ABSTRACT
To enhance industrial design students’ decoding and understanding of the technological possibilities and the diversity of needs and preferences in different cultures it is not unusual to arrange study trips where such students acquire a broader view to strengthen their professional skills and approach, hence linking the design education and the design culture of the surrounding world. To improve the professional learning it is useful, though, to facilitate and organize the trips in a way that involves systematic data collection and reporting. This paper presents a method for facilitating study trips for engineering students in architecture & design and the results from crowd-collecting a large amount of trend observations as well as the derived experience from using the method on a large scale study trip. The method has been developed and formalized in relation to study trips with large numbers of students to the annual Milan Design Week and the Milan fair ‘I Saloni’ in Italy. The present paper describes and evaluates the method, the theory behind it, the practical execution of the trend registration, the results from the activities and future perspectives.

Keywords: Study trips, trend analysis, industrial design, trend observation, innovation.

1 INTRODUCTION
Study trips have a long and strong tradition in design programs at Danish universities as an addition to sources of knowledge and inspiration given in literature lectures and project work. Such trips enable in situ observation of spaces, objects and places which you have only heard of or seen on a screen. For generations Scandinavian designers have incorporated inspiration from study trips into their design projects in architecture, product design and fashion. Furniture designers like Hans J. Wegner, Børge Mogensen and Ole Wanscher were inspired by Chinese [1] North American, Spanish as well as Egyptian chairs [2], and the first Danish industrial designer, K.V. Engelhardt, thoroughly studied and got inspired from tools and products on a trip to Japan back in 1923-24 [3]. A study trip to USA in 1950 later inspired the Swedish designer Sigvard Bernadotte to set up an influential industrial design studio collaborating with a range of Scandinavian manufacturers [4]. In 1976 industrial design professor Arne Karlsen [5] argued that the primary aim for industrial design students’ study trips should be to experience with their senses and deduct valuable generic design principles by studying fine architecture and public space detailing. He sees this as a reaction to a previous trend from the late 1960’s, where study trips focused more on studying behavioral patterns or registering socio-technical phenomena. He warned about the danger of unreflected documentation overload and suggested a systematic and organized data collection by studying the details of a specific building or public space, hence expressing a 20th century approach, where products were seen as architectural detailing and not as consumer goods for a market.

At the Industrial Design program at Aalborg University, we have for some years likewise tried to optimize systematic learning from the design students’ study trips [6] by adding workshops, exercises or specific tasks to ensure that the study trips differ from less structured excursions arranged by the students themselves or ordinary holiday trips.

Initially, the structuring of the students’ learning in relation to study trips consisted of a concept where a small group of students wrote and edited a Study Trip Guide based on the preliminary studies of the works, businesses, museums or studios that they would visit on the study trip. The study trip guide was prepared before the study trip hence, making it a useful bank of information on tour, but the students were not required to collect or handle impulses or knowledge that they obtained during the study trip. Several study trips have also been organized around a workshop with students from a local
university in another country such as China or Mexico. The visible results of such trips were the presentation of the projects that the students developed in such a multicultural context. On later study trips, we have tried out models where the students helped to define the study topics in advance and then formed student teams who collected data on the trip for processing after returning home [6]. Travelling can be stressful, though, and the students might not stay at the same hotel or might not have had the opportunity to plan the data collection and align the ambitions or methods for data collection before the trip. These conditions can make it difficult to perform effectively in a joint project group on tour and they can result in more scattered or unstructured data collection and a situation, where a single conscientious student or a pair of students end up writing the report after the trip while the other group members simply skip the task.

2 THE STUDY TRIP TASK OBJECTIVES
On the basis of more than ten years of experience, we developed in 2013 a model with a more dynamic, effective and manageable structure and specific goals for the study group assignments. The concept can be summed up in these Study Trip Task Objectives:

The study trip should:
1. adapt to the specific data that could be observed at the specific location;
2. ensure that each student was given a specific task to be solved individually;
3. make it possible to solve the task ON the trip without preparation and by using available remedies;
4. involve an assignment that could be uploaded without a substantial work load;
5. include identical assignments for all students;
6. yield data collection that would give a broad and valid response and a clearer picture than each individual data collection would give;
7. yield results to be directly or indirectly used in later student project works, research or studies.

The concept was tested on a study trip to Rome and Milan with 145 first year students in Industrial Design and Architecture. A series of individual tasks in architectural studies (including sketching exercises and photo records) were given in Rome after which the students were given a number of tasks related to furniture and product design in Milan. To manage such a big group of students we had to develop tasks that were very well defined and could be solved regardless of the variety in the students’ individual skills and preconceptions.

3 THE TREND OBSERVATION
Among the assignments to be undertaken in Milan was a trend observation exercise where each student acted as an independent observer of phenomena that could be defined as a current and visible trend. While trend research is often defined as a cross disciplinary task, where society patterns, movements and relations are analyzed, it is also recognized among professional trend forecasters, that every individual or organization could establish trend spotting themselves by simply collecting, arranging and discussing the infinite amount of signals that we meet in our everyday life [7]. We therefore presented a very open approach to trend observation, where each student was asked to fill out a template for registering ‘a phenomena in form, surfaces, details, materials, general compositions etc. which can be said to express a current or new trend’. In order to ensure that the observed trend is not just a casual observation, each trend should be documented by at least three images picturing the described phenomenon as seen at the Milano furniture fair or elsewhere in the Milan city district.

Moreover the students should:
A. name the trend;
B. describe the trend in general;
C. describe the three pictured samples;
D. describe where each observation was recorded.

In figure 1 you can see two samples of trend observations as registered by students in Milan, 2013.

The objectives in relation to the above mentioned study trip objectives could thus be met like this:
1. Milan is a very lively place during the design fair where all the major manufacturers and retailers of furniture and related products show their latest products while plenty of exhibitions and events involving design schools and experimenting designers show the formal and conceptual directions of public interest. This makes it a unique setting for observing trends in a number of product categories, especially within furniture and interior design products;
2. Each student should fill in 2-3 registration sheets based upon their own individual observations;
3. The student should be able to quickly take the necessary snapshots with their phone and complete the data collection in a supplementary paper;
4. They could then easily upload the data to a digital form, which was available on the www while waiting at the airport or after arriving home;
5. All students were given the same assignment, but only a few answers would be identical because they were based upon individual observations;
6. With a response rate of 86 and an average of 2½ trend reports handed in per student there was generated 315 responses, which gave a broad picture of current trends.
7. The study trip was early in the semester just before the start of a PBL design project, where the project groups were expected to use the observed data directly as a basis for discussion and inspiration for the design of a new product. Indirectly, each of the students also learned to use an active research-like approach, which taught them observe in a more active way than they would do on a conventional holiday trip.

It was the intention that the data obtained during the study trip would constitute a kind of inspirational compendium for the whole group of more than 150 students, but the large amount of data was unfortunately not collected before the design project was finished.

4 MILANO TRENDS 2013

There was some variety in the quality and especially in the focus of the collected data. The students were asked to define and name the phenomena that they themselves observed as a pattern to be defined as a kind of trend. By naming each trend in 1-3 words, they could highlight the specific focus that might follow or expand the main categories like surface, detail, materials and general constructions etc. The recorded trends almost exclusively focused on furniture design; obviously as the fair area and the city’s attention was directed at this specific product category at the time.

The reported trends were analyzed retrospectively and they could be divided into the following partly overlapping main and sub categories:

A. MATERIALS & MANUFACTURING METHODS (27%)
1. Materials (22%): Mainly paper or cardboard and Plexiglas but also concrete, felt and rubber besides unusual combinations of materials, primarily wood combined with stone or metal;

B. SURFACE, COLOR, DÉCOR & TEXTURE (22%)
3. Surface & color (16%): Mainly shiny or reflecting surfaces (like mirrors used as a main component) but also to some extent the use of neon colors and pastel colors. Transparent and flashy combinations of contrasting colors plus the use of green, yellow and cold blue;
4. Textures and tactility (2%): Soft furniture that looks hard or hard furniture with soft edges. Surfaces with appealing texture.
5. Decorations (4%): Prints and graphic patterns used in surprising new contexts, but also the use of wooden components as a decorative element;

C. FORM, STRUCTURES & ELEMENTS (17%)
6. Form geometries (9%): Untraditional use of circular forms, spirals, prismatic (diamant) and organic forms plus basic geometric forms in general. But also beam or pin structures, twisted forms, odd angles and ‘the obsession of thin’;
7. Contrasting elements in general (2%);
8. Origami (3%): The use of motifs or geometry from the traditional Japanese folding technique in furniture and lamps in paper or other materials like metal sheets;
9. Grids/network(4%): Braided or otherwise semi-transparent constructions or sheets in classic materials or new ones or open woven constructions in diverse materials;

D. GREEN/ENVIRONMENT (9%)
10. Recycling/reuse/green (9%): Mostly the use of (reused?) card board or reuse of more or less ‘rough’ wooden components. And the use of components with another functionality like whisks for lamps etc.;

E. THEMATIC FORM KONCEPTS, MOTIVES & DETAILS (18%)
12. Specific motives (3%): Water bubbles or flower-like forms as decorative elements or full corpus constructions, spaghetti-like furniture or lamps, references to animals or animal parts in hangers etc;
13. Composition of elements (4%): The use of ‘small legs’, raw elements in stone or wood, double layer tables, upholstered buttons’, ‘leaned back furniture compositions’, and wooden stick legs;
14. Unusual parts (3%): The use of colored strings and plumbing tubes as constructive and aesthetic elements;

F. PRODUCT CATEGORIES AND USE (6%)
15. Principles of use (3%): Products with modularity, multi functionality or untraditional compositions of furniture or room dividers plus the use of free standing toilet interior;
16. Product categories (3%): The revival of the chandelier in crystal or unorthodox materials. The wide spread use of small round tables and classic/old design items in new contexts;

The main categories A-F and the sub categories 1-16 were not named by the students themselves but they were defined by the researchers after analyzing the students’ material. The categories are not following consequent rules for inclusion but most of the categories are probably not surprising to those who follow the current trends in furniture design. If the students’ observations are correct, you could say that the general remarkable or upcoming trends in Milan, 2013 were: The wide spread use of paper, card board, concrete, copper, mirror and plexiglas in rough or very shiny and often contrasting compositions and surprising but also basic geometries, foldings and perforations/grids added with ‘funny’ or appealing details in textures/tactility often in relation to picturesque themes or more or less ironic references to well-known trends of the 20th century.

5 PERSPECTIVES ON STUDENTS’ TREND OBSERVATIONS
The results from this study raised a number of reflections on what led up to these findings. The students were asked to report on the basis of their immediate observations, meaning that they had not been prepared or had otherwise examined whether the observed trends actually pictured the reality as such. This immediacy has a certain power, but the information was primarily gathered at exhibitions that are set up to create an instant attention. In such a visually very appealing environment the exhibitors need to create attention by often using strong colours and special effects, and the most
spectacular or contrasting products may be put in the frontline, while more sellable products might be arranged more discreet in the background.

The frequent observation that paper and cardboard products are merging in interior decoration and furniture design may be due to the fact that many students’ experimenting stands or smaller start-up companies without significant impact focus on especially such materials that do not require big investments or advanced production facilities. Many such observations can therefore be right, though, and in fact corresponding trends are often mentioned in many interior design magazines and web shops these years.

Other explanations for several of the observed trends may be completely different. A common hermeneutical principle is that you observe and interpret from a pre-understanding, and in this case the point of departure is the pre-understanding of Scandinavian freshmen students who have not finished their first year of studying design and engineering. It would take too far to dissect these students’ backgrounds and mental filters in their observations, but you could for instance take the following views:

1. The students primarily observe what they are familiar with and what they like.
2. The students primarily observe what they are NOT familiar with and find new and unusual.

LOOKING FOR THE FAMILIAR AND ATTRACTIVE (1)
The students could tend to notify stands and places that they simply found attractive as they haven’t got the deep specialist knowledge to make them see the underlying innovations such as less visible construction principles or manufacturing methods. The invention of a revolutionary new tilting bracket might for example have been overlooked by the students even though the professionals would reckon it as a strong invention to promote a whole new generation of comfi-chairs. The discovery of trends would have required that the students more actively analyzed the stands and asked what the individual exhibitors considered most innovative.

A considerable part of the exhibition area displayed ‘classic furniture’ addressed to an elder generation or the contract market for hotels etc. Such objects do not appear in the students’ observations, even though trends and innovations should be visible in this area as well. This is probably due largely to the fact that students simply haven’t sought out these stands. At the same time many students have several observations from more appealing and experimental stands or from showrooms in Milan’s avant-garde neighborhoods, Tortona and Breda.

Similarly, the consideration that many new products are based on origami folding technique may simply be due to the fact that the students had an origami-course just a few months before visiting the furniture fair.

LOOKING FOR THE UNFAMILIAR AND NEW (2)
On the other hand there could be a tendency that the students primarily observe the products that they do not know from their own culture. The Scandinavian design culture is characterized by preferences for ease, simplicity (IKEA is Scandinavian) and natural materials as well as a rare use of very shiny surfaces. The observation of the widespread use of natural materials and simple geometries speak against this and make no reason to believe that there actually IS an international trend in interior design, which refers to Scandinavian design paradigms. Some students’ perception that glossy surfaces is a new international trend, on the other hand, might come from the fact that they are not used to the glossy surface finish that is prevalent and desired in southern Europe and in most parts of the world in general.

It would be very interesting to filter out the layers in the students’ observations that are too biased by the students’ own cultural background. To do so, it would be useful to set up a parallel observation team of students from for instance an Italian university or a university outside Europe and compare the different students’ findings.

6 THE STUDENTS’ LEARNING AND FURTHER PERSPECTIVES

It is difficult to measure the students’ learnings from this study, mainly because the observed trends were not collected into an inspirational catalogue as previously planned. The students could therefore not use such an inspirational palette as the source for the design project that was scheduled after the return to the home university. Nevertheless the exercise provided the students with an insight in interior design, and the most important learning might be that the students through this exercise were forced to actively observe and record design relevant phenomena in a real physical context which is not fully coherent with the digital media, where students often find inspiration or information on the
nature of the real world and their own profession. The participating students and supervisors expressed
general satisfaction with the exercise, which also met all the listed Study Trip Objectives.
The principles will be used in future study trips, and in this way we might add yet another dimension to
the trend observations by comparing the findings to observations from previous years, hence observing
the nature of shifting trends and analyzing the rise and decline of trends in the area.

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