An Exhibition on Social Mobility in Mexico
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Key words
Social mobility, graphs, understanding, exhibition, interactive

Abstract
This paper describes an information design process of an itinerant exhibition on Social Mobility in Mexico. The process involves the participation of an interdisciplinary team that put together creative and thoughtful insights into an interactive and didactic presentation of complex information.

The design process included research and analysis of information from various sources and different disciplines, concept and visualisation, testing concepts, design project and production. Testing visitors understanding of the concepts and recall was also included in the process.

The exhibition is based on a series of graphs that transformed data into clear and simple information for non-specialists. These graphs were designed for a web site. However, the NGO responsible for the statistical study on Social Mobility wished to disseminate these topics into another level. The purpose is to convey relevant information regarding intergenerational social mobility, and the relation between education and income level to young people throughout the country. Teachers and parents, as well as policy makers, are also considered as possible indirect visitors. The exhibition is designed to promote awareness of these issues and generate a different attitude of young students to break vicious cycles of poverty and inequality. The exhibition will be inaugurated on the last week on August 2013.

Introduction
The first intergenerational social mobility survey in Mexico was carried out in 2006 by the NGO Espinosa Rugarcía Foundation (ESRU). The study consisted of a sample of 7,288 effective in depth interviews developed throughout the country, with statistically significant representation of male household heads of the Mexican population. A large number of variables were captured to know how society has been moving in the last forty years. These numbers depict the interaction among variables such as age, education, migration, intergenerational movement, women status, and income level from different generations. A second survey on Social Mobility was done in 2011 with a sample of 11,001 in depth interviews. The idea was to make a follow up of the results obtained in the first survey, but an important characteristic was included in the second edition. The survey provided similar data as the first survey, but it provided data for female household heads and also showed the difference between men and women’s situation in the topics studied before, as education, salaries, occupation, living conditions, etcetera. Another set of results show that in order to have a mobile society, it is important to use public policies to eliminate institutional obstacles that prevent it, and at the same time personal and family decisions are crucial for a better outcome. Within the first set of policies, public policy and budgets that invest on education, health and other public services work as the first engine for social mobility. On the other hand, it also depends on family and personal decisions, such as whether to study or not, finish a whole educational cycle, work hard, discipline, etcetera. Sometimes, parents and even teachers do not grasp the importance of those decisions either (CEEY, 2013).
For our purposes, social mobility means ‘the easiness with which a person can climb to a higher level in the socioeconomic ladder’ (Serrano and Torche, 2008). As mentioned before, the study reports data on family, economic structure, intergenerational mobility, education, among other variables. The results of both surveys show that there is very little social mobility in Mexico, especially at both ends of the distribution: people who are born poor remain poor one generation later, and those born rich tend to remain rich until their death (Graph 1). For the poor, it seems there are few chances to break the vicious cycle and climb the socioeconomic ladder. In other words, poverty is perpetuated, even inherited.

In 2009 we designed a series of graphs that could be easily understood by different audiences and that could promote a reaction in those who saw them. The graph proved to be effective; it was understandable to a wide variety of people from different socioeconomic levels (González de Cossío, 2009). These graphs were tested and proved to be easily understandable and meaningful to those who had the chance to access them. They were placed on a web site along with the survey so other researchers and institutions could use them and produce further work. However, ESRU Foundation wanted that this knowledge should be spread to a much wider audience, to different kinds of people, and make a point on the importance of education.

The design problem

The design problem meant to propose a system on how to communicate the main ideas behind social mobility, and we decided that an exhibition could be the instrument for that. Another issue is the fact that this topic has not been neither in the Mexican public agenda nor in the minds of the people, and so far no exhibition related to social mobility has been shown. Falk (2009) studied why visitors go to a specific type of museums and he found that most visitors usually go to those museums of their particular interest, i.e. 90% of visitors of art museums say they like art. In this case, as one can imagine, we did not have any previous experience to which audience we could refer to. Since the results of the study done by ESRU suggest that people’s attitudes are fundamental to promote social mobility, that was the basis for the exhibition. Thus, the purpose of the exhibition became addressing people’s awareness and acknowledgement of the importance of education in order to achieve a better socioeconomic level. The solution should be easily understandable, effective, and should shake people’s minds and attitudes. It should create ‘lasting positive memories of the display and giving them new insights’ (Hughes, 2010:34). The design solution should empower users into new ways of viewing their future and foresee the possibilities they could have if they make a proper decision.

The solution should offer a new way to convey the importance of education, discipline and team work and reach as many people as possible, especially those who have fewer opportunities to move into a higher socioeconomic level.

We built on the previous work developed so far; the graphs are the cornerstone for an itinerant exhibition on Social Mobility that will travel throughout the country. The exhibit is the result of an interdisciplinary team who has applied a thorough design process, from the conception of the project to the evaluation of its impact on visitors, especially our young audiences.

Exhibition ‘Imagine your Future’. Social Mobility in Mexico

Design process

Before describing the process, we should mention that this is an interdisciplinary team effort. Specialists from communication, economics, industrial design, interactive technology, graphic and information design, linguistics, marketing and social scientists have joined together to develop this project. Our job has been mainly to define the general concept, choose the right
people to contribute with their ideas, knowledge and expertise, and to coordinate the group until the exhibition is set.

It has already been 18 months since we started working on this project. We have followed a conscientious design process that has involved the following stages:

1. **Research and analysis.** We are certain that without understanding the design problem, it is impossible to build a good proposal. Therefore, we dedicated several months to understand the problem, from the main issues on social mobility and on the survey sponsored by ESRU Foundation, as well as on what an exhibition meant and for whom:

   - We did bibliographical research on the main topic, from definitions (such as inequality, absolute and relative social mobility, intergenerational mobility, etc), effects of social mobility on the population, and on Mexico's development, reasons why people cannot change from one level to another, to social impact, etc.
   - We visited a variety of museums and galleries and interviewed recognised museum designers, to understand the dynamics of working in cultural spaces. We also looked into bibliography on exhibition spaces as didactic sources, to find out materials and structures used, illumination design, use of 3D objects, interactive approaches and realise how these spaces also contribute in a definite way as an educational space.
   - We studied *competent users*, as Gui Bonsiepe\(^3\) refers to the specific users who will interact with the project. We made two focus groups studies; the first one with university students\(^4\) to find out whether they understood the initial graphs, and the second one, performed by our team\(^5\) to two different types of young people. They analysed how young people thought about issues related to social mobility and how they reacted to the initial concept of the exhibit. The first type of participants were undergraduate students and the second type were young people who dropped out from school. Both types of participants came from medium low socioeconomic level.

2. **Diagnose and Strategy**

   The results of these studies allowed us to define the design problem. The diagnose and strategy that we defined is:

   - We decided that the exhibition should be addressed to young people from 14 to 24 years old from low and medium income levels that might be at risk of abandoning their studies or who do not appreciate the advantage of studying. The definition of the main public (or direct user) meant a number of design decisions, such as language used, type of images presented, dynamics of the exhibition, time spent during the visit, etc. The ends to be attained coincide with Miles et al (2001). The exhibition should include: attracting the visitors and holding their attention; presenting them with information and helping them recall, activating their response and provide them with feedback. The project led us to explore and establish a number of relations with institutions willing to offer economic support for education.

   - We defined that the objective should be promoting young people awareness of the importance of education to improve their socioeconomic level. The specific objectives of the project were:

     - Offer clear and simple information to understand the basic concepts on social mobility.
     - Develop awareness on the data presented.
     - Stimulate change of attitudes in the public.

\(^2\) We are only presenting a brief list of the issues that we studied.

\(^3\) In a conversation in 2012 with Gui Bonsiepe, I asked him about a classification of users. He told me that while working in a software house in USA he classified users into three types: incipient, competent and master users.

\(^4\) This study is described in González de Cossío, 2009.

\(^5\) This study was done by Alberto Martínez de Velasco from Factum (www.Factum_marketing.
Present the country’s situation to those who make decisions.

- The exhibition would be itinerant, so young Mexicans from different regions could have the chance to think over these issues. Public universities were chosen as excellent places to host the exhibition because they usually have the necessary space and electronic requirements. Besides, public universities have captive presence of our target audience, known and free access to their premises.
- We decided that teachers and parents were also important public (indirect users) involved in this project because they are direct influences on young people’s achievements. Therefore, we should present relevant materials for them as well.

3. Proposal: concept and visualisation

The concept of the exhibition was carefully thought of because we wanted visitors to become aware about social mobility, promote their reflection and to let them know that they could change their expectations. Exhibition contents seem ‘to play a role in museum meaning-making’ (Falk, 2009:26), therefore we concentrated on what to say and how to say it.

The exhibition structure was designed in such a way that visitors will have full immersion with each piece of the exhibit and will be able to interact personally and in small groups in different ways with materials placed in each room. The exhibition had to be more experience-based than object-based (Hughes, 2010) because of the nature of the topic shown. It was difficult to present specific objects related to the topic that could refer to visitors’ everyday life. Nevertheless, all the images have a direct and meaningful correspondence to Mexico’s situation. For effective communication, concepts and presentations should be close to the visitors’ experiences. Kosslyn (2006) refers to this as an appropriation of knowledge. With the same order of ideas, Shah, Mayer and Hegarty (1999) state that if a visual presentation is not related to the visitors’ experience, it might not have a strong effect and might be more difficult to understand.

The narrative has been carefully studied: the images, videos and interactions have specific purposes; the graphic and interactive materials have been designed to provoke reactions on visitors. The spaces have been created to comply with setting, moving, packing and unpacking requirements, and to host the diverse materials and equipment thought as a visual communication system.

The exhibit is built with a reception and four main conceptual areas:

Reception. Visitors will pre-register at home, school or at the exhibition and will enter in groups of twelve. They will choose a simple avatar as a way to personalise their visit and will receive a ticket with an ID card with a QR code. The code will enable them to work/play in the third area of the exhibition, as well as send their information to their personal email account and will have a link to the exhibition’s web site. Personalisation in this exhibition is quite important because we want to treat and value visitors as individuals, we want to follow up visitors’ support, questions or requests. Simon (2010) would say that we are ameliorating faceless visitors.

1. The first room has the topic of ‘becoming aware of poverty and inequality in the country’. The purpose of this space is to make visitors realise the country’s situation and understand the contrasts there are in housing, jobs, transportation and population. The disadvantaged situation of women and men are also part of this area, especially related to women’s access to education.

   The design objects for this area consist of three videos (these are specifically loaned for the exhibition), a window to other situations (comparison between Sweden and Mexico’s), presentation of a printed graph on the development of services and appliances in Mexican households and relevant texts on the panels.

   The first video consists of flashing pictures that depicts Mexican reality, people, housing, transportation, fields, cities, to show that all in one is the country’s situation. A second video, loaned by the Museum of Memory and Tolerance shows a love story that is framed with silent and forgotten poverty. The video asks viewers if they realised the number of poor people around the story of the two lovers. We are not surprised any more of poverty. The third video is loaned by The Girl Effect and shows the risk and
danger that girls are subjected to when they are 12 or 14 years old and how education can empower them.

There are quotes placed on the walls that describe unequal situations between sons and daughters. The latter ones are usually those who do not need to study or whose responsibilities deal to take care of parents and should not think of a productive future life.

It is important to have three-dimensional objects in an exhibition so people can identify with real situations (Hughes, 2010). For that purpose, a specially designed space that shows how low income level from two countries is totally different. It is interesting to mention that even though a better comparison could have been between Mexico and Korea, for example, we chose Sweden because Mexicans have a rather aspirational feeling towards this country in particular.

2. The second room is directed towards ‘understanding the concept of Social Mobility’, understand what intergenerational mobility is, know the relation between education and income level, and the type of life of each situation. Give insight to teachers of their key role as educators.

In this space, we are using the floor, ceiling and walls to project the two main graphs. The first one shows what is intergenerational mobility and is accompanied by the interaction with visitor’s personal information. Visitors are asked to choose their grandparents type of house and drop a token in the box that represents this economic level, and compare to their parents’ house by dropping another token in the corresponding box. There are five transparent boxes and each one belongs to a quintile of population differentiated by income level. The five boxes are structured as a stair that show five socioeconomic levels.

The second graph projects on the ceiling and walls each level of studies with the correspondent income level, meaning ‘what you study, what you earn’, together with audio that describes each type of living.

There are also Simón Bolívar and Ortega y Gasset’s quotes placed on the panels. These texts are directed specifically to teachers to make them aware of their importance in education. There is also a particular graph that shows what happens with students who have had good teachers in comparison to those who have not.

After experiencing this information, visitors have to walk through a short corridor with various doors to the next space. These doors mean that other ways can be chosen besides education, some of these doors might be risky or dangerous, or for the long or short run.

3. The third room is dedicated to ‘planning the future’. In this space visitors are expected to discuss four topics: what they have and what they would like to accomplish in the next five years; what are the obstacles they encounter and the opportunities they have in order to succeed in the future. Simon (2010) says that the best participatory experiences are in small groups. They should support people to feel comfortable engaging in the activity. ‘It requires a careful balancing act between structure and flexibility’ (2010:269). Visitors will also listen to stories of people who have achieved their goals in life.

This is an especially designed space for young visitors interaction. In groups of three, they will discuss their present and their future. They will work on a tablet whose contents relate to type of housing, type of transportation, dress, food, etc. They will choose the icons of what they now have and what they would like to have in their future. Once defined the two situations they will place them on a touch screen table shared by other three groups of visitors. The exhibition guide will pose the questions and discuss the answers with them. The conclusions will ‘be sled’ on to the walls by touching the table. Visitors will be able to see their own opinions projected on the walls. This information will be available to them by the QR of their ID registration card.

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6 If we divide 100% of population into five different income levels, each 20% is called a quintile.
After these discussions and imagining their future, visitors will be able to listen to stories of Mexicans who have overcome problems and feel proud of their life, and other why they feel they failed.

The quotes placed on this space are for parents; one of them belongs to the rector of a large university who thanks and honours his parents for supporting and fighting for his education.

4. The fourth room is directed to ‘understand that social mobility should not be an individual process’, but it should include bringing the community to a higher level, as well. Visitors are invited to confirm that working as a team is an experience that leads to interesting and communitarian results. The last part of the exhibit will stimulate visitors to remember their experience.

In this area, visitors will look at a photomural that shows the transformation of a poor and forgotten environment in Monterrey, Mexico, into a lively community centre that now offers courses in a well-designed and productive space. Visitors will also look at a video, specifically developed for this exhibit, that shows a children's orchestra playing and suggests that only through respect, discipline, hard work, involvement of a number of people, teamwork, etc could get optimum results. In other words, it is important to move upwards independently, but also to move pulling up the immediate community.

After viewing the experience of children working together in perfect coordination, visitors will explore that communication and respect are key issues to obtain good results. They will interact with an electronic device that needs participants to be involved and cooperative; they will try to reproduce a melody by pushing buttons at the same time. If they do not coordinate, a screen will show lines as noise, but if they work as a team, they will reproduce a rhythmic melody.

Finally, the last experience will be to see a video designed for the exhibition that will wrap up the experience by showing people climbing a large stair helping each other. A sticky song will tune the video related to the topic of the exhibition: imagine a future by moving into a higher level. This video and its music should be remembered and should keep visitors with the idea of social mobility for a while.

The design objects and design of experiences in particular

The exhibition was in constant questioning and development thanks to the active participation of specialists from different areas of study. We had many working sessions with social scientists to reassure that the concepts were correct and accurate, that we were conveying the right information, and we have their validation of the contents of the exhibition.

Bringing the ideas down to earth involved the work of a variety of specialists:

- The design concept and coordination of the project. The design concept was developed by Cecilia Orvañanos and the author in its final form. However, Judit Pinzón, information designer, worked actively in the first phase of the project. Cecilia's previous experiences in museums enriched the concept, which also helped to prepare the program for the exhibition’s guides. Cecilia and I put together the team, questioned, discussed and decided on each item, each phrase, each image, each space. The coordination of the group and the production of the exhibition was our full responsibility.

- The structure and the space modelling. The industrial designer, Rigoberto Cordero was the responsible to design the panels. The exhibition had to be inexpensive, since we had a tight budget and it was a philanthropic project donated by ESRU. The exhibition also had to be light weighted for easy transportation. Rigoberto Cordero and his studio Core-design defined a structure with modules that could be organised in different ways without loosing its concept: as a square, as an L shape or in a linear way so the exhibit could adjust to the space offered by each university. The panels carry their own light and every cable is hidden under the structure, inside the rail. Rails are connected as in children’s motorways and panels are built on top of the rails. The exhibition has a black ceiling to keep sound within each space. The overall structure is a unified space with rounded shapes that suggest unity.
Graphic and information design. Benito Cabañas, a graphic designer and his studio Abracadabra, developed the visual identity for the exhibition as well as the visual concept for the panels. The logo in a 3D interpretation identifies the exhibition at the entrance. The exterior panels had texts and images that people could remember as key concepts, all in high contrasts and using visual metaphors. Typography is clear and simple to facilitate reading. The inside panels are divided by colours, that identify each space and its concept. A whole system was designed that was also applied to web site and promotional objects to keep in contact and to help remember the exhibition.
Interactive systems. Ariel Molina and his studio Edis worked on the interactive touch screen table and the interactive sound device to produce a melody that we called the social orchestra. Ariel also developed the data system to control each room, since it was important to guide group by group in a sequential system. The interactive touch screen table enables visitors to express their ideas and concerns and it is an excellent object to produce discussions that can be kept and even replicated. The results of their discussions go directly to the web site data-base to compile the results from visitors. This is an excellent tool to have specific feedback from the various publics around the country.

Videos and audios. Videos were designed by Gerardo and David Sánchez from Rayya studio. Their work included several shoots and locations, appointments with the orchestra, visiting the children’s home and shooting in the midst of difficult weather. The aim of the videos is to convey information through appealing to the visitors’ emotions through images and music. However, also an ethical appeal (Ehses, 2009) is considered —without being moralists—, by showing real successful experiences as the children’s orchestra. The excellent results of the tests showed the visitors’ reaction to the different projections.

Testing and confirming. The work of Alberto Martínez de Velasco from Factum, marketing professionals, provided us, initially, with confidence that we were in the right track and, at the end, confirming that the expectations were achieved. They designed a testing strategy to receive the results from the touch screen table discussions and provided data to study visitors’ profile, feedback, reaction, obstacles and opportunities regarding education. This is a relevant feature, since we are following up each visitor who is placing his/her data looking for support. Factum also provided a system to test impact and recall by using the exhibition’s web site.

Designing the exhibit was very important in terms of building awareness, making people discuss and think over certain issues related to their own lives, moving them into a non-centric perception of mobility and having them understand the importance and value of working with the community. However, if we were trying to motivate visitors into a new way of imagining their future, we had to give them some kind of support and hope. Therefore, the last part of the exhibition was backing our visitors in two main areas: support for studying or support for working. In other words, after shaking our visitors, we had to give them hope. Therefore, we contacted a number of NGOs that were willing to help those visitors who wished to commit themselves to a better life through education. We incorporated a number of institutions such as PrepaNet, an on-line highschool of one of the leading universities in the country. They were opened to receive applications through our exhibition and offer them a scholarship if visitors comply with their requirements. Another institution that immediately joined our project is Bécalos, a NGO that gives scholarships to teachers and students through a number of educational and financial institutions that share the same concerns.

On the other hand, we contacted institutions that support people that wish to initiate a productive project such as the Ministry of Social Development (Sedesol) and the Ministry of Economics through their National Institute of Entrepreneurship.

Conclusions

Working with this project could not have been possible if we would not have put together such an excellent team. Interdiscipline should be regarded as a very important type of work in Information Design. The thoughts, ideas and imagination shared by all group members helped to develop a project that has given excellent results.

The sketched project proved to have an impact on visitors from our first test and we hope that by interaction with the real project, the results can be even more emphatic.

This is a project that started small and with a limited scope. But throughout time, it has grown to a larger dimension and a lot of expectations are placed on it. At this time, there are two federal states that are willing to have their own exhibition to present it in various cities and communities. Museums, universities and ministries of the interior are invited to the premier show in August.
References


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*** Better quality figures of this project will be available for the conference. The images included in the text are dummies.