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How can we generate ideas for a project event and how is this process experienced? Delving into students' learning experiences and perceptions of usefulness in an idea and concept development process

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Abstract

This study demonstrates ways of teaching creative methods in order to generate ideas for a project event and reveals project management students' learning experiences and perceptions of usefulness during the process. Qualitative interviews were conducted with eight students on a project management course at a higher education institution in Norway. We provide a description and a detailed illustration of how the Creative Problem Solving (CPS) model can be used as a navigation tool in the planning and implementation of idea and concept development workshops, and how different forms of creative work methods can be used at different stages of an iterative process. The students find that using different ways of working with creative methods results in high idea generation, which is then processed into different concepts to form the basis for the content of a project event. All the students see the value of and want to use different forms of creative methods in various development projects in their workplace. Following the idea and concept workshop, several students successfully used creative methods in problem solving and development work in their organization and say that they will continue to practice using more of these working methods in different work situations.

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1.Introduction

As part of the 2022 Norwegian Skiing Championships in Harstad, students from the Practical Project Management course conducted a project event to provide fun and enjoyment for the public and the participants. The event was named "Sidetrack" and was a success [1]. A project event can be defined as a time-limited event with fixed quality criteria for implementation, which aims to create value for the client and the actors involved [2]. Project events have become increasingly popular [3], and it is important to be familiar with useful tools to create content for the event. In this article, we will demonstrate how to generate ideas for a project event and Practical Project Management students' learning experiences and perceptions of the usefulness of the process. We explore in depth the idea and concept development process that was established to generate ideas for the content of Sidetrack, which was part of the final exam of these students in the subject "practical projects". Practical Project Management is a part-time course over two years, mainly taken by students who also work in the public and private sectors. In developing a project event, the idea and concept development phase is important, as it forms the basis for what will take place in the project [1]-[3]. In idea workshops for project events, the goal is to generate a large number of ideas related to the development of the event, using various creative methods, such as brainstorming, manipulation methods and free association methods, visualization of ideas through role-play, rapping, singing, dialogue and listening methods, in addition to different stimuli such as pictures, scents and tastes that can encourage different lines of thought [4]. In concept workshops, the aim is to process and further develop ideas into realizable concepts, using methods such as storyboarding, zooming out, prototyping pin-up walls, prepping, etc. [5]. Since projects are extensively used as a working method, it is important to gain learning experiences related to project work and its various phases [6]. From an experiential perspective, learning can be defined as acquiring knowledge and skills on the basis of experience, leading to lasting changes in ways of thinking and behaving [7]. The purpose of this article is to shed light on project management students' experiences of learning and usefulness in phases two and three of their project work, the idea and concept development phase (see Figure 1), in relation to the implementation of Sidetrack and relevance to their work.

2.Theoretical resources

Many different approaches could be used to generate ideas for a project event. One example is brainstorming methods. These were developed to prevent ideas from being quashed as soon as they were mentioned [4]. I am sure we have all been at meetings where the idea is to think creatively, but as soon as you mention your idea, you get reactions like "That's way too expensive", "No one's ever done that before", "That idea's just too crazy", or "I don't believe that would work". Arguments like those will definitely dampen your creativity! For this reason, there are four important rules for brainstorming methods. 1) Do not immediately judge and criticize. There will be a later stage when ideas will be evaluated. 2) Use your imagination and let it run wild. What seems crazy initially may turn out to be a good and profitable idea when it is processed later. 3) Generate as many ideas as possible. 4) Build on each other's ideas, and have a "yes, and" attitude to the ideas written down [4]. In this context, the process leader has the important job of managing the process and facilitating a creative attitude and positive atmosphere, as well as enabling further processing of the ideas after the brainstorming. In the following, we will describe some brainstorming methods that can be used in idea and concept workshops.

In the *gallery method*, possible questions are written on flip chart sheets posted on the walls of the room. The participants walk around in silence and read the questions and provide their ideas, and read other people's ideas and build on these with new ideas. If participants run out of ideas, various stimuli can be used in the process, e.g. participants look at pictures placed in the room, listen to different types of music, or smell different spices, which can then stimulate them to generating more ideas on the gallery sheets. The advantage of the gallery method is that many ideas are generated in a short time, and it is particularly effective in large groups [4]. In the *flip chart method*, the participants sit in a horseshoe around the process leader and provide input on the question that the leader asks. The process leader writes all the ideas on the flip chart as they come in [8]. Role cards can also be used; here, the participants take on different roles and provide ideas from the perspective of these roles [4]. The advantage of the

flip chart method is the generation of many ideas in a short time, as well as "thinking outside the box" and seeing new ideas from different perspectives when role cards are used. The *idea bank* is a method where participants sit in groups at tables, each with a pile of blank A4 sheets of paper. They come up with a certain number of ideas for a problem provided by the leader, and each idea is written at the top of a sheet of paper. These ideas are placed in the middle of the table and constitute the idea bank. The participants read these ideas and build on them with new ideas. The advantage is the generation and further development of a large number of ideas [4]. A disadvantage of these brainstorming methods is if the ideas are not processed after the brainstorming. If all these methods are used in an idea workshop, the process leader can ask the participants to reflect on their immediate thoughts about the best ideas from the flip chart and idea bank sessions, and then write these ideas on the gallery sheets.

Another creative way of working suitable for slightly larger groups is the *world café* [9]. Groups of five to seven participants sit at tables covered with a white paper tablecloth and markers of different colours. In order to create the right café atmosphere, there is soft background music, and coffee, tea and fruit are available. The process leader hands out a problem and the participants provide input by writing key words, drawing models and making notes on the tablecloth. After 20 minutes, each group chooses a host, who will remain at the table while the others from that group find other tables to sit with new people. The host at each table tells the participants what was discussed, with the tablecloth as the frame of reference. The other participants supplement this with what they discussed at their tables and a new discussion takes place with many new points noted down on the tablecloth. After a further 20 minutes, participants are asked to return to their original tables. The host explains what the discussion has been about and the other participants supplement this with what they talked about "out in the big world". The process leader can ask the participants to write down the main points from the discussions at each table, which are then collected for further processing [9]. Finally, the process leader could ask the participants at each table to present their main points to the whole class.

Another method that is useful for structuring a discussion is the "talking stick", a traditional communication tool used by Native Americans for active and impartial listening [10]. The original talking stick had an eagle feather, a rabbit skin, a blue stone and a shell attached to it. Anyone who wanted to speak about the topic under discussion took the talking stick and had the power of the word, which meant that the others had to listen until the person had finished speaking. The eagle feather symbolized wisdom and courage to speak honestly and wisely, the rabbit skin indicated that the words had to be soft and come from the heart, the blue stone showed that the Great Spirit could hear the words and the message, and the shiny rainbow-coloured shell was a symbol of how all creation changes, such as days, seasons, people and situations [10]. When the speaker had finished, the talking stick could be passed to the next person who wanted to speak. In idea and concept workshops, the "talking stick" can be a different object from a stick, and the creative dialogue that evolves can be well suited to combine with other creative methods. An initial selection of the best ideas is based on certain selection criteria [8], such as that the idea must be innovative and profitable and must attract the public. In the phase of selecting the best ideas, several methods can be used. In the *scoring method*, the participants read all the ideas on the gallery sheets and give 5 points to the best idea, 4 points to the second best idea, 3 points to the third best idea, etc. In *barometer ranking*, the best ideas in the room are written on post-it notes and stuck on a flip chart sheet. The participants discuss and agree on a ranking where the best ideas are at the top of the barometer and the worst at the bottom [4]. Participants can then be divided into groups to process the best ideas and turn them into concepts. A concept can be defined as a collection of ideas, and one or more concepts can form the basis for the design of an event [4]. In a concept workshop, the concepts developed in group work can be presented to the whole class, who take on the role of an evaluation committee. The processing of the ideas is based on certain predetermined criteria, such as the feasibility and public-friendliness of a concept. In the presentation of a concept, various methods can be used such as storyboarding, zooming out, rapping and role play. In *storyboarding*, simple drawings are made on paper, such as large post-its, which show participants in relation to the activity in the concept [4]. This can also involve zooming out, as with a camera lens, to enable both individual parts of the concept and a more general picture to emerge [5]. The concept can also be visualized on long rolls of paper, as in a cartoon [4]. Idea and concept work should include a project wall, where those involved can post maps, photos, drawings with close-ups and more general pictures, and information, with a separate area for displaying prototypes or objects, which can be used by members of a project team to communicate ideas [5]. In planning and implementing an idea and concept workshop, it is helpful to use a model of systematic and creative problem solving, namely the CPS model. In the different stages of the model, divergent and convergent thinking alternate, as illustrated by the arrows in Figure 1 [11]-[8]. Divergent thinking means thinking in a broad, open manner, while in convergent thinking, ideas are filtered out based on selected criteria, followed by further

processing. The CPS process is iterative; one can move back and forth between the various stages, based on needs that arise [4]. For project managers, it is important to have knowledge of how to design and hold idea and concept workshops, which this article describes and illustrates in detail.

Project work involves experiential learning at various points during the process, based on obtaining information, solving tasks and problem-based learning, as well as individual, group and organizational knowledge sharing [6], and it is therefore interesting to explore our students' experiences of experiential learning and how useful they found the idea and concept workshop in relation to the implementation of Sidetrack and its work-related relevance.

3.Methodological approach

This study is based on semistructured qualitative interviews with eight randomly selected students (out of a total of 20 students), who had completed the Sidetrack project event as part of their final exam in the Practical Project Management course at Harstad Business School, UiT The Arctic University of Tromsø, in the spring of 2022. The one- to two-hour interviews took place in an office. One of the authors of this article was the main interviewer. The other author had been process leader of the idea and concept development workshop on campus (see Figure 1) and thus mostly observed during the interviews to avoid researcher bias [12]. We prepared and used an interview guide related to the various phases of Sidetrack, aimed at eliciting in-depth knowledge of the students' learning experiences and perceptions of the usefulness of the idea and concept development phase (phases 2 and 3 of the project model), Figure 1. The first interview worked as a pre-test to calibrate the interview guide. We found that the students gave honest answers to our questions. With the participants' consent, audio recordings were made, which were transcribed immediately after the interviews. After several readings, the data were categorized based on meaning condensation and dimensions in the idea and concept development phase. Both authors were aware that our pre-understandings after many years of experience as teachers of the subject should not affect what we were looking for [13]. The project was approved by Sikt, the Norwegian Agency for Shared Services in Education and Research (Sikt.no).

4. Results and discussion

4.1. How to plan an idea and concept workshop using the CPS model

Figure 1 provides a detailed illustration of how the CPS model was used as a navigation tool in the planning and implementation of the idea and concept development process, as part of phases 2 and 3 of the Sidetrack projectwork.
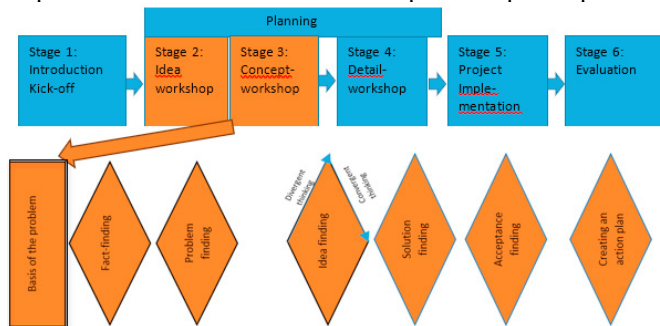
4.1.1. Idea workshop (first day session):
As illustrated in Figure 1, **step 1**, the idea workshop was built around the challenge of the problem owner (the championship committee); What activities can provide fun and enjoyment for the public and participants during the 2022 Norwegian Skiing Championships in Harstad? **Step 2** is the fact-finding phase, involving the gathering of information about the championships posted on one of the walls in the workshop room, including a PowerPoint presentation about the event by the chair of the main championship committee, as well as information about the Norwegian Skiing Federation and its vision and values. Participants can read this information at the beginning and during the process. **In step 3**, problem finding, the problem must be formulated in a wide variety of ways from different perspectives. These problem formulations are used in the various creative methods during the process, such as the gallery method, flip chart method, idea bank, world café and talking stick. Examples from the gallery method: What are the most amusing, craziest, hairiest, wildest things we can do to attract the public to the people`s championship festival? An example from the flip chart method: What would a five-year-old want to experience in the festival? In **step 4**, idea finding, the clue is to generate as many ideas as possible using

the various formulations of the problem from the brainstorming methods. Examples of ideas generated: write a song for the 2022 world championships, a mini-ski competition for children, treasure hunt for families with QR codes and prizes. In **step 5**, solution finding, certain assessment criteria for selecting and processing the best ideas are chosen, based on the client's instructions. The criteria selected for organizing a people`s festival; attracts the public, fun and enjoyment for participants and public, safeguards the values of the Skiing Federation, feasible regardless of the COVID-19 situation. Selection of the best ideas using the scoring method and barometer ranking. In **step 6**, we selected criteria for the processing of ideas for the whole class evaluation committee and the interim evaluation, and the assessment criteria was the same as presented in stage 5. The ideas are processed on the basis of the selected assessment criteria and then presented/ sold to the whole class, using storyboarding, zooming out, role-play and singing, where the rest of the class took on the role of an evaluation committee. In **step 7**; The idea workshop resulted in an idea development report written by the process leader, where all the data were transcribed and collected, and then posted on the students' intranet. The ideas are processed further in a concept workshop.

4.1.2. Concept workshop (second day session): A month later, a concept workshop was held with the aim of processing and further developing the ideas from the idea workshop and translating them into various concepts. The process leader had previously categorized ideas from the idea development report into various main themes. The name of each main theme was posted on various project walls in the workshop room and the students were asked to stand next to the main theme they wanted to develop concepts for. Based on the idea development report, one member of each group was asked to select and write on post-it notes the five best ideas from their main theme, based on gut feeling and the selection criteria, presented in step 5. This participant then told the other group members why the ideas were selected and placed the post-it notes on flip charts on the project wall. The students distributed the ideas they wanted to work on, both individually and with the others in the group. The ideas were processed using storyboarding and words, and the material produced was posted on the project wall on an ongoing basis. In processing the material, the students were encouraged to use the creative methods from the idea workshop. When selecting ideas for the various concepts, some of the groups used barometer ranking, with the best ideas at the top and the worst at the bottom. As part of the processing of individual ideas, the students were also asked to answer questions about how realistic implementation was (the fact-finding phase, step 2 of the CPS model), and all the information that emerged was posted on the project wall. Examples of questions in this type of fact-finding phase are: What do we know about this concept? What will be the main attraction of the concept? Why do we want to implement this concept - is there an interested public? The students continued to collect and process more ideas from the idea report, which they then combined into concepts. Near the end of the session, the groups presented their concepts to each other in front of their part of the project wall. Following the idea and concept workshops, the concepts that emerged were further processed and developed in groups, and presented to the championship committee, which then decided which concepts the students would implement during the event. These concepts formed the basis for step 7 of the CPS model, which constitutes stage 4 of the project model (Figure 1).

4.2. The students' learning experiences and perceptions of usefulness in the idea and concept workshops in relation to the implementation of the "Sidetrack" project event

The findings show that the students felt that the **idea development process** was motivating, useful and educational, involving the generation of many ideas, which after further processing in the concept phase formed the basis for the activities that took place in Sidetrack. Informant 7 said the following: "I thought the **idea phase** was fun, you could say anything you wanted to. We really came up with a lot of different ideas and concepts. (…) And we didn't spend much time on deciding on something or limiting it". Informant 2 said: "Well, it was actually the best thing I've ever done in my education. It was just incredibly brilliant! I was sorry when it was over, because... what I'm really best at is ideas, at work too". When the students were asked if any of the ideas generated in the idea workshop were used in Sidetrack, informant 5 said: "Definitely, everything that came out of the one or two hundred ideas was used. So we processed it to make it fit into our activity trail". Informant 6 said the following about his experience of the idea and concept development process: "Very good. Yesterday we talked [evaluation meeting in the whole class] about how the design of what we did on Saturday and Sunday [implementation of Sidetrack] came from the creative learning centre, what we learned there and the methods we used and what was produced those days, those are the things that shaped our project". Several of the participants highlighted the benefits of the creative methods. Informant 7 said the following about the **gallery method**: "Putting up flip chart sheets around the room (…) that's a very good method. (...) we all walked around and had to write (…) we were inspired by each

other and we could see what the others had written and could build on that. Informant 5 also pointed out how useful the **flip chart method** was, saying: "Something that struck me that I really enjoyed was when you had to imagine... what would a clown want in that event? What would a five-year-old want there? Because then you're thinking very specifically about the group you maybe want to reach (…) there were a huge number of suggestions". Further, the use of **different stimuli** was also felt to be useful. Informant 7 said: "And then we had those pictures we looked at as well, they inspired us. (…) We got new thoughts, so that was also a good method". Informant 4 mentioned some methods she found particularly useful: "That **world café**... and then there were interesting methods I've never come across before, like smelling things... different smells and so on... getting new impressions and trying out different senses". Informant 3 said: "And then we also used **listening**, because it's also good practice (…) The **talking stick**". (…) "But the one I learned a lot from... it was the '**yes, and' [attitude]**". Informant 2 emphasized **acting** as useful, because one could see acting talents that could be used during the Sidetrack event. The findings show that the informants felt it was important to create an **idea development report** where all the data from the idea development process were collected. Informant 5 said: "I used it a lot ... in the group I was in".

Informant 5 described the **concept workshop** in this way: "It was fun... we'd selected five concepts we wanted to work on, so we put them up on a wall and whoever wanted to work on that [concept] would go and stand there, (…) and started to specify what you would work on [later in the project]. (…) and we were still using the kind of way of thinking we learned before [positive, creative attitude]". Also referring to the concept workshop, Informant 6 said: "We learned a lot and it challenged us. Because we were challenged to think in new ways, to think about what we had found so far, and how we would realize it and what we got ... from the kind of data collection we did on the first days. Very good, I'd say". Several of the informants highlighted **storyboards** and their own part of the project wall as useful methods in the concept workshop. Informant 3 said: "I thought it was very useful, because it gave us a sort of visual impression of how to think about things". Informant 5 found it useful to have one's own part of the project wall: "(...) But just getting those ideas stuck up there in front of you gave you a bit of an idea of the type of concept you'd been in from the beginning to the end".

The findings show that the students felt that the teaching and their work on **idea and concept development** were enjoyable and motivating and that a positive, creative attitude towards the ideas and suggestions put forward set a standard and good atmosphere for the following project work. Research shows that feeling secure, playing, using humour and having a 'yes, and' attitude are all important to promote creativity. The process leader must make an effort to create a positive atmosphere of trust, openness and active listening, to enable participants to interact creatively. Efforts must also be directed at removing inhibitions that block creativity in order to develop a creative attitude [4]. The findings show that the students found it easy to present their ideas in the idea and concept workshops and were pleased that other students did not dismiss their ideas by saying "No", "That's wrong", or "I don't like that", which are against the rules in an idea development process. They found that the process was marked by a 'yes, and' attitude, a positive basic attitude where one builds on the ideas and suggestions presented. For the process leader/teacher of the subject, it is important to strive towards this attitude. The processes involved require good management and the teacher must be familiar with the various creative methods that can lead to idea generation and the rules that guide the process [4].

The students found that very many ideas were generated in the **idea development workshop**, which were then used in the project event, after further processing in the concept phase and later in the detailed planning phase. For the facilitator of an idea and concept workshop, it is important to be familiar with different creative methods and to alternate between them in order to have a rich supply of ideas. Each of the creative methods has its strengths and weaknesses, but in combination they offer different approaches that lead to idea generation [4]. Students who did not believe they were creative realized that they could actually contribute many relevant ideas, precisely because the various methods with their different problem formulations and activities enable participants to contribute based on their competence, experience and imagination [1]. During the idea and concept development process, various methods were used, such as brainstorming methods [4]-[8], methods involving listening and dialogue [4]-[10], storyboarding [4], pin-up walls [5] and various icebreakers, as well as visualizations of different ideas, with role-play, rapping, music and other activities that caused excitement and laughter. Several studies have shown that laughter has a liberating effect and is an important key to innovation and creativity [5], and that an atmosphere of laughter may be the signature feature of a successful team [5]. The students learned that a positive, creative attitude combined with methods of idea generation helped to establish a good atmosphere of laughter, enthusiasm and

excitement, which also continued into the later project work in the planning and implementation phase [1]. The students also thought it was very useful to have a report containing all the ideas and everything produced in the idea development process. The idea development report became an important artefact [6] and reference point for the participants to elicit ideas for further processing. In this way, the idea development report came to play a key role in the subsequent physical interaction in the project.

The students found it useful to have their own parts of the project wall, where they posted close-up and more general drawings of people involved in the activities planned in the various concepts, and felt that the drawings formed a good basis for discussing the different activities. In the concept development phase, they saw the value of walking around "their" part of the project wall with "their" theme, being able to "touch" the ideas there, move them around and add more ideas, while gesturing and discussing, and putting up factual information and pictures. In this way, the drawings clarified the concepts by being visual and physical and enabling zooming in and out to alternate between details and the whole [5]. The project wall helped to ensure that the individual members of the project team had a common frame of reference that showed how far they had reached in the process, and which of the concepts they had created could be further developed. The idea development work took place at the UiT creative learning centre for innovation and development, which is tailor-made for creativity with the space, materials and other elements necessary for such processes. Research shows that in idea work material and spatial factors are important for learning and results [14]. For example, it is demonstrated that when we look at an object that we can touch, the same neurons that enable us to pick up the object are activated [15]. Our world is represented and processed by both cognitive and sensorimotor processes [16]. The use of role-play and sketches to visualize ideas enabled the students to take on different roles and use various forms of expression such as singing, gestures and the use of different objects which enhanced their understanding and further interaction. In this way, the project wall was an important tool for interaction and learning, where the project team members could move around the wall, and see, present and discuss details and more general pictures in their own team and with other teams.

In the **concept development phase**, the students could select the theme they wanted to work on in the workshop. This motivated them [17], as it was based on their wishes, preferences, competence and goals for further learning. The students saw the usefulness of this, as they learned of each other's fields of interest, which they could build on and which formed the basis for the division into teams in the planning and implementation phase [1]. The idea and concept development phase showed them that processing and visualizing the best ideas for the whole class in the form of drawings like cartoons on long sheets of paper, role-play, dressing up and musical instruments helped them to discover different qualities in each other. Some were good at drawing, others were good actors, while some could transform ideas into practical products, such as by leading the carpentry work for the Sidetrack event. Others turned out to be good at communicating or to have good computer skills. These were all useful learning experiences that improved resource use during the implementation of Sidetrack [1].

A community of practice can be defined as a group of people who are part of a community with common values, views and perspectives, as well as common ways of talking and acting. The members of a community of practice can learn from each other [18], and the students on the Practical Project Management course are an example of such a community. For the students to gain new knowledge, it is important to spend time developing and nurturing social relationships, which can provide interaction that encourages people to share, ask and help each other. The idea and concept development phase is a suitable setting, where the process leader sets the framework and facilitates positive and constructive interaction. In the creative idea and concept development phase, the students worked together to generate ideas and develop concepts for the project event of the 2022 Norwegian Skiing Championships. This phase or process can be seen as co-creation of value where the ideas and concepts generated can increase the desire of the public to visit the event. Value creation is the main goal [19], based on a service-dominant logic [6]-[19]. The findings show that the students perceived the idea and concept development phase to be crucial for the activities in the project event, and that they learned that creative methods are useful tools for generating ideas and concepts. They also found that the organizers of the championships felt that the project event provided new experiential concepts for the public and participants during the championships, and the organizers thus became more oriented towards the needs of the public and participants, not only in 2022 but also in future national championships. For both the organizers and the students' current and future workplaces, the use of idea and concept workshops can lead to single- and double-loop learning, where the latter could result in extensive changes in basic systems of value creation and sustainable development [6]. The collaboration between the organizers of the championships and UIT was thus a win-win situation, where the students learned through projects relevant to their work and the organizers of the championships and the students' workplaces could benefit from single- and double-

loop learning.

4.3. The work-related relevance of the students' learning experiences

Our findings reveal several creative methods from the idea and concept workshops that the students found particularly useful and have used and will continue to use in their jobs. The findings show that practising "learning by doing" on real cases from work situations as part of their course makes it easier to internalize and reuse this knowledge in other work contexts. Informant 2 told us about his experience of using creative methods in his job after the idea and concept workshop at UiT: "Using creative methods ... it's incredibly helpful in the planning phase and in (…) the beginning phase, the fact that you can get everyone involved, the whole company, right from the start, so everyone gets ownership". Informant 6 said: "I've used the method called the gallery method, I've used it a lot". In fact, informant 6 also used the flip chart method and the post-it method and all the methods yielded good results. Informant 6 said: "I got a very good response, people thought it was very good. And we spent a lot of time afterwards in the project team, we collected all the data and then it was put together in a Word document and categorized...". Informant 4 said that her experience of creative methods was "Very positive", and underlines that it should be more used at work. Informant 5 said: "Yes, I definitely want to take home these different workshop methods so I can come up with different ideas and get new ways of looking at things and thinking about them. (...) I'm quite sure I will use it [in my job]". Informant 4 felt that creative methods would be useful at work: "For example, risk assessments... You kind of have to use the same type of creative thinking there". Informant 3 said: "A lot of people have like lots of yellow post-it notes and they're stuck on a wall, and then that's it. But as we've learned about all the work that comes afterwards, you know, bringing things up again, developing them, processing them, I could definitely imagine that it could be used [the creative methods]". Informant 6 said: "My experience is that it has helped me not only in my education, but also in my work context". Informant 2 said: "Yes, I thought that storyboarding was really cool. And I included that [in the idea development process] at work". Informant 2 also experienced self-efficacy when he used creative processes in his job: "You know, I'd always wanted to try something like that, you see, but now I had the tool, and I really want to try more things. So I'm sure I'll have the opportunity to do that". When asked why the methods were useful at work, informant 2 replied: "They challenge people to do something they haven't done before, or in a new way. And then there's teamwork. We'd made up teams across departments, and people can be a bit sceptical about things like that, but it was done in a nice way. Even the maintenance man liked it a lot. And he actually hates meetings like that, so... I thought it was really good". When asked whether the use of creative methods had yielded any results at work, informant 2 said: "Yes, it went well when we used it in a staff meeting, and everyone was satisfied and... We didn't just sit and listen to someone talking and showing budgets and stuff like that, but we actually cooperated. (…) and you have to present things and it's like a game. You have to play! (…) everyone gets the chance to be creative."

The findings show that several of the students had successfully used creative methodology and the CPS model with its systematic and creative problem solving in their workplace, and they planned to continue to use the tools. To prevent the newly acquired knowledge from disappearing when the students' project is over, it is important to use it at work. Some of the students emphasized that they had used creative methods actively after the course, and their learning from their project work could thus be consolidated in their workplace, which could thus achieve organizational learning. Here, the project participants could include the knowledge in their everyday work and in new projects, and thus spend time on systematizing and sharing knowledge [6]. Part of the criticism aimed at higher education institutions is that the learning is far removed from everyday work situations and difficult to put into practice [20]. The Practical Project Management course emphasizes its work-relevant approach by requiring students in their final exam to carry out a practical project. Here, they are divided into groups to cooperate on planning, implementing and evaluating a concrete project, using theoretical and practical tools they have learned on the course. In order to achieve work-related relevance, the teaching of creative methods was structured around generating ideas and developing concepts for the Sidetrack event. By trying out the project tools in a real case, students learn in practice how to use creative methods in idea work, which is also important work-related learning that can benefit their current and future workplace [6]. The students' learning is created as a product of participation in a social community of practice, in a context that co-constitutes cognition and learning [18]. Through participation in individual and collective learning processes, students develop management skills and become aware of factors that promote and inhibit change. Through Sidetrack, the students experienced mastery, excitement and joy and saw the value of using creative methods for this type of event. Continued practice in these ways of working in an

organization can lead to the development of a culture, structure and systems for innovation and development, but according to Senge [21], organizations themselves must enable organizational learning to take place.

5.Conclusion and further implications

This study highlights the importance of planning and implementing well-prepared idea and concept workshops to generate ideas for the content of a project event. In this context, the CPS model is an important navigation tool involving the use of various creative methods at the various stages of an iterative process. Students find the processes involved to be useful and motivating and note that they establish a positive atmosphere of laughter and excitement in the project work. The students' learning experiences are that idea and concept workshops provide a high level of idea generation, which forms the basis for the content of project events. All the students found creative working methods useful and want to use them in their jobs. Following the idea and concept workshop, several students used the creative work methods in the development of various projects and activities in their workplace and are keen to practice more and become more proficient in using these working methods. It would be interesting to follow up this study with further studies to shed more light on whether and how former project management students and staff use creative work methods in project work and problem-solving in various workplaces.

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