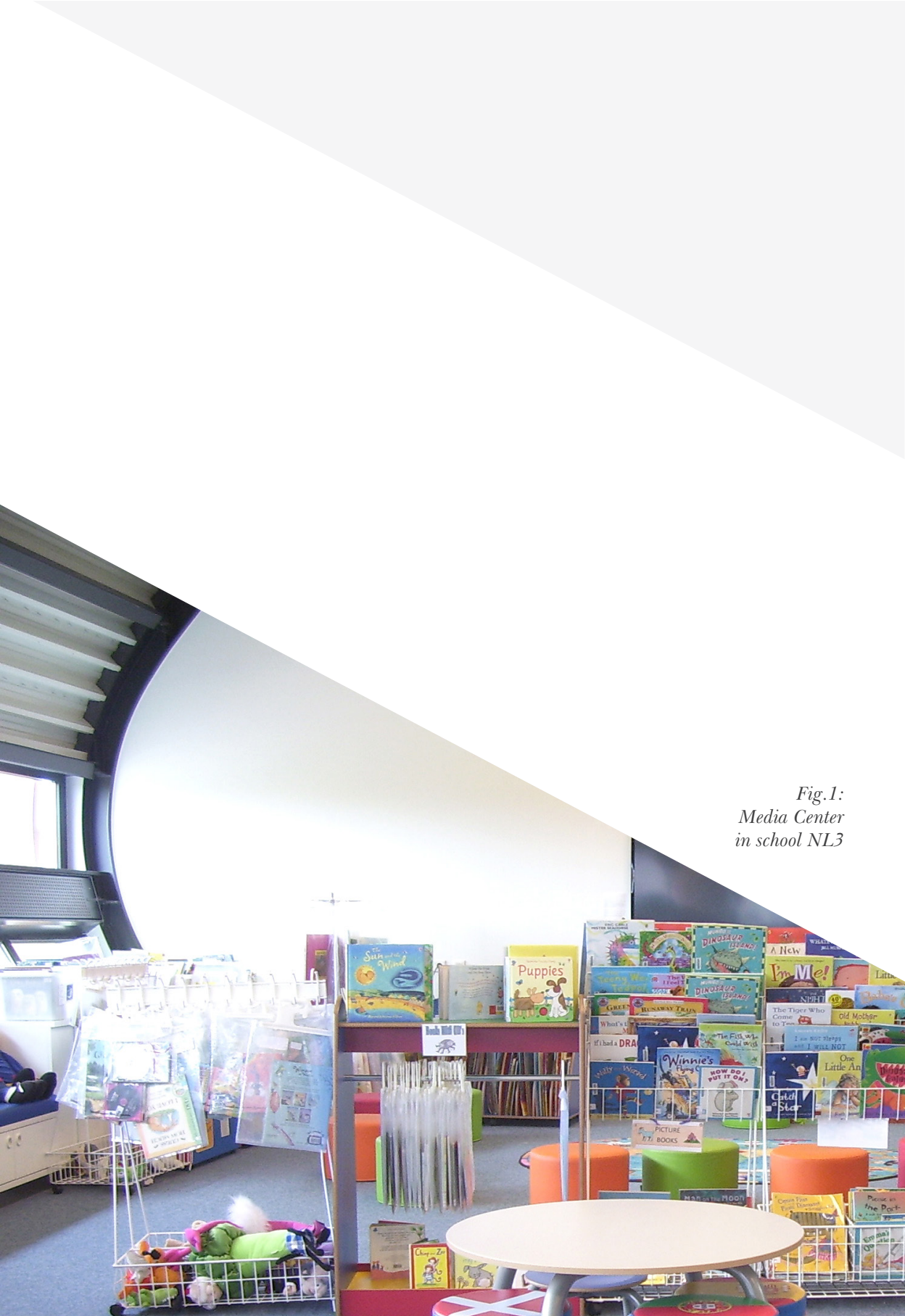
interconnected world, where a global perspective is more and more needed. This, in turn, has led to the role of the school library being often discussed and debated, for it being the place where information gathering typically takes place. In particular, it becomes increasingly necessary to understand how the library service is organized and delivered as well as it is progressively more important to gain a clear overview of how it is tied into didactic activities.

Education is ever more about forming *"minds that are robust enough and smart enough to engage with the uncertain demands of the future"* and it is ultimately about forming *"a mind to learn"* (Wells & Claxton, 2008, p.2) The challenge is twofold and consists of interconnected aspects: the evolution of technology and available resources has dramatically increased in the last century and this has in turn generated an expansion of our world. What seemed once far away and was therefore more easily ignored for the simple fact that it was not accessible is today just a few hours away by plane. Even more, a lot of content and information can be gathered even without moving from our chair. We get to see and know things about the whole world and we simply cannot ignore this. It is already happening and it is every day under our eyes. But how to navigate this sea of information? Where to put the focus? What to choose? And how to filter through content and understand its real value? As Carla Ida Salviati highlights in her "La biblioteca spiegata agli insegnanti" [2], teachers are nowadays challenged to help students in making critical use of the different sources they may come across, especially when it comes to data retrieved online. The way they have been assembled and put together may in fact follow different logics and sometimes serve commercial purposes rather than informative ones.

This is where the role of education is crucial: as Carol Collier Kuhlthau puts it, *"global interconnectedness enabled by information technology calls for new skills"*. The present context poses challenges that, more than ever, have to be listened to: in the era of information technology, information

fills up every corner of our digital world (but also physical, considering that digital still occurs through physical devices). The only existence of an interconnected web that occurs everywhere at the same time and with potentially infinite content gives us a strong feeling of how complex it can be to retrieve and make use of content today. However, within the debate around the role of education, a lot of research has just assumed that mastering these new devices or having these resources available within the educational context could be enough to fully be part of the 21st century educational system. An example can be seen in the guidelines offered by the national association of Italian libraries (AIB: Associazione Italiana Biblioteche) in relation to what libraries should do to keep high standards of quality. The document focuses on the fact that a lot of different realities are grouped under the category of *"school libraries"* and that a lot of them are maybe not much more than a cupboard in a hallway. Taking a starting point in this argument, the list of suggested interventions then includes specialized librarians, computers, a broadband connection, a dedicated room, … but no recommendation touches upon the use that should be made of these resources and the educational scope that they should support. Instead, the challenges posed by the current socio-cultural context show that the effort that is required from schools and institutions is much bigger than this: educators will more and more need new to adopt new methodologies, embrace new skills and especially understand how the library service can be best integrated in this system.

WHY IS MAKING USE OF INFORMATION SO COMPLEX?

When looking at the nature of information and at the way we access it, it is possible to identify some challenges that better explain why this topic has become so widely discussed within the education system.

Moreover, it is important to notice how the debate around information does not imply a distinction between information seeking directed to research purposes and recreational access to content: both aspects are in fact confronted with the same challenges and are equally relevant within the educational context, also for the fact that they are quite often interlaced. For this reason, in the following discussion, the term information is replaced with *"content"*.

Content is multimedia
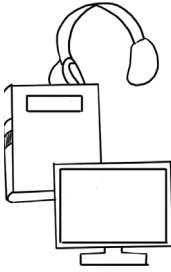
It occurs through different channels and on different devices, including the more longstanding ones and the more recently acquired. When talking about multimedia literacy, it is not just a matter of being familiar with different devices or supports (even if this is necessary as a first entry point). It also means that children should be taught to make use of their critical thinking to understand the intrinsic potential of these different media and what it is that they can or can't do for us, as well as what challenges they confront us with. Just to take a classic example, reading a book differs from browsing the web for the fact that the latter offers a much less linear process that requires *"lateral-associative thinking"* (Eshet, 2002, p.2) and the capacity to connect information into a coherent story. This means that different media can serve different purposes and should be recalled at the right time, depending on the purpose.

Content is broad

Within every discipline or topic that one may possibly want to dive into, an incredible pool of content is already available. This does not make it easy to choose what to explore and use. The advent of the digital has amplified this effect, by making content even more readily available and by magnifying the perception of the vastness of what is out there, to the point that it can become overwhelming. This makes it necessary to support a process that can help children build personal frameworks and purposes and that can guide them throughout their journey. As the American Association of School Librarian (AASL) states in its standards for the 21st century learner, *"The continuing expansion of information demands that all individuals acquire the thinking skills that will enable them to learn on their own". (AASL, 2007)*

Content is differently relevant or accurate
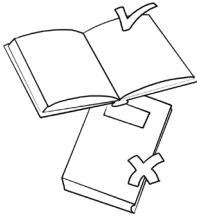
Having a purpose or topic is still not enough to navigate this sea of complexity. In fact, it is then necessary to understand how a certain piece of information or a certain content can be relevant in regard to the reason why they have been retrieved. Once again, this challenge has to do with all the different media, even those that only exist in a physical world. For example, in order to choose a book, one has to be aware of its content and be capable to evaluate if it can fit the needs that inform this choice. Once more, the existence of content in the digital world amplifies this challenge by making it even more complex to retrieve sources and to fully understand what is being offered: the web is a huge platform open to everyone to upload content, but it is also a very flexible and dynamic environment with no or little filters, which makes it sometimes really hard to figure out if we have stumbled upon something that is of real interest. As the AASL standards (AASL, 2007) explain, learners will more and more need to develop skills that will make them more autonomous in dealing with the complexity of available information, such as critical thinking and self-assessment strategies.

An interesting element that emerges from these challenges is that it doesn't take an hyper-connected and fluid world to recognize the importance of educating children to make independent and informed choices: the navigation of the physical world, the world that we walk everyday and that is in physical proximity to us can pose equally complex challenges in our everyday life. This means that a shift in the methodological approach and in the way we teach can turn out to be fruitful even before we get to a scenario where a huge amount of resources, infrastructures and competences is available on big scale within schools. The amplification of the challenge determined by the advent of digital channels then represents a very important call that gives schools the chance to build up a roadmap to empower children to be more aware, confident and competent in making use of information.

THE LIBRARY AT THE CORE OF THE LEARNING PROCESS

As soon as we transfer this debate in more practical terms and we look at what it actually implies for educators, it is clear that learning cannot just be limited to the content that is transferred by the class teacher to his students: the amount of information needed to understand the world around us is in fact much bigger than what can be *"contained"* in a single person. A repository from where to access information and to build knowledge is needed, a physical or digital space where students and teachers can pull out relevant information to serve different purposes: comparing several perspectives, expanding the frame of the discussion, validating other information, …

This need for a container of information and different materials links us directly to what is traditionally known as school library, whose role is defined by some researchers in the following terms: *"school libraries emerge as an ideal hybrid space to bridge the formal classroom with the broader world"* (Subramaniam et al., 2012) . Many others have been highlighting the potential that lies in putting the library at the core of the learning process: *"School libraries are dynamic learning centers in information age schools"* says Carol Collier Kuhlthau that, like many other researchers, sees it as a learning hub, a reference point for children to go, mine information and explore the world. Building on top of this, the definition given by the IFLA UNESCO Manifesto on school libraries poses them in the role of knowledge centers responsible for the formation of adults of the future: according to the Manifesto, school libraries have to provide information and ideas essential to the full realization of each individual in the present society of knowledge and information. School libraries offer students the chance to acquire all the abilities necessary to lifelong learning, to develop their imagination and help them become responsible citizens [3]. Finally, existing research (Lonsdale, 2003) has proved that a direct correlation can be drawn between the quality of the library service and its use and children's learning performances.

From this ongoing debate around libraries and in relation to what discussed before about information today, it is possible to pull out some key characteristics that derive from the current cultural landscape and that should be taken into account to meet the needs of this rapidly-changing environment:

The multichannel library: as new types of literacy emerge, it will be more and more necessary, or at least interesting, to expand the types of materials owned by the library, including digital and physical content, according to what can best support the needs of the curriculum. As Antonella Agnoli explains in her book "La biblioteca che vorrei", libraries should become a space for experimentation, where books are only one of the thousands learning opportunities offered to the users, a place where all the media coexist together. [4]

A dynamic and updated environment: in a society where content is quickly produced and replaced with more up-to-date knowledge, following this pace as much as possible is necessary to provide kids with relevant materials that can make the learning experience meaningful. (Salviati, 2012)

An assisted service: navigating this complex sea of information is possible only with assistance, which is crucial. As De Groot and Branch highlight in their study, the *"role of the enabling adult"* is crucial to accompany kids through their learning experience and to provide them with knowledgeable and effective support.

An easily accessible repository: as we shift towards a model of education that gives children the responsibility and the power to navigate the complex network of information and to build up knowledge, not only access to these learning resources becomes more crucial, but also it becomes necessary to build an environment that is *"conducive to learning"* (AASL, 2007, p.2).

THE ROLE OF SERVICE DESIGN

This whole debate offers a good overview of what are the key challenges posed by the historical context we live in today and brings us to the definition of the library as a crucial agent in this process of transforming the way information is delivered and knowledge is built. However, this is certainly not enough in order to understand how to really make the difference into the lives of educators and students. It takes a more *"down-to-earth"* approach to do this: what are the real challenges that schools face everyday? How might we build a roadmap to support teachers and librarians to deliver a service that can really enable kids to explore the world and build up knowledge and confidence at best?

When talking about public institutions like schools, it comes easy to imagine that what is delivered to the end user is mainly regulated by the law of by decisions taken by the ministry of education. And, to some extents, this is of course true, but if these actors certainly play a crucial role in shaping the structure and the functions of a school, it is also true that a lot can be done with bottom-up initiatives as well. Teachers and librarians or specialists as well as children are the possessors of extremely valuable knowledge about how things actually work and about what are the needs at stake. However, what is typically missing within a school is a function capable of investing resources into the understanding of all these need and into the definition of strategies and implementable solutions. The issue is twofold: on one hand, educators simply do not

Fig.2:
A co-generative
session at the Dutch
Montessori School

have the time, next to their core tasks, to embark themselves in such journey; on the other hand, the actual design of the library service and experience tends to go beyond their competences, making it sometimes hard to implement effective solutions. This is where the match between teachers and designers occur most successfully: each of these figures owns different skills and a different know-how: only when combined and when integrated with the contribution coming from the children themselves, these skills can truly promote durable and meaningful change.

Here begins a journey that aims at bringing design and research together, studying the key challenges of schools and using research tools to identify design principles and support the implementation of solutions from within. This study has made extensive use of field and desk research in order to capture the most relevant issues at stake. It has investigated the topic with a comprehensive perspective, considering user experience, but also tapping into disciplines such as pedagogy and psychology. It has finally used service design tools in order to envision possible solutions and carry out an experimentation. The following chapters will unfold the main methodological milestones as well as the the most relevant findings gathered along the way.

END NOTES

[1] «…Siccome è quasi impossibile modificare il pensiero di un adulto, noi ci dovremo occupare dei bambini. Gli uomini e le donne che formeranno la nostra prossima società futura, sono già qui adesso, hanno 3 anni, 5, 7…» (Munari, 1981)

[2] «La domanda vera è un'altra: come utilizzare questa enciclopedia online in ambito educativo? Qual è il modo giusto per aiutare gli studenti a usarla in modo che li aiuti a imparare più in fretta, in modo più approfondito e consapevole?» (J. Wales in Salviati, 2012)

«L'unica strada per non diventare sudditi globali della potenziale dittatura del web è avere la "testa ben fatta" di cui parla Edgar Morin, quella che non si accontenta della prontezza di risposta ma sa - e lo continua a sapere nel tempo - che le risposte "esatte" spesso non sono tali e che la ricerca è sempre problematica» (Salviati, 2012)

[3] «La biblioteca scolastica fornisce informazioni e idee fondamentali alla piena realizzazione di ciascun individuo nell'attuale società dell'informazione e conoscenza. La biblioteca scolastica offre agli studenti la possibilità di acquisire le abilità necessarie per l'apprendimento lungo l'arco della vita, di sviluppare l'immaginazione, e li fa diventare cittadini responsabili.» (Manifesto IFLA UNESCO sulla biblioteca scolastica, 2003)
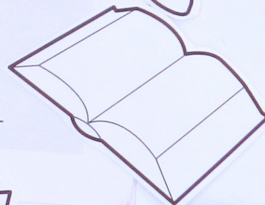[4] «La biblioteca diventa un luogo di sperimentazione e di spettacolo, dove i libri sono solo una delle mille possibilità di scoperta offerte agli utenti». (Agnoli, 2014)

LEZEN IS

- onderzoeksproject -

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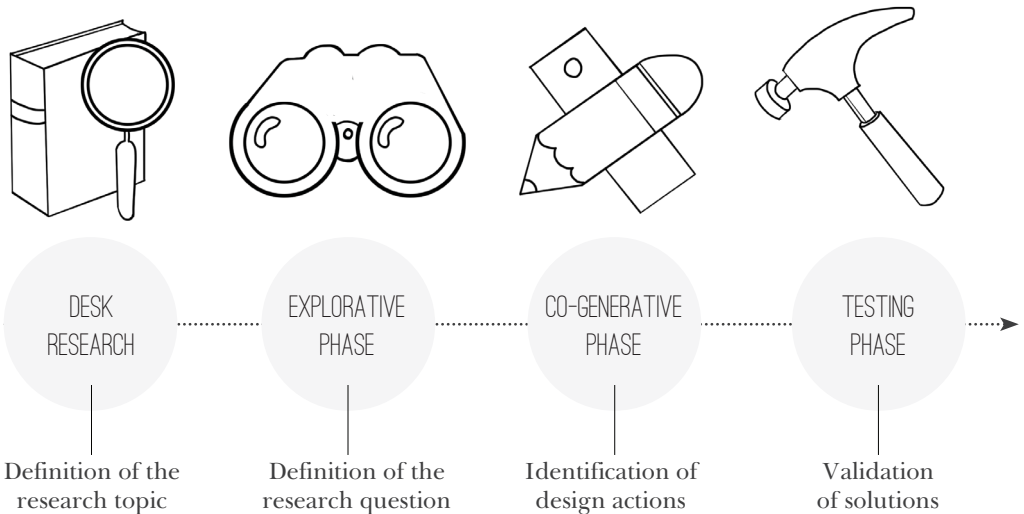
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A DESIGNER GOES TO SCHOOL

Methodology

"

*One real strength of qualitative research is that it can use
naturally occurring data to find the sequences (how) in
which participants' meanings (what) are deployed.
(Silverman, 2011)*

"

T his research has taken place over a period of 6 months of on-the-field activities and has been partly developed as an extension to the exchange period at TU Delft, in The Netherlands. It has been carried out with an alternation of divergent and convergent phases: broad analysis has been followed by a restriction in focus and the iteration of these two steps has driven the progression of the study. Within this, some key phases that compose the backbone of the methodological approach, can be identified, as shown in the scheme below. The process spawned began with a definition of the overarching challenge that school libraries face in supporting schools to make use of information and transmit knowledge. An open exploration of the field then followed, in order to understand what are the core challenges in more practical terms and in order to frame a research question. This then led to the definition of a more concrete focus and an actualization plan through which to tackle the issue and gave the start to a co-generative phase, aimed at the identification of factors (or experience ingredients). Out of these, a few selected aspects were tested. The outcomes of the research process were finally validated through a comparison with the research question and its goals.

DESK RESEARCH	EXPLORATIVE PHASE	CO-GENERATIVE PHASE	TESTING PHASE
Definition of the research topic	Definition of the research question	Identification of design actions	Validation of solutions

Scheme 1: design process

MAIN TRAITS OF THE ADOPTED METHODOLOGY

This project has been approached by making use of existing methods and embracing a certain point of view that seemed to best fit the needs of this work. The methodological framework that permeated this thesis is here presented in its most significant aspects.

The nature of this research itself makes it evident why qualitative research stands as the best option. In fact, this is an open investigation aimed at exploring the challenges within a certain context and at building relevant theory. Even though the scientific value of qualitative research has been long debated and thoroughly questioned, it has finally received proper recognition among scientists in the latest decades. (Charmaz, 2014). Particularly relevant in this sense has been the contribution of Glaser and Strauss that first framed a methodology for qualitative research and constructed the backbone of what is known as *"grounded theory"*, whose principles are applied in this study.

Grounding theory in data
Grounded theory differs from other approaches to qualitative research, not standing in opposition to them, but featuring very specific characteristics. *"Grounded theory methods consist of systematic, yet flexible guidelines for collecting and analyzing qualitative data to construct theories from the data themselves"* (Charmaz, 2014). In fact, as the name itself tells, grounded theory aims at creating the best and strongest possible connections between raw data and elaborated findings. The link with empirical reality is what ultimately makes the theory valid. Moreover, it is a highly iterative approach that makes alternate use of processes of data collection and analysis (Eisenhardt, 1989). The backbone of the process represents these two characteristics, showing a sequence of divergent and convergent phases and a flow from raw data to more elaborated theory.

Building on top of this, it is important to underline the inductive nature of the grounded theory approach: even though it is impossible to completely empty one's mind from preconceptions and pre-existing knowledge, a research should start with a clear reason for being, but with no hypotheses or assumptions whatsoever. Within this project, the only preliminary literature review has been conducted with the aim of assessing the relevance of the research topic. (Glaser and Strauss in Charmaz, 2014). This first step has also been necessary to focus the research and avoid a completely free and therefore purposeless exploration.

GROUNDED THEORY APPROACH

PARTICIPANTS
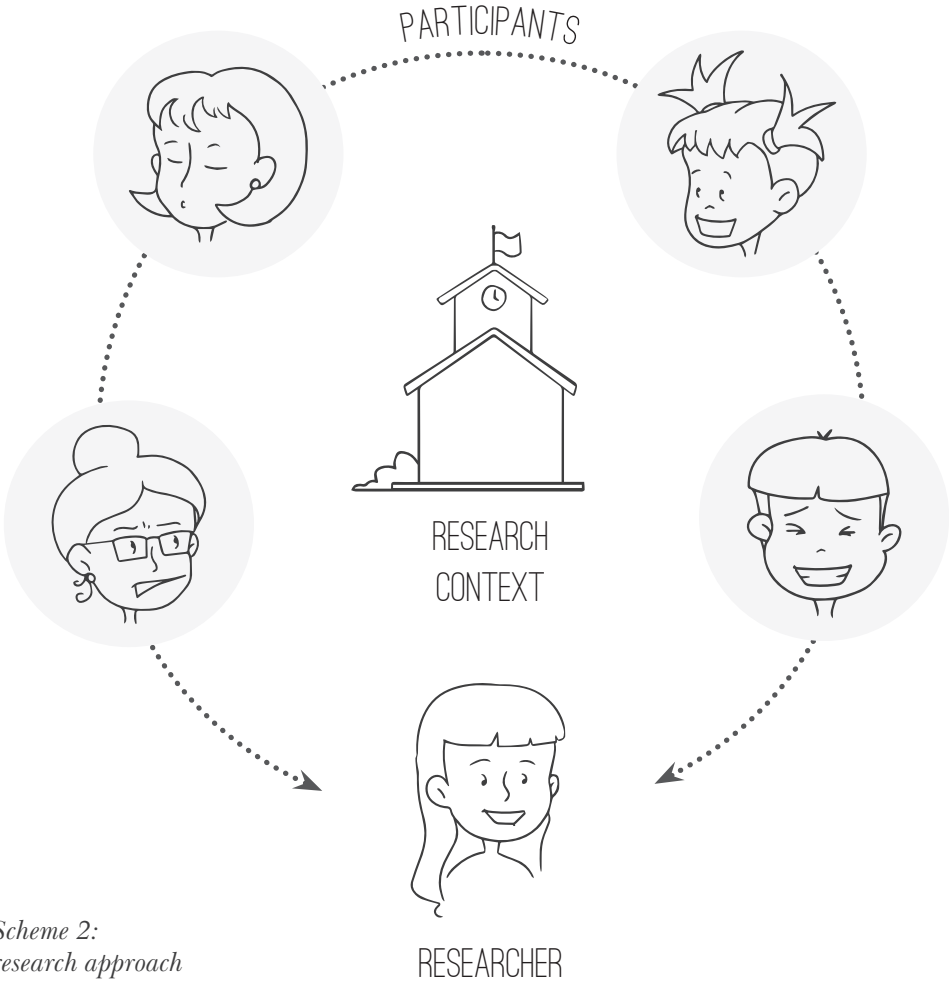
RESEARCH
CONTEXT

Scheme 2:
research approach

RESEARCHER

Finally, *"grounded theory methods lead you to make early stops to analyze what you find along your path"* (Charmaz 2014). This means that more and more theory is gathered along the process and this may lead to a gradual construction of hypotheses: however, until new data prove the validity of such hypotheses, the all have *"to be intended as "tentative" and by no means guaranteed"* (Eisenhardt, 1989, p.536).

Next to the key advantage of reducing external bias as much as possible, the downsides of this approach lie in the fact that the researcher is part of the reality and the construction of theory as well: collected data and subsequent theories do not constitute a discovery. Rather, the researcher himself is always part of the data he collects and the analyses he performs, thus leaving the door open to potential internal bias (Charmaz, 2014).

Building case studies
Case study research has been identified as the optimal methodology within a grounded theory approach. In fact, the question investigates a contemporary phenomenon where the boundaries between the investigated topic (information literacy) and its context (the single schools) are blurred, meaning that interdependence between them may be found. As described by Yin (Yin, 2014), these are the most suitable conditions for this very specific type of qualitative research, case study.

Case study focuses on understanding phenomena and dynamics occurring within single settings. It can have different aims, such as testing or describing or, as in this case, building theory and bridging the gap with implementation. This method has been selected for it being useful in contexts where current perspectives do not seem to be satisfying enough and more knowledge and a new perspective are needed (Eisenhardt, 1989).

Cases can vary in number and in level of analysis, but one of the key advantages is the likelihood to generate new theory and to build solid evidences thanks to the depth gained in collected data. At the same time, this method leads to constructs that can be further tested through quantitative research.

Case study research presents specific risks too: the typically consistent amount of data can lead to complex theoretical frames that try to capture everything. At the same time, the researcher has little control of the *"width"* of the theory, which depends on the collected data that may eventually result relatively narrow and negatively affect theoretical outputs. (Eisenhardt, 1989).

Building theory from cases has to follow a precise roadmap. Within grounded theory, there are different variations but the core of the process is the same and all methods make use of an analogous backbone.

FINDING CASES TO STUDY

A first step toward the actualization of the research plan is the definition of a sample, which means spotting interesting cases and contexts to study.

Theoretical sampling
Differently from quantitative research which is based on the identification of a *"population"* to study, qualitative research and specifically case studies never implement random sampling (Charmaz, 2014). Theoretical sampling is instead adopted: this means that cases are picked because of some specific characteristics. This helps have a profile of each case and it is fundamental in order to have extraneous variation under control and to trace the boundaries within which findings can be extended and generalized (Eisenhardt, 1989). Choosing polar types or selecting similar cases are two different strategies that can lead to different but equally interesting results.

In this research, participants have been selected with specific criteria: all institutes were primary schools that had a library. The choice of primary schools relates to the fact that this is the moment when the very first experiences with learning take place and this can be a somehow critical phase. The concept of library has been declined in many different ways and variations have been sought for within the sample, covering a range from a one-shelf library to a multifunctional learning center (polar types). However, it has to be specified that all the analyzed libraries almost exclusively offered books and print materials. This sample anyways allowed to observe very different conditions and extend the reliability of findings within the frame of primary school.

Furthermore, the selected sample included schools from different cultural context and located in different countries: the study in fact involved one Dutch Montessori school, two International Schools located in The Netherlands and two Italian public schools in the province of Milan. From here on and for the sake of simplicity, they will be referred to through nicknames:
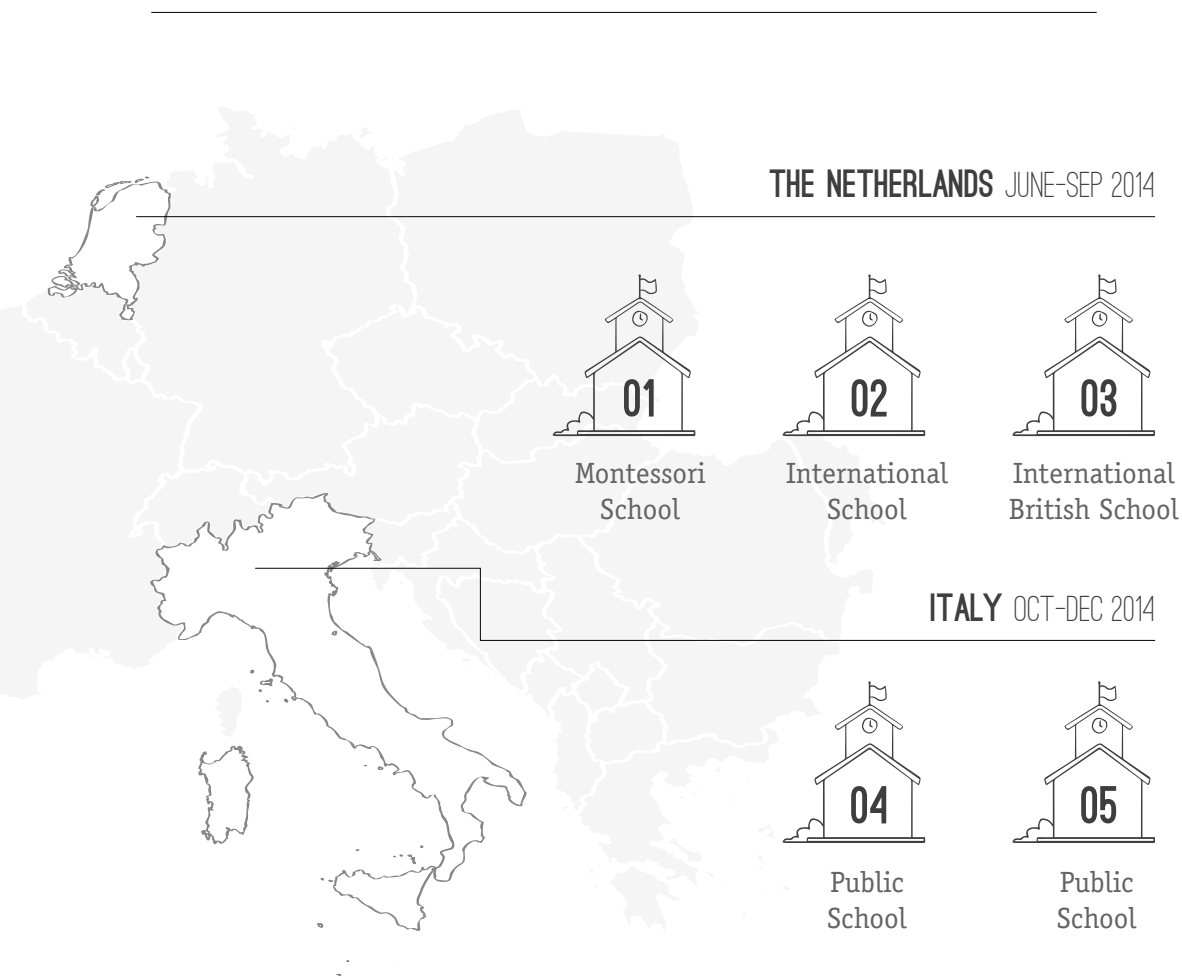
> **Dutch Montessori School: (NL1)**
> **International School in The Netherlands: (NL2)**
> **International School in The Netherlands_02: (NL3)**
> **Italian Public School_01: (IT1)**
> **Italian Public School_02: (IT2)**

01 Montessori School

02 International School

03 International British School

ITALY OCT–DEC 2014
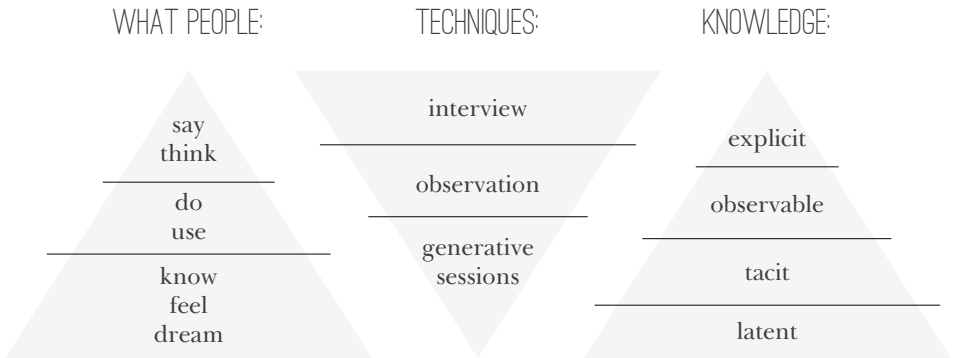
04 Public School

05 Public School

Scheme 3: overview of case studies

Being the research topic broad and articulated, it has been necessary to clearly identify the boundaries of the research. This has been done in two different ways: since the beginning, the unit of analysis, which indicates the observed context, has been identified in the library system, intended as the physical space, the activities conducted in relation to it and the interactions between all the actors involved in the system. On the other hand, the level of analysis, defined as the observed phenomenon, has been further detailed through the first exploratory phase of the research, trying to boil down the overarching topic to a more precise research question relevant for schools.

DATA COLLECTION

Multiple data collection methods have been implemented throughout the process in order to strengthen results and allow for triangulation of data. In this case, only qualitative data have been collected.

As can be observed in this scheme, different methods cater differ research needs and only the use of multiple techniques can allow for a full understanding of the case that is being analyzed, from the surface to the deepest level. Throughout the study, all the three data collection methods illustrated in the diagram have been used: interviews, observations and generative sessions.

WHAT PEOPLE:	TECHNIQUES:	KNOWLEDGE:
say think	interview	explicit
do use	observation	observable
know feel dream	generative sessions	tacit latent

Scheme 4: data collection (Sanders, 2006)

INTERVIEWS

Qualitative interviewing has been used in data collection with key adult informants in order to gather knowledge about the use of the library as well as about the didactic approach and experiences and activities carried out in the library. This has then allowed for the definition of the research question. In general, qualitative interviewing can be conducted with many different techniques, such as structured interview, semi-structured interview and open conversation and these techniques can also be combined to serve different needs. All interview approaches make use of open-ended questions in order to elicit broad and meaningful answers from respondents. However, semi-structured interview has been then recognized as the best option for this study and has therefore been implemented. In fact, semi-structured interviews rely on an interview guide, composed of a main topic, a series of pre-defined sub-topics and

guide-questions within them. The researcher is still allowed to steer the conversation and pick up insights that may unexpectedly emerge during the conversation. This format best served an exploratory phase in which the field of research was clear but the research question needed to be further detailed. Moreover, this allowed for new topics to emerge, since this technique leaves space for more spontaneous questions within the defined macro topics. (Patton, 2002)

More descriptive questions that require the respondent to simply report on activities or experiences have been concentrated in the first part, while questions that elicited opinions have been asked toward the end of the conversation, after the topic had already been unfolded, thus providing the respondent with better anchor points for argumentation. The same applies to questions that refer to a specific moment in time: questions about the present are generally easier to answer and have been posed in the beginning, while questions about the future have been asked last. (Patton, 2002)

The interview guide has been built respecting all the key rules necessary to gather valid and solid findings: questions were truly open-ended and avoided dichotomies. Moreover, questions have been asked separately, investigating one single aspect at a time and the wording has been refined over time, in order to tie it more and more into respondents' language. Finally, broad why questions have been avoided and whenever a why question could have arisen, its focus has been specified *(ex. why= for which goal? for what personal reason? …)*. (Patton, 2002).
From the point of view of interview techniques, pause and silences as well as nods and verbal reinforcements have been used to elicit more complete responses. At the end of the interview or sometimes of each subtopic, key information has been verified with the respondent to make sure that all the answers had been understood correctly (Patton, 2002).

OBSERVATIONS
Observation has been used as a relatively simple tool to record data and study phenomena in their real context. Observation has been used both to frame key challenges and to explore specific aspects of the use of the library later on in the process. This is one of the key methods borrowed from ethnographic research that is implemented in this study.

The key output of observation is field notes. Field notes are annotations upon the observed phenomena and a key challenge that is posed by this

is the necessity to have a clear focus during the observation in order to write relevant memos. This therefore poses the question of what to write about: a researcher has to be fast in focusing his attention on the desired aspect but flexible and open to new inputs at the same time. A support strategy is needed. Wolfinger (Wolfinger, 2002) describes two different approaches and both have been included into my study in different stages. The first method is referred to as *"the salience hierarchy"* and requires the researcher to note down significant events only. This significance derives from the fact that a certain episode stands out because of it being a deviant case from what the researcher expects, or from what has been previously observed. The necessity to rely on previously acquired knowledge to assess the relevance of an episode makes it necessary to adopt a different strategy for field notes in the early stages of research. In particular, what Wolfinger defines as *"comprehensive note-taking"* has been truly helpful in the initial phases. This technique aims at recording as much information as possible and consists in the selection of specific general categories under which notes can be organized. These categories are typically very broad, such as *"actor", "action", "object", "space",* … This allowed me to capture reality in details and progressively use this data to narrow the focus and eventually note down only salient episodes.

GENERATIVE SESSIONS
Generative sessions have been used to include children (as main users of the library) into the analysis of the context and the generation of design solutions to improve the service. Tisdall et al. (2008) identify multiple beneficial dimensions around this process: in first place, children's participation benefits the children themselves, by offering them a chance to learn new skills and by empowering them to express their opinion and truly make the difference. However, benefits can also be seen from a methodological standpoint (findings would be better grounded into reality) and from the point of view of the service that is delivered to children, the library in this case. All these reasons supported the decision to plan generative sessions with the kids. Different users have been involved into this project adopting different methods and children have been addressed with co-generative methods, all the way from research to co-design insights. Specifically, the earlier stages implemented co-research and contextmapping techniques.

Co-research and contextmapping
"Contextmapping techniques can be described as a form of generative research with users, aiming at creating context awareness by eliciting emotional responses

Fig.3:
Interview with a class
teacher in school NL2

Fig. 4:
observation session
in school IT1

from participants, including users´ concerns, memories, feelings and experiences of these explored contexts" (Sleeswijk Visser et.al., 2005). As explained in this quote, contextmapping is a way to understand a specific context and phenomenon through the eyes of the people that know most about it, the *"users"* of that context in the broadest sense of this term. The discipline is still relatively new, especially when it comes to children, for the necessity to adapt co-generative methods to different ages and skills. It is hard to find guidance in existing literature for what concerns the methodology, but a few solid guidelines together with a careful analysis of existing

studies that made use of these tools, allowed me to organize an accurate set-up.

The key tools of this research *"are tasks and materials that help deeper reflection and diverse forms of expression"* from the side of the user (Gielen, 2008). This concretely takes the form of artifacts (drawings, maps, notes,...) built by participants and through which a deeper understanding of their world is possible. In particular, contextmapping techniques allow researchers to dig deeper into latent and even tacit knowledge that informants own. Contextmapping has been used in this research during the co-generative phase to help children understand the library context better and sharpen their perspective on design challenges.

From a methodological standpoint, certain aspects had been taken into account in order to ensure quality and completeness of findings (Gielen, 2008):

Fig.5: contextmapping in school NL2

Conversation with children has been used as a tool throughout all the sessions: this strategy proved to be crucial in allowing for a clear interpretation of children's artifacts, thus avoiding arbitrary explanations. Both one-to-one conversations and group discussions have been used to ensure that every child could be heard without getting overshadowed by other classmates, but also leaving room for peer-to-peer interaction to take place.

Contextmapping sessions have always been introduced by sensitizing exercises to make the process relevant to the children. Gradual zoom in and the identification of key anchor points (outputs and artifacts) have helped children follow the process and move on to the next tasks. Session have always been closed with a short group discussion to recap the main learnings and verify my understanding of their answers.

Fig.6:
co-research session
in school IT1

Co-research is a different method that brings cooperation with children to an even higher level. The method still aims at gathering contextual knowledge, but in this case children gain the role of researchers and are tasked to investigate a specific field or phenomenon with key informants. (Van Doorn, Gielen, Stappers, 2014). Co-researchers therefore have to identify participants as well and they give a contribution both to the phase of data collection and of data analysis. This approach benefits internal validity of a project since children will identify key informants that are close to their world and with whom they share a common language and understanding (Van Doorn, Gielen, Stappers, 2014). The fact itself that children assume this role becomes a powerful motivator to engage them throughout the sessions.

Co-research has been used in different phases of this study but a few key steps have been identified: children followed a process that saw them engaged in the definition of research questions, in the execution of an interview and finally in the interpretation of findings and the use of these insights for design purposes.

Co-design
In a second phase of exploration, after the refinement of the research question, children have been involved in co-design sessions too. This has been done in order to boost the process of transformation of research insights into tangible and applicable outputs for the schools. *"Co-design aims to set the stage for useful and inspiring dialogs among different stakeholders in the design process."* (Vaajakallio, Lee, Mattelmäki, 2009) This quote clearly expresses one of the key goals of this method: within this research, *"bringing stakeholders together"* meant primarily involving children and letting them express their ideas, but it eventually led to the involvement of adults as well, since all the results of the co-design activities have then been discussed in class and presented to teachers and librarians that took part into the project. This resulted in two schools taking immediate action and beginning a gradual process of change.

Co-design sessions have been centered on the cooperative development of *"artifacts"*, here defined in general as outputs of the creative process, including brainstorms, drawings, notes and small mock-ups. Supporting participants in producing artifacts together has been the key to the success of the co-design process. In particular, it has been proved that the process itself can sometimes become even more important than the

Fig.7:
co-design session
in school NL2

final result. From the side of the researcher this allows for a deeper understanding of where the output comes from and which mental process led the participants to develop a certain direction. In order to support this, children have often worked in groups or at least presented their ideas to each other and received feedbacks or asked questions.

DATA COLLECTION

	INTERVIEW	OBSERVATION	GENERATIVE SESSIONS
NL1	**T.**, librarian	3 sessions	3 sessions (co-research *with exploratory purpose*)
NL2	**E.**, class teacher and library coordinator	1 session	7 sessions (co-research, contextmapping, co-design)
NL3	**B.**, class teacher **J.**, librarian	3 sessions	1 session (co-design)
IT1	**L.**, librarian	2 sessions	6 sessions (co-research, contextmapping, co-design)
IT2	**R.**, class teacher and library coordinator	1 session	▬

Scheme 5: overview of collected data

DATA ANALYSIS

Transcribe or gather notes
"Simultaneous involvement in data collection and data analysis" and comparing data during each stage of the process helped to obtain a more solid link between phases of the project. This also allowed for more flexibility during data collection. At the same time, a large use of memo and side notes to be seen as a *"stream of consciousness commentary"* (Eisenhardt, 1989) about the research itself helped me keep constant track of the process. Interviews and co-generative sessions have been recorded and transcribed, while observation sessions have been captured through field notes. All these materials have then been used as raw data for coding.

Coding
Coding is a step-by-step process of interpretation of collected and transcribed data that allows a researcher to build up theoretical assumptions gradually. (Charmaz, 2014) *"The first analytic turn in our grounded theory journey brings us to coding. Grounded theory coding requires us to stop and ask analytic questions of the data we have gathered"*: with this definition, Charmaz captures the core value of this phase of analysis. In a more recent work, she then identifies what differentiates coding from other approaches to data analysis: *"Using inductive data to construct abstract analytic categories through an iterative process differs from sorting topics, as is common practice in general approaches to qualitative research"* (Charmaz, 2014). Categories are therefore really generated from data, using iterative cycles of analysis.

This iterative process is characterized by a gradual process of zooming out from the data. Coding takes place by assigning very short captions to a portion of data and then progressively clustering these units and refining theoretical categories. The resolution of the analysis is defined by the researcher: in this case, the coding was mainly conducted analyzing the text period by period, but when necessary a smaller portion of data was taken into account in order to avoid simplifications that may occur by looking at an entire sentence and trying forcedly to force-fit the entire narrative in one single caption. The first round of coding (initial coding) maintained a more descriptive approach, using captions that highlighted the key information present in the raw data. Differently, the second round (focused coding) represented the very first step into the interpretation of data and *"developed [codes] into categories that crystallize participants' experience"* (Charmaz, 2014), thus ensuring fit with reality. The output of

this second phase has been a codebook, a research database that includes category, codes and quotes and that allows for further development into theory building. In fact, a last step was then required to build up the relevance of the research and therefore connect categories in a coherent system: this has been executed by including case analysis.

Case analysis

Case analysis has been first of all applied as *"within-case analysis"*. with the purpose of making a detailed description and facilitating a deep understanding of a case. The goal is *"becoming familiar with each case as a stand-alone entity"* and understanding specificity before looking for patterns across cases (Eisenhardt, 1989).

On the other hand, cross-case analysis helps to avoid premature conclusions and aims at analyzing the pool of data in divergent ways. Weak patterns can be uncovered before a theory is formulated and digging deeper into data allows for a better understanding of the complexity of the available information. Different cross-case comparison strategies have been implemented. Cases have been compared by identifying categories (relevant according to literature or to the first findings) and coupling or grouping cases that belong to them, looking for similarities and differences. Not all categories yield clear patterns and this is an additional reason why cases have been grouped and compared according to different parameters and in various clusters. In addition to this, cases have been paired with all the different combinations in order to simply look for similarities and differences and detail findings even more. Finally, cases have been compared by data sources, analyzing data coming from interviews as a unit and then repeating the same for observations and co-research/co-design data individually. (Eisenhardt, 1989)

EXTRACTING FINDINGS

The whole study aims at theory building. Hard at it may be to imagine that findings gathered from few case studies can create a solid theory, it is important to remember that these findings are *"generalizable to theoretical propositions and not to populations or universes"* (Yin, 2014). This means that connections between concepts can be drawn, but also that hypotheses may be handed over to quantitative research for further investigation.

"Shaping hypotheses" and "enfolding literature".

The analytical process stops only when minor improvements can be achieved and the iterative process between evidences and constructs does

not yield new inputs. This is called *"theoretical saturation"*. (Eisenhardt, 1989).

The output of coding and case analysis are tentative hypotheses and structures for a theoretical frame. The next step is to look back into the data and search for concrete evidence to ground the theory once again through a process that moves back and forth between theory building and data mining. Each case is treated as an experiment that can confirm or disprove a certain construct and qualitative data is key to reinforce internal validity. In this phase, constructs are built and verified, as well as relations between them and this leads to the construction of a theory. (Eisenhardt, 1989)

At the same time, this is the moment when extant literature comes into play. A broad literature has been analyzed to reinforce findings. Conflicting literature has been analyzed too, in order to question the data even further and to strengthen the theory. (Eisenhardt, 1989). Even from such analysis and comparison, interesting frame breaking findings may emerge.

EXPLORE TO UNDERSTAND

Exploratory phase

"

Emic investigations define cultural phenomena through the
perspective of the community under study.
(O'Grady & O'Grady, 2009)

"

A first necessary step into this research has been to make contact with schools and familiarize with the context, in order to understand the main challenges and needs at stake and to figure out where to set the focus of this research. In particular, it has been interesting to get a clear picture of each specific case but, at the same time, also to define my area of intervention that would best benefit the school and lead to valuable outcomes.

EXPLORING THE FIELD

Data collection in the exploratory phase has made use of two different types of data sources, mainly implementing interviews, accompanied by a few observation sessions. Data collection at this stage occurred first in The Netherlands, but a phase of validation took place afterwards in Italy as well. Findings gathered in the two countries were compared, highlighting similarities and differences. The research set-up is here further explained:

Interviewing teachers and librarians: understanding challenges
A series of interviews has been carried out: 6 informants between teachers and librarians have been reached to gain a clear perspective from adults involved in the use and management of the library. Interviews took place in two rounds, 4 in the Netherlands first and then 2 in Italy. The first round already yielded a quite clear pattern on how to narrow down the focus of this research and similar insights emerged from the Italian schools too.

Scheme 6: interview structure

| occasions of use | interactions with children | organization of the service | future perspectives |
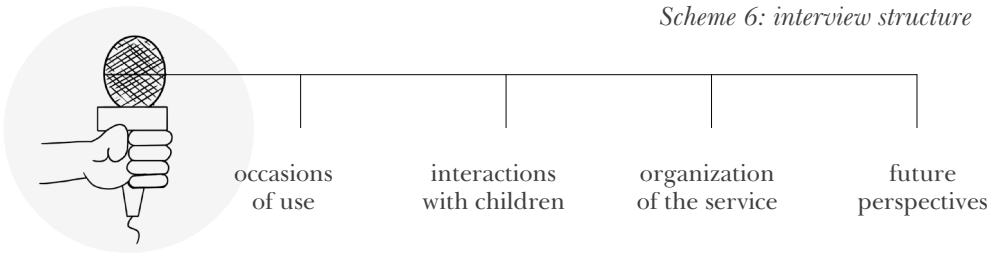
Observing the library in action
A few observation sessions supported the exploratory phase. Only with two schools it was possible to schedule them: 3 have been carried out at school NL1 and 2 at school NL3.
It has been possible to assist to information seeking activities as well as selection of recreational reading and story time. All observations have been non-participated and have been accompanied by follow-up conversations with key adult informants.

AN OVERVIEW OF THE CASE STUDIES

Different types of contexts have been investigated: all the involved schools implemented a physical library, set up into a dedicated space, but with highly significant variation for what concerns availability of materials, dedicated resources and the use of the resources themselves.

This varied range of cases has in turn determined the identification of a spectrum of different needs.

Fig.8:
Library in
school NL1

01 NL1

The first case that has been analyzed is a Dutch Montessori Primary School located in The Netherlands. The school is quite small and hosts a few classes divided in 3 different age groups: within the Montessori curricula, in fact, classes are not strictly divided by age but are quite varied and allow for more flexibility. The school made use of the class environment for different activities, that were often project-based and partially self-regulated by the kids themselves. The atrium was occupied by the library, that was organized into two very distinct parts, a Dutch and an English section. The latter spawned from a project started up by a British teacher that decided to create a library for English speaking expats. The English library has been happily welcome by the school not only because English books would build up more relevance into the formal teaching of a foreign language, but also because the presence of this library can help Dutch kids speak English in everyday situations, with the native speakers that they can meet there.

"What is different with the library, it's just you know, brings English out of the classroom and that's the main thing, you see, because I could see in group 6, 7 and 8, when they go to the next level, but they are not confident you know".
T., librarian

The library was open to the public once a week after school time, but was always available and open for the students, since a self-loan system was in place. Next to this, the library was sometimes used by an after school program run by another English teacher and addressed to Dutch kids willing to learn a second language. These extra curricular activities carried out here as an after-school club spawned from the same vision as the library:

"It's a play time English, it's not a class in school or whatever, ok, we have things that we use but it has to trigger them". ***M., after-school club teacher***

The study of this context has been carried out through an interview with the founder of this library project and through two observation sessions, both of a moment of free access and of one lesson of the after-school program. Findings have been analyzed taking into account the quite complex nature of this context, where the library had an use also beyond the school. This made it necessary to filter information and especially concentrate on those aspects that were important on a didactic level as well.

02 NL2

A second school that has been selected for a case study is a small international school of around 40 children, split in half between kindergarten and primary school. The didactic program is built on the International Baccalaureate Primary Years Programme (PYP), an international curriculum developed by International Baccalaureate, a non-profit educational foundation, active since 1968 and focused on the construction of programmes for different ages and levels of education. These are implemented by both private and state schools in many countries of the world. The PYP is designed for students 4-12 and is inspired to some key principles. As stated in the mission of IB:

"It prepares students for the intellectual challenges of further education and their future careers, focusing on the development of the whole child as an inquirer, both in the classroom and in the world outside." […] "The programme incorporates local and global issues into the curriculum, asking students to look at six related, trans-disciplinary themes and to consider the links between them. The themes include 'who we are', 'where we are in place and time' and 'how the world works'."
source: ibo.org

Given the small size of the school, the 20 children taking part in the PYP are gathered in one class and carry out activities on analogous topics, but in subgroups that are homogeneous in terms of age.

"So we'll sit down together and we introduce the topic of discussion or exploration or research and then we'll break out into more ability leveled groups". **E.,class teacher**

For what concerns the available facilities, besides the classroom and the outdoor space, a relatively small library of approximately 600 volumes is located in the atrium of the building, organized in one big bookcase next to a couch and a carpet. The library is used very often and it is strongly integrated with the activities carried out in class, besides being used for the loan service, allowing kids to select their free readings.

"We try to make things as relevant as possible for the children and as applicable in a real sense for them. So when we are talking about various concepts and topics, we come straight to the library 'where we see that? where we find that? where can you get information?'" E., **class teacher**

Fig.9: Library in school NL2

This is how a class teacher and curriculum coordinator described the way reading is framed and integrated in everyday activities. For this particular school, relevance of the topics is key within the curriculum and the program is structured by themes rather than disciplines in order to encourage a more natural and fluid movement between units. Besides this, all topics are proposed in a way to link them to kids' experiences and interests.

As Carol Collier Kuhlthau explains in her study on Guided Inquiry and libraries in the 21st century, finding a communal space between the teacher's and the student's worlds is key for a relevant and purposeful communication. In this scenario, the library becomes a real source of knowledge and inspiration for further applications of the concepts discussed in class.

Similarly to what is done for project-related activities, a key concern for the school is ensuring that moments of free reading will be as fun and as engaging by coming closer to children's world. They therefore came up with the concept of *"reading carousel"*: a series of enjoyable activities that students get to do every week and that goes round and round, allowing everyone to have a different experience with the books each week.

"Everyone else is actually quite intrinsically motivated to start reading, they like looking at the letters, they like looking at the books. I think that, what we've tried to do is make reading enjoyable, you know, we have reading carousel, it's a fun time and they look forward to it, they know that they are either going to do puppet shows with their books or they are going to be read to or they can sit down with a friend and then share their books or they may be doing some reading on the tablet or something, so we try to make it a fun time for them" **E., class teacher**

"The older ones especially toward the end of the year, when they are getting more tired and, you know, when they finished an assignment and there's still time before the next assignment starts and they have free time as well where they can choose to work on whatever it is that they like and occasionally they'll ask if they can come and get another book as well." **E., class teacher**

This case has been studied through an interview with the class teacher and a second talk with the colleague that replaced her for the next academic year. Moreover, one observation session and six co-generative workshops (three for each of the two groups I have worked with) have been carried out later on.

03 NL3

The research with institutes based in The Netherlands has also involved a third school, an International British School that implements the British national system for Junior Schools, ranging from grade 1 (5-6 years old) to grade 6 (10-11 years old). For many years, books had been confined into a relatively small classroom that was not matching the needs of the numerous kids coming in every day. A few years ago, the library was therefore moved to a dedicated space and turned into a media center that offered PCs with internet connection too. The way the library is used nowadays is strongly tied into the curriculum and into project-based activities that constitute the base of the didactic approach. A lot of focus is put on making the children independent in gathering and filtering information by acquiring awareness of their goals and of what they need throughout the process.

"We do higher gathering information, finding information out, how do we call things scientifically, we're coding things in the written form and then we're presenting information, so there's all that aspect ehm, one of the key with the library is the research side". **B., class teacher**

School NL3 also adopts a perspective centered on the idea that children should have some non-constrained time with the books, to simply explore the library and start developing curiosity about it and about reading as well.

"...I want them to carry on reading, it's like you know, the school motto is "reading for pleasure" and if we can get any child that comes in to the school and says "I don't like books", that's something I would turn around [...] Especially with the key stage 2 children we have like a library, a media center skills club at lunch time so it's a great way of bringing more children into the library at lunch time so it's their own time, it's not something that they have to do, but then I think it's the way of promoting the library" **J., Librarian**

At the same time, a class teacher highlighted the importance that the library can have for children's involvement in relation to the fact itself that the library is a place intended for choice, that allows students to

express their own preference and to steer their own learning experience.

" Things like the chance that they do get to choose their own books and children learning to read and things, yes we've got the leveled reading books but also reading other things that they want to try and read, at home, so reading with the parents at home, so to enjoy reading of a harder text, enjoying reading, reading stories to the children in the class and all those different things to make…" **B., class teacher**

At the same time, the librarian explained to me how hard it can be to facilitate students in making satisfying choices. For instance, she noticed that children often select books that are way beyond their reading skills and so distant from their current level that they eventually result in disappointment and frustration. She reported the example of a boy who was fascinated by the cover of a book with a big dragon that his friend had read: it was a particularly complex text that would have been too

Fig.10: Library in school NL3

hard for the boy, a beginner reader. She therefore faced the challenge of easing this situation and finding the right way to make the child aware of the situation and eventually valuate with him the opportunity to opt for something different. For reasons like this, triggered by small daily episodes, teachers and the librarian of school NL3 are more and more interested into supporting children's choices through dedicated tools, still giving them time for free exploration. A class teacher expresses her wish with the following words:

"I think maybe within our school [we should have] things like more library skills, how to use the library, people doing some more focused work like that, rather than just using half of a session to go and choose library books, doing some more library skill, I think it's yeah, this... [...] It's almost like another one because you still want more time where the children can just go and look, can browse through the books, if they can't do that, then they are going to lose interest and it becomes just another lesson". *B., class teacher*

Another challenge specific to this school has to do with the amount of time available for each library session. In particular, it has been found that the time frame available for children to choose their books was typically quite limited and it sometimes reduced to a few minutes. This especially emerged through observations, where it was noted that children only had around 5 minutes to pick their readings: in some cases, this resulted in the process of choice being incomplete, because when time was up, children had to hurry and select a book to bring to the librarian for registration. Especially the last minute was quite hectic and children moved fast back and forth, going back to something they had seen before and browsing as quickly as possible in the attempt of spotting something of interest. Situations like this present a challenge that on one hand has to do with the schedule itself and how to best plan library sessions, but on the other hand also links back to how processes of choice could be made more effective by offering more touchpoints or strengthening children's skills.

Two interviews have been carried out here, involving both the school librarian and a class teacher of a 5th grade class. Moreover, four story time sessions has been observed: in both cases, children of different ages came, chose their books and had one or two stories read by the librarian.

04 IT1

Two different Italian public schools in one municipality in the province of Milan have been involved into this research. The first is a school of 10 classes (2 in each grade) of slightly more than 20 children each. As typical within the Italian system, disciplines are split among two different teachers, with a distinction between humanities and the scientific area and with the exception of the foreign language (English) which is taught by a different specialist. The school has a room which is dedicated to extra-didactic activities or one-to-one teaching as well as to the library, which counts a few thousands volumes, that only have a rough distinction between fiction and nonfiction and between the main age groups. The library is not used very often, typically once a week or with bi-weekly frequency and only for the loan service.

This case study has been built up through a few observation sessions and through several talks with the librarian, a former teacher that voluntarily comes in a few hours every Friday to assist the children in choosing their books. Later on, two groups of children from two distinct classes have been involved into the co-generative project.

Compared to what observed in Dutch schools, teachers equally expressed their interest for building a use of the library system that can really involve kids into reading and learning, but at the same time the study of this context revealed the need for a frame to allow for a better exploitation of the intrinsic potential of the library.

When talking about reading and the use which is made of the library or its materials, in school IT1, the library is only used for the loan service and for kids' individual reading, which is sometimes related to other activities such as summaries and written reports about the books. Differently from other situations, children experience less chance to shape their own learning experience.

In particular, it has been found that a discipline-based didactic approach,

that is typical of the Italian schools system, often does not benefit the possibility to focus on library skills that can be transversal to all the topics tackled in school. Reading and literacy typically fall under the responsibility of the teacher in charge of humanities that in turn has to divide her schedule into the different disciplines she teaches, while colleagues that teach scientific disciplines hardly ever make use of the library. This results in less chances to access the service and select materials or practice library skills. Moreover, due to the fact that the schedule itself tends to separate disciplines, library time is often a quite narrow time frame: children come to the library for few minutes every two or three weeks and in general the potential of the library is not exploited at its maximum. For these reasons, recognizing the limitations of the actual school system, teacher showed their interest for counselling in relation to ways to support kids' choices.

Fig.11:
Library in
school IT1

05 IT2

The other Italian school that took part into this research is slightly bigger than the first presented here, with one more class in each grade (15 classes in total). The curriculum is structured in a similar way, with the same distinction between the different disciplinary areas. The size of the library is analogous too, but the organization of volumes is more structured and the library is in this case managed by volunteering parents that take shifts to cover the opening times during the week. The library is used more regularly (kids come in every week), but also in this case the main use is the loan service.

Here, the time dedicated to reading in class has been recognized as highly valuable, not only to monitor students' reading skills, but also and especially to give children a nice and relaxing moment during the day, where they can get to choose the story that is being read. A class teacher pointed out how important it is for her to grant children this occasion:

"Reading out loud is something that I do, say, not every day but quite regularly. We usually read books proposed by children, for instance we are currently reading "La gabbianella e il gatto", because a child read it, another read it a second time, he liked it and then another child liked it…therefore we are reading it out loud".
R., class teacher and library coordinator

The idea of giving a clear purpose to reading to motivate children more has been recognized as a key challenge in school IT2 too, but tackling disciplines through project-based activities and guided inquiry has been found to be less common even if highly desirable. In general, this was more highlighted as a partially unsolved challenge that would require the implementation of dedicated processes. In particular, the conversation with the class teacher and library coordinator made it clear that there is an interest in making didactics more relevant for kids and implementing new methods to support a more purposeful use of the library material.

"I think that the more lacking aspect is research-based work, which means using the library to do a research. As I told you before, it happened to me to see some children

*doing research in the library, but [...] you have the sensation that it's you preparing all the books, right? and then you say << you can find it here>> or you even open the book. Well, doing research work is something else. I think in my case… it's really us…I feel I am quite unprepared from this point of view. Even if you try to detach and not do a dominantly frontal lesson, for all that concerns research I don't think I have enough tools, I don't know, how to say, I think we as teachers got little preparation in planning this and therefore we rarely propose it." **R., class teacher and library coordinator**

The case study has been built through an observation session of children choosing their books through an interview with the class teacher who is responsible for the management and the didactic program of the library and. Differently from school IT1, there is a reference person for these tasks, but in all the Italian public schools more people used to gather in a committee that would cover these functions. The interview carried out in school IT2 revealed some interesting insights related to the way public funding has shaped the organization chart in a lot of public primary institutes.

*"Until some time ago, not only there was the "funzione strumentale" in terms of a person responsible of the literacy program, [...] but also in terms of the relationship with the public library and of all the projects done together. This role has then been removed, always for a matter of funding and budget and the library committee does not exist anymore as well. The committee was not composed of many people, but it was 2 or 3 people in each institute that were in charge of the library and of the relations with the other institutes; It was not a solo task, it was a more collegial task. [...] There was more sharing even from a didactic point of view and then from an organizational point of view, in terms of rearrangement, set up, definition of classification criteria. [...] We now have only one person that is a bit in charge of everything and the occasions of contact with the public library have decreased." **R., class teacher and library coordinator**

This leads to a broader digression. Looking in general at the situation within the Italian context, the financial crisis of the last years has certainly contributed to a significant cut in the expenditure for public services, such as healthcare and education. Within this situation of economic hardship, school libraries suffered from a reduction in resources too.

The cut in funding that occurred in the last years has heavily damaged the system of school libraries from different standpoints. Schools used to identify a group of teachers responsible for the library and to assign

them the so called *"funzione strumentale"* [3]: these people were entitled to make decisions concerning resources and materials and to plan the didactic use of the library together with their colleagues. Often a small committee was gathered around them, including students' parents too. A precise budget was handed over to them and their service was covered with a compensation. This virtuous structure has gradually started to fade since educational institutions nowadays receive less and less public funding. A lot of libraries were forced to cut on activities, shrink their investments, reduce their opening times and in different cases the *"funzione strumentale"* has been removed, therefore leaving any initiative to the personal motivation and interest of teachers, whose time has now been filled up by new tasks required to cover the lack of personnel in other functions.

At the same time, a scarcely strategic legislation did not support school libraries to adequately develop. Since 1974 (D. 417/74, Art. 113), teachers who, for health reasons, were not eligible for teaching in class anymore, were allowed to acquire different tasks and opt for administration or assistance in the library. In a lot of cases these people started a new career as librarians, for it being close enough to didactic activities even if less demanding and stressful. A more recent law (Decreto Legislativo 95/2012) limited the choice to the only administrative functions, therefore heavily impacting on the number of human resources available in school libraries.

Parallel to this, legislation does not give a clear direction in terms of defining the minimum viable elements that constitute a library and no law obliges schools to implement a library and respect certain minimum standards. As a result, the Italian landscape of school libraries is variegated and ranges from one-shelf collections to advanced media centers, with all the possible shades in between. These considerations represent fundamental background knowledge to this research project: in fact, only by building awareness about the social and economic context can the design intervention become sharper and more incisive.

ORGANIZING MATERIALS: A COMMON CONCERN ACROSS CASES

An interesting overall finding has been that all informants from the different contexts somehow mentioned the organization of materials as a key challenge in relation to the management of the library service as well

as to its use and to the experience children go through while they select their next reading. What teachers and librarian expressed through this concern is actually the desire to facilitate kids' search and provide them with an organization that reflects their own expectations and needs. Different perspectives on this topic are gathered here:

In school NL1, the librarian faced the challenge of finding the best way to meet children's preferences and to highlight the most appealing and relevant categories, especially for the English speaking children for whom it was not particularly easy to find books in their native language in The Netherlands. Here, the key was finding ways of monitoring children's reactions to the layout of the library and gradually improving it. This keen attention for readers' wishes and needs expressed her desire to make the library an easy-to-navigate and attractive place for kids. However, this led to very frequent changes of set-up and therefore to the request of some research inputs on how to consolidate the organization.

In school NL2, on the other hand, the class teacher had previously involved her older students into a project, where together they had had a look at the books in the library and had categorized them in groups. This had been done next to the preparation of a diagram to show the process that led them to the final classification. In this case kids had been directly empowered to make decisions about the organization of books, both to make them more aware of the available material, therefore expanding their possibilities of choice and to help them come up with a frame that they could easily remember in the future. However, this highly conceptual format was then not easy for younger kids to understand and use and the books kept on being mixed up, leaving students with the difficulty of finding books within certain topics or genres.

In school NL3, a simplified version of the Dewey system was in place, ensuring the possibility to retrieve items and track them accurately. Moreover, a few areas had been set up differently, for instance displaying books for the youngest kids in a way that was appealing and understandable to them or arranging small boxes organized by topic. Nevertheless, the interviews still revealed the need to improve the system and find a different way to categorize materials or a different frame the process of search that could mirror children's mental schemes better.

"if they don't know the author, it's very difficult to find the book, ehm but if they want to read a specific type of story like (…), you know, some adventures, so all the adventurous books are in a sort of an area, that might be quite useful" **B., class teacher, NL3**

Next to this, the two Italian schools shared similar concerns in noticing the limitations of a classification that was only based on age groups on one hand and that did not have a precise system for retrieval on the other. This made it particularly hard to locate specific books but also to browse within the macro categories.

The identification of this challenge throughout the sample represented a trigger to then focus some of the co-design activities on this specific topic, adopting a participative approach and involving children in the definition of a better and more effective classification and layout of the available material.

FOCUS AND CHALLENGES

As can be seen from this overview of the different contexts, the library service is conceived and used in different ways across them, with more or less integration into the curriculum and with a series of different activities carried out in or through the library. Moreover, different insights have been spot, both concerning the focus that is put on the library and the unsolved challenges that teachers and librarians face in their role. However, when looking at the big picture, what emerges is that educators are confronted with two main challenges:

Challenge 1:Involving and attracting
On one hand, a key concern is finding ways to involve children and attract them towards the library with a clear purpose. In fact, educators see the need for ways to stimulate curiosity towards reading and learning in children and the library comes as a context in which to actualize this interest through the fruition of content. The library is ultimately seen as a chance for kids to get engaged into various topics or fields of study and the very first step into this journey is helping them foresee the relevance of this experience and develop positive expectations.

Challenge 2: Offering a smooth experience

On the other hand, educators strive to offer a good experience with the library service, that can satisfy children's needs and keep their engagement high over time. This concern shows that stimulating curiosity is not enough in itself, since engagement needs to be supported throughout the process. In fact, individuals tend to adopt behaviors that they feel as being under their control and they have positive association with: when they have trust in their own skills and they expect positive results, they act on reality, being convinced of the fact that they can bring change through their choices (Bandura, 1977).

Fig.13:
Challenge 2
Offering a smooth
experience

For instance, when talking about fruition of the library, choosing the right material is a necessary action in order to actually be able to make use of that content and it is particularly necessary to support children in this phase in order to ensure that their choices are as successful as possible and open the way to positive learning experiences.

As a side note, it is important to underline that these challenges concerned both information seeking and recreational reading and findings of this phase suggested the need for more research about the experience kids go through while they use a library, in order to understand what can facilitate them and what can instead slow down or even hinder successful choices.

Motivating children: the overarching challenge

Even though these challenges may appear as two distinct ones, there is a strong red thread that brings them together: the overall challenge of a school's library is supporting children's motivation toward learning and toward the acquisition of new experiences and knowledge. Fostering motivation is for some schools a real issue and for some others a well-achieved goal but in every case it is recognized as the necessary starting point without which everything else would lose meaning. This led to the definition of the following research question:

"How might we turn the school's library into a source of motivation toward learning for the children?"

Before continuing the journey through the findings of this work, a remark around this question and its relation to the case studies is necessary. The different schools involved in this project almost exclusively implemented print materials and particularly books. Only in one school, DVDs and audio materials were available, but constituted a very small minority of

ENGAGEMENT

FRUITION
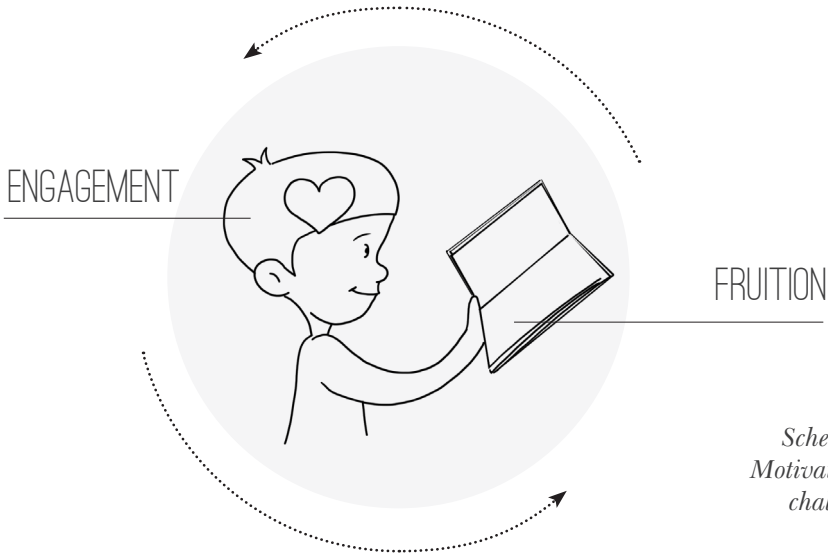
Scheme 7: Motivational challenge

the resources owned by the institution. For this reason, in a lot of cases teachers and librarians framed their challenge as *"motivating children to read"*, since they related this to books, which represented the most of what kids had come in contact with. However, it is important to dig deeper into this concept to understand the full potential of this topic of research, in relation to what highlighted in the introduction of this work about information literacy and content fruition.

The cases that have been investigated determine a frame within which the research takes place: the fact that schools predominantly offered books in their libraries led to set the focus of the following research phase on reading. However, there are grounded reasons to believe that a study on what motivates children to read can build up knowledge around what are the key principles that can give a real, durable and valid outcome to the learning process. Reading is one of the possible ways in which learning takes place and, in fact, literacy is a fundamental aspect of a person's life. It is not just about being able to read letters and words or becoming passionate about reading, but it also has to do with the capacity to find resources of different kind when needed. Moreover, literacy has to do with building emotional intelligence. Narratives and stories are fundamental introspection tools and can help people to interpret their own experiences in a wider frame, thus finding significance in them (Mignola). [5]

Furthermore, it is important to note that motivating to read and learn has to do both with recreational purposes and research scopes. In both cases, an intrinsic desire to approach such materials has to be in place in order for the learning process to be effective and to trigger long lasting engagement. No separation between these two aspects has therefore been operated.

THE ROLE OF SCHOOLS' RESOURCES

This reflection on the central role that motivation plays ties back to the need to think beyond the idea that more resources or better structures or more technological devices can build a better library by themselves.

If it is true that the amount of available resources can add value to the service and eventually allow every citizen to receive qualified education, it is also true that, within this picture, another part of the debate shouldn't

be forgotten and the right focus should be put on the understanding of what can truly support children's learning and keep them engaged and motivated towards it.

School libraries nowadays face the necessity to improve their standards and find a model that can make them more recognizable and work as a guarantee on their quality.

As underlined by a study from De Groot and Branch (De Groot & Branch, 2009), a substantial body of research has identified a positive correlation between the amount of books children come across with and their motivation and commitment toward reading and learning. However, they have also identified other and different conditions of functional, relational and didactic nature, that have to occur at the same time in order for this to be truly effective.

AN ACTIONABLE PLAN

Promoting change
As mentioned before, the main goal of this research has been to bridge the gap between research and implementation by embracing a cooperative approach and guiding schools through a roadmap to gradually build up a real transformation. This has taken place through a process aimed at defining a priority area for intervention, but also through a methodology that has become in itself a way for the children to get intrinsically motivated and interested about their school library.

Viewpoint
As it has been widely acknowledged in research, kids' engagement in learning may have depend on different factors, that involve experiences and contexts of various type, ranging from the family environment, to the didactic approach and the experience they have had with reading and more specifically with the school library. As Edmunds and Bauserman found in 2013 by interviewing children on what motivated them toward reading, engagement has different dimensions and is affected by multiple actors as well as situations and past experiences. Some of these aspects are strictly connected to pedagogical and psychological considerations, which are not the focus of this research. On the other hand, this study aims at understanding and defining what elements can help to fabricate a good library experience that would reinforce kids' motivation. Even though this could possibly not be a sufficient trigger for kids that are

struggling with reading or facing more complex types of discomfort in its regard, it still holds the key for a lot of children to start their own journey into the world of reading and it is still a necessary completion for those kids who are already motivated toward reading. Moreover, when the design process is tackled through a cooperative approach, it leads to better alignment of the actors involved and eventually to shared decisions, that can really facilitate small and gradual behavioral change and infuse a sense of belonging.

The fact that some aspects of the library have pedagogical implications and the fact that the main goal of this research has been to work on the improvement of the library experience has however not excluded reflections beyond a merely functional perspective.

The focus has still been set on the analysis of the "*library system*" as a whole, which means it has moved past the study of the library as a physical place. In fact, the library system has to be seen as a more complex unit, that has its core in tangible assets of resources but whose boundaries reach much further.

If it is true that the library is the place where children go to look for support materials and mine information, it is also true that this happens for certain reasons, within specific activities and in relation with other people. Within this frame, my approach has therefore taken a very clear starting point into the fruition of the service, but the process has naturally led to stumbling upon insights of different nature that have anyway formed a significant portion of this study and have become part of the feedbacks to teachers and librarians.

In order to make this declaration of intent more concrete, it is interesting to have a closer look at what "*fruition of the library*" actually means, through an overview of situations in which the library service was being used across the selected contexts. These examples range from more to less self-directed occasions of use and it is important to notice that these example all relate to the fruition of printed materials, but the same activities would still apply if the library offered different types of resources.

Choosing books for recreational reading
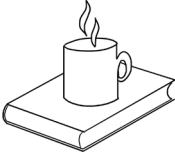
This includes planned visits to the library dedicated to the selection of a book to read for recreational purposes and typically with none or very little constraint. This activity includes both free exploratory visits to the library and access to the loan service. *EX. All schools planned regular visits for the children to change their books. This typically occurred every week or with bi-weekly frequency, allowing children to access the library in groups or all together, accompanied by the class teacher.*

Information seeking

Similarly, information seeking refers to both exploratory activities within the library and situations where books are borrowed for further research. Differently from recreational reading, choice is typically guided by an *overarching theme or purpose. EX. In school NL2 children carried out information seeking activities both going to the library in groups and working in class, browsing through a pre-selection of books.*

Free time in the library
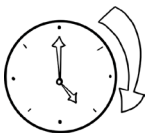
This category includes spontaneous visits to the library during students' free time. An example may be kids deciding to go to the library during lunch break to explore or read or borrow or do other activities that they especially like.
EX. In school NL3, kids could decide to access the library during lunch time and spend time doing what they preferred to. A group of kids for example came in quite often to read comic books together.

When looking at these examples, it is clear that the main function of a library is offering access to resources and, in this, the main challenge therefore becomes helping children to successfully obtain the resources that best fit their needs and to operate effective choice. In fact, selecting

among the available material is the crucial enabler for kids to then access information and content in general. The issue is actually much more complex than this, since it is not just a matter of retrieving materials, but of making the whole experience meaningful, beginning with the definition of a relevant scope and all the way to the fruition of the collected information. For instance, choosing a book for recreational reading purposes, implies that the individual has a reason to do so, sees a meaning in this activity and has enough background information to begin his search. Similarly, this applies to all the three examples mentioned above.

For what concerns the way this research has been developed, the co-creation phase has been carried out by taking a starting point in the actual fruition of the library service, taking this as an anchor to then explore more broadly into other aspects prior or subsequent to it.

RELEVANCE WITHIN EXISTING LITERATURE

When looking at what kind of research is already available, a few different streams can be identified among previous works. The following overview on extant research will show how existing studies can represent a valid support to this work and will identify the gap in literature that my research addresses. Literature review has been used as a tool to position my research and ground its reason for being, but no assumptions or hypotheses have been constructed prior to field research.

A comprehensive perspective on motivation
Broad qualitative studies on motivation toward reading and learning are few in number and within this body of knowledge, a key element is missing: a frame that can help schools understand the relation between factors belonging to different dimensions that affect motivation, but taking the perspective of children and teachers themselves. In fact, many times factors are just *"listed"* or, if interconnected, they are related on a highly conceptual level, as in the case of many studies around self determination theory.

In other cases, the study is focused on the understanding of the effects of specific factors, like didactic methods (Guthrie et al, 2006). A lot of quantitative research has been conducted to test the correlation between particular approaches and interest or achievements in reading (Wigfield

et al., 2004). Similarly, other types of factors related to the didactic, relational or functional dimension have been proved valid. For instance, researchers have demonstrated that better strategies of choice motivate children more. A relevant body of research has then taken this as a starting point and has explored in detail which strategies and sub factors come into play during the moment of choice (Reuter, 2007; Reuter & Druin, 2004; Raqi & Zainab, 2008).

My research remains open to include factors of different kind, observing and investigating different activities that revolve around the library system, considering all the elements in the system: resources offered by the library, initiatives and tasks of all the actors involved, relational dynamics and behaviors, the context and the school ecosystem.

For the school, with the school
For what concerns methodology, a consistent body of literature uses interviews, observations or a combination of data that does not go beyond the analysis of the status quo. What these studies are missing is a phase of implementation in which factors are tested within the same contexts where the analysis has taken place. It is of course possible to use multiple studies to gain a better picture of what researchers have found and achieved up until now, but findings are not always comparable, as they belong to different contexts and are lacking a unitary perspective.

Some of the broader research on motivation, like the interesting study from Kathryn M. Edmunds and Kathryn L. Bauserman (Edmunds & Bauserman, 2006) uses conversational interviews with children to gather knowledge around what really motivates them to read in all dimensions. However, only one source of information is available and no observations or interviews with other informants are performed.

My research goal is to both analyze contexts and start defining key design directions. In order to do this, different points of view, considering all the actors that are involved in the library system. Children are the core of the system, for being the main users of the library and the reason of existence of the school itself, but teachers and librarians and other decision makers need to be involved to in order to truly promote change within the school. A lot of effort has been put into proposing a methodology that allowed children to express their ideas. Multiple sources of data are included too, but the key element of my approach lies in the constant involvement of all actors throughout the process from analysis to definition of design solutions.

On the other hand, some researchers have focused on participatory processes and on the implementation and experimentation of new functions within the library, but their perspective remains rather narrow and bound to the context, without embracing findings that came out of existing studies. (Blend et al., 2014)

My approach attempts instead at making extensive use of existing research to validate and compare the outcomes of my work.

Ultimately, the combination of these two aspects, an holistic approach to motivation and a methodology aimed at bringing real behavioral change constitute the unique value of this work.

END NOTES

[5] «Le storie sono un grande strumento di introspezione e inducono a interpretare la propria vita in termini narrativi e a proiettarla in un contesto più ampio, permettendo così di attribuire significato a esperienze che altrimenti potrebbero apparire prive di senso.» L. Mignola - Dall'emozione di leggere al piacere della lettura.

CHILDREN BECOME DESIGNERS

Co-generative phase

> "
> *While student voice in school decision-making has been established over many decades through, for example, representative student councils, the convergence of student voice and the design of learning environments is a rare and more recent phenomenon. (Bland et al., 2014)* "

G iven the focus of the research on the fruition of the library and on how to make it more engaging for the children, this second phase has been carried out involving kids directly and trying to understand their perception of the library and of the way they experience it. This has been aimed at answering the overarching research question mentioned here above, but at the same time other foreshadowing questions have been identified within it, to further break down the research goal:

Factual knowledge

- How do children access and choose resources from the library?

Understanding of perception

- What do children perceive as attractive or not within the library experience? (Likes and dislikes)

- Which barriers do children experience while making use of the library?

- Which needs do children express through their wishes and ideas?
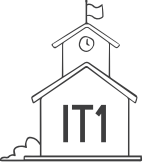
Definition of motivational triggers

- Which factors positively affect children's experiences with the library?

DATA COLLECTION

The co-generative phase has been carried out through a series of participative sessions with the children and it has been organized as a gradual process to guide kids from the reflection upon their own experience with the library till the definition of possible design solutions aimed at improving it. This has been done making sure that children could relate their ideas to the challenges that they had previously identified. Only two schools, NL2 and IT1 agreed to participate to a full co-generative process, but a focused co-design session has been carried out in school NL3 too, taking as a starting point the challenges highlighted by teachers and those that had emerged through preliminary observation sessions.

Co-generative sessions
Co-generative sessions in school NL2 and IT1 have involved two groups of children of different ages in both contexts (4 groups in total). The younger groups involved children from 7 to 9 years old, whereas the older groups covered the age range 9-10. Each group was composed by 4-6 students and participated to three sessions, but younger and older groups followed a different path, adapted to their level. The two different paths are presented here:

Scheme 8: co-generative sessions-overview	NL2		NL3		IT1	
GROUP A 7-9 yrs old	2	2	–		5	1
GROUP B 9-10 yrs old	2	2	8	7	2	4

GROUP A (7-9 YEARS OLD)

- **Session 1: contextmapping**
  After being introduced to the topic and the project, children engaged in conceptual assignments, reflecting on what characteristics can make a library particularly enjoyable and then reflecting on their own school library. This session also included a moment of participated observation of children choosing their books.

  Session 2: co-design part 1
- The first co-design session has been focused on the topic of classification, that had been identified as a challenge in all the observed contexts. Children have designed a new organization of books and have divided them in new clusters, that have been maintained in use in the library even after the session.

  Session 3: co-design part 2
- Based on the insights of the first session and on what students had reported about the library experience, a few design challenges have been identified and proposed to the kids asking them to come up with ideas and solutions.

GROUP B (9-10 YEARS OLD)

- **Session 1: co-research part 1**
  After being introduced to the topic and the project, the older children started from a more conceptual analysis of the library experience and, making use of visual triggers, they came up with questions to ask to their peers. They did this in pairs, therefore creating different series of questions.

- **Session 2: co-research part 2**
  During the second session, pairs were mixed and children interviewed each other on the different questions they had come up with during the previous workshop.

- **Session 3: co-design**
  Interviews yielded interesting findings in relation to design challenges. Kids were proposed with some boiled down insights from their interviews and were briefed to come up with their own design solutions for them.

At the end of this process, teachers have been involved again and children have presented their ideas back in class, with different formats that have been at that point set-up by the teachers themselves. In school IT1 and NL3, this has been organized as an official presentation to the class and to the teacher, where everyone could ask questions and discuss the ideas. This has been done under my facilitation as well.

Each session lasted approximately 1 hour, a quite contained time-frame, in order to allow the children to make optimal use of this time and carry out simple activities that could lead to immediate and gratifying outputs. The proposed assignments required the children to make use of different tools and to engage both in conceptual and practical activities. Even if tasks have been differentiated according to the age group of pupils, a common process composed by analogous phases can be identified:

Giving children a role
The very first entry point into the co-generative process has been about getting to know each other and establishing a trustworthy relation between the researcher and the participants. This has been done by helping kids understand their role within this project: they have explicitly been recognized as knowledgeable informants and this has been translated into a role-play game where they have for instance been given the title of *"designer"* or *"researcher"*.

Sensitizing children on the topic
Giving a title and recognizing children in a role is however not enough to help them relate personally to the project: this has been done by implementing a sensitizing assignment at the beginning of each series of workshops. Sensitizing techniques included participated observation, visual triggers (pictures of other libraries or pictures of situations related to it) and verbal techniques, especially asking children to talk about their personal experience with reading in general and with the school library in particular.

Identifying and understanding design challenges
The next phase has been focused on helping children to better relate the topic to their own school library and identify possible areas of improvement. The key tools in this case have been open discussion and brainstorming for the younger kids and semi-structured interviews for the older kids.

Identifying possible solutions
Finally, children have been accompanied to a more hands-on phase of the project, where they have developed and presented their own ideas, trying to relate them back to the context of their school. During this phase, children have often been invited to draw or write about their ideas. Drawing was useful not only to obtain a visualization of children's ideas but it also helped to establish rapport and get to know more of their experiences and wishes. In practical terms, drawings often served as conversation starters. (Hill, 1997)

*Fig.14:
sensitizing tools for
a contextmapping
session*

In school NL3, it has been possible to carry out only one session, but involving a whole class of 16 students in 5th grade (9-10 years old). In this case, the session has been stretched to cover a time slot of two hours in order to make sure that a first sensitizing moment could still take place. Given the situation, children have been presented with co-design challenges based on what had previously been observed in that context and on what teachers had highlighted as an area of interest. At the same time, the assignments have adopted the same format of the co-design sessions carried out in other schools, but they have been kept general enough, in order to allow kids to steer them to some extent.

Interviews and follow-ups

Interviews with teachers and librarians still played a role during this phase: in fact, during the conversation with adult informants, different insights emerged from their experience with the library. These insights provided a better understanding of both solutions that had already been successfully implemented and solutions that teachers envisioned as desired interventions. This knowledge has been used to back up what emerged from the co-generative process with children, but at the same time it has also offered a different angle. In fact, the solutions that teachers and librarians came up with often took the perspective of the management side of the library service. These inputs have anyway become part of the findings of this research, as elements that can effectively contribute to a better library experience, especially for what concerns background operations.

DATA ANALYSIS: EXTRACTING FACTORS

All the collected data has been first transcribed and analyzed through coding, boiling down raw information to a more easily usable form. This has produced a first pool of concepts that have then been clustered to constitute research insights, after having been validated through a second round of comparison with the original data. Each factor (or *"ingredient"*) has been extracted from raw data gathered during field research. In fact, for what concerns the second phase of this research, two types of data have been identified, direct and indirect data. The first cluster has been used to identify factors that influence the library experience, while the second type of data has been utilized to validate and strengthen findings through the perspective of multiple informants. Direct data includes

ideas emerged from the children themselves as well as correlations that have been observed first-hand during one of the observation sessions. On the other hand, indirect data includes ideas that teacher proposed in order to improve kids' experience and references to implemented solutions. Both direct and indirect data have been anyway taken into account, given the fact that both kids and adults have been included in this study as key informants.

Parallel to this, some conclusions have been drawn from the comparison of different cases. This has added more depth to the findings and has extended their internal validity (deeper understanding of the factors themselves and their variables) as well as their generalizability across different contexts.

ANSWERING THE RESEARCH QUESTION

The second phase of the present study has answered the research question at three different levels: on a more general level, this research has allowed for a deep understanding of the school system and the main processes that regulate and affect reading and learning motivation. On a deeper level, the use of the library has been analyzed in details and the co-generative sessions raised awareness on what key ingredients would be needed in order to design a truly motivational experience. Finally, the methodology adopted to work with the children has yielded interesting results and has become a motivational tool in itself, therefore leading to a deeper understanding of what motivating kids actually mean.

01 DIRECT DATA   **02** INDIRECT DATA

— Children's ideas   — Teacher's ideas

— Observed phenomena   — Referred situations
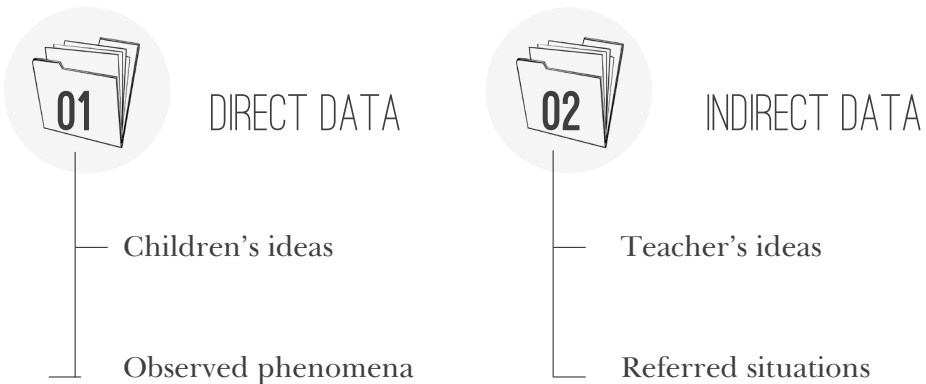
Scheme 9: types of data

Seeing the big picture

A first significant result lies in the understanding of the overarching structure of factors and drivers that shape kids' motivation. This first scheme is intended as a navigational tool to explain the role of the findings of this study. The final outcome has been a deep-dive into possible design actions and this will be analyzed in detail later on, but these overall relations have first to be drawn in order to circumscribe the reach of my intervention.
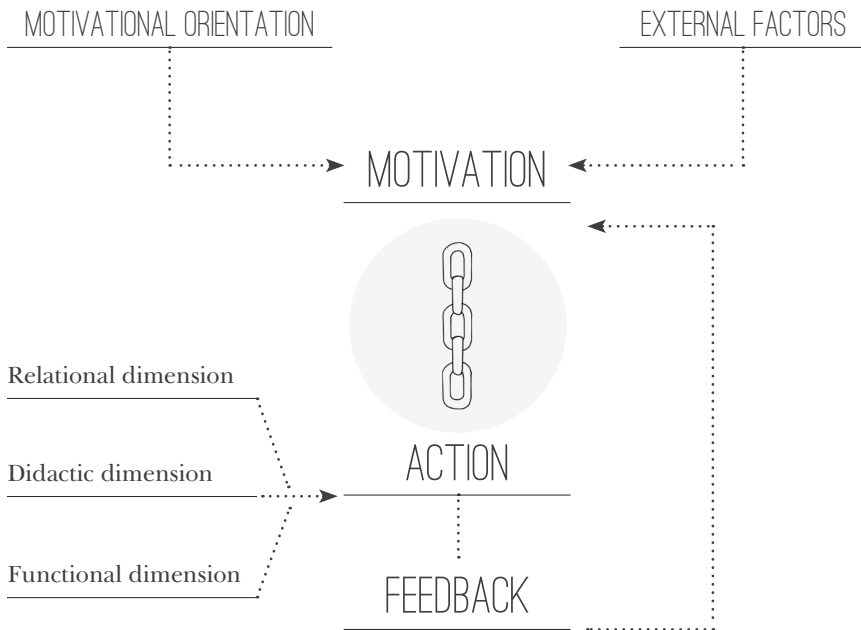
Scheme 10: findings - theoretical model

This scheme shows which general aspects play a role in the construction of a strong and durable motivation toward learning. It offers an overview of the different types of factors that emerged across this study and of the way they link to each other. It has in fact been constructed taking a starting point in the findings of this research and understanding their nature and relation. At the same time, existing literature has been integrated to back up the connections that have been drawn here. Findings will be then presented by following different phases of use of the library, which represents a better frame to actually understand how to impact on

the quality of the service and on its user journey. Meanwhile, this graph offers a more conceptual interpretation of the different types of factors that play a role in the motivational challenge.

LINKING MOTIVATION AND ACTION

As mentioned before, motivation represents the core of this investigation around school libraries for it being the key challenge that teachers and librarians face everyday. Therefore, it is also located at the center of this scheme.

The term motivation is often used to indicate the desire that people have to try, learn or discover something. In psychology, motivation is both defined as the desire to understand reality (primary motivation) and as the desire to understand the reasons of one's success or failure. Emphasis is put both on what these aspects are and on how they are interconnected. The core part of the model is in fact the link between motivation and action. Action is here defined as the sum of all the activities that are related to the use of the library. Both aspects have to be taken care of if we are to enhance a truly long lasting engagement in reading, as the exploratory phase has demonstrated. In fact, until action occurs with no motivation, the child's interest will be focused on the mere completion of a task. On the other side, a motivated child that did not find a proper outlet in action, would face the risk of seeing its enthusiasm diminished and may eventually suffer from frustration. A lot of research insights proved this and showed a clear interdependence between how relevant library activities were to children and how they actually perceived the experience. The connector between motivation and action is therefore the keystone of the whole system, the main element that ensures that the entire cycle actually works. Existing psychological theories have in turn proved that behavioral choices depend on individual beliefs and social norms that have become subjective for them being part of one's own values (Ajzen & Fishbein, 2011). Internal factors such as attitudes, skills and information and external factors such as opportunities or dependency from others can orient one's intentions that stand behind behavioral choices. In particular, personal beliefs around possible consequences of a certain behavior and evaluation of consequences generate a certain mental and affective attitude towards the behavior. On the other hand, beliefs around others' opinion and motivations to

please such expectations generate subjective norms. Finally, beliefs around the possibility to control something generate the perception of control (higher or lower according to the chances that the individual sees for himself). All these factors together determine what is defined as *"behavioral intention"* and therefore the behavior that the individual eventually chooses to adopt (Ajzen & Fishbein, 2011).

ANTECEDENTS OF MOTIVATION

When looking at how motivation can be leveraged, it is important to consider some overall *"environmental"* factors, that are typically built over a long period of time and represent the conditions within which the library experience takes place. These represents motivational antecedents. Specifically, two different macro-factors have been recognized:

Motivational orientation, seen as the overall approach used by adults to leverage motivation in children, constitutes a general factor connected to the school context. External-to-the-school factors, such as family context, personal attitude, … play a crucial role too.

Existing research has widely proved the relevance of external factors: however, they are not being included into the present study for them being outside of the chosen unit of analysis, which is bound to the school environment. Likewise, motivational orientation has been only partially analyzed for its vastness and given the fact that it would have taken a much longer time frame to capture it. However, its definition deserves a closer look.

Motivational orientation
Motivational orientation indicated the overall approach adopted by teachers, or educators in general, to leverage motivation in children. It has to do with interpersonal relations between teachers and students and with the way didactic activities are proposed and handled and it describes the classroom climate that welcomes children everyday and that can be more or less supportive in their regards. Its range is bigger than something that occurs on a specific situation or experience and it goes beyond the use of the library per se, involving all the different activities carried out in school. It is built over a long period of time, for the fact that it is an essential component of the adult-child relation in school. For this reason, what happens specifically during the execution of each single

task or activity contributes to build and shape the overall orientation: a durable and consistent series of positive reinforcements will give children supportive feedbacks. On the other hand, negative responses or very divergent and confusing interactions may eventually weaken motivation itself. Furthermore, motivational orientation is not just described in absolute positive or negative terms: in fact, children may have different reasons to be motivated toward learning and what would be seen as an optimal reinforcement from a student may negatively affect another one.

SUPPORTING ACTION

A strong influence on motivation comes from children's everyday experience in school and therefore from their experiences with activities and tasks. During the execution of a certain action, different elements may influence its outcome and different ingredients are necessary in order to shape a meaningful experience. These *"ingredients"* can be defined as factors and will be discussed in the following paragraphs, in specific relation to the process of choice. However, before deep-diving into them, it is important to highlight that these factors will take into account three different dimensions:

Didactic dimension

It is seen as the actual content of the activities that children are confronted with as well as the methodological tools that they are offered throughout their learning experience.

Relational dimension

It includes both peer to peer and student-adult interactions. This category comprises all those behaviors and interactions that occur between adults and children and that are aimed at making the individual motivated toward a certain learning and reading. Likewise, it also incorporates relational dynamics amongst students. It is generally acknowledged that teachers play a key role in motivating children to read learn, by creating a supportive classroom culture and by making sure children receive positive reinforcement that keep their

interest alive. Existing research (Gambrell, 1996) has proved that, when asked to describe what inspires them to read, children in primary school often mentioned their teacher or situations that took place in class. Reinforcements describe the way teachers relate to children during the development of the action. The reinforcement can be external (such as a reward for a specific achievement), can be related to the activity itself (for example to its value or enjoyability) or can be directed to the individual (for instance leveraging his desire to learn or achieve something). Reinforcements can also be classified by looking at the ultimate goal they embody. Some are more performance-oriented and encourage toward the achievement of results, some others are instead mastery-oriented, therefore supporting the desire to learn for the sake of learning. Peer-to-peer interactions include relational dynamics between students that occur during the process of choice. P2p interactions cannot be fully controlled or planned, but certain situations can be encouraged through activities or occasions of use. The data gathered here shows some relational dynamics that occurred during the use of the library and that generated a positive outcome, that led a child to a successful choice.

Functional dimension

It is linked to some more operative aspects related to the experience the child goes through as a user of the library system. These can be seen as facilitators or enablers that make the aforementioned experience smoother and help achieve a positive outcome. Whenever children experience frustrations while performing a task, a negative feedback occurs and, if this is repeated over time, it may lead to a permanent barrier and eventually to a decrease in motivation and interest. A lot of other complex factors already influence children's engagement and operating a choice is often not an easy task: the best way of tackling this complexity is therefore providing a high quality service, in which all the details of the journey are taken care of.

FEEDBACK: FACILITATING REINFORCEMENT OVER TIME

The outcome of actions, the feedback children receive from the things they do, matters too. This does not only relate to success or failure but also to the understanding of the reasons that led to success or failure. However, a single successful experience is not enough to support long-lasting motivation if it does not feed itself repeatedly over time through positive and reinforcing feedbacks. Existing theories such as the transtheoretical approach (Prochaska & Di Clemente, 1984) have engaged in the study of the dynamic nature of human behavior. In particular, they underline the importance of the time frame within which a certain experience unfolds, knowledge is accumulated and individuals become capable of evaluating the pros and cons of their behavioral choices by resorting to a *"decisional scale"*. Positive feedback may induce a stabilized behavior; appreciation of achievements reinforces the reasons that stand behind actions as well as examples and testimony from others can generate emotional activation.

I'm NEW!
PLEASE
READ
ME!

th Rees

EXPERIENCE INGREDIENTS

Findings

"

Students' contributions to school design, particularly where they are encouraged to be imaginative, may well be unpredictable and contradictory to the conditions that adults see as 'desirable' (Blend et al., 2014)

"

F indings of this study are intended to provide a frame within which it is easier to develop design solutions to improve the school library experience. Even though it is acknowledged that findings emerged from different contexts and have been abstracted from a varied pool of data (findings may have more or less support data and instances), this overview of ingredients should be seen as a map of hypotheses to be verified through further research as well as an essential tool for the comparison of future cases (see annex "EXPERIENCE INGREDIENTS").

The key ingredients of a motivating experience of fruition of the library service are presented here, following the user journey. Their description incorporates research insights and raw data, but also presents possible design actions (at the level of guidelines) that could be used to verify the validity of these ingredients on the field.

As mentioned before, next to the identification of the overall relations between factors that affect motivation at different levels, findings have been organized following the phases of use of the library. Specifically, four different stages and some backstage operations have been identified and are here presented in general terms:

Process of fruition

| 01 | 02 | 03 | 04 |
| BEFORE | ACCESS | CHOICE | AFTER |
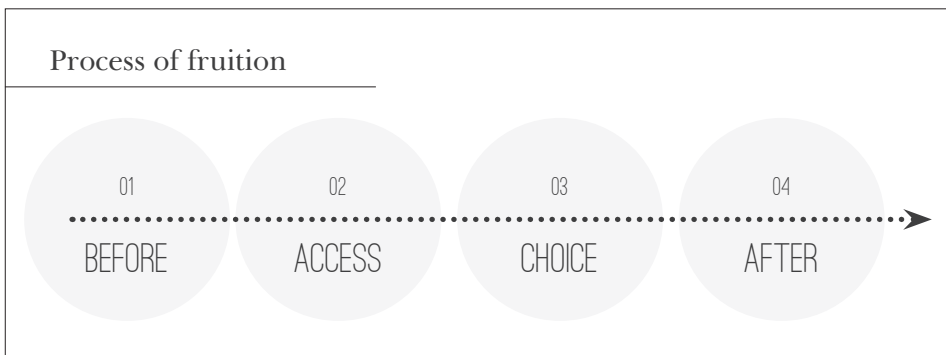
BACKSTAGE

Scheme 11: process of fruition of the library service

"BACKSTAGE" includes operations that take place in background and set the stage for the use of the library. In particular, it considers the management of a library service.

A first phase has to do with what happens **"BEFORE GOING TO THE LIBRARY"**. This includes a whole series of activities that can be carried out in class or with the students in general in order to create a ground in which the experience of the library can meaningfully take place. Talking about reading and books as well as having a lecture on a specific topic can be powerful starters to engage kids in the use of the library. This "before" phase can however be seen both as a near trigger (ex. the teacher gives an introduction on a certain theme and the kids go and search for more information in the library) or as an overall antecedent that is part of the school and class culture or didactic experience. For instance, a long-term project that constantly requires the use of the library may generate a very specific type of antecedent that would repeatedly have an impact and over a long period of time.

The phase named **"ACCESS TO THE LIBRARY"** indicates the actual occasion in which kids access the library service and it takes into account both the time and the didactic frame within which this happens.

The actual moment of **"CHOICE"** then follows: this includes the processes that kids go through in order to pick the resources they need, all the way from exploration and evaluation of options to a final decision making and selection of some material from the library.

One may think that this decision would mark the end of the process of fruition of the library and even though this is literally true, a first relevant finding has been that kids do not see this being the case. On the other hand, what happens **AFTER** is as relevant as the rest of the process. As soon as the children have selected a new

book to read, they like to find a way to give meaning to this experience, perhaps spending time reading it or comparing their choices with some friends. Moreover and once again the time span interested by this phase reaches much further, including also the way that those selected readings are used by the children and integrated into didactic activities.

Another interesting first finding from this study was that kids identified another key phase within this process. They highlighted the importance of having occasions of use of the library that just allow them to do a free exploration without the constraint of necessarily having to pick something to read at the end. This is considered relevant in relation to their choices, but it is also regarded as a parallel and enjoyable activity in itself: having the chance to browse through books, look at the covers and read a bit of the stories is compelling and relaxing at the same time.

Moreover, it can ultimately lead to more aware and successful choices. For example, in school NL2 , it has been observed that kids sometimes picked their readings based on something that they had previously observed during one of the library lessons that were in some cases aimed at facilitating children's exploration of the library. Students remembered elements like cover, topic or title, that they had noticed during previous scouting activities and these led them to successful choices the next time. They basically pinpointed interesting triggers, built a small mental archive and retrieved information later on, when needed.

IMPROVING THE LIBRARY EXPERIENCE: DESIGN ACTIONS

1. BACKSTAGE

NEED

A good library service highly relies on some backstage operations that take place parallel or prior to the use of the library service and that enable it. Existing research has highlighted that the way libraries are designed and the way their use is planned can significantly affect children's learning processes and outcomes (Lonsdale, 2003). It is here important to specify that a lot of different didactic aspects would come into play when looking at background processes, however, for the purpose of this research, only more functional aspects are considered.

#A RELEVANT OFFER
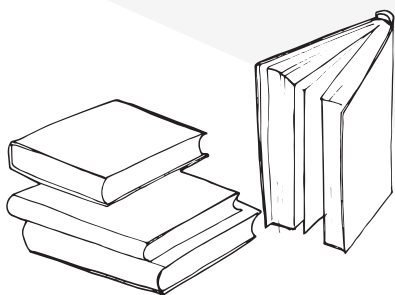
#A RELEVANT OFFER: When deciding which materials the library should have, involve different stakeholders and make sure it's a collective decision.

*"I do not believe that having a lot of volumes necessarily helps, it's the contrary… because if it not correct to give children the books they should read, chaos is not good either…I mean, in my opinion you should do a lot of selection on the type of books you own. For instance, all the information books area is a bit chaotic now and we haven't started organizing it yet. You know you have a lot of stuff, but what exactly? […] The ideal solution would be that adults really knew these books. And this pre-selection…you don't just do it because one book is put together with tape and the other is new but you have to read them, you have to know them". **R., library coordinator, IT2***

The core of a library is books and other materials designed to offer access to information and content of various kind but, obvious as this may sound, building a relevant and interesting collection that meets children's expectations and needs is anything but easy. The main challenge lies in bringing together educators' didactic needs and personal interests and children's wishes and it may not be particularly easy to make everyone satisfied with the offer:

"I think there could be more books, 'cause there's a lot of people that come in and since there's not many books that are my type, then like people start taking books and then you just take one book cause [...] you think it's cool and then you start reading it and then [...] ok, this is really boring and then you look again and ehm ok maybe I should take that one and you find out it's boring, so it's really hard to find out the book you want to read." - **D. - 10 years old, NL2**

The concept of relevance has a direct relation on the decision making process through which new titles get selected: this is one of the fundamental background processes of the library service. Making such decisions requires both the definition of a person or group of people in charge and the capacity to make informed choices. Interviews with teachers and field observations especially revealed examples of good practices. Starting from these insights, some key concepts have been identified:

Constant reviews

"My weekend is not complete if I don't go to the local bookstore " **J, librarian, NL3**

A good library is not just supplied once: building a relevant and complete collection is a continuous process that requires the system to be kept up to date constantly. In order to do so, different tools may be used, but most importantly the school should set up a system that guarantees that new inputs come in frequently and that service deliverers can always be up-to-date.

A collective decision

"We will give a list also to our librarian, we need books, we're doing, we're changing our topic to rivers, we need books on rivers and she will find, she'll order books on rivers when she has the next budget to do so". **B., class teacher, NL3**

"They can sometimes ask me: can you recommend anything? or I've read this book, it's from a series, you haven't got book 2 or 3 in the library, can we order? And then you know I said to them…just make a note in the ordering book, we have like a suggestion book". **J, librarian, NL3**

A good decision making process often involves multiple actors. Schools where teachers, librarians and children gave a contribution to decide what the school's library may need, were more successful in delivering a positive experience of choice and in supplying relevant material. In particular, in these contexts, children could effectively relate both didactic activities and personal interests to available books. It is important to remark that this occurred not only because of the fact that more suitable books were available but also thanks to the higher level of involvement that everyone experienced and that became a motivational driver itself. It is the proof that such results can be achieved not only by creating an official decisional board, but also by empowering everyone to give suggestions and contribute, as happened in school NL3, where even children could note down their proposals. Other researchers identified similar findings: Gambrell (1996) found that teacher book selection plays a crucial role in the structuring of literacy programs "because teachers know about the kinds of books that will be appropriate and appealing to their particular students".

#PLANNING

#PLANNING: Plan activities so to allow children to have frequent chances to use of the library and turn it more and more into a key anchor point of their learning experience.

If library time has been proposed to children as something meaningful and fun to do, spending more time in the library amplifies its value even

more. The challenge posed to schools is both about planning library time and making sure that there are enough occasions to make use of it as well as spending a significant amount of time in the library and allowing enough time for choice. To put this briefly, it is both about frequency and duration.

In fact, having a fixed appointment with the library has been found to be truly important and kids would feel disappointed if this did not take place as planned. When talking about their ideas on how to improve the experience, different students mentioned things like *"going to the library more often"* or *"spending a little bit of time in the library everyday"*. Some of these children had in fact experienced the pain point of not being able to get a new book because the library was not open or because library time had been canceled due to other priorities. Insights gathered on the field revealed different interesting topics related to time planning activities and uncovered a series of good practices that can in turn lead to design guidelines:

Generating expectations - the library as a fixed appointment

A first challenge has to do with the way library time is proposed to kids and allocated within the weekly schedule:

In school IT1, kids that valued reading as an important activity were really attentive in reminding the teacher that it was library's day and they should have therefore found time to go and change their book. Due to a very rich and somehow unpredictable schedule, it was not always possible for them to foresee if it would have been possible to go to the library and this made them feel that they were not using the library at its maximum.

Planning visits to the library and in general having a schedule for library-related activities has an impact on kids in the sense that it builds expectations and a sense of anticipation, especially if they are adequately informed about the plan as well. Knowing what to expect and when to expect it is important to feel that one's needs are being taken into account, especially when some limitations occur and it is necessary to provide a justification for them.

During the co-design sessions, kids of the aforementioned example expressed their desire to have more time in the library and more occasions of using it, but at the same time also highlighted that they would enjoy

being able to come to a better agreement with their teachers in order to have a clearer regulation concerning access to the library.

Having an always-open library

When talking about time spent in the library, it is interesting to look at the approach that has been found in all the three contexts investigated in The Netherlands. These schools implemented an always-open library that kids could access at any time, whenever they had a break or were done with their assignments. The fact itself of communicating that the library is always open is a very powerful way to make kids feel welcome in there: of course, their daily schedule includes a lot of different activities, but a small break may always allow them to sneak in with the teacher's authorization and go for a brief book hunt.

"This way I could ensure that they could do self service check-out, I don't have to be there, the library is always open for them, for children to go and get what they want and…" **T., library coordinator, NL1**

At the same time, for the schools that implemented this kind of solution, it had become a way of testifying that the library is not just an extra function within the school, but it is part of it and it is relevant as much as the learning space of the classroom. Of course, such approach poses challenges on the management side, but more reflections on this point are presented later on in this chapter.

Planning shifts - managing different groups of kids

However, the library service is not only used by a few children in small groups. It is also important to allow each class teacher to have his own time slot to come in with the entire group of children, making sure that no overlapping occurs and therefore that the library does not get overcrowded and children can carry out their activities with no hurry. The teacher and library coordinator of school IT2 implemented a system of shifts divided by grade, tuning this with the shifts of the library assistants. Since the school welcomes a quite significant number of children, the library is open every day for some hours in order to cover everyone's needs. For this reason, a group of parents volunteers at the loan service, taking shifts during the week, in order to ensure that the system keeps going smoothly.

2. BEFORE GOING TO THE LIBRARY

NEED

Before the actual library experience takes place, it is important to pave the way for a meaningful occasion that will truly leave a trace in the way children perceive and approach reading and learning. The main challenge here is generating positive expectations and infuse enthusiasm into students, making them willing to venture into the library. This is probably a well known feeling for many voracious readers, that are certainly familiar with that sense of excitement that gets them when they stand in front of a bookcase: each single book is a world to explore, a separate universe in which to immerse oneself, a walk in the fictional woods (Eco, 1998).

And this feeling has been found to be familiar to some kids too: G., from school IT1, sees the library as a forest to explore, with different paths that can lead you in many directions and S., her classmate, sees it as a place that can contain the history of the whole universe. What makes these definitions similar is this perception of the library as a place of possibilities where two journeys will never end up in the same place and where the vastness of the fictional woods guarantees constant new discoveries. But not all kids share the same positive and hopeful attitude: triggering this sense of expectation is therefore a fundamental step toward reading motivation. Field research highlighted the following principles:

2.1 INSPIRING AND PROPOSING

Children's engagement can be affected by the way library experiences and library materials are framed and offered. Three desirable strategies have been identified:

#ON STAGE

"I have an idea: there is a stage in the library and then a microphone and one of the librarians comes and says to everybody to go to the stage, she says it to all the people and the she shows the new books!" **T. - 8 years old, NL2**

Going to the library should be like a special occasion to look forward to, or at least this is how a lot of kids portrayed it, using the metaphor

of the stage or referring to other occasions of entertainment. Besides this, children very often wished for an authentic collective involvement of all the actors that revolve around the library and underlined how they would like to share these joyful moments and see them equally promoted by everyone.
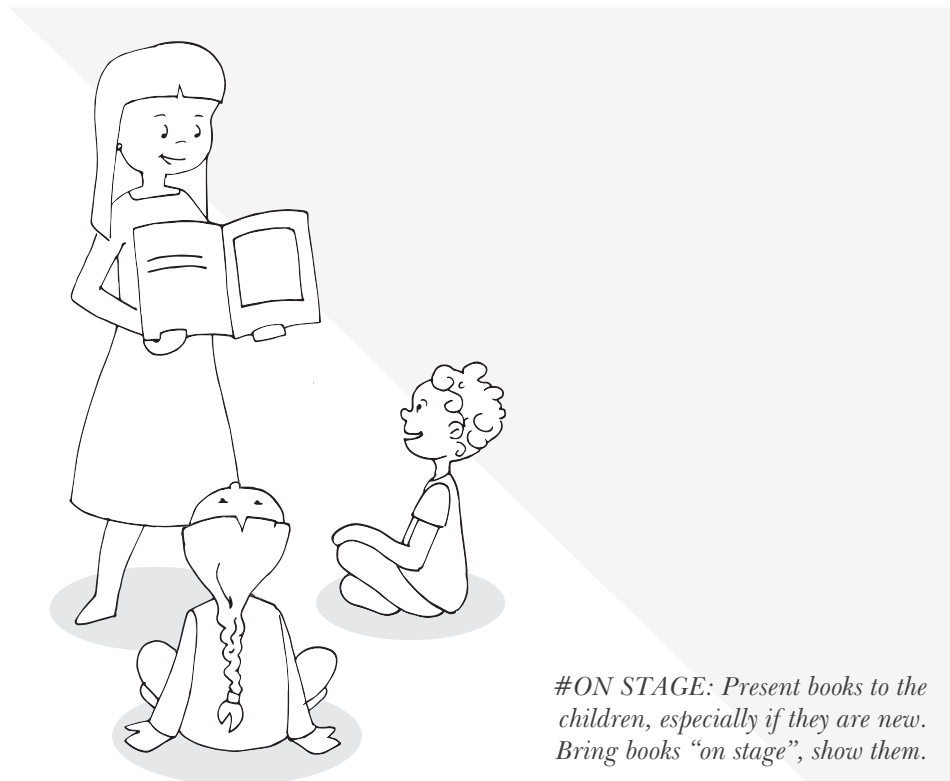
#ON STAGE: Present books to the children, especially if they are new. Bring books "on stage", show them.

Moreover, many children wished for a more emphatic and clearer communication around what the library can offer, as in the example reported here below:

"In this library I can't really see new books, like I can't even realize it, because you know if we have a new book, that is in group 7 or 8 or 6 they just put it in, you can't realize that there is a new book, you can only realize it if you take it out, but how much is the percentage that you would take the new book out?" **B. - 10 years old, NL2**

In different occasions and in more than one context, children then came up with a series of ideas that ranged from using a stage, to installing a system of speakers to putting up big signs right in the middle of the library. All these ideas reflect the interest that children have in being involved and captivated, making library time a special and happy moment. In her "La biblioteca che vorrei", Antonella Agnoli (Agnoli, 2014) similarly highlights that a shift is happening in many libraries: from offering extensive collections of books to building an appealing environment that puts materials under the right light and allows users to fully enjoy them.

#A GOOD LINK
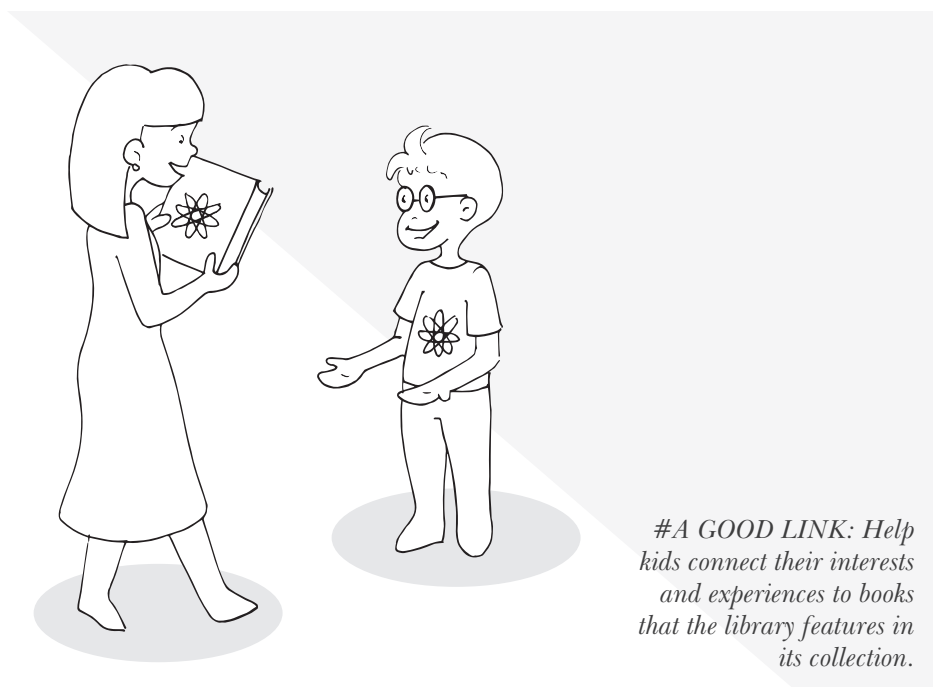
#A GOOD LINK: Help kids connect their interests and experiences to books that the library features in its collection.

The potential of initiatives devoted to the promotion of the library does not just lie in special occasions or events such as the presentation of new books (that may just happen once a year). In fact, everyday activities could be likewise turned into triggers to inspire kids and make them

willing to explore more, not necessarily in relation to predefined didactic activities. During one of the sessions, a girl from school IT1 picked a book about painting, explaining that she had got the inspiration for it during the last art lesson, when the children had worked on the redesign of a painting from Van Gogh, learning his painting technique and analyzing his style. In this case, she had stumbled upon the book by chance as she was browsing the art section, inspired by her great passion for the topic and by the desire of finding something interesting to read about it.

In this case, she had been lucky enough to come across it, but it may not be the case in other situations. Moreover, other kids may not be as quick in making these connections and building a habit of looking for books related to interesting experiences they've had. This reveals a great opportunity to create these links and generate new expectations and interests.

#ENGAGE

#ENGAGE: Offer children a captivating onboarding experience with reading, properly triggering their imagination.

Co-generative sessions with kids revealed that the way content is proposed on a relational level can have a significant impact on motivation. In fact, kids tended to draw quite strict conclusions regarding teachers' approach to literacy promotion. Some children noticed a clear difference between proposing a book by talking about its characteristics, contents or qualities and by directly reading part of it, to make those features immediately clear and understandable. They underlined how the first approach would make them think that the book would have been used for homeworks or during a lesson, whereas the second showed a more informal and friendly attitude that in turn would raise more curiosity and interest and would put the didactic frame aside.

For these reasons, during one of the co-design sessions, a boy from school IT1 presented his idea of having a narrator next to the librarian and the teacher, a person that would be in charge of telling stories, picking interesting parts from books and presenting them to children to really inspire them to find something new. This example makes it explicit that a good and captivating onboarding experience is key to attract kids into the world of reading. Similar findings came out of the study that Edmunds and Bauserman conducted in 2013: by interviewing children on reading motivation, they found that teachers are often considered a source of inspiration and therefore play a crucial role in promoting reading.

The challenge is however twofold and equally concerns educators and students: a teacher from school IT2 reported that she had hard times proposing books that she would not enjoy as well as she would not propose readings that did not establish a positive relation with the children. Her experience had shown that trying to come up all together with a common decision on what to read next would establish much better conditions for the actual reading experience to take place. This would be used by her not only as a way to make children read more, but also as a powerful source of inspiration to feed and support their following free reading choices.

All these examples show how activities prior to the library can be carried out in class, to spark kids' imagination and help them discover the pleasure of reading and develop expectations on what they can get from the library.

2.2 GIVING A PURPOSE

Giving a purpose to children's readings is somehow similar to inspiring them, or at least it can be observed that these two key actions share their role as motivational triggers. At the same time, they are also different: inspiring is in general more aimed at giving kids a broader pool of choices and helping them develop new interests. On the other hand, giving purpose means that children are offered didactic experiences is a way that attempts at making them as engaging and as relevant as possible through the use of the library resources.

#MAKE IT REAL

Libraries are often associated with places devoted to purely theoretical activities, but field research as well as existing literature have proved that this is often not the case. As it has already been highlighted in the presentation of the case studies (chapter 3), it has been found that some schools implement a didactic approach based on making things as real and relevant as possible for the children. This method embraces what is commonly known as project-based learning (Chu et al., 2011).
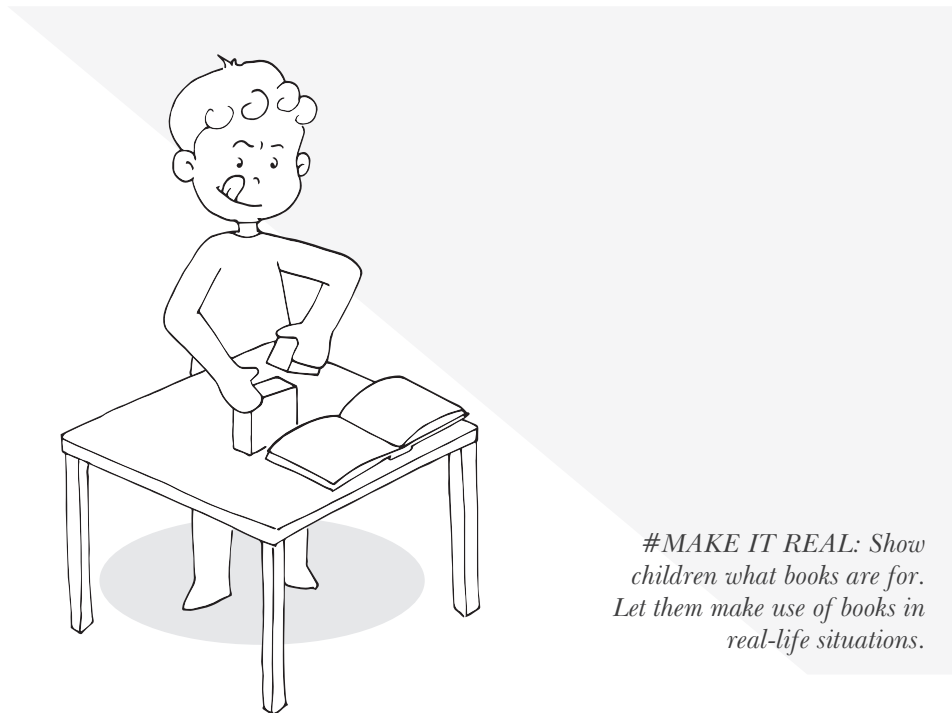
#MAKE IT REAL: Show children what books are for. Let them make use of books in real-life situations.

Moreover, engaging activities carried out in class can spawn more interest outside of the classroom. During the month of September 2014, students in school NL2 were learning about the human body, carrying out small research projects in group. The whole topic was being tackled with a very practical angle, encouraging kids to discover interesting facts about the human body by using books and referring them to personal experiences the had had. During the contextmapping session, a boy shared some pictures from his favorite books with the rest of the group. He showed his encyclopedia open on the chapter about the human body that he had been using for that research as well.

"I am reading my encyclopedia, this is the chapter of the human body and I was reading about science and there you could see the picture of the skin. I was reading in my house my encyclopedia, so I was reading about my skin, now it says how our hair grows. And that image is why don't haircuts hurt? so they are showing how the hair grows. So, like this I keep my books and this is my favorite chapter" **P. - 7 years old, NL2**

These findings show that the use that teachers make of the library and the purpose that they give it can become an important motivational factor.

#THIRD SPACE

In other schools a more traditional approach has been found, meaning that lectures were more often based on knowledge transfer from the teacher to the students rather than on a guided and shared research process. Nevertheless, it has been still found relevant for kids to make practical use of what they read in books and they sometimes created spontaneous connections between things they had read and experiences of their real life. For example, a boy in 4th grade in school IT1 expressed his interest for insects and bugs and later on, during an assignment that included the exploration of the library and the eventual selection of an interesting book, he picked a volume about animals, saying that this would have allowed him to know more about the creatures he had such a strong interest for. He talked about his passion as follows:

"Let's say that I like animals. And then basically, I like fish and things like that, lizards, all kinds of bugs and amphibia. When I go to a small playground here nearby the school, there is a house which is like abandoned in the grass and when it's sunny … basically there are small walls with some sort of pipes. And when it's

sunny I go there and see the lizards, I run chase them and then I sneak up on them and catch them" **D. - 9 years old, IT1**

Moreover, the decision of picking that specific book represented a truly new discovery for D., who later on stated that it had been a new eye-opening experience to him:

"Today I have found out that there are books I did not expect to find here and like for instance I had never seen this book about amphibia."

This small anecdote shows how much potential there could be in giving books a whole new exploratory purpose, truly bringing them to life, into the world of living or tangible things, giving them a real three-dimensional depth that is sometimes not perceived to its full potential, therefore giving books the status of mere knowledge carriers in the most passive and static sense. Helping kids to make the connection between reading and other experiences is key to supporting a deeper and stronger engagement.
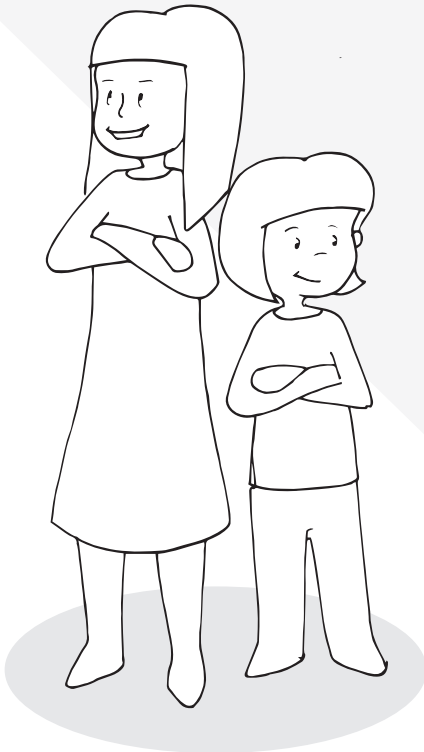
#THIRD SPACE: Create a common ground between teachers and students. It's not about mediating, but intersecting mutual interests.

This concept is tied in what is defined in research as the *"third space"* (Kuhlthau, 2010) between teachers and students, a common ground where students' interests and teachers' roles happily and successfully meet.

"If we think of the student's world outside of school and the student's cumulative knowledge and experience as first space and we think of the curriculum as second space, the question arises of how to make these two very separate spaces intersect. When first space and second space overlap third space is created. Third space is where the most meaningful, lasting learning takes place. The teacher's main challenge is to create third space as often as possible." (Kuhlthau, 2010, p.21)

#WIDE HORIZONS

When comparing findings of this research across the different case studies, it emerged that children that had the chance to make use of the library for different purposes and in relation to a variety of topics were more keen on exploring new topics, genres and themes and had a much wider range of appealing choices to pick from.
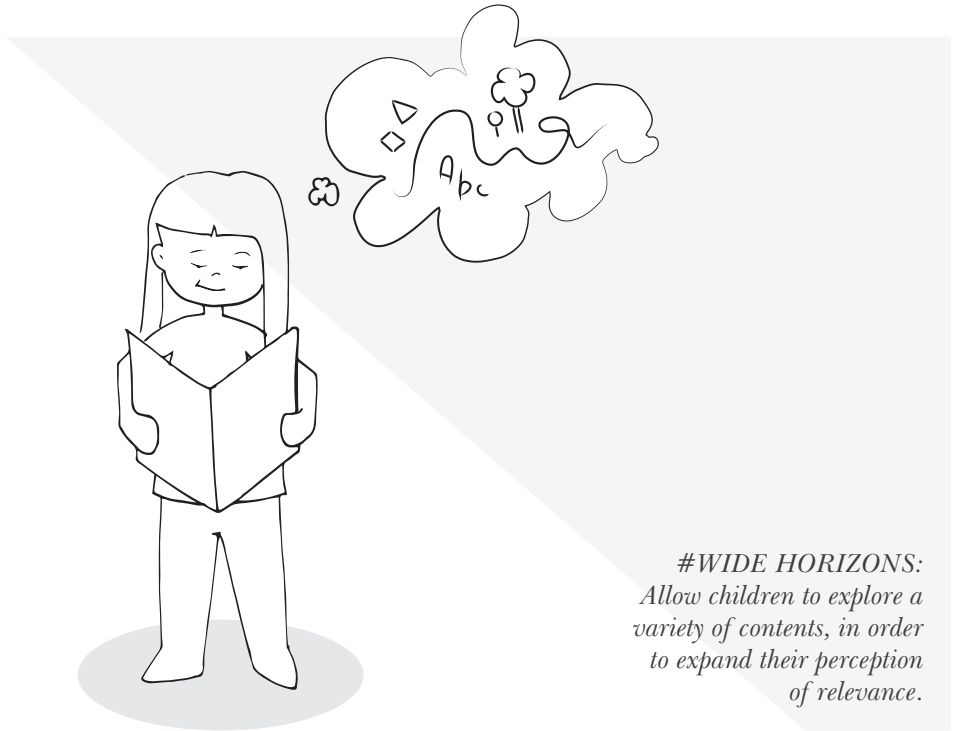
#WIDE HORIZONS:
Allow children to explore a
variety of contents, in order
to expand their perception
of relevance.

In particular, it has been observed that schools that implemented a project-based approach throughout the curriculum did a better job in helping kids better relate to different subjects and areas of interest. Ultimately, this finding shows that the combination of depth and width in experiences with reading can truly super-charge kid's interest about learning. As a support to this insight, it is worth mentioning that, during their study on elementary school children, Wigfield and Guthrie (1997) found that there is a positive correlation between the amount and breadth of reading and the level of intrinsic motivation.

2.3 EMPOWERING CHILDREN

Not only promoting reading in a meaningful way has been found necessary to foster motivation. Kids seek for more autonomy too and often express the desire to be more empowered to shape their own learning experience and to become active decision makers. Co-generative sessions as well as observations and interviews yielded interesting insights in this regard:

#I CHOOSE

In order to stimulate positive expectations among children, it has been found important to make them perceive that going to the library is not just a mandatory activity or the mere execution of a task. On the contrary, it should be a personally relevant moment, that gives students the chance to explore their own interests and passions. This is a highly relevant factor, that has been observed as an overall facilitator of motivation in different moments, starting from interactions that take place prior to the use of the library.

It is important to guarantee that children feel they are making their own choices: if there is a frame that always constrains them, they would perceive that their individuality and interests are being overshadowed and they would likely feel less motivated. This ties back into the debate about what should be a good didactic focus: activities in school are often directed at achievement and observable performances, which in itself is not supportive enough for the need of autonomy that is a key component of motivation. Kids want to be empowered and to feel that they can have ownership over their own choices. In fact, a progressive and constant process of empowerment is what guarantees that children can increase and sharpen their resilience, e.g. their capability of activating helpful

resources and positive thinking when facing a new situation (Malaguti, 2005; Putton & Fotugno 2008). The concept of *"proactive coping"* sits within this logic too: it represents the capacity to activate mental strategies in order to face a complex situations and overcome potential discomfort (Anolli, 2005).

But what happens in reality is sometimes that children may feel constrained by rules and frames that they can hardly relate to and over which they have little decisional power. It is the case of what has been observed in school IT1, where the librarian reported the following issues:

#I CHOOSE: Allow children to have ownership over their choices, by giving them margins of freedom within the curriculum.
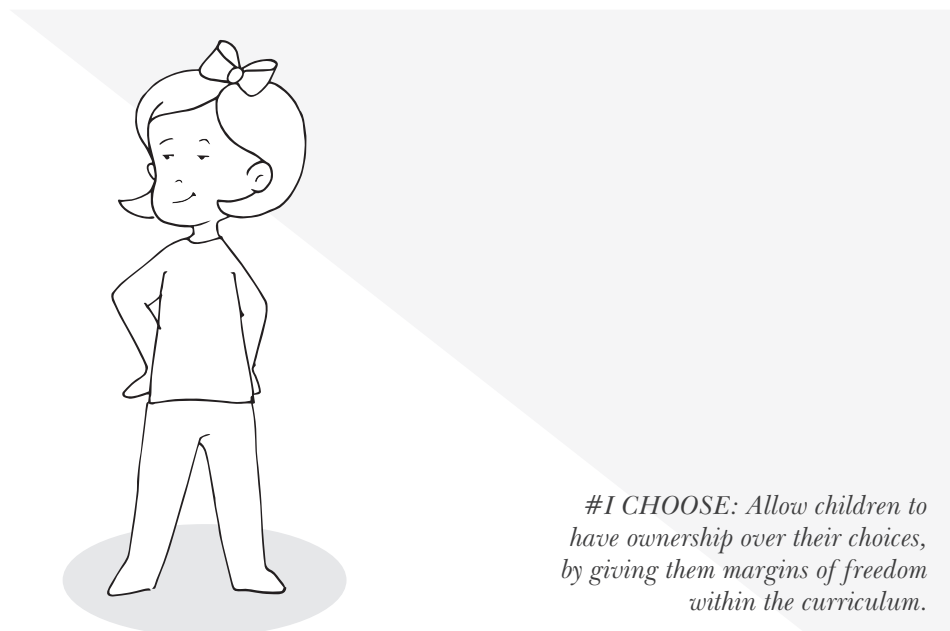
"For instance, I was only entitled to lend out one book per child when I started working here. And then sometimes children wanted to get more than one and a debate with some class teachers occurred, whenever they saw this happening. And I was wondering: why do you send them back with the exceeding books? If they have chosen, it seems to me that they more or less had a clear idea of what they wanted, I mean, it probably means he likes reading about that topic! And sometimes when it happens to me to be a bit skeptical about what a child has chosen, I go like: "Ok,

*I will lend it to you, but be aware that if your class teacher says that it is too big or there is too much to do this week to read this, then you can come back and we can change it". And I explained that this is a complex situation for the children because they feel disappointed about being denied a possibility of choice. And in some classes they always do written reports about books and therefore they try and choose short books because if they pick a huge volume than you know it's tricky, you must read it all to write about it!" **L., librarian, IT1**

This perception has been observed in co-generative sessions with kids too. Some of them reported that these constraints really turned them off and made them develop negative expectations on their library experience. This issue has eventually been recognized by teachers too and the school adopted a more flexible policy regarding the amount of books that students could borrow, thus allowing for more free choices. Similarly, the teacher of a 5th grade class that was part of the study in the same school, picked up the challenge and decided to propose a new type of report about books, in which children were asked not to summarize the story and prove their full understanding of it, but in which they could prepare a small review for their friends to read, in order to suggest to others a book that they had particularly enjoyed.

In school NL3, teachers instead adopted a different strategy to offer kids the chance to make their own choices, a flexible and self-regulated reading diet. The language curriculum included activities that touched upon different types of written texts. However, these categories were extremely broad (poetry, historical fiction, …) and children were given the freedom to define their own reading plan, with the only constraint of reading at least one book in each category during the year. In addition, they were encouraged to share the one that they had appreciated the most, giving them also the chance to reflect on their own reading preferences.

All these different examples show how obligations and constraints may eventually disrupt motivation and how important it is to find ways to open up possibilities of choice for the children, even if within the frame of didactic activities and purposes. Despite the need to meet the learning standards of each grade, it is also important to remember that the best way to help them get there is by having them take partial control over their learning process. As Daniel Pennac tells in his "Come un romanzo", children cannot be forced to love reading or learning at any cost. The verb "to read" cannot make use of imperative forms because they won't produce any effect in itself: it will instead be the capacity to involve them,

to make them experience the magic of discovery first-hand that will eventually make them better learner. [6]

PREFERENCES

Different children in different schools shared the feeling of their preferences not being represented enough or the frustration of looking at the same shelves in different situations and never finding a book of a specific genre or topic. This phenomenon has been found stronger in schools where a clearly regulated and participatory process for the acquisition of new materials was missing. Comments around this issue emerged in many cases in relation to recreational reading, but in some situations also in regard to information seeking for research purposes, especially in schools where project-based teaching was implemented. As *D. (9, NL2)* pointed out:

"Ehm I think I'd like to have a bit more, for example non-fiction, for example to help us, if we are doing something about exercise, non-fiction books about exercise."

#PREFERENCES: Involve children in deciding the offer of the library to best meet their taste and make them feel empowered,

The concept of relevance of a library collection has therefore been expressed in terms of variety of titles owned, match with children's preferences and topics proposed in school. In some cases, during observation sessions, another perspective emerged, since relevance has been assessed also looking at physical characteristics of a book and at its content. Very old books, books printed with extremely small font size or stories that deal with topics that are profoundly distant from children's life are often perceived as non-relevant.

Another interesting stimulus came from a student in school IT1: **T.** is a voracious reader, but he is not very happy about the school's library and when asked to elaborate more on this thought, he explains:

"I almost do not borrow anything because there is nothing… I mean, there is not much that interests me from a narrative point of view, I have tried to read these books, these you see here that are narrative fiction, I've read "Il Giornalino"… but they are written in a small typeface… not even Harry Potter should be here because of the age (meaning Harry Potter is for older kids). And there's only one Harry Potter. I've already read the classics, these are instead books for research, not for reading. I also like science and history, but through narrative texts."

This example shows that a child who is extremely proficient in reading and enthusiast about it tends to choose very differently from his peers, looking for more complex books, such as novels or books that are typically targeted at the tween audience. Moreover, his pace was much faster: he would come back to the library more often to get a new book because he had already finished the previous and he sometimes ran out of options. Making sure that these kids get choices that are relevant to them is as important as supporting students that struggle with reading. If this need is ignored, reading may gradually become less interesting and challenging or the kids' potential may simply not find proper outlet. Children may manifest very different needs and it is therefore necessary to come up with targeted solutions to help educators better understand how to cater for the many different types of learners they could come across.

Research has highlighted that personal interests of children play a crucial role in motivation toward reading. As Edmunds & Bauserman found in 2006, children are driven by their passions towards the selection of a certain book instead of another and making use of interviews and conversations is a truly powerful tool in order to get to know what can

better engage students. Involving children in book selection can therefore become an effective motivational strategy, that has been proved to be appealing among children too.

For instance, students from school IT2 came up with a design for a printed form to be distributed in all the classes of the school that would allow children to have a discussion and agree upon some titles/genres that the library should get more of. At the same time, teachers recognized the importance of understanding more of children's preferences:

"If we have some kind of cataloging system where we can tag titles that are often requested, then you can do your resourcing based on those, maybe the next in the series or read-alikes or something like".E, class teacher, NL2

It is for sure not easy to keep track of everyone's preferences and to always consult everyone on the matter. For this reason, the process has to be made efficient. Being aware of what children especially like and look for is important to make sure the library is supplied enough. The use of library records (digital or physical) can support more in-depth observations: it may allow teachers to know more about the process of check-in and out of books and to base decisions on that.

3. ACCESS TO THE LIBRARY

NEED

Generating positive expectations in children and triggering their imagination properly is certainly a good starting point but it is however not enough in itself. In fact, this has to be followed by actions that effectively fulfill these expectations, starting from the way the access to the library is regulated. The action itself of going to the library has to be meaningfully framed and proposed to the children, without making it seem like a random activity, but on the contrary offering it as something to look forward to, that has a meaning and that adults themselves care for. This has to do with planning library time and really making it part of the activities carried out in school. It marks the difference between seeing the library just as a deposit of resources that functionally supports the possibility of retrieving items and instead envisioning the library as a knowledge center.

3.1 GIVING RESPONSIBILITY

 # AUTONOMOUS ACCESS

As mentioned in one of the previous paragraphs, having an always open library can facilitate kids and give them more occasions to spend time there. Concurrently, this is interlinked with the possibility that children may then be able to identify the most appropriate time for them to go and choose a book. If the library was always available but accessible only in a few moments, this would still generate a certain degree of frustration and would result in a lost chance. Besides this, it has been observed that giving responsibility to children would reinforce their sense of autonomy as well as their competence in relation to the capability of performing a successful and relevant choice. Finally, reading a text may take a different time depending on complexity and length of the text, individual skills or other reasons and the pace with which kids get new books may vary as well. This implies that different students will need to go to the library in different moments, a need that should be carefully taken into account.

#AUTONOMY: Allow children to make a more autonomous use of the library, giving them some chances to access it independently.

Children in school IT1 formulated the hypothesis of a self service system in which they could independently register their loan and go back to the class. Analogous solutions have already been implemented in some of the observed schools: school NL1 made use of simple paper-based records, in which children could write their name as well as the number of the book that they were checking out, whenever they accessed the library alone during lunch time or recess. Similarly, in school NL2 children were allowed to go to the library whenever they had finished an assignment and they had some spare time before the next class or task. In that case the process of recording the book would be executed in class, but children were still free to go and pick their reading. It has been observed that these two schools were both facilitated by the fact that the curriculum was mainly project based and therefore structured differently for each child or for small groups of children. This generated a quite diverse schedule within the class, that in turn created more occasions for the kids to have spare time in different moments, therefore avoiding overcrowding of the library and a difficult management of shifts. In schools implementing a more traditional organization or simply applying a different regulation it may not be easy to allow children to go out of the class on their own. However, in some schools a small library is set up in class too, allowing kids to have a look at books more often and to have more material in their proximity. During the co-design sessions, children took this idea even further, envisioning a library in which kids could take the role of librarians, assisting other peers with their choice.

"Like maybe I could be that I could become the librarian's assistant and people can be asking me like where can I find funny books and then I can look for the funny books section on the computer or I just know where the funny books section is. I've just been looking for funny books actually and I just tell ok this is the funny books section, you can just pick whatever book you want." **D. - 10 years old, NL2**

This concept appears particularly interesting since it incorporates the 3 fundamental psychological needs of the individual, autonomy, competence and relatedness (Ryan & Deci, 2000). The idea of assisting other children in the library in fact implies the capacity to give competent advice and be knowledgeable about the library, the ability to do this independently and the desire to help others and interact with them. Another example of empowerment has been observed in school NL3, where the librarian took a similar initiative, taking advantage of the fact that children were free to access the library during recess and lunch time. She began to involve some of them in simple tasks, such as putting the books back

on their shelf or taking care of the records. This was not presented as a task to execute, but it was instead frame as a learning moment: in fact, through these activities children were guided to understand more of how a library works.

"Especially with the key stage 2 children we have like a library, a media center skills club at lunch time so it's a great way of bringing more children into the library at lunch time so it's their own time, it's not something that they have to do, but then I think it's the way of promoting the library. They see, they're trained up with skills so the assistant librarians like are helping them to do different jobs [...] We have them in the actual library clubs, they see more of what actually goes on.
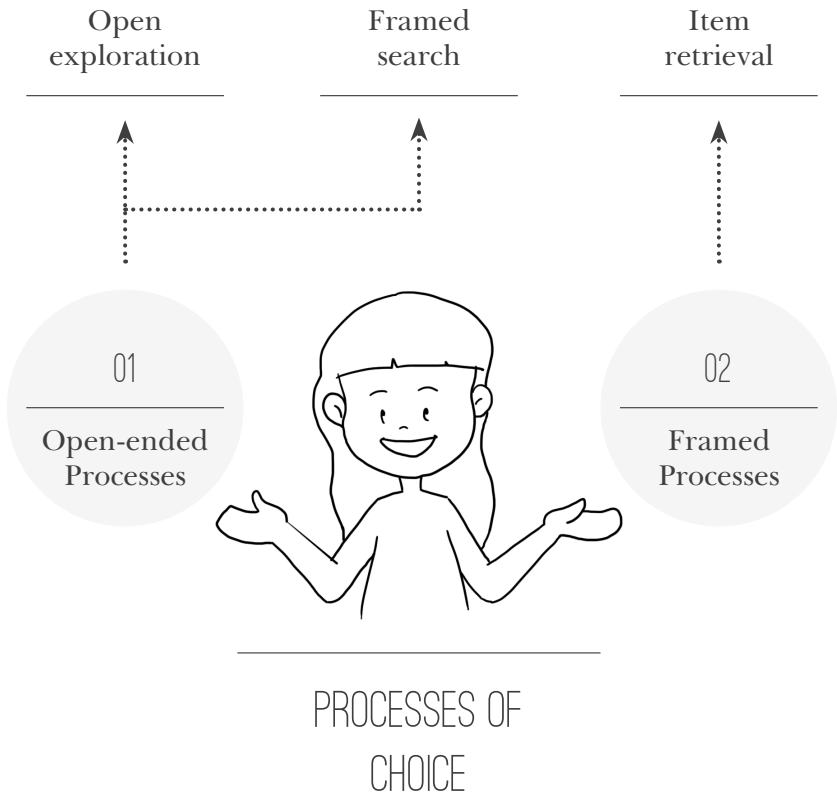
Scheme 12: typologies of processes of choice

How do you order books? Why do we do it? How about that we realize that we've got book covers on books? You know, some books they are delivered and they don't have these covers on. Why do the books have to be stamped?" J., librarian, NL3

All these examples show how empowerment may not only mean giving permission to go and choose a book without the presence of an adult. On the contrary, a lot of different activities may put children in the role of protagonists and allow them to make autonomous use of their competence.

4. CHOICE

When looking at the actual process of choice, it is important to note that this process may take place in very different ways. In particular, three different processes have been spotted and are described here below:

OPEN ENDED PROCESSES

Open ended processes include paths of choice in which the outcome or goal is not fully defined since the beginning but is gradually discovered as the process unfolds and as contextual stimuli intervene. This openness can be more or less radical and for this reason two types of open ended processes have been isolated.

Framed search
Framed search indicates a process of choice in which a certain frame is given or decided by the child prior to the choice itself. For instance, looking for a book on a certain topic means framing the decision within that theme or subject. Frames can be very different from each other and can occur at the level of genre, topic, author, series, level of complexity of the text, … depending on personal preferences and needs. These frames can change time by time or can be maintained for longer, thus determining an increased familiarity with strategies that can help retrieve that specific type of books. The challenge has to do with helping kids both to filter existing resources with these criteria and to analyze them and make a final informed decision.

A boy from school NL2 reported that he particularly liked reading scary books: he described his journey through the library explaining that he would normally come in, browse the section dedicated to his age group and occasionally other sections too, always in search for thick books with a scary-looking cover or title or general look and feel. He faced the challenge of being able to easily isolate this cluster to then browse through its items.

Open exploration
Already having a general idea of the type of book to look for is not necessarily an obvious fact: a lot of times, children come to the library just in search for something to read, letting the context be their source of inspiration to start filtering content or looking into specific area. Within this process, children start from a specific stimulus, analyze it and decide if to follow it or not.

"I never know [what to borrow]. Only when I see a book, maybe G. has it or someone else and I think "That's cool, I'd like to borrow it next". If I instead go to the library to get a new book, I absolutely don't want to read the same type again."
- S., 9 years old, IT1

This type of search poses a challenge that has to do with the way the library can be navigated and explored: the environment as well as the experience in general have to be conceived in order to cater for this kind of need and allow children to find good triggers and get to a successful choice.

FOCUSED PROCESS – ITEM RETRIEVAL

Finally, a focused process indicates a totally different path, in which the key challenge is simply being able to retrieve a specific resource. Sometimes kids come to the library already having a very clear idea of what they would like to read next.

This idea may have different origins that have led to a process of *"mental pinpointing"*: a title mentioned in class or by a friend, the sequel of another interesting book or within a series, a new title from a known author, an activity that relates to a certain text are all examples of situations that may generate this desire to read a specific book and therefore the need to find it in the library. The challenge (not to be underestimated) is to

make this process as successful as possible and to understand how to deal with situations in which children encounter a *"dead end"* and need to start over their process of choice.

The same child may follow different paths in different occasions or even within the same session. Switching back and forth may depend on different factors, such as the impossibility to retrieve an item or to find a desired area or as the fact that new inspirations come in.
For instance, a child following an open ended process may start from a certain stimulus and therefore identify a category of interest for that specific search. This may pull him back to a framed search or even into the need for retrieval. An example has been observed in school IT2:

EX. a group of children from the same class (3rd grade) was browsing the shelves quietly. A boy started saying out loud that he was looking for the story of Hercules, recalling his classmates' attention and asking them to help him find the book. This gathered a lot of attention from other two boys that eventually started searching for another copy or version of the same story to borrow it as well.

NEEDS

Differently from other phases, this phase has been analyzed in greater depth and has represented the anchor point for discussion throughout the co-generative sessions, for it being the core of the library experience. At the same time, recreational reading has represented a major focus throughout the research, due to the fact that this represented the main reason of use of the library across the different contexts. As explained in the presentation of the methodological approach, the use of case studies implies certain risks: depending on the cases involved in the research, findings may result narrower than the research question. This has to be accepted and may only be counterbalanced through more research (Eisenhardt, 1989).

An overarching need connected to this key phase of use can be recognized in facilitating kids' choices and helping them go through a successful and meaningful journey. When looking at the topic of choice, it is important to note that each choice occurs in relation to the pre-existing and personal conditions in which it happens. Some information may be subjectively evaluated and may influence choice more than other information, if they are reflected into one's prior knowledge (Kahneman & Tversky, 1981).

Emotions play a relevant and predominant role in comparison with rational evaluations, and individuals need to find criteria for choice that they can perceive as turning to their own advantage. Within this frame, it is particularly important to understand the differences between different approaches that children have towards the choices they make and the different rationales that inform these. Thanks to the numerous occasions of dialogue with the children, it has been possible to identify different needs, based on situation that kids reported as part of their experience. These have been turned into examples of personas that should not however be necessarily seen as separate individuals, but as mindsets that can potentially be adopted by the same person over time.

Different profiles express different needs. Even though this cannot be seen as a full representation of reality since it is based on a rather small sample, it still gives an insightful perspective on what children's needs are and it confirms and reinforces the key ingredients that contribute to a successful experience of choice. What is important is to allow kids to change their path and still go through a seamless experience. This is about understanding all the single elements that can support different paths but also bringing them together allowing this seamless shift. Some key ingredients have been identified:

THE SELF-CONFIDENT

The self-confident reader tends to come to the library with a clear idea of what he would like to choose. He has a clear overview of the offer, has already mentally pinpointed interesting titles and has gathered inspirations from things he does or suggestions he has received. He is also highly aware of his preferences and therefore easily finds what to pick. His choice is quite fast and efficient and highly self-confident. He needs to be supported with an efficient experience that can live up to his fast pace. At the same time, due to this high self-confidence, he sometimes finds it hard to share his experiences with other peers, that he perceives as *"slower"*, even though he would appreciate having chances to share his passion and knowledge with someone.

THE CAUTIOUS READER
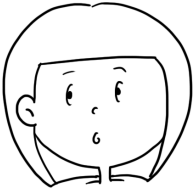
The cautious reader tends to repeat similar choices over time and stick to them: a certain type of books or series may for instance represent a safe choice for him, whereas the rest of the library seems to be unknown and somehow threatening or non relevant. He feels comfortable with *"the usual"* and likes it and he does not see a reason why he should put effort into the exploration of something new or different. He needs to be taken "by hand" and be shown how other types of content can be relevant to him. He needs triggers and valuable inputs but at the same time he also needs to be able to opt for his preferred choice without being stigmatized.

THE SELF-AWARE

The self-aware reader has an overall clear understanding of what are his preferred topics or areas of interest. He has experienced different things over time and has come to certain conclusions on what can best fit his literary need. He would particularly enjoy an efficient system that allowed him to navigate the library, but at the same time he would still be open to the chance of testing out something new.

THE EXPLORER

The explorer enjoys very open explorations and opts for different types of reading over time. This approach is sign of strong intrinsic motivation as well as self awareness. Similarly to the self-aware, he has some anchor points in things he especially likes, but he is also very open to novelty and seeks for frequent change. Therefore, he still needs good navigational tools but also frequent elements of novelty that can keep him engaged and help him dive into new experiences.

THE DISILLUSIONED READER

The disillusioned reader has the perception that the library has nothing to offer to him. He has a hard time finding something to read and tries to avoid it as much as possible, until he is forced to make a decision. He does not see a reason to come back to the library and he wonders what's in it for him. He needs to be accompanied to a gradual journey that can show him how the library can become a place for him to explore more around things he likes.

4.1 HELPING THE EXPLORATION OF THE LIBRARY

Being able to navigate the library with a seamless experience is a key ingredient that can support kids' engagement from a more functional perspective, by allowing them to make more successful choices and get positively reinforced from this.

The term *"navigation"* is not here meant to imply that there should be a fixed path for children to follow: on the other hand, this navigation means that children that come in to the library with different needs and expectations would be able to find their way around. The term is specifically referred to the more open ended processes of choice, that have been proven different from other highly framed processes that simply lead to retrieval of a desired item. In general, it has been observed that the way the space is set up has an impact on children's experience.

Similarly, the "Reimagining School Libraries" project (Bland et al., 2013) found that learning environments play a crucial role and can generate strong perceptions that can in turn affect learners' attitude toward that space. This paragraph takes into account different aspects that have been found relevant in relation to the design of the library environment.

LANGUAGE

Navigating a library has to do with both language (visual or written) and the overall arrangement of elements in space (display, layout, signage, visibility…) that can facilitate children to get inspired or to find a specific cluster or area that they are looking for. It is especially important to point out this double function that concerns the following key ingredients or design principles to a different extent: while some of them help kids locate something specific (example: the shelf where adventure books are kept), others help open up new possibilities and paths of choices. A third type of factors covers both aspects. All these variables will be highlighted and made explicit in each of the factors presented below.
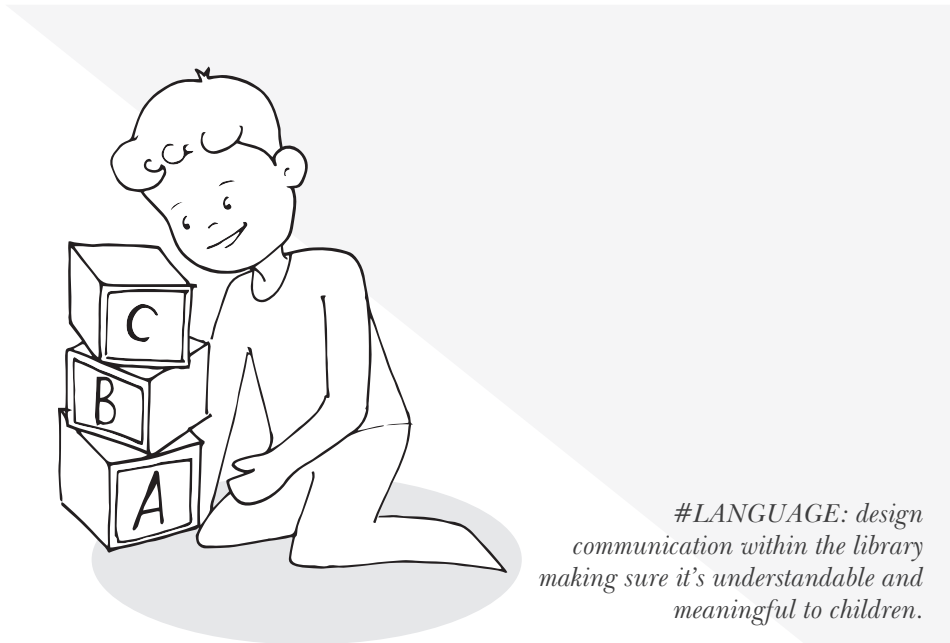
#LANGUAGE: design communication within the library making sure it's understandable and meaningful to children.

Language is crucial when it comes to discussing tools that can support the exploration of the library: language may of course mean written language, that can especially be found in signs and indicators or in other touchpoints like a catalogue. Despite the channel that is implemented, it is important to highlight that it is necessary to build a type of communication that is properly targeted to the audience and that can be easily understood. However, this is not only a matter of complexity

of lexicon, but also of relevance of the adopted communicative frames. An example that helps understand this better can be seen in what kids pointed out in school IT1: they noticed that the shelves carried very few labels and that the only two signs said *"1° ciclo" and "2° ciclo"*, indicating the two different levels of grades that existed in primary school. This language was not familiar to the kids that were more used to think in grades and that eventually showed that a distinction strictly based on age or class was not even particularly relevant to them, because it did not help them choose and it did not reflect their choosing rationale, that was for instance more focused on themes or genres.

As Linda Z. Cooper (Cooper, 2002) explains in her study on cognitive categories for libraries, "The information seeker must deconstruct his/her personal understanding of the information and reconstruct it in terms of the library's typifications. This creates a potential problem for the information seeker if s/he cannot make that cognitive leap. If this transition cannot be made, the information seeking process breaks down without the assistance of an intermediary." The topic of categories and classification will be more deeply elaborated later on in this chapter.

Language can obviously mean visual language too. Some kids have highlighted the importance of visual stimuli within the library, explaining that they can easily become triggers and spark their imagination as well as help relate better to the books. For instance, children in school IT1 noticed that the library was quite full of drawings and small posters that were quite old and not very clearly related to books or stories that they could find in there. They wished it was possible to have more visual material, such as pop-up posters, to bring stories to life and give them a third and tangible dimension in the environment of the library.

Images play a crucial role in relation to the classification of books too: different children came up with the idea of a visual system of labels or signs, that would have made the distinction between materials clearer and would have iconically shown the type of books on that specific shelf *(ex., a crown and treasure chest to stand for the category of adventure books)*.

For the same reason, some kids enjoy seeing pictures inside books, but it has also been found that others find them distracting and prefer to have a more conceptual approach to reading. Both verbal and visual language can anyway serve the function of guiding kids through the library as well as inspiring them through attractive stimuli.

A CLEAR NAVIGATION

When analyzing the library environment and its arrangement (again referring to both functions), kids pointed out that it is important to ensure that the stimuli they receive are relevant and effective and that they do not generate an overwhelming feeling that would eventually produce confusion. During the contextmapping session, kids from school IT1 got to analyze their own library highlighting pros and cons and clearly pointed out that it was hard to understand what some of the things they saw were for. For instance, they highlighted the two following aspects:

The library was being used as an additional classroom for some extra curricular activities as well as for some English lessons. However, kids noticed that there was no clear and good distinction of areas dedicated to these different functions. This resulted in the fact that some materials dedicated to these activities were mixed up with the books on the shelves, thus resulting in some confusion and disencouraging the children to go and look at those shelves more because they thought there was nothing interesting for them. This suggests that a clear destination of use can benefit children by providing them with an easier frame to find their way around. This in turn led to a reflection on signage, that had come up in other schools as well.

In different contexts, children designed solutions concerning the signage system, often making use of the surface of the floor to draw paths that
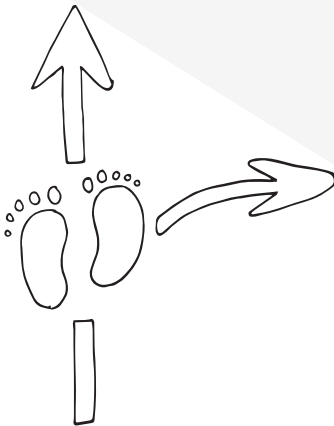
#A CLEAR NAVIGATION:
Ensure that all the different
areas of the library have clear
functions and that they are
clearly communicated.

could help you find your way. For instance, children in school NL3 designed a system of arrows painted on the floor tiles that would easily guide you to your destination and similarly, some kids in school IT1 proposed a series of footprints to signal the different areas.

The library was decorated with posters and various paper models built by students of the school: the children noticed those and appreciated the fact that the library was colorful and not just empty, but at the same time they found it hard to relate to those artifacts, because they did not have a clear connection with the books or the library and somehow looked just laid out randomly. Children then explained that they would have liked to see more connection with books or with some themes, so that the pictures could become truly inspirational to them. They therefore mentioned pop-up posters and pictures that would promote the most popular themes or books by bringing them to life in big size. A group of children brought this concept even further and elaborated the idea of a big pop-up book where kids could come and stick their stories or write and illustrate them.

INSPIRE

As it has been already highlighted through the personas described above, children may run dry on inspirations while they choose a book or may simply not have a precise idea of what they are looking for. For this reason, it is important to design an experience that can inspire them along the
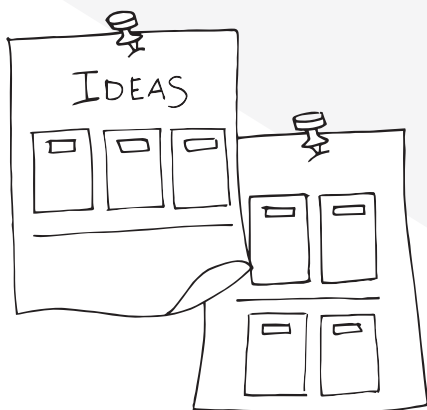
#INSPIRE: Offer inspiring touchpoints that can give children "anchor points" and get them past the sensation of facing a blank canvas when they choose.

way and trigger them by highlighting certain themes or titles that can spark their imagination. Children have identified different touchpoints that can serve this function:

A lot of different solutions fall under the category of tools that allow to highlight a group of books, based on the fact that they are the most popular, the newest or that they deal with a certain topic. Kids mentioned both dedicated shelves and posters, envisioning certain areas of the library as shop windows to draw on for new inspirations.

You know sometimes you have those book stands. We're going to have like a kind of bookmark saying "I'm new", so everyone can see it and then they're gonna be on a bookstand and near the edge so you can see it. **-girl, 10 years old, NL3**

The key finding behind these suggestions, that has been confirmed also in other designs that they came up with, is the fact that children do not see the library as a "flat" environment where books are just lined up in rows without any distinction. Highlights and a good variety of stimuli are necessary to generate more meaningful and interesting interactions, still keeping in mind that the environment should allow kids to enjoy each of this stimuli without overload of information. Similarly, the "Reimagining school libraries" project found that *"children appear to value intellectually stimulating material that can take their minds on imaginative journeys"* (Bland et al., 2013, p.8).

DISPLAY

Children identified different possible ways to interact with books, considering the use of different media. They expressed different preferences in relation to the way books are accessed.

A few kids across different contexts explicitly stated that being able to hold the books in their hands and see and touch them directly better helps them make their choices, rather than having a virtual preview only.

"I think [I prefer] going around in the library to find one, because if you just go to the screen it's not as exciting because if it's just like the screen tells you where to find it and what it's about and how it looks. But when you actually go to the library to find one, you find more books and the books that was on the screen might not be the one...the kind that you like and you might just want to go to another book." **-D.,10 yrs old, NL2**

Other kids found the digital media desirable too, for their flexibility and the possibility to access content easily or do other things, such as reading in different languages:

"If I'm a country that sells books that are not English, I like to use touchscreen. It also saves a lot of energy instead of just keeping flipping you can just like swipe, so yeah. **-D., 9 yrs old, NL2**

Despite personal preferences that may vary according to subjective needs (for instance, the need of finding books in a different language depended on the fact that the child who expressed that desire came from a multicultural environment and from a family that had often moved to new places over the last few years), an overarching need has been found across cases: when selecting a book to read, children need to be able to catch a glimpse of what that book has to offer, through some kind of sensorial message. In their design explorations, children included different tools and media that could help users understand more about the single books: hand-drawn book covers, audio-recorded advises, a special location for the most appreciated books and even volumes with perfumes.

#DISPLAY: Allow direct contact with books by removing barriers and enhancing the possibilities to get a foretaste of what the library has to offer.

CLASSIFICATION

The way the organization of books affects children's choices is twofold and has to do both with the fact that books should be organized and in order (see next paragraph) and with the way they are classified and divided in the library. In fact, designing the classification of books means considering different aspects at one: conceptual categorization, signage, communication and spatial organization. The relevance that the organization of books can have during the experience of choice has been observed during the sessions with the children:
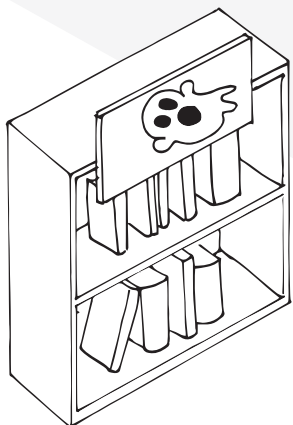
#CLASSIFICATION: Design the classification of the library together with children, ensuring that signs and categories are understandable and relevant.

For example, in school NL2, children were struggling with a classification which was only based on grade. This helped them because they knew where they could find books that reflected their reading skills and they could feel really confident with their choices, but at the same time it made it hard to detect genres and themes, which would have been very relevant for them. School NL2 implemented a relatively small library of 600 volumes only, which still allowed children to patiently browse through titles, whereas school IT1 has a few thousands volumes and anyway had a classification based on age groups. This made it even harder for the children to actually know where things were. A few series or books around the same topic were sometimes put on the same shelf but there was no control over the organization nor an official categorization. This resulted in children having to start their search anew every time they

accessed the library and it eventually generated a low level of awareness of what the library had to offer. Some shelves had been commonly recognized as *"useless"* or as places where "there was nothing good to read" and were therefore avoided in favor of other *"safer"* shelves, where a sort of classification was in place. As an end result, some kids restricted their choices to these few usual options and eventually gave up on doing more exploration.

Having this been recognized as a common challenge across the different analyzed contexts, an entire session has been dedicated to the co-design of the classification of the library. During these sessions, children have picked books from the library and organized them into boxes, that had been transformed into shelves for the purpose of the activity. Through this task (whose set-up is described in details in the methodology chapter), it has been possible to dive deeper into children's mental schemes and understand their conceptual classification of books. Even though in each school children came up with different categories, the following considerations can be done:

Themes and topics represent a very easily understandable criterion for classification. These themes and topics are often attached to a certain emotional value or feeling: when assigning a title to their categories, children often made explicit the emotion or reaction connected to a specific type of books. For example, rather than just saying *"funny books"* they said *"books that make you laugh"* The level of difficulty of a book tends not to be a main criterion and kids would sometimes enjoy a book, even if simpler compared to their age or they would feel attracted by a cool book even if beyond their reading skills. A deeper analysis of the findings of this focused session can be found in chapter 6.

Designing the classification of books not only has to do with kids' wishes and needs but also with what can best support teachers' activities. In some schools, the library was exclusively utilized for recreational reading, but in others it was strictly interlinked with the curriculum and therefore needed a dedicated structure. School NL3 for example created a system to facilitate pre-selection of reading materials, by preparing a series of boxes organized by topics and based on the units of the curriculum adopted for the different disciplines. This system allowed teachers to borrow the entire box and bring a section of the library to the classroom where children could have an accessible entry point into the research activity and the information seeking process.

4.2 SUPPORTING ITEM RETRIEVAL

 # ITEM FINDER

As it has been anticipated in the description of different processes of choice, it can happen that children come in to the library already having a very clear idea on what they would like to take, but they still need to retrieve it. Even if this may initially sound as a minor issue and it certainly is less complex to tackle than other challenges, it still represents a crucial point that is not always very easy to take care of. First of all, a good retrieval process depends on the way books are organized and kept in place: maintaining order and making sure that books do not get mixed up is important to make the process of locating an item as smooth as possible. Not finding a book because it got *"lost"* in one of the shelves represents a frustrating experience for kids and this has to be avoided as much as possible. The library coordinator in school IT2 explained that they are looking into a new identification system (not to be confused with the classification system that has to do with clustering volumes whereas this relates to assigning a code to each item) because they have been witnessing too many situations in which students were looking for something and could not actually find it:

"And then we have decided to do something else, to organize books, but not with an official classification because that would be too much for them, but just in alphabetical order, by title for instance, because it happens quite often that a child
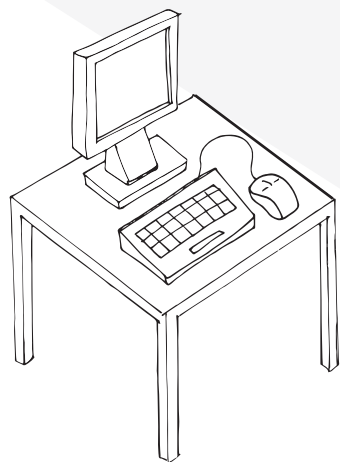

#ITEM FINDER: Make sure that all the items that the library has to offer can be easily retrieved, else the experience will not be entirely successful.

comes in and asks for a specific title, especially the older kids, they would ask you "Do you have that book … ?" And you look it up with the computer, it appears to be available, but then actually you can't find it on the shelf, while with a system like the one we are implementing at least this is going to be possible". **R., class teacher and library coordinator, IT2**

REORDERING

However, the challenge is not just limited to this, but it is also strictly related to which tools and touchpoints can best support kids to help keep the books within a certain organization in the simplest possible way. This challenge also derives from the fact that schools do not always have the possibility to hire a librarian or to have library assistants very often: this in turn generates the risk that the logistic management of the library is not truly taken care by anyone, given the lack of someone accountable for that role.

School NL3 and school IT1 implemented a simple but quite effective solution that hands over part of the responsibility to students: kids were given a paper bookmark that they would put between books as soon as they took one volume out: this would then help them remember where it came from, before they moved on to the next book or shelf, always repeating the same simple trick.
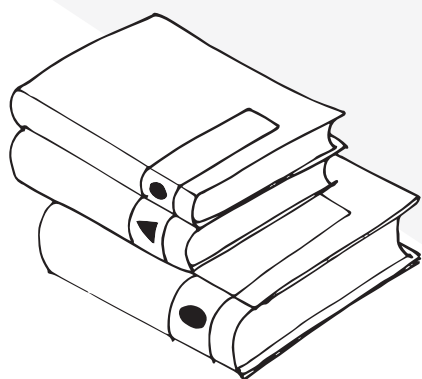
#REORDERING: Make sure it is easy for children to put books back in their original location whenever kids are handling the return of the book by themselves.

Even if, as discussed in the previous paragraph, children recognized the importance of physical contacts with books, they also saw a purpose in having tools that can allow you to browse through the content of the library just from a screen. The availability of a catalogue has been identified as a handy and functional solution that becomes useful whenever the frame within which the exploration of options occurs is quite narrow. Children also pointed out some benefits of having a catalogue and a platform from where to check availability of titles and offer:

The status of the book can be tracked: *"In my old school the catalogue was like, if I wanna take a book and someone already took it, you can check it out on online."*

A catalogue can be useful, especially when the library has a lot of books: "Well yeah because there is like not too many books, but not too few. So I would prefer … it's useful." **B., 9 yrs old, NL2**

Whether physical or digital, retrieval systems should efficiently provide kids with a way to easily find what they are looking for. The same tool has now been analyzed from a very specific angle, but it is also true that the retrieval function could become part of a bigger system that also covers the function of inspiring kids along the process and helping them navigate the library.

4.3 TUTORING BUT MAKING CHILDREN FEEL INDEPENDENT

THE WISE LIBRARIAN

Adults play a crucial role in this process too. The relation with adults can positively or negatively affect the process through the type of relation that is established. Kids need and appreciate guidance but are deeply aware of who really owns a certain decision and would really like to have a final say in what they are choosing. In this sense, they like to receive suggestions but they also enjoy the possibility to explore freely with no barriers and without being stirred in a certain direction. Due to this awareness, kids would not sometimes ask for explicit help, but would still benefit from an informal interaction with the adult facilitator that could help them be more successful in their choices. A lot of the ideas that emerged during the co-design sessions revolved around the librarian as an important enabler of the experience of choice. The

way kids described their ideal librarian tends to move this role away from a scholastic approach, in favor of a more friendly relation, where dialogue and sharing are fundamental keywords. Next to this, kids still highlighted the importance of the librarian as a knowledgeable person, that knows what the library has to offer and especially knows how to pull out something relevant for you. Once more, as existing research has already highlighted (De Groot & Branch, 2009), one of the key roles of a good librarian is having a clear overview of the library offer and being able to quickly relate it to upcoming needs.
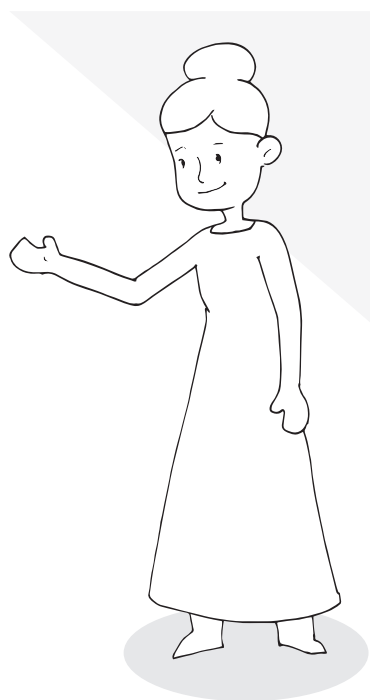
#THE WISE LIBRARIAN: Offer knowledgeable advice and help children find what they are looking for or find new triggers.

REAL INVOLVEMENT

Not only knowledge is perceived as a fundamental requirement for a good teacher-librarian, but relational skills are crucial too. Kids in school IT1 had developed a special relation with their librarian and found it very easy to relate to her, ask her for an opinion and see her as a

companion, to the point that they defined her as a *"non-standard librarian"* because of her friendly attitude. What played a key role in this context was the possibility to build a personal relation: the majority of kids were addressed with their first name and their preferences or dislikes would often be well known to her.

Next to this, kids highlighted another characteristic that a good librarian should have and that they had experienced with her. In particular, a child expressed his opinion in the following terms:

"A good librarian should be a lively person and not be like (flat indifferent tone of voice) "so, yeah, that book is nice, go take it cause I think you'll like it". No, it should be something more with little questions, if you have this preference, then that is the section that can interest you. In this way she can give you specific advices."
A.- 10 years old, school IT1

Similarly, the library coordinator from IT2 expressed her special care for this aspect, explaining that she would try and build a personal relation with kids by giving very open and friendly suggestions and by telling

#REAL INVOLVEMENT: Establish an authentic relation with children, by sharing advices and being truly involved in their choices.

them about her experience with some of the books that are offered in the library and of which she has direct knowledge. What plays a main role is here the great interest that she has for children's literature and her capacity to directly relate to the content and share an opinion with kids.

"I usually come closer to them and I ask them what is it that they like, that they would like to read and that they have already read and enjoyed and then if he wants to continue on that narrative strand, let's say. Then maybe we pick some books together, we look at the covers, we start to look at that, at pictures, especially with the young kids and maybe I would say yes, I've read this one and I liked it but it ends here, it is not an invitation to read it, it happens in form of conversation."
R. - class teacher and library coordinator, IT2

A RESPONSIBLE CHOICE

Another key aspect of the relation between adults and children has to do with the actual moment when children make their choice. Some tension may be generated because of conflicting expectations: a student may
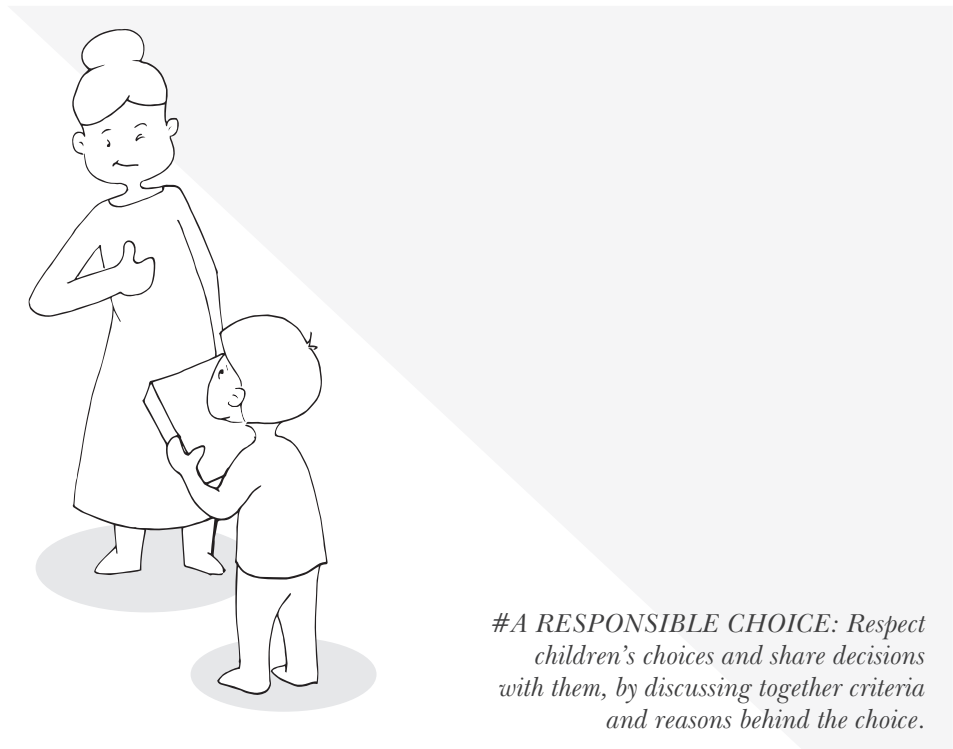
#A RESPONSIBLE CHOICE: Respect children's choices and share decisions with them, by discussing together criteria and reasons behind the choice.

really be attracted by a book, but this may sometimes be way beyond his reading skills or may not represent a suitable choice at that moment, in relation to the way activities are planned within the curriculum. Even though children should be encouraged to make their own choices and should be empowered and supported as they pursue their goals, it may be the case that certain restrictions have to be applied. What generates a sense of frustration is however the fact that their choice is rejected with a brief explanation, but restrictions could be turned into a learning moment as well, as long as teachers and children manage to share some criteria and to reflect upon their decision together.

An observation session in school NL2 yielded very interesting findings in this regard:

The teacher sat next to the children on the couch besides the bookcase and dedicated a few minutes to each of them, listening to them read and to the reasons that had led them to choose that specific book. A girl (9 years old) had picked a quite thick volume. The teacher was initially skeptic and feared that it would have been a too tough challenge, but then the girl explained that the had already seen a movie about the same story and she felt confident she could read the book as well. Eventually, they both agreed that it was a good choice and the girl kept her book.

4.4 ALLOCATING TIME

Time plays a crucial role in determining the outcome of the library experience, both in terms of quantity and quality.

IT TAKES TIME

A first challenge has to do with the time dedicated to each library session. A few minutes are usually not enough for everyone to pick a book, as one of the observation sessions in school NL3 revealed:

During one of the library sessions, children had less than 5 minutes to choose their next reading. When time was up, the librarian recalled the children back to the common area, a big carpet with some cushions. At that point, several children were not done with their choice yet and simply tried to ignore the call for some time and kept on browsing frantically, in the attempt of making a quick decision. In a few cases, children just grabbed something and ran back to their classmates just on time for the beginning of the next activity.

While choosing their readings, it has been observed that children go through several iterations of a loop and different children may follow different processes that require a longer or shorter time. To put this briefly, some kids may have only a rough idea of what they would like to read and some others may have no idea at all. Moreover, throughout their process they may find themselves at a dead end and may have to start their search over again, therefore making the overall necessary amount of time not completely predictable. For these reasons, the time that is needed to go through the process of selection is highly variable and depending on the specific situation kids may need to iterate different cycles until the choice is successful.

Time is therefore a powerful enabler for kids to choose better: whenever a library session is too rushed or is interrupted halfway through the selection process, this will more likely result in scarcely successful or non optimal choices and therefore in a negatively reinforcing experience.
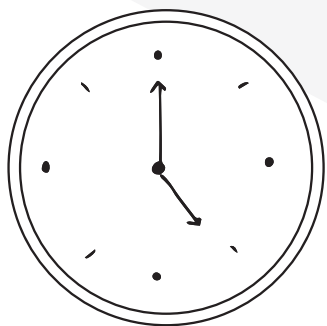
#IT TAKES TIME: Allow enough time for library sessions. Let children take their time to make an informed choice, which will be more likely successful.

FREE TIME

On the long run, time spent in the library can instead positively affect kids from the point of view of the experience they gain. Familiarity with the library environment (deriving from the time spent there) can in fact make the kids more expert with the library tools and therefore more efficient in their choices, but also more knowledgeable and strategic. Voracious readers and library goers very often know all the corners of

the library, they have explored a lot and can find their way around very easily.

For instance, in school NL3 great attention was devoted to the fact that children had frequent chances to come in to the library and become familiar with the environment as well as with books and other materials. During one of the observation sessions, two girls in 5th grade showed me around, indicating their favorite shelves and corners and demonstrating great awareness of what the library had to offer.

An interesting finding that emerged from the co-generative sessions suggested that kids see the library as a space with a much bigger potential than what it often is at the present moment: various children described the library as a place where new learning experiences are available, not only in relation to books but to a whole range of materials and content. In particular, it is interesting to underline how students from different
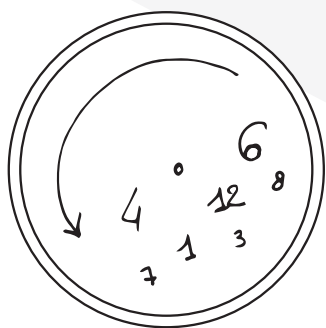
#FREE TIME: Allow kids some non-constrained time in the library, when they can just explore, look at books or do other activities.

schools and cultural contexts expressed the desire to connect reading and learning to more practical activities and to entertaining activities too.

Two children (school IT1), *T.* and *C.* (9 years old) drew the map of their ideal library, highlighting different areas and functions and including a space where it is possible to listen to music and draw, besides different sections dedicated to various types of books. Their classmates *L.* and *A.* then added the idea that the library could offer a few tablets to read and

learn, but have fun at the same time with dedicated applications that could offer you content in a different way.

A group of kids in school NL3 instead depicted their ideal library as a place where it is possible to gather and read together, but also as a space for creative expressions, where for instance some LEGO bricks are available, to allow children to build sceneries and characters out of the stories that they have read.

4.5 FACILITATING SOCIAL DYNAMICS

There are a lot of social dynamics connected to reading and choosing a book. Observation of behaviors during moments of choice and the experiences that children themselves reported showed that there is a strong social value connected to reading. Of course, different children may attack reading with a more individualistic and independent approach, while others may be more keen on having support from other people, but nevertheless no one should feel excluded. On the contrary, every child should be able to step in and take active part into reading-related social interactions at any time. Building an environment and providing occasions that facilitate sharing is therefore a first step to enable kids to live their experience with reading at its full potential. At the same time it is also a strategy to generate situations where motivational dynamics may take place. As existing research has demonstrated, "supportive qualities of interpersonal relationships were significant predictors of academic and social aspects of motivation"(Wentzel, 1998, p.207). This has been found in relation to teachers, parents and peers. In particular, for what concerns this last category: "perceived social and emotional support from peers have been associated with motivational outcomes such as the pursuit of academic and prosocial goals, intrinsic value, and self-concept" (Wentzel, 1998, p.203).

 # TOGETHER

Building a sense of belonging through meaningful interactions takes its first step in the circle of peer to peer relations, that represent a fundamental source of motivation together with educators and family members. Within the context of choice, different situations, such as the fact itself that children can go to the library and choose their books

together, have been recognized as facilitators of this process. It has been observed that friends especially enjoy sharing this moment because it becomes a way to talk about a common passion or to simply inspire each other and talk about well-known stories. More specifically, different mutually reinforcing behaviors have been observed:

two girls from school NL3, typically spent some time together in the library, choosing books together, talking about their opinions and preferences, thus building a shared world of significance that made both their relation and their interest toward reading stronger

#TOGETHER: Allow children to go to the library with other peers, explore together and share experiences.
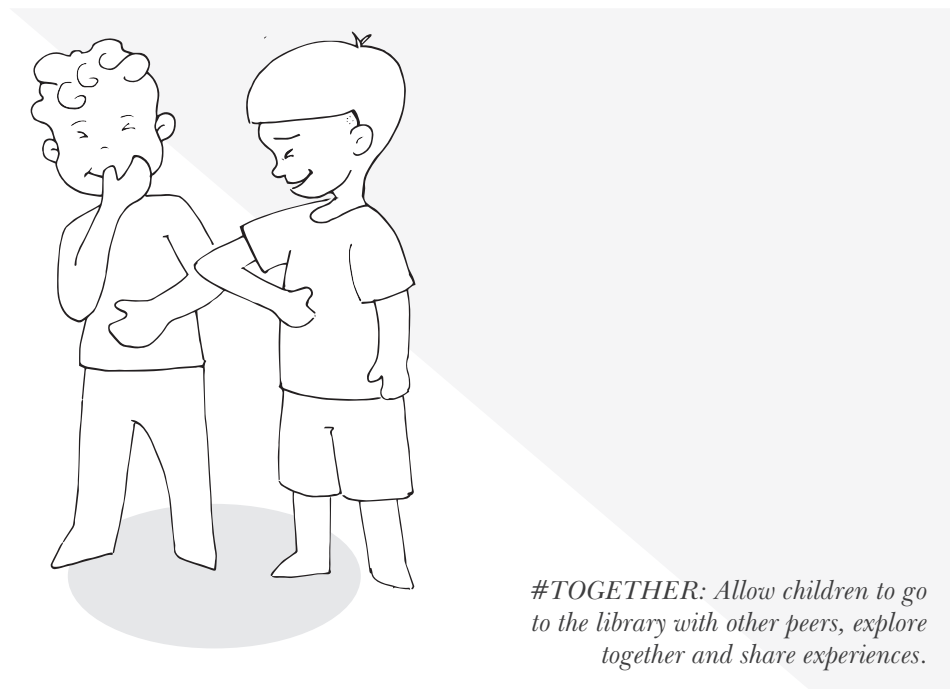
Positively reinforcing behaviors also have to do with more occasional interactions with peers. In particular, observation sessions in schools IT1 and IT2, revealed that children often look at what other classmates have selected and compare choices or negotiate in order to get to read a certain book.

SHARING IDEAS

Not only vicinity with peers can trigger supportive dynamics, but quality of interactions plays a role too and the possibility to share ideas and exchange opinions is a particularly important motivational driver. A lot of the solutions described in relation to inspirational tools and touchpoints can also be analyzed under this perspective, highlighting their potential to bring children closer together. A lot of times kids mentioned that they would like to have a system where it is possible to see what other kids have read and what they would recommend. And this is not only about building a complex system of reviews, but students really brought their solutions close to a more personal level.

For instance, a group of 5th graders from school NL3 proposed the idea of having customized bookmarks with the title *"Read me I'm really beautiful"* that children could customize or decorate and assign to books that they had found particularly inspiring.

A child in school IT1 instead came up with the suggestion that books should incorporate a blank page at the end to allow children to leave a message to the next reader and to share their opinion or make a small review.

Moreover, a child from IT1 highlighted how getting to know what your friends have chosen can eventually help you to know more about them and to reinforce friendship.
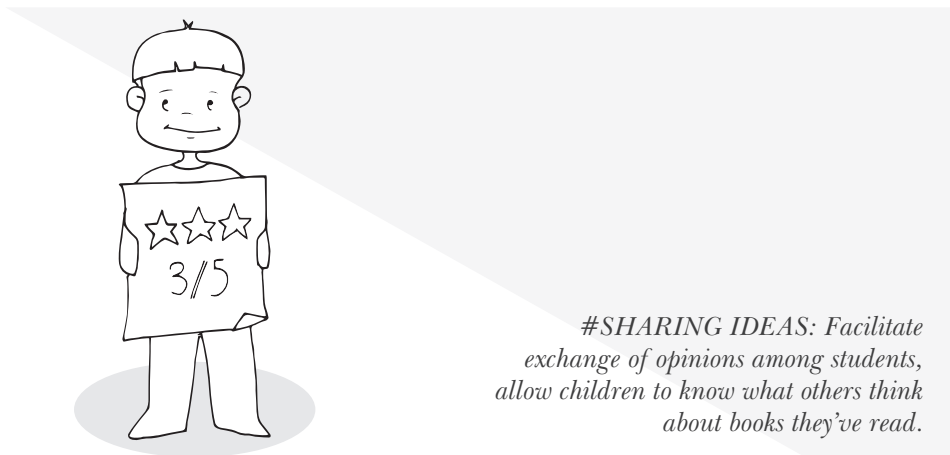
#SHARING IDEAS: Facilitate exchange of opinions among students, allow children to know what others think about books they've read.

Next to this, some kids mentioned that it would be interesting and fun to have moments of collective debate in which they could talk about books and share their opinions with others. This was already implemented in school IT2, where the teacher regularly involved kids in talking about preferences or past experiences.

"We maybe read paragraphs together, if a child has read a book and says: "Nice, I've enjoyed this book", then all right, I pick that book and instead of reading it all, I pick something I really like and we read that part, a funny excerpt or a scary one, … I mean children usually talk about the books that they are reading". **R., class teacher and library coordinator, IT2**

5. AFTER

NEED

The conclusive part of an experience is crucial in order to generate a positive memory and positive attitudes. Existing research in the field of psychology has demonstrated that the ending part of an experience is what most often determines the overall perception and opinion over it, even more than the whole process that has occurred before. An unsatisfactory outcome may overshadow all the enjoyment that took place previously and leave the individual with a dominant negative perception, in spite of its partiality. Kahneman (Kahneman, 2011) has found that human beings have a clear distinction between the *experiencing self* (the one that is aware of the present perception) and the *remembering self* (that has an overall perception of a certain experience): the latter tends to be highly influenced by the conclusive perception of a certain experience and tends to turn this into an overall judgment. For this reason, it is important to take care of this phase and exploit it at its maximum to generate pleasant memories and enthusiastic expectations for the future.

Following up on this aspect, it is clear that motivating children to read through a positive experience does not mean that this experience is delivered only once. On the contrary, it is important to generate a virtuous loop that feeds itself over time. The concept of *"purposive behavior"* developed by Tolman is based on the idea that anticipations and expectations over a certain result are the main reasons that inform behavior. The pleasure that derives from reading or listening can spawn

the expectation of a renewed pleasure and can solicit interest. According to Miller and Dollard, infants acquire a tendency to emulate because they have been reinforced after his first imitative responses. This in turn leads to the fact that reinforcements play a crucial role especially in ensuring that this mechanism is maintained and replicated over time.

It has already been anticipated that one of the key aspects of the process of choice is giving the possibility to kids to make it their own choice. Situations in which the choice expressed by children is pushed back and replaced with a different decision are highly detrimental to the sense of autonomy and ultimately to motivation. It is therefore important to understand and respect kids' choices and, if necessary, share the decision with them, without imposition. Next to this, other actions can be crucial to support children after they have made their choice and they are presented here in the following paragraphs.

5.1 FOLLOWING UP

 # READING TIME

The experience of choosing a book does not just end when the book is taken to the counter and registered. Getting a book to read is like getting
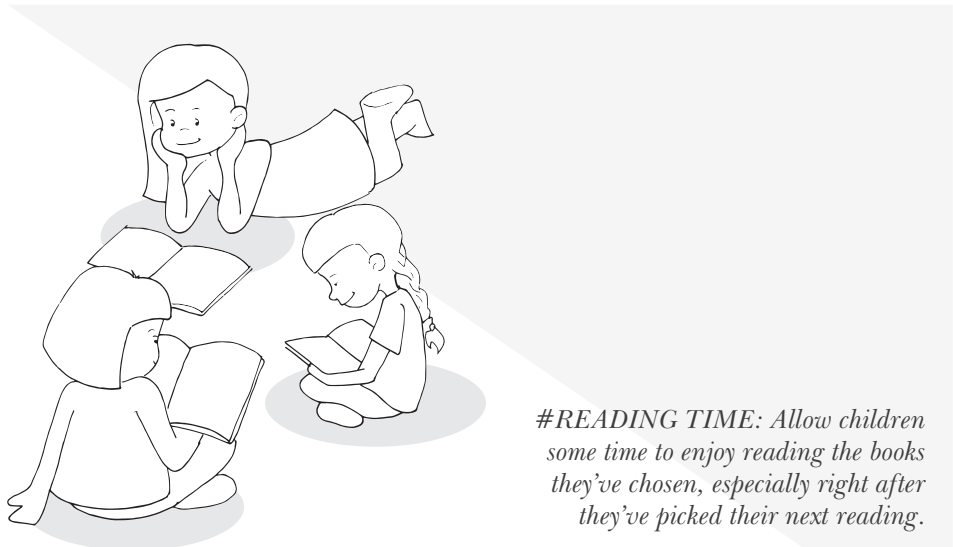
#READING TIME: Allow children some time to enjoy reading the books they've chosen, especially right after they've picked their next reading.

an experience that you can't wait to unpack and begin, just like a gift. While making their choice, children have often been looking at the book, sneaking a peek at some of the pages and foretasting the pleasure of a good story. This cannot be easily put aside as soon as children are back in class: they have the expectation to be able to read and spend some time with their book, but this is not often the case.

For instance, kids from school IT1 expressed their desire to spend more time reading after they had chosen their book: this would give them some time to appreciate that moment without losing this momentum in the flow of the numerous activities of the day.

VALUABLE OPINIONS

#VALUABLE OPINIONS: Give kids the chance to express their opinions about what they've read, without turning this into a task or assignment.
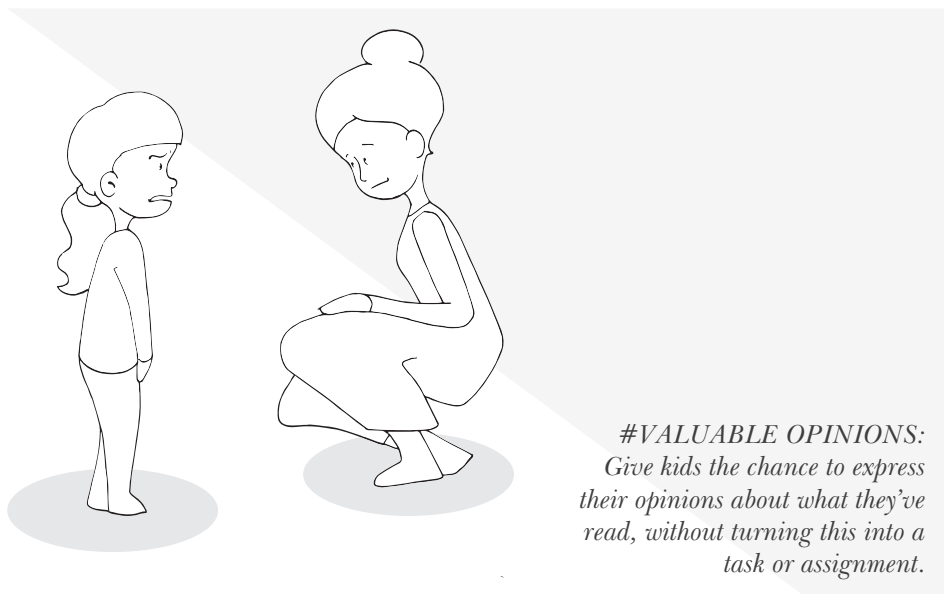
At the same time, giving relevance also means following up on what the experience with the book has been. This does not necessarily imply turning reading into an activity that has to be verified or tested all the time: on the contrary, what really makes it enjoyable to kids is the fact that someone actually cares for what their experience with the book has been, giving also freedom to abandon a book and start a new one if the first

has not met the expectations. Daniel Pennac describes this in a brilliant way in his book *"Reads like a novel"*, by making it clear that reading is not necessarily a linear process that has to do with the completion of a task. On the contrary, it is a truly exploratory activity that implies new turns, dead ends, great discoveries and a whole range of different experiences.

Following up on children's choices then primarily means enabling kids to understand their preferences better and to operate a meta-cognitive process that can eventually strengthen their strategies and their motivation. In 1991, De Beni and Pazzaglia involved a series of school in an experiment where children were offered meta-cognitive tools to understand and self-assess their reading skills. At the end of the experiment, these tools resulted in significantly better reading performances. At the same time, meta-cognitive processes can become a source of motivation too. As Landine and Stewart highlight in their study (Landine & Stewart, 1998), there is a correlation between meta-cognition and motivation and that self awareness over one's knowledge and processes can help students become more engaged and proficient.

Children themselves express the desire to see that their experiences truly matter and are properly followed up in class. For instance, a boy (school IT1) expressed the desire to have more group discussions and to share more with classmates and teachers.

END NOTES

[6] «Il verbo leggere non sopporta l'imperativo, avversione che condivide con alcuni altri verbi: il verbo "amare", il verbo "sognare". Naturalmente si può sempre provare. Dai, forza: "amami!" "Sogna!" "Leggi!" "Leggi! Ma insomma, leggi, diamine, ti ordino di leggere!" "Sali in camera tua e leggi!" Risultato? Niente. Si è addormentato sul libro. (Pennac, 1981)»

TESTING SOLUTIONS

Experiment

> " *The participatory prototyping cycle of making, telling, and enacting is a way to organize and activate the dozens of old and new tools for bringing people into the design development process. (Sanders & Stappers, 2014)* "

T he previous chapter has offered an overview of possible design interventions and strategies that could be implemented to contribute to a better library experience. These serve as general guidelines and constitute an important body of knowledge to start developing specific and targeted design solutions within individual schools. In fact, as previous research has already highlighted (Lonsdale, 2003), it is not possible to assume that the same solution, implemented in the exact same way, will work in two different contexts. Change behaviors and practices always happens in relation to decision makers, to specific needs or sets of official or unspoken rules and it is necessary to deep-dive into single contexts in order to make these interventions effective. For this reason, the next natural step after the identification of design principles is a phase in which selected solutions are gradually introduced, prototyped and verified in their effectiveness on fostering children's motivation. Out of the 5 schools that took part into this project, only one school has made itself available for an experiment.

Fig.15:
school library
(IT1) in use

Out of the different challenges and opportunities identified through this study and drawing upon materials produced by children, one specific aspect has been picked for a first experimentation, organization of books. The experiment has been conducted in school IT1 and has eventually led to a permanent redefinition of this aspect of the library service. The reasons behind the selection of this topic, the process and its outcomes are here described in detail.

WHY THIS EXPERIMENT?

The interest around the topic of classification of books has spawned from a recognized need across different contexts: even if in different terms

Fig.16: designing the classification with children

and in relation to different uses, the need to understand how to classify books emerged as an unsolved issue for all the interviewed teachers and librarians. Moreover, within school IT1, the one that agreed on the realization of an experimentation, this topic represented the most urgent aspect to solve: the greater barrier that the children came across in the use of the library was in fact represented by the impossibility to figure out where certain books could be found. This not only resulted in the necessity to come up with different searching strategies and to opt for other books, but it also led to disencouragement and to a diffused perception that the library "had almost nothing to offer". Next to the relevance of the challenge, different other reasons came into play at the same time: availability of resources and possibility of implementation as well as the need of a relatively easy entry point of change drove the definition of an actionable plan. Due to the restrictions that one typically meets when changing the way a public service is delivered (and a school is no exception), it has been important to let the process of change begin from a more functional approach, thus avoiding groundbreaking or destabilizing changes.

HOW DID KIDS DESIGN THE CLASSIFICATION OF THE LIBRARY?

Given the fact that this has been identified as a significant area of interest since the beginning of the development of the different case studies and since the first activities of co-creation, an entire session has been dedicated to the co-design of the classification. As mentioned in the description of the setup for this session, kids were prompted to first understand the concept of classification and categorization and to then develop their own criteria or rules according to which books should be organized. This exercise eventually led to the identification of categories, that represented a way to understand which topics children are interested in but also to better define what kind of language appears clear to them. Specifically, the following categories emerged:

Popular series or characters:
Geronimo Stilton
Mickey Mouse
Narrative genres
Adventure and mystery
Scary books

Adventures that make you laugh
Rhymes from all over the world
Animal stories
Fairy tales
Non-fiction
Art and technics
The human body
The animal world

The process of co-creation not only applied to the verbal labeling, but regarded the visual language too, since kids also gave ideas on how these different categories should be displayed and communicated through labels and iconic elements. In particular, kids tended to avoid an organization where books were just placed next to each other, with only the side being visible. They instead more often opted for showing the

cover or opening books to show illustrations or pictures. This disposition has been respected in the final organization.

HOW HAS THE EXPERIMENT BEEN IMPLEMENTED?

For reasons of availability, it has been possible to conduct this experiment in one school only. Given this fact, it hasn't been possible to compare different contexts and generate an analysis between a control group and experimental groups. However it has been possible to analyze the inquired context in depth, comparing the situation before and after the change and the activation of the experimentation.

The experiment took place in two steps, since two different changes have been implemented in different moments:
New classification with labeling (implemented in December 2014)
Shelf for the most appreciated books (Implemented in February 2015)

FIRST OBSERVATIONS

At the moment of the implementation of the new classification, an observation session has been carried out to verify children's first reactions to the new system. This observation has been carried out during a friday, the regular opening day for the library, when children from all the classes take the chance to come in and check out a new book. The experiment generated a significantly positive response and especially raised a lot of curiosity. Children perceived the change as a surprise and immediately started asking questions about the new organization, being then explained what had been done with a group of children from 4th and 5th grade. A few expressed the concern that some of their favorite books might have been taken away due to the change but they felt reassured as soon as they could see that they had just been reorganized. This concern was especially expressed around the most popular series, like Geronimo Stilton, which had actually been now clustered in dedicated shelves. This was eventually appreciated by the children. Besides this, other remarkable aspects have been noted while analyzing the fruition of the library:

Kids raised more questions about books owned by the library. The reorganization made children visualize new categories that they had

never clearly associated to the library and this made new questions raise. For instance, different children started asking if the library had books on a specific topic. More in general, they started making use of the conceptual categories to talk about their preferences, start conversations or compare their choices.

For example, a boy had just returned a book, placing it in the *"scary books"* section. The cover itself wouldn't have probably attracted a lot of attention (the book had not been borrowed in a long time), but the fact that it was being placed back on that specific shelf, triggered other children to ask if the book had been really scary and if it was therefore worth borrowing. A few kids gathered around this conversation and a girl finally decided to take the same volume.

Finally, other children used the labels to indicate interesting categories to each other and to give each other suggestions on what could have been captivating topics to explore.

On the downside, it was not particularly easy to immediately make correct use of the new system and putting the books back on the right shelf generated some confusion. An initiative that could give children the right skills to make use of the library, like a more complete and structured introduction to it, would have been a better way to kick off this experiment.

5 MONTHS LATER: LONG-TERM MONITORING

Next to a first-hand observation to assist to the implementation of the new classification, a longer monitoring process has been set up through the librarian, who has kindly agreed to note down interesting elements and then report them through a final interview that has been carried out 5 months after the beginning of the experimentation, in May 2015. The reason for this type of monitoring is the need to verify if this process has actually led to durable change, even after the novelty effect has worn off. The conversation with the librarian has yielded truly interesting insights and has highlight different strengths of the process. At the same time, it has also revealed a few downsides and has shown clear directions for improvement.

Specifically, the librarian has noted an initial quite steep learning curve from the side of the children that was due to a complete different system that had only been designed by a few students and appeared brand new to others. This has not represented a major issue and has been overcome through explanations from the side of the librarian and thanks to constant use, but at the same time a more formal introduction to all the classes mediated by the teachers could have helped a smoother communication.

"After an initial understandable disorientation, choice turned out easier for everyone, because less dispersion occurred during the search of a book". **L., librarian**

Fig.18: the new classification in place

The librarian highlighted how the system made the process of choice more efficient by facilitating the identification of topics and areas. At the same time, a change has been triggered not only in terms of functional fruition, but also for what concerns the approach of children toward choosing a book:

"The majority of students has now learned to ask me more questions in order to be able to choose a book with higher awareness". **L., librarian**

During the use of the new system a barrier has been encountered when it came to reordering books and placing them back to the shelf where they belonged:

"The tidying up of the books when they were being returned has not always been appropriate; in spite of the clear classification, books have often been put in randomly. I've asked the children to have a bit more attention and to respect everyone's work". **L., librarian**

Analyzing the way the system has been implemented, one key aspect emerges: due to the fact that the experiment had to be run with the minimum possible workload from the side of the school, it has not been possible to implement a clear labeling system for all the books available in the library. Stickers with the category to which the books belonged have been placed on the volumes that had been selected by the kids that took part into the co-creation process and on some more books, but others (especially the series) have just been treated as units and places in the different shelves. Availability of more time or resources would have allowed for the implementation of a clear labeling system (that could have been ideally co-created with the children as well), based for instance on colors or tags.

The implementation of a shelf dedicated to books that children would have liked to recommend generated highly positive feedbacks and an interesting sense of novelty from the side of the children that for the first time went through this experience and had the chance to express their opinion and really make the difference.

"When I asked children to start using the shelf dedicated to "advised book", I mean to books that they had liked and that they felt like recommend to their peers, they seemed a bit "weirded", so to speak. Some of them asked me what "recommending"

meant. Then they understood and took heart, to the point that that shelf has never been empty. I believe they felt that they were being listened to and taken into account. It has always been a very active shelf". **L., librarian**

An overall consideration on this experiment shed light on two different aspects: one one hand, the test turned out beneficial from the point of view of children's awareness about their choices. In fact, the whole process of being more involved led to higher confidence and willingness to understand how to make best use of the service. On the other hand, variety of choices has been positively affected too, allowing kids to broaden their reading experiences.

"There has been more awareness in the way books were being chosen, especially for the children who took part into the project. Children come in to the library, they head for the wall that now has the new labels, they choose faster, some have learned to read the blurb on books, other ask if a certain book is available or if it is out on loan".

"Choices are varied because books that were not really visible have been better highlighted; and the number of books that they borrow has increased too". **L., librarian**

DURABLE EFFECTS

A fundamental goal of this process has been not only to monitor the outcomes of the experiment within the realm of the fruition of the library. In fact, is has been equally important to investigate what behavioral changes have been driven by this research process and if it has sparked new initiatives. In this case, the answer has been positive. The librarian has been very closely involved into the actualization of this experiment and had the chance to witness its beneficial effects first hand. For this reason, she has later on decided to set up other tracks to renovate the use of the library:

"An initiative that I proposed has been the introduction of another new shelf dedicated to new books. I've bought some new volumes and gave them to the library. This initiative has been appreciated: also in this case book were being constantly borrowed". **L., librarian**

The meaning of this initiative goes beyond what can be deducted by this quote: in fact, the school had not bought any new books in the last two years, due to budget restriction and to a different allocation of the different resources. This process of collaboration has infused a renovated interest into the library and its potential and has sparked the desire to offer children an even better service. Next to this, another of the kids' insights has been picked up by the librarian, even if it has not led to a concrete outcome yet:

"I asked children that took part into the project to prepare a list of books or authors that they would like to find in the library. Someone had begun to write, but the thing did not caught on, but I still have hope in next year". **L., librarian**

Teachers have positively welcomed this cooperation too and the workshops in turn led to another initiative:

"Children who take part into the co-creation process made use of their different competences during the welcome day to the youngest kids. They have told them what a library is, why that classification was there, what books are for, the loan service and then they have read them a story. They have been really brilliant"!. **L., librarian**

CONCLUSIONS

These insights mainly show that what has been done up until now has already determined an effective change. That said, this reflection upon the new status quo shows that there is still large room for improvement. In particular, the following aspects appear relevant in this regard:

The library system could be further improved in regard to its classification and organization of materials by implementing a better labeling system and by making it easier for children to put books back into their shelves. This could improve the fruition on a more practical level, preventing functional issues from casting shadows on an otherwise effective and fulfilling experience.

An overall involvement of more classes and therefore more teachers and students would amplify the effect of the process, making more people feel the relevance of this change and giving the right value to their opinions.

A stronger coordination between the librarian and class teachers would be beneficial both from the point of view of implementation (more availability of resources) and from the side of planning itself (different points of view would come together).

CHAPTER 7
MOTIVATION TO LEARN
A deep-dive

"

Student motivation is rooted in students' subjective experiences, especially those connected to their willingness to engage in learning activities and their reasons for doing so. (Brophy, 2013)

"

A t the end of this research, it has been possible to draw some conclusions on motivation toward reading and learning, by making use of findings gathered on the field as well as of existing theories, drawing on concepts from the field of psychology and pedagogy.

AN INCLUSIVE PERSPECTIVE ON MOTIVATION

Motivation is a phenomenon that occurs on an individual level and has to do with strictly personal dynamics and reasons. However, the process that leads to the construction of motivation not only occurs within the self, but also in relation to the context. In other words, environment as well as personal factors contribute to shape motivation. For this reason, when it comes to motivation toward reading, existing research has been focusing on how to create a context and a climate that can adequately cater for the reader's personal needs and enhance his motivation (Gambrell, 1996).
Research on learning and reading motivation has actually started out focusing more on cognitive aspects and reading proficiency (especially during the 80s), then more and more investigating attitude and interest too (Baker & Wigfield, 1999). More recent studies tend to have a more inclusive perspective on motivation (Wigfield & Guthrie, 2004; Jones, 2009; Brophy, 2013), including factors of different nature. but it still does not come easy to translate all of this into practical suggestions and implementable solutions. Researching on what motivation toward reading and learning means to children has benefited this research by allowing for the identification of some subjective components of the user experience, to be further investigated and verified.

Even if motivation has long been regarded as a mono-dimensional component that may or may not be present in a certain context, it is instead a complex phenomenon spawned out of multiple interdependent causes that make a person have a positive attitude toward something and eventually act in a certain direction (Deci&Ryan, 2000). Expressed in these terms, this is still a very broad affirmation that needs to be detailed

and applied to the case under study. When we talk about learning motivation, this general definition still holds but we need to see it as a twofold occurrence, composed by motivation toward acquiring some necessary skills (for instance, learning how to read) and toward actually making use of books and other materials for learning purposes.

As already described in the introduction, learning can take multiple forms, the book in its traditional appearance being the most common one, but certainly not the only one. In fact, multiple media may serve the function of delivering content. Even though it is true that a lot of schools mainly own printed books, motivation is framed in regard to all the possible present and future forms that reading and making use of content will take, by physical or digital means. As Andrew Piper puts it in his text "Book was there", "I can imagine a world without books, but I cannot imagine one without reading": written materials change form and use over time, but they will always be "there". Ultimately, educators should aim at giving children the tools and the motivation to make use of different types of content and to navigate the sea of information with clear goals and with all the necessary instruments. Findings discussed in this chapter are often related to reading motivation, given the fact that books were the thing children related to within the library: however, it is important to note that the overarching concepts presented here apply to the discussion around motivation toward learning in general.

A JOURNEY INTO CHILDREN'S MOTIVATIONS

The motivated child: isolating motivation components
In existing research, motivation is defined through dimensions and categories, that indicate phenomena that occur whenever a child is motivated. They could be somehow seen as the symptoms of motivation. These dimensions are then affected by different factors that contribute to reinforce or disrupt motivation in children.

Even if recent research has come to recognize motivation as a multidimensional phenomenon, this has been interpreted with different and more or less flexible approaches. A model that has often been referred to by different authors is the profile of "The engaged reader" (Gambrell, 1996) in which specific attributes are identified as characteristics that all together belong to committed readers: these are in fact defined as people who are "motivated to read for different purposes, utilize knowledge

gained from previous experience to generate new understandings and participate in meaningful social interactions around reading".

More recent studies have drawn upon this body of research to continue investigating what these different purposes for reading may be. Findings have revealed that different aspects of motivation can be combined and intersected in different ways, generating a lot of motivational scenarios that vary between individuals. For instance, the work of Baker and Wigfield has accomplished this result by identifying different categories of readers and coming up with readers' profiles. The two researchers have developed a set of 3 categories and 11 dimensions of reading motivation, testing children's response for each of them and then seeking for patterns. Next to two "extreme" groups with respectively high and low scores in almost all dimensions, four types of readers have been isolated:

GROUP 1

Children in this group tend to avoid challenging activities as well as comparison with peers and are concerned about their level of performance, however showing to value reading and to have interest for it.

GROUP 2

Kids belonging to this category show not to value reading highly and to see little purpose in it.

GROUP 3

This group shares ego-oriented goals, characterized by the desire to compete with others as long as the challenge could be easily won.

GROUP 4

A last cluster has been grouped under the definition of mastery-oriented motivation and is composed by children that value reading for the benefit they can gain in terms of knowledge and understanding of reality beyond the book itself.

These groups have also been analyzed for their likelihood to lead to independent reading next to activities assigned in school and a "mastery-oriented" approach has been proved to hold the key to more self-motivated reading experiences.

These studies constitute an extremely valid theoretical support to begin an investigation on motivation toward reading and learning. However, looking at this from a service design perspective, what is somehow missing is the possibility to relate these categories to concrete experiences that children live in school, in a library or with books in general. If it is true that categories and profiles help capture reality, it is also true that a qualitative understanding of the single components that form motivation is necessary in order to design better experiences. For instance, mastery-oriented motivation is still a very general concept that needs to be understood from the perspective of a child: how does a child describe his interest in gaining knowledge about a discipline? How would he frame his motivation? Only a first-hand comprehension of kids' perception can answer to these questions. Moreover, only a study of isolate motivation components rather than aggregated profiles can allow to design flexible solutions that can respond to the needs of different groups of children and contexts. Finally, grasping better insights on what makes some kids have an unmotivated attitude is equally important to help them have positive experiences and cater for their specific needs.

READING MOTIVATION COMPONENTS

My attempt in studying children's motivation has been to capture their "symptoms" of engagement and their reasons for investing time in reading, then translating these into design inputs. Children have been encouraged to report about key positive experiences with reading and asked to explain what made them so special and motivating. This has been done to gather meaningful examples and to help kids stick to concrete examples without having to deal with abstract concepts such as motivation in itself. Overall, the three main motivational dimensions of content, performance and social value have been confirmed, but research has yielded results that in some case build on top of discussed literature, detailing it from the perspective of children and in some other add new categories. Findings are here listed and discussed with examples and meaningful quotes and each component has to be seen as a single facet of reading motivation and certainly not as a feature capable of describing

the entire attitude of a person. A final reflection takes into account more inputs from existing literature, especially from self-determination theory, to understand the long-term value of these aspects of motivation.

CONTENT-ORIENTED MOTIVATION
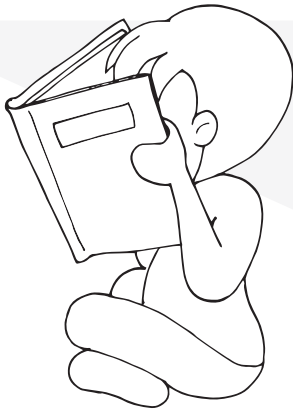
"The things I get to discover and experience get me engaged"

These motivational components are characterized by a focus on the content of reading, with a distinction into two sub-categories:

Mastery: different children reported an interest for books related to the possibility to gain knowledge on a specific topic or field of study. This ranges from more abstract (I read about something because I want to know what it is like) to more concrete interpretations (I read upon a topic so I can do something with this knowledge). Interestingly enough, even though this motivation has been observed in all schools, it emerged more frequently in schools that made use of project-based learning, where information seeking was highly integrated into purposeful and concrete applications.

Enjoyment: for many kids, reading is perceived as a truly entertaining activity, that allows you to immerse yourself in a story and be part of an unique experience. This has been mentioned as a reason for which reading is enjoyable by almost all kids.

Children who described content-oriented motivation shared feelings of involvement and curiosity in reading. However these were slightly

different for the two sub-categories and revealed interesting perspectives:

Curiosity: children defined curiosity in reading as the desire to move on to the next page, to absorb the content of reading and discover what the book has to offer. When it comes to mastery-oriented motivation, curiosity means having interest for what things are like in real life. The book becomes a medium, a relevant source that leads to a deeper understanding of things and eventually to a potential use of that knowledge.

> *ex. During a discussion about favorite books, a child explained science books were amongst his best readings. He then picked the example of a particularly beloved volume about the human body and pointed at a paragraph that explained how hair grows and why cutting hair does not hurt. These little discoveries made him curious about himself and the world around him.*

In relation to enjoyment-oriented motivation, curiosity is instead the excitement about knowing how the book will evolve, what situations will be described and what sensations and emotions will be elicited.

> *ex. A child described his feeling of curiosity while reading: "then I'm sitting just that I'm a little bit dreaming about things [...] I think first...I think that maybe an exciting thing comes or that exciting things come that he's going down or he's flying away or dying whatever and if it is good I'm a little bit happy or if it is not good I'm not happy."*

However, this distinction of the term "curiosity" should not be seen as a dichotomy between fiction and non-fiction books, since the difference is to be seen in the intentions of the reader and not necessarily in the purpose for which the book has been written.

Involvement: from the point of view of mastery-oriented motivation, involvement occurs more on a personal level, in relation to one's interests and passions.

> *ex. During one of the creative sessions, a child manifested interest for books that talk about bugs, their habitat and life, explaining that he usually went to the park or the playground looking for real bugs to observe them and therefore he got interested in them.*

On the other hand, enjoyment-oriented motivation leads to involvement

on the fictional level. This has been found to be particularly strong for a lot of children. Specifically, a lot of kids pointed out the value that emotions conveyed by books have for them, till the point that in some cases they specifically look for books that can give them that specific experience, of fear or thrill for example. Moreover, other kids reported their enjoyment in feeling a bound with the story, and in reading something that feels like it is real.

ex. A child explained to me that, when coming in to the school library, he would often look for a book that could represent his mood or, on the contrary, reverse it. Had he been bored on that specific day, he would have then looked for an exciting book full of action to enjoy the story and be able to detach from that contingent perception of reality.

PERFORMANCE-ORIENTED MOTIVATION

"My achievements and results are what pushes me to do even more"

These motivational components share a focus on self-awareness and self-perception. Interestingly, they have often been reported or have emerged next to content-oriented motivational aspects and very rarely by themselves.

Achievement: this is a self-reflective process, that can lead children to strive for something for the final reward of being able to say *"I could do this"*. Using Baker and Wigfield's words, children that show this type of motivation, manifest very low *"work avoidance"* and express eagerness to obtain concrete results. Differently other performance-oriented attitudes, this is a very personal type of reward that do not rely on others' opinions

or judgments.

ex. A girl reported that a couple of years earlier she had borrowed a very ponderous volume about the history of her town and she had worked really hard to read it all, to prove herself capable of doing so.

Recognition: this motivational process is about relating oneself to others to be confirmed in a certain role or a certain skill level. It could sometimes be confused with desire for sharing, but it is instead self-directed. It is important to note how this is not associated with a negative judgment, nor it is about a mere desire to show off. On the other hand, a lot of research highlights the importance of recognition in the motivational process, not only for proficient readers, but also and even more significantly for readers that feel that they are lagging behind or they are not meeting the expected standards.

ex. A few children manifested appreciation for recognition from adults or peers. In a couple of cases, for instance, children reported to me with pride titles of books that they had read, showcasing their personal collection of readings and therefore confirming themselves as expert proficient readers.

Competition: competition is defined as the desire to achieve a certain performance, but in relation to others' performances, aiming for higher and better result. However widely validated in existing research and surely a component of some kids' motivation toward reading, it has not been observed within the analyzed contexts.

All of these motivational components that go under the name of performance-oriented share an association with feelings of pride and self-esteem, that achievers develop individually, while children seeking for recognition or competition rely on others to do so.

SOCIALLY-ORIENTED MOTIVATION

"I enjoy it because it's something I share with my friends"

Socially-oriented aspects have been found to be part of children's motivation toward reading, often next to content-oriented motivation. Different children showed enjoyment of social activities in reading, with a more or less superficial outcome.

Sharing: this indicates appreciation for the possibility to share stories with others and curiosity toward what these stories are. It is the case of children in school IT1, who proposed the installation of a big book, where kids could write their own stories to inspire others.

Bound: on a deeper level, reading is seen by some kids as a powerful activity that brings people together in friendship.

ex. Some children reported to share books with their friends, especially series, and talk about them and the stories and lives of those characters, thus reinforcing their relations even more. In one case, a girl even mentioned that she had designed the organization of her books together with a friend, with whom she had then shared the collection.

These three main motivational components do not just exist as separate islands, but some relations have been identified. Specifically, two interesting patterns have been isolated:

Content-oriented motivation can lead to performance-oriented behaviors (especially achievement): when a book is highly desirable because of its topic or story or theme, some children develop an "achiever" attitude

and express their will to read that specific book, despite its length or complexity.

ex. The librarian from one of the schools reported that quite often some kids would insist to borrow books beyond their reading level because of the attractiveness of the story or theme, for instance dragons.

Socially-oriented motivation can lead to content-oriented interest, as it has been described in Chapter 6 with in the example of a boy who returned a scary book and generated curiosity among his friends.

READING DE-MOTIVATION COMPONENTS

"I don't feel this is something for me and I may give up soon"

As already found by Baker and Wigfield in their study, very few kids are highly motivated in all regards or show very low scores in all motivational aspects. For the majority of children, some aspects represent a trigger and some others do not. Moreover, it is not infrequent that even highly motivated children show symptoms of low motivation at times, in relation to specific occurrences or situations.
Looking into de-motivation and capturing its features is as important as understanding engagement: only by identifying these negative attitudes, one can dig deeper and eventually design appropriate solutions.

Even if the groups of children I had the chance to work with showed a very remarkable commitment to reading, a few "negative" components could be isolated and they really helped to fuel the co-design process. It has not only been a matter of interviewing the children on what made them feel disengaged about reading and then getting back to them with

solutions. On the other hand, that these issues were raised in group discussions and subsequently tackled together with co-design activities: this shared process itself already made all children motivated to overcome these challenges and work for a real change. Specifically, three different issues have been reported by kids:

Complexity of effort: some children manifested a somehow negative attitude toward reading, due to the complex challenges posed by reading itself. Long texts were regarded with a sense of fatigue for the time it takes to go past lines and paragraphs and chapters, … In particular, some children lamented that books had a lot of text printed in small size and very densely laid out on the page, making it difficult to keep the concentration for long.

Lack of purpose: in some cases children used expressions like "there is nothing in this library" or "there are not enough books that are my type", expressing a discomfort related to an offer that somehow does not meet the child's expectations or does not help him to see purpose in reading.

Not enough occasions to read: in different cases children complained about the fact that the library was used too sporadically or that it was only used to check books in and out, which did not make reading a key activity and therefore reduced its value.

UNDERSTANDING THE ROLE OF MOTIVATION COMPONENTS

As anticipated in the introduction of this chapter, this is meant to be an overview of aspects that are part of children's motivation or disengagement toward reading and each child may have a personal response, that may include all these orientations, or manifest a predominance in some. It is not easy or immediate to understand whether all these dimensions equally lead to lifelong motivation toward reading. Important guidelines come from existing research on self determination theory.

Extrinsic and intrinsic motivation
Self-determination theory has built a groundbreaking broad framework to support the understanding of motivation toward learning in general: what different authors (Deci&Ryan, 2000; Niemiec &Ryan, 2009) found in their work is that motivation may occur at different and more or less ingrained levels, in relation to internal or external factors. In particular,

within a publication about self-determination theory and educational practice, the authors rank different attitudes based on the degree of interiorization of a certain activity, specifically the object of learning (Niemiec & Ryan, 2009).

Four different levels are identified: external regulation, introjected regulation, identified regulation, integrated regulation. External regulation is the least autonomous attitude and corresponds to a motivation "induced" by rewards or threats of punishment. Students who engage in activities with this approach are quite likely to lose motivation, as soon as contingencies change and the source of engagement is removed. Slightly different, introjected regulation still descends from external factors, such as praise or reproach, but in this case students take ownership of the duty that is asked for them and commit to certain activities to avoid feeling guilty for not having done so (or to feel proud of having achieved a certain thing. Moving on to more autonomous motivational types, identified regulation describes situations in which students recognize a practical purpose in what they do and they see that dedicating time and effort

External
regulation

Introjected
regulation

Identified
regulation

Integrated
regulation
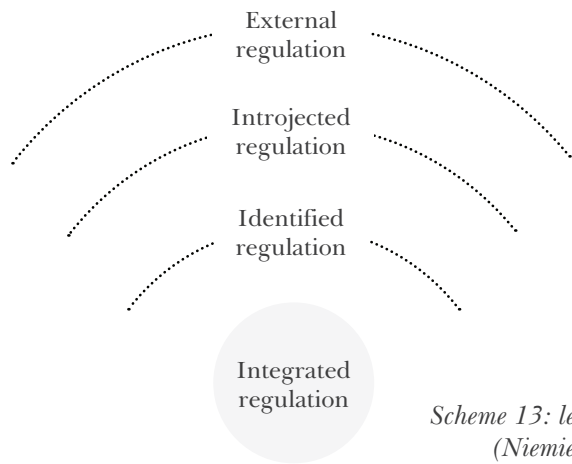
Scheme 13: levels of motivation
(Niemiec & Ryan, 2009)

to something is relevant, because that particular skill or knowledge will be needed. The highest and most autonomous approach to motivation reflects a situation in which "identified regulations have been synthesized with other aspects of the self": the student would then engage in a certain activity because this reflects his values or interests or personality.

The higher the level of interiorization, the more the chances that motivation will last for long and be truly deep-rooted in the individual. The key learning from this theory is that, even though kids' reading motivations present us with a very mixed landscape of components and attitudes, teachers and schools should always try to support engagement toward reading by helping children to find their way around it and to discover or build a personal meaning for it. Ultimately, schools need to strive for the highest and deepest level of motivation or at least lay the foundations toward it and build up a path to support internalization.

Supporting internalization
According to self determination theory, individuals seek for the satisfaction of three basic psychological needs, autonomy, competence and relatedness and all of them need to be considered in order to empower authentic intrinsic motivation. When it comes to reading, this still holds true and evident relations can be seen between these three needs and the different components of motivation. Social-related components show a connection to relatedness, while content-related components and performance-related components are linked to both competence and autonomy in different ways, as can be seen in the following table:

	COMPETENCE	AUTONOMY
CONTENT-ORIENTED	I master this content	This is relevant for me, I can make my own use of it
PERFORMANCE-ORIENTED	I can produce this result, I can prove my competence	I can do things by myself

Scheme 14: types of motivation and their relation to basic psychological needs

Each of these components is a necessary ingredient within the process of internalization by playing a specific role and affecting motivation differently. Existing research (Baker and Wigfield, 1999) has proved that personal engagement leads to more independent reading compared to

a type of engagement that relies on recognition of a role or a level of performance. Moreover, students who were motivated for more personal reasons were also more likely to spend extra time reading on their own, despite the presence of someone that would praise their achievements. Not to underestimate the importance of feeling capable of doing something, it has been extensively proved that this perception of being able to produce a certain outcome is absolutely important for children (Ryan & Deci, 2000) together with all the other factors. Parallel to this, self determination theory (Deci et al, 1994) underlines how this process of internalization can be successful only if it occurs together within an autonomy-supportive context and through empowering dynamics, else it will fall back into introjection.

Relational and social aspects have been found to be important as well, even if with a different dynamic (Ryan & Deci, 2002) and for this reason they deserve a particularly close look: in general, it has been verified that infants that "experienced a general sense of satisfaction of the relatedness need were more likely to display intrinsically motivated exploration" (Ryan & Deci 2002, p.14). However, it has also been observed that different activities were subjectively perceived as solitary and in this case individuals tend to maintain the same degree of motivation despite the presence or absence of others. This links back to the various dynamics observed in the schools: some children expressed their appreciation for occasions that allowed them to share stories, read or choose a book together, or simply talk about their preferences, whereas some others declared to enjoy reading on their own without the need for others to take part in this activity. It has also been observed that many kids tend to separate the act of reading itself and all the other activities around it (choosing, talking about, …), considering the first as a private moment and the second as a socially relevant occasion.

"In my old school there were some private spaces so I went there but sometimes I went next to my friends". -B. (9 years old), NL2

"Yeah I sometimes do it [talk about books with others] because if they haven't read the book and they say oh how is the book or did you like the book that I told you to read then we can start talking about it and they can know how I felt about the book, like if it was too bad for me or if it was too good for me or if it was ok". -D., (10 years old), NL2

Daniel Stern (1985) proposed an interpretive model of the development of the self in relation to others: since the earliest stages of childhood, the discovery of the sense of self goes through progressive phases characterized by the discovery of others in terms of physical presence, action, affectivity and autonomous thinking. When infants learn to share meanings that give a name to things through words, a potentially infinite number of narrative experiences and interactions is generated (the verbal self comes to life).

According to the psychologist and pedagogist Jerome Bruner (1990-92), the construction of the self is a function of the constant exchange with the surrounding cultural context, that combines emotional and cognitive fields. In this sense, narration is one of the most important psychological mechanisms from a relational point of view, especially during childhood. The study of narrative texts began to gather researchers' attention around the 70s and has then been broadly investigated and used in different fields, cultural, clinic, educational, … All these different perspectives underline the centrality of narrative thinking for children, not only for the related cognitive aspects, but also for the intrinsic value of social change: in fact, narration presents both mental and emotional relevance and both can be exploited to foster kids' motivation.

CONTEXT MATTERS

All these consideration rely on the fact that "human beings can be proactive and engaged or, alternatively, passive and alienated, largely as a function of the social conditions in which they develop" (Ryan & Deci, 2000) and that behavior is at any time the result of the dynamic interaction between personal reasons and contextual stimuli: the individual with his specificities and the external environment with its positive or negative values meet in what is defined as "immediate psychological field". The way these forces are combined allows to reach a temporary balance that steers and guides action; the integration of new stimuli generates behaviors that are aimed at keeping or restoring this balance and at finding appropriate responses to new situations.

KEY LEARNINGS AND DESIGN IMPLICATIONS

Given this variety of motivational attitudes and components, it is important to underline that all of them have to be taken into account when designing a library service, for each of them plays a different yet major role into the process of construction of lifelong motivation. In fact, research has demonstrated that interest toward the activity of reading itself, as well as the desire to acquire mastery through reading are the most predictive aspects of a motivation that can last long and accompany the child as he grows. However, all the different facets of motivation have a function in this process and the main challenge from a design standpoint is understanding how to bring all of them together and help schools build a roadmap that can support kids in developing a deeply personal motivation.

Understanding children's motivation plays two fundamental roles in this process: on one hand it lays the foundation for later validations of implemented solutions. In fact, design interventions can be tested and monitored by taking into account the effects they produce on motivational attitudes and by verifying if they help children to develop internal motivations for reading. Already during the experimentation carried out in one of the schools, this has proved to be a relevant body of knowledge to assess the impact of that specific experimental action. On the other hand, this study around motivation fueled the co-generative process by helping me develop better set-ups for the different sessions, making sure that they would become a truly engaging experience themselves.

MOTIVATION AND CHILDREN

Conclusions

"

Motivation is a theoretical construct used to explain the initiation, direction, intensity, persistence and quality of behavior, especially goal-directed behavior.
(Brophy, 2013)

"

T his research has been carried out implementing existing qualitative methodologies and applying them to the context of primary schools and to the study of a service experience. Given the challenge of understanding how to motivate children to learn through the library, this qualitative approach has been chosen for the chance it offers to understand contexts from within and to gradually build up knowledge. Besides it being a way to answer the research question, this methodology has been object of investigation in itself. Most importantly, this process of review enables the researcher to understand which aspects of the co-generative approach have contributed to elicit positive responses from children and to stimulate their participation to the co-generative process. In particular, this stream of findings has determined an interesting parallel with the experience ingredients exposed in Chapter 5. In fact, the actions of the researcher himself can be somehow seen as a didactic intervention, with a goal and a clear process and with some learning implications for children too. This methodological review and the findings that emerged out of it have made it possible to draw more reliable conclusions and to identify some key principles that seem to successfully contribute to kids' motivation within a didactic context.

GUIDELINES FOR A SUCCESSFUL PARTICIPATORY DESIGN PROCESS

Creating a good atmosphere and a positive climate of cooperation is necessary in order to get the most out of the research process. Making participants feel involved and listened to is crucial, because only in this way they will do their best to provide authentic and relevant information and they will engage in a meaningful debate. On the contrary, if conditions for engagement are not optimal, the process may result in a somehow superficial participation. The experience of this research study has allowed me to better understand what factors can contribute to increase children's motivation toward the project and the most significant insights are presented here below, accompanied by some examples. Moreover, the fact that co-generative sessions have been carried out in

different contexts over different periods of time (first in The Netherlands and subsequently in Italy) has allowed for a gradual improvement and refinement of the set-up, aimed at reducing bias and increasing the effectiveness of the adopted tools.

#EASE THE SITUATION

The very first moments spent together with the children are fundamental to help them have a positive feeling about the project they are going to take part into. It is important to ease the situation, to make them feel welcome and to make it clear that this is an open process, where no judgment will be given at the end and where everyone will have the chance to express his own ideas. Previous research has shown that when children carry out co-design activities in class or in a context that is connected to specific rules and a certain structure, it is not always easy to break this routine and encourage pupils to embrace a more open and flexible attitude that can best encourage team cooperation (Tisdall, Davis, Gallagher, 2008). In fact, students tend to associate specific behaviors to contexts and stick to them, which makes it necessary to start sessions with the right approach in order to support the following phases.
Something similar occurred in school IT1, where kids were not used to project-based didactics and were therefore not familiar with open ended learning processes. Some kids tended to imagine that their outcomes would have received feedbacks from me in evaluative terms, but they were then quite positively surprised by the fact that feedbacks did come, but they were elicited from the kids themselves or from their peers.

#GIVE A ROLE

Giving a role to children is not only important in order to make them get a grasp of what they will be doing. Most importantly, this is about making them feel relevant and allowing them to play the role of protagonists even if within certain boundaries (the given role), that can steer the process and turn it into a real chance to learn something new. Moreover, the game of role-playing a certain type of character and learning how to act like him infuses in children a sense of competence and conveys the powerful message that we can all do this, that we can all be awarded the title of designers, journalists, ...
The use of these role-played characters turned out quite successful and gave children the possibility to foresee where the project was going by relating to what the character would do. It was especially interesting

to notice how some kids from school NL2 started talking about their creations very seriously and defined themselves "library designers".

CREATE SENSE OF SURPRISE

Generating a sense of surprise is an effective way of creating expectations and it plays a different role at different levels. From a more practical point of view, this is a technique that can help the researcher have everyone's attention on a certain thing. From the side of the kids, this produces expectations, a sense of curiosity, the desire to know what will come next, but on a deeper level this communicates that tools and assignments are not just being delivered to kids, but are being gifted to them, with all the emotional implications that this carries.

Fig.19: Giving children a role. Material from the sessions.

The same assignment has been proposed to two different schools: children have been presented with pictures of different libraries from all over the world and have been asked to express their preferences, explaining what made those libraries really attractive but also which ones looked more easily usable. The second time this assignment has been repeated, it has been presented differently, really trying to convey a sense of magic and surprise: pictures have been collected in a box that was labeled "libraries from all over the world" and this created a sense of fascination for this narrative that in turn resulted in a stronger engagement during the group discussion about the pictures. In particular, children were more keen on expressing their opinions and relating to the pictures from an emotional point of view, therefore providing more relevant and complete insights.
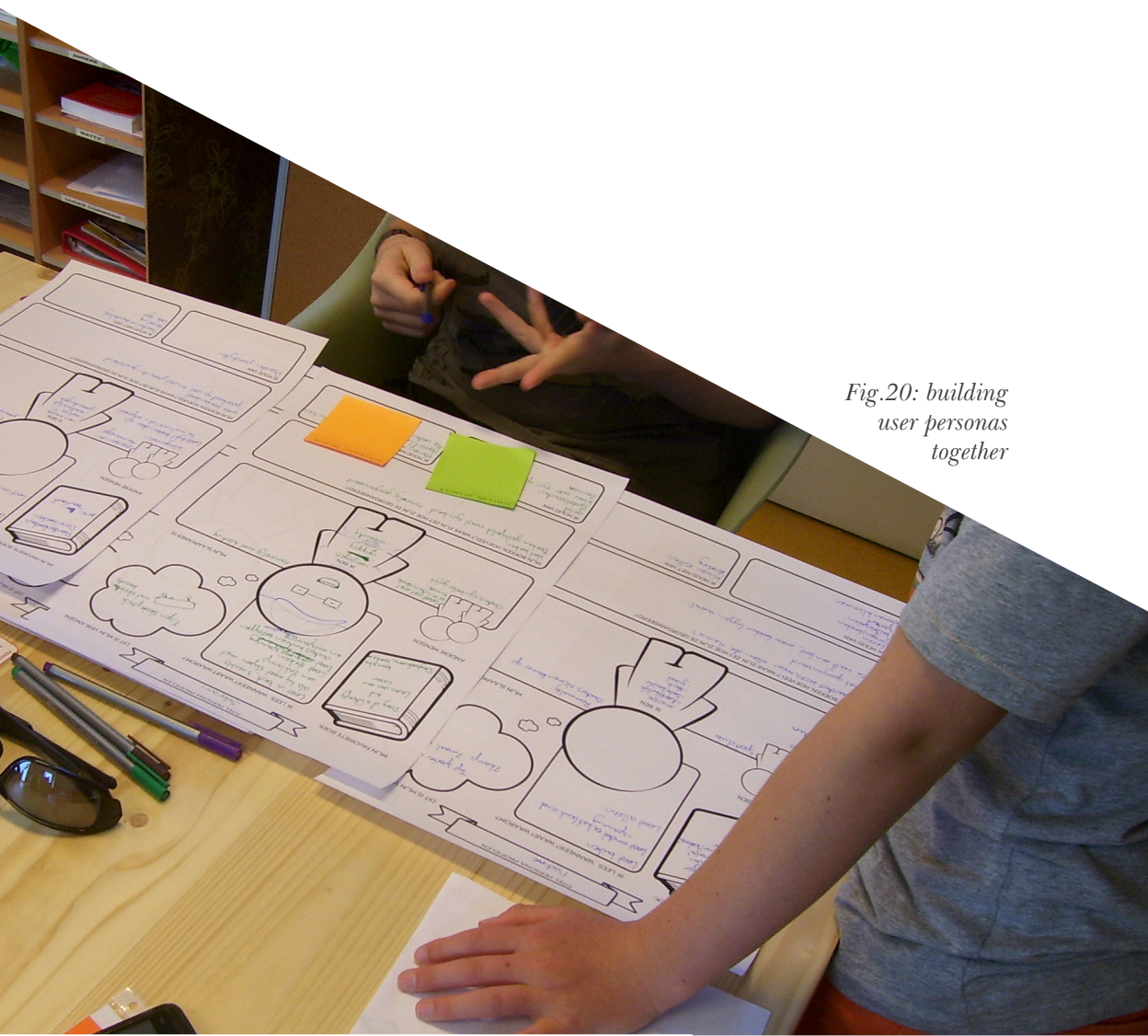

Fig.20: building user personas together

#LET CHILDREN EXPRESS THEMSELVES AND TALK ABOUT THEIR EXPERIENCES

Having the chance to talk about themselves is an important moment for the children: in fact, this can especially help them to better relate to the assignments from a personal point of view. It is important that the researcher is ready to highlight these correlations, to make this even easier.
In school NL2, the first co-research session started out with a round of personal stories and past positive or negative experiences with libraries. This created a common ground, helped ease the situation and offered a chance to later on relate back to those experiences.

GIVE EXAMPLES AND GRADUALLY TRY OUT TOGETHER

Even if activities are planned to match the age group they are designed for, some assignments may require a bit of effort to be fully understood or some children may need more guidance. A task that is perceived as too difficult may disencourage children and eventually disinterest them. In order to prevent this from happening as much as possible, the most effective strategy has been to start from a practical example built all together and deduct instructions from it. This allowed children to have a model to refer to before starting their process.
An example of this can be seen in the assignment that involved children in the design of a new classification for books. Students were given empty boxes and were required to identify criteria to sort the books. However, the conceptual understanding of what a rule or criterion is may not be immediate or may be partial, resulting in reduced possibilities of exploration. This has been prevented by asking one of the children to pick a random book from the shelf and show it to the group: all together we started listing different characteristics of the book, with a purely descriptive approach. This allowed everyone to see different types of characteristics (related to the content or to the book as a physical object for instance) and to start thinking about which ones could have been best used for classification purposes.

HAVE A BACK UP FOR EVERYTHING AND TRIGGER THE CREATIVE PROCESS WITH NEW STIMULI WHEN NECESSARY

When co-designing with children, having a back up plan for the different assignments is key: it is especially important to consider that certain

assignments may result too difficult for children or may simply take more time than planned. At the same time, external factors may come into play and the session may end up being shrunk in a shorter period of time. Moreover, having a back up means preparing follow-up questions and alternative ways to propose the same concepts. These simple tricks can help to keep the process smooth and avoid "dead" moments. Finally, having a plan b is not only about making sure that the whole session is being carried out effectively: another important aspect is also allowing kids to steer the outcome of the session. The researcher has to be flexible, not only facilitating activities but also readily picking up suggestions that may come from the students themselves.

For example, during the brainstorming with the younger kids from school IT1, a series of back up triggers has turned out to be especially useful. Children were engaged in a collective brainstorm and tended to stick too close to each other in making comments, sometimes almost copying what others had just said. In order to allow them to explore different dimensions of the topic, a series of triggers have been gradually provided in order to constantly give fresh inputs to the discussion and get the most out of it, making the kids feel this sense of achievement too.

USE A MAIEUTIC APPROACH

Disclosing the ultimate goal of the project in the beginning would not probably be an optimal solution: besides spoiling it, it would also generate confusion and a certain overwhelming feeling. On the contrary, what has been really effective is helping kids go through a gradual meta-cognitive process and gradually discover the potential of the process they are going through.

For example, kids in school IT1 had the chance to reflect on their project after the small experimentation had been set in place. This allowed them to eventually understand the impact they had had on the library and to feel a sense of pride for the project they had contributed to. Had this reflection been done in the beginning of the process, it would not have been equally meaningful and it could have generated a concern about the expectations on the kids themselves.

FACILITATE TEAMWORK AND SHARING

Teamwork is a very important aspect of the co-generative process. Having the chance to work with peers often makes children feel safe and more ready to attack a new challenge. However, other kids may

prefer a more individualistic type of work and find it hard to cooperate. No imposition has been given to the kids, even if a certain workflow has been proposed for the different assignments. Whenever children found it hard to follow this, they haven't been forced to change their approach, but the advantages of a certain working method have been demonstrated in practice.

During one of the assignments, one of the children from school IT1 had a hard time working together with his partner and started developing his idea on his own, expressing a sense of discomfort for the fact he had to expose his idea to other people's opinion. This had in turn generated the impression that he considered his classmates to be somehow not worth his attention. This could have potentially generated a disruptive dynamic and could have negatively affected the final group discussion. No imposition to work together has been given but, as soon as a connection between this child's idea and another child emerged, this has been pointed out and the mutual benefit of sharing it has been highlighted. Kids ended up finding their suggestions reciprocally useful and the sense of detachment was eventually mitigated.

MOTIVATING CHILDREN: AN INTERESTING PARALLEL ACROSS FINDINGS

Some interesting patterns have been found in the comparison between findings of the study on the library experience and the findings that have just been presented in relation to the methodological review: in fact, experience ingredients and methodological guidelines present some relevant commonalities that are worth a closer look. These conclusions represent overall motivational factors that seem to have a special relevance for children.

Building relevance

It represents the first step towards a motivational experience: children have the need to relate whatever they do to their world and their area of interest and significance. This does not mean that children should only engage in what they find relevant at the moment: on the contrary, the main challenge for educators should be to help children expand their area of interest and stretch it to embrace new experiences.

Empowering

Empowering children to take active part into the things they do is a second fundamental factor: in order for them to be fully engaged, it is important be able to have an impact on reality through their actions. It is not only about giving them the chance to express an opinion or a preference, but it is also about allowing them to make concrete use of their knowledge or ideas.

Enabling

Offering support tools to make this happen is then the next natural step towards a successful completion of the experience. Things like teaching relevant skills, triggering with inspirations, suggesting possible paths are extremely relevant in turning engagement into authentic motivation towards something: without enabling resources, children would in fact not be able to achieve results.

Tutoring

On a relational level, tutoring children and establishing positive and reinforcing dynamics is necessary in order to make children feel comfortable with their tasks and activities. Tutoring turned out to be a powerful motivational driver, even if with differences in approach from child to child. For what concerns the library, children highlighted different types of interaction with the adult that would be helpful for them and similarly, during the sessions, it has been necessary to find the best way to interact with each child and offer support in the right way.

Building a sense of community

Building community within the school is fundamental not only to reinforce the perception of relevance that children may have towards what they do, but also to multiply interpersonal connections and facilitate synergetic dynamics between children.

FIELD RESEARCH IN SCHOOL: GUIDELINES

In addition to what has been discussed until now, it has been interesting to test the adopted methodology in relation to its effectiveness and its capability to bring a real and durable change. The interest for this lies in the nature of the selected context, in which challenges are posed by the existence of an institutional structure as well as by external regulations and a complex system of roles. In fact, the influence of public actors often

MAKING CONTACT AND PLANNING

- Research goals as well as didactic goals have to be clear since the beginning:
  when it comes to field research within a school, an additional aspect has to be taken into account, the didactic relevance of the activities proposed by the researcher. The overall plan has to generate a good fit with the school's curriculum and eventually enable kids to learn new skills and gain knowledge.

- Time is a scarce resource: time is scarce in all regards and throughout the research phases. Meetings and sessions often have to be done in compressed time slots and it is not easy to change an already fully packed schedule in order to add new activities. This implies that communication and execution have to be as efficient as possible and that whatever can be carried out without teachers or children being present, has to be optimized in this direction.

- Flexibility is necessary: for the same reason, flexibility over the calendar of activities is essential to guarantee good results and to establish a constructive relation.

- An external perspective is interesting to teachers: the researcher plays a truly interesting role in getting the chance to immerse himself into a new context of which he knows very little. This has turned out to be particularly interesting for teachers, because this situation can offer them a fresh perspective on a certain context.

- Depending on the way the curriculum is structured, a certain set up may be more desirable: different schools may react in a different way to the idea of having only a small group of kids participating to the co-generative sessions.

- Being open to parents is fundamental: dealing with schools and with kids means that the right attention has to be given to parents too. Preparing informed consent forms, sending out copies of the program of activities and introducing oneself are absolutely necessary actions prior to the beginning of the actual research.

CARRYING OUT THE SESSIONS:

- Respecting the schedule: besides the fact that this is a generally recommended principle, it becomes even more important in the context of a school, where activities have a very strict planning and cannot be easily shifted or substituted.

GIVING FEEDBACKS AND FOLLOWING UP:

- Generate dialogue between different people within the school: act as a pivot.

- Give feedbacks on the work that has been done: proving findings with real data and grounding design solutions.

- Following up on implemented solutions.

play a crucial role in shaping what services are offered by the school, what decision making processes are implemented and in general how resources are allocated. Moreover, as highlighted in the introduction of this study, the way schools are structured does not make it easy to monitor the quality of the delivered services because no dedicated resources are employed. Based on the experience accumulated through this field research, a few guidelines are identified. These serve the purpose of showing how a researcher can effectively set up a fruitful cooperation with a school, throughout the phases of his study, from planning to implementation.

LIB LAB

L LIB LAB has taken a starting point in the need to support educators to design better and more supportive library services. Making use of participatory design tools and of research techniques, both teachers and students have been involved in the attempt of defining together possible solutions to improve the service, based on their specific needs.

But the outcomes of this process have not just been confined within each context. LIB LAB has achieved results at different level, that are here listed:

- Assisting actors of each single school in becoming more aware of the challenges they face in the set-up, use and management of the library service. In fact, 3 schools out of 5 had the chance to take part into co-generative activities and to have children come up with fresh ideas. Moreover, they had the chance to discuss these ideas with the students themselves and set up an essential cooperation with them.

- Gathering hypotheses and assumptions for further testing. Being an exploratory qualitative research, LIB LAB has unveiled different factors that seem to positively affect the experience with the library, thus making it more motivational. These factors would need to be tested in different contexts and conditions in order to assess their relevance and impact and to better understand their possibilities of use.

- One of the schools agreed to take part into an experiment, that allowed me to test one of these factors, in response to their specific needs. In particular, the experiment has been aimed at verifying the effectiveness of a classification designed by the children. The new classification has been implemented (it is now permanently in use) and has been monitored over a period of 4 months, through initial observations and

through the information provided by the librarian. Findings revealed that the new type of classification has determined positive outcomes in facilitating children to find books more easily, to explore more categories and to better understand the categories themselves. In particular, the language with which categories were expressed has helped them to start up meaningful conversations with their peers as well as to ask more questions to the librarian. At the same time, the school has implemented a shelf for recommended books, interlacing the intervention on the classification, with the possibility of interacting more with other children. This second intervention has yielded positive outcomes too, especially affecting the variety of choices.

- The review of the adopted methodological approach has revealed interesting patterns in the comparison with the gathered findings concerning the use of the library. It has been observed that there are some common principles that seem to be particularly effective in stimulating children's motivation.

OBSERVATION (11/06) some conclusions
- playing and reading go together
  shi[...] one to the other
- [...] reading?. How do they

[...] about books?
[...] about reading?

[...] = how can
[...] (even non-native
[...] tend the age

[...]book. they are arranged
[...] interest raised in children
[...]
- Some distinction between reading for pleasure
  and for information seeking
[...] we please children's tastes or should
  [...] some kinds of books more?

[...] things visible. How do
[...] see the space? How big
[...] tors be?
[...] REN TO THE CONTENT

(12/06)
A   ACTORS
Asking where
they have been   (M)
on (foreign
countries)
Asking where
they have international
relatives

Disturbing paper
they will fill in
giving one after the
[...] to read (cut)

asking for typical
[...]ings in some countries
[...]ood, sport, tradition,
[...]sportation,)

[...]inding   (M)
[...]el
[...] immediately   (i)
[...]ting and   9 yrs
[...]ing books
[...] after the
[...]ther

[...] not finding,
[...]ving up,
Going to small
desk
lying on bench
(too small)

Disappointed

complaint

bored

CHAPTER 9
TO BE CONTINUED
Future steps

"

Iterative design helps focus the final product through cycles of testing, analysis and refinement. Questions that may have not been foreseen by other formative research may arise out of the iteration process. (O'Grady & O'Grady, 2009)

"

L ib Lab has its roots into a real need that schools are confronted with everyday and it has encountered interest from the side of teachers, librarians and children throughout its development. This makes it interesting to find ways to develop it further, beyond the scope of this research. In fact, collaboration with schools has shown a good complementarity of skills and roles that has made the facilitation process relevant and effective.

An analysis around limitations of this work is however necessary as a first step. As it has been mentioned multiple times, participant schools almost exclusively offered books and print materials. The sample was therefore quite varied, but not enough to include real polar cases. It would be particularly interesting to involve new contexts that implemented resources different than books.

At the same time, a significant portion of the findings emerged from a study about reading for recreational purposes. It would instead be beneficial to extend the investigation around information seeking and, in general, to seek for more variety in the types of observed situations and occasions of use of the library.

Finally, the research has been mainly carried out with students aged 8-10 (only one student was 7) and this excluded beginner readers from the study. Moreover, the complexity of some assignments of the co-generative process would have make it hard to cooperate with younger kids. However, it would be extremely interesting to extend the research to all the different age groups in primary schools and to start studying how different needs can be served within the same library. In order to do so, new methodological tools would need to be defined, drawing on the existing body of research and adapting existing tools to a completely different target group.

Expanding and developing this project especially could be first of all done through replicability across contexts: it means that part of this work or the entire research set-up could be potentially transferred into a different environment. This could occur in multiple ways and lead

to multiple paths of replicability, as different variables could come into play. For example, the same process could be repeated in a different school and this would allow for the construction of a growing body of knowledge about experience ingredients that could really turn the library into a tool to foster reading and learning motivation. At the same time, if this research set-up was to be repeated, it would be increasingly important to allocate time to test design solutions and verify the validity of the aforementioned experience ingredient. Next to this, the research could be extended to a different type of institution (at a public library for instance).In alternative, pushing the boundaries of this work even further, the method itself could be reused and applied to a different kind of challenge within a school or another situation where delivering good experiences to children is crucial.

A certain degree of scalability could be foreseen as well, but most likely on the longer run: if this process could gather a certain interest around and appeal to different contexts and institutions, it could eventually lead to the possibility to associate people around this idea and spread this approach. Alternatively, another strategy to scalability could happen through the involvement of teachers or other adults and facilitators that could be accompanied into this journey and become active researchers themselves.

At the moment, a cooperation is being set up with a couple of schools in Italy. In particular, the use of a participated methodology raised their interest for the fact that it could initially be applied to a specific service but it could eventually also lead to a broader reflection on the core service that the school delivers, education. At the same time this could also lead to more outputs in terms of new experimentations and implementation of service design solutions. Teachers are particularly interested by the possibility to deeper understand what key factors can best trigger kids' motivation and build durable engagement.

In order to achieve more consistent outcomes and truly cater for schools' needs, a gradual roadmap has to be built, taking two different aspects into account: on one hand, it is necessary to gather more knowledge on kids' motivation and to continue the research process, sharpening theoretical constructs and testing them in practice. On the other hand, the methodology itself should be iteratively improved and refined and become object of testing as well.

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ACKNOWLEDGMENTS

RINGRAZIAMENTI

L IB LAB would have never come that far without the support of many people: a first special thanks goes to all the lovely teachers, librarians and directors that have opened the doors of their schools and libraries for me and have found the time and the resources to support me into this research. At the same time, this thesis would have not been possible without the participation of the children, that have done their very best to make their library dreams come true and with whom working has always been great fun.

Un ringraziamento va ad insegnanti e bibliotecarie delle scuole italiane, con cui è stato un piacere condividere momenti di riflessione e confronto, che mi hanno fatta davvero crescere. Un grazie enorme va anche ai bambini di 4^A e 5^B, insieme all'augurio di continuare a sognare il futuro così come abbiamo fatto insieme.

Thanks to Fenne Van Doorn that has advised me so greatly and to Mathieu Gielen, for his amazing course in "Design for children's play and learning": I've learned so much from both of you that it would take another book to explain.

Grazie a Fabrizio Pierandrei, per gli incontri di coaching che spesso sono sfociati in occasioni di confronto su molti temi, dalla politica all'educazione, al design. E grazie per aver accettato di supportarmi in questo progetto di tesi mentre giravo l'Europa!

Thanks to all the people that shared with me the months spent in The Netherlands and especially to Raffa, Umberto, Matteo, Johnny, Giulia and Meirav, because you've always been there for me, encouraging me to keep going and to make this project real.

A special thanks to my lovely colleagues at LEGO, Carol, Yufan, Philip, James, Sid, Bjørn, Susan and all the rest of the amazing Future Lab crew: thanks for the great learning experience that has helped me grow so much and thanks for your advices and support.
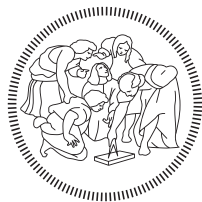
Un grazie enorme a Jessica, compagna "giocattolaia", per i tanti consigli e per lo scambio di idee, oltre che per tre anni di amicizia: senza di lei questa tesi avrebbe un tocco di allegria in meno.

Grazie a voi, Esa, Bezzy, Simo e Giuly, perché dai tempi del liceo siete al mio fianco e perché tornando qui e ritrovandovi dopo tanto tempo trascorso via mi sento a casa ancora una volta.

Grazie alla Mery, per essere per me come una sorella e per aver condiviso tutte (e davvero tutte) le tappe della mia vita.

Grazie a Luca, semplicemente per il fatto di esserci e di accompagnarmi nei miei passi mano nella mano, incoraggiandomi sempre a perseguire i miei sogni.

Ed infine, ma soprattutto, grazie a mamma per la pazienza infinita nel sopp...ehm...supportarmi e per le infinite risorse di conoscenza che sa estrarre da quella taverna. Grazie a papà, perché continua ad ispirarmi ancora oggi e per il DNA di progettisti che ci lega. Grazie a Zia Carla, Chiara, Roberto, Alessandro e Ciurlino che rendono la mia vita colorata e festosa ogni giorno.