NTNU

Kunnskap for en bedre verden

TPK 5100: Applied Project Management

Reflection Report

Development a prototype of a board game with a flashcard set for group learning of the TPK 5100 "Applied Project Management" course

Submitted by: Group Number: 1

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1. Introduction

The type of product which was developed within the framework of this project is a new learning tool for the TPK 5100 course. Our purpose was to produce a prototype of a board game with a flashcard set allowing students to learn the key points of the course quickly and in an enjoyable way as a group. A bigger message we attempted to convey through some of the implemented rules in this board game, is that the team/groupwork is one of the key factors that contribute to the project success.

The rules, the design and the picture of the board game are provided in the *Appendix 2*. Database of game questions and flashcards are given in the *Appendix 3*. Link to the video-presentation given in the *Appendix 4.* The board game was inspired by the book [1] and named after it.

The board game instead of a web-page or simple flashcard producing was selected after several rounds of discussion within the team and research on additional learning tools. Please refer to *Figure 1* for the overview of the evolution of our product idea. Our product is based on the gamification technique which is well known to be an effective additional source for enhancing students' engagement and learning.

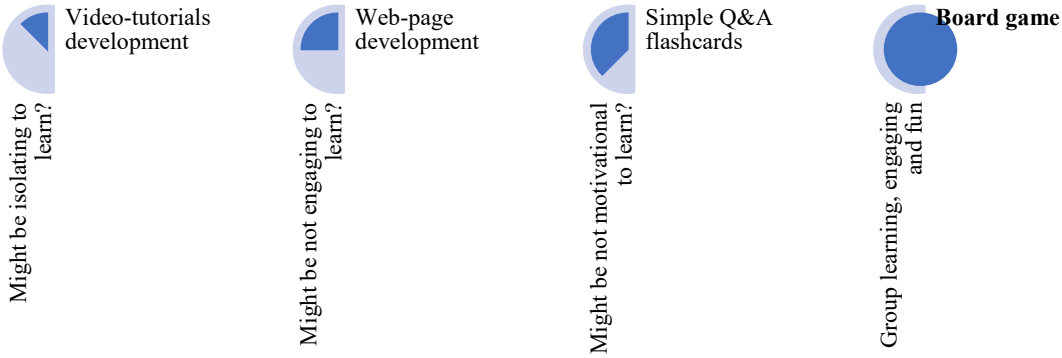


Figure 1. Evolution of our product idea

"Its advantages include giving students the opportunity to experience learning in a multi-sensory, active and experimental environment. Specifically, learners can use these educational games for experimental learning to develop their decision-making and problem-solving skills in a dynamic learning environment" [2]. Additionally, students can receive feedback/results immediately to get answers, instead of receiving delayed feedback from traditional assessment methods (e.g., tests and examinations) [3].

According to the survey conducted among "Applied Project Management" course students, over 80% of respondents were positive about alternative ways of learning (*Figure 2*). The complete results from the student survey are given in the *Appendix 5.*

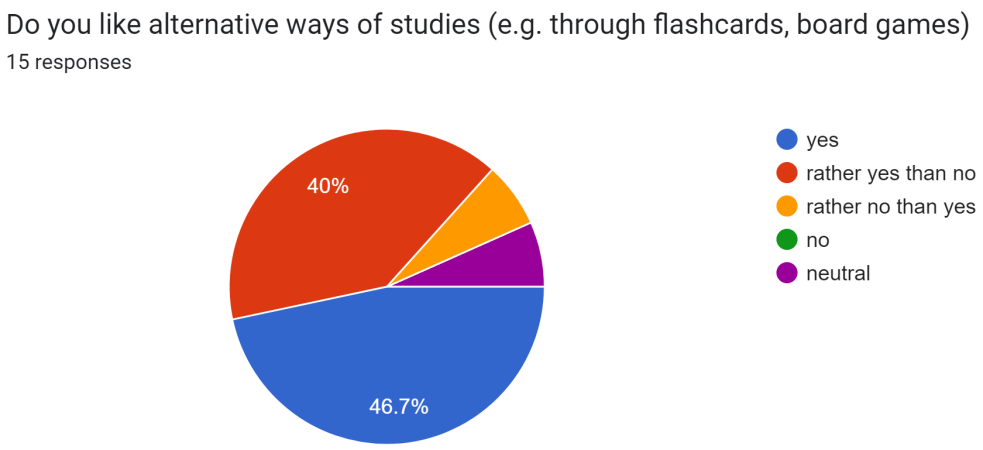


Figure 2. Student survey results conducted by the project group. Students' attitude towards alternative learning ways.

The board game design was based on the web-research and students survey. We could not identify any board game that was specifically designed for learning "Applied project management" course but revealed general trends (e.g. availability of power with characters, number of players, game duration, etc.) of the popular board games that were adopted in the game design. One meeting with the test group was also organized to collect feedback and improve the game rules and design.

2. Evaluation of Project management effort

The overall performance and project management effort of the group is evaluated under this section considering how well the project group was organized/structured, the effectiveness of work breakdown structure, risk assessment, and communication plan to deliver the intended project deliverables.

The project group was not structured hierarchically but each member has equally shared responsibility to create and execute the project tasks. Additionally coordinator, evaluator, quality assurance and agenda follow up roles were assigned voluntarily to each group member based on their expertise and preferences to facilitate and synchronize all tasks within and externally with other stakeholders of the projects. The shared "organizational" roles and responsibilities of the project team members are shown in the table below.

Table 1. "Organizational" roles division

Team Member	Role
Shirin Sadullaeva	Monitor evaluator, creator, executor
Maria Giosuè	Wellness manager, creator, executor
Marius Christian Hansen Larsen	Quality assurance manager, creator, executor

Bereket Belayneh Bassore	Agenda manager, creator, executor
Matthieu Duperray	Coordinator, creator, executor
Petdyar Mehrdad Alayharian	Coordinator, creator, executor

In this regard the project structure was effective which increased trust and self-motivation among members. Therefore, each member was able to play their roles and responsibilities towards the achievement of the project objectives.

The tasks ownership throughout the Project assignment are summarized in the table below.

Table 2. Tasks ownership

Task	**Owner/ Responsible person**
Selection of the Product idea	All team members
Division of responsibilities	All team members
Development of Pre-project report	Maria Giosuè, Matthieu Duperray, Shirin Sadullaeva
Development of the Game Rules	All team members
Board game design	Shirin Sadullaeva, Matthieu Duperray
Flashcards questions development	Matthieu Duperray
Development of the project cases and case questions	Bereket Belayneh Bassore, Maria Giosuè, Marius Christian Hansen Larsen, Petdyar Mehrdad Alayharian, Shirin Sadullaeva
Report Development	All team members
Printing cards, boards, cases, putting them together	Maria Giosuè, Matthieu Duperray, Petdyar Mehrdad Alayharian
Video - making	All team members

When we consider the risk management plan of the project, the project team has developed a risk management plan during the initial phase of the project with the aim to identify and prioritize risks that are likely to occur and their mitigation and response approach. Risk is an uncertain event that has a positive or negative effect on one or more project objectives [4]. Therefore, the three prioritized risks in the project were the risk of spending too much time to identify the key points of the course, the risk of producing unsatisfactory design and developing flash card & board game, and the risk of accessibility and scalability of board game to serve a greater number of applied Project management course's students.

In this regard, the project team mitigated the risk by splitting the workload among members during the earlier phase of the project and more time was spent in brainstorming to come up with simple and creative flash card/board game that can be used by students for exams preparation. Other related projects were observed as additional input from YouTube to determine the type and the format of the

game. Concerning the risk of accessibility of the game, as a short-term plan, campus and sit common area can be used to create a group access to the game and digitalizing the game would be a next level long term plan. Except the long term plan the other mitigation plan was successful to reduce the impact of the identified risks.

On the other hand, an effective communication plan is vital to any project to share information smoothly, align and keep all stakeholders and team members on the same page throughout the project life cycle. In this project effective communication was identified as one of the main success factors of the project. The pre-planned communication plan was effectively used to coordinate activities and manage the information flow. Even if the response was not fast, Google forms, blackboard discussion and emails were used to collect basic requirements and feedback/survey from end user/student. WhatsApp chat was successful to update and follow up the progress whereas weekly physical meetings could not be used regularly as it was planned due to certain unforeseen incidents. Discussion with the lecturer as a group and through representatives was carried out as per the communication plan.

When we assess the overall project management performance, we can conclude that the project team was able to deliver the product/board game as per the intended plan of the project. The aim of the project was to produce a prototype of a board game with a flashcard that can allow students to learn the key points of the course quickly and easily, as well as to prepare for exams in an enjoyable way. The team was able to achieve all the project deliverables as per the project schedule. These are submitting a project plan, conducting, and analyzing the survey, developing and testing the prototype, and finally delivering the report document and a short video that can describe well about the product. Furthermore, despite the limited number of involved users, the result of the project was satisfactory due clear and realistic objectives, good communications plan, realistic schedule, and adequate contribution of each team member.

Finally the group evaluated the performance of the project management effort in the table below and agreed that project management was successful based on the above mentioned success criteria.

We evaluate our project management effort as successful:

Scale	StronglyDisagree	Disagree	Neither agree nor disagree	Agree	Strongly Agree
Team response				•	

3. Evaluation of the impact (Project success)

The target audience of our product is primarily the students of the "Applied project management" course and also individuals who want to get some insights from project management. Our product is an additional tool that assists students in comprehending the materials and also facilitates their group collaboration.

The benefits from the game-based learning have been already discussed in the introduction section based on the research from [2] and [3], and are proved to be an effective learning tool.

We have evaluated the impact of our specific project by collecting feedback from the test group after trying out the board game. The test group was made of our acquaintances who take the same course. Their feedback constitutes our metric to evaluate the impact of our game.

We also could measure the impact of our project through grades. If we observe statistically higher grades for people who played the game, it would mean that the game somehow allowed them to learn new things and skills.

Feedback from several students is captured below for the reader's consideration.

Feedback from Lohim:

"I also take the course and have played the game. I liked the game, but i guess you can't really play it a lot of times, because of the limited number of questions. It would be nice if there were a large number of project cases so that you can play a game in a larger group, but I understand that the game covers all project types learnt over the course semester and could be always expanded by the developers following the same design.

The game started with some general questions to gather points, to start your "project" and after that you would get case specific questions. The first part was just kind of a test on the "basics", but the second part of the game gave it a bit more context and that was good.

Apart from the learning and just about the game: I really liked being able to choose if you wanted to cooperate (while making the game harder), or not."

Feedback from Côme:

"I did try the game with the team and it was rather intuitive and fun, and I am actually planning to request the game copy to use for the exam preparation. It is definitely a fun way to learn key definitions and concepts. Studying with flashcards is a good thing as well!
The amount of questions covers every chapter and provides general knowledge for this course which is mandatory to deeply understand it."

Feedback from Jeremy:

"I used to be a big fan of board games at some point and I read that it could take up to 1 year for a team of 20-25 people to just come up with the idea, rules and basic design features of the board game. So, well done to this team given the time and resource constraints. As far as the game's purpose is concerned, I guess the game pushed me to rethink the study approach and consider additional "alternative ways" for processing of learnt material. It is very good when you need to find motivation for studying, especially during the winter periods in Trondheim when the study routine is very isolating and occasionally depressing. I would recommend other students to try!"

To increase the audience we can reach and help through the developed product we are aiming to post the game in the discussion board in pdf format after the project submission deadline so that students can print it or at least to go through the questions and responses before the exam.

Please evaluate the degree of your support to the following statement (group-based evaluation):

We evaluate the quality of our final results as outstanding:

Scale	Strongly Disagree	Disagree	Neither agree nor disagree	Agree	Strongly Agree
Your response				●	

4. Factors that have contributed to failure / success

Many of the success factors are closely tied together and it is important to note that how we named and distinguished them is somewhat arbitrary, and they are still very much part of the same system. For example the "flexibility"could also just be integrated in/seen as a part (and consequence) of the "Hierarchical structure" and "Mindset of the project team". In the same way the factors could also be further divided and specific, but this level of specificity and exactness was deemed satisfactory and appropriate in the framework of our project.

- **Mindset of the project team**: because of the positive attitude and cohesion of the project team, it would be accepted when one of the teammates was unavailable. That part of the

work would be divided between the other members of the team, or taken up by one of them, without further need for ("forced") compensation. However, the team was still monitoring and ensuring fair distribution of the workload.

- **Flexibility:** The project team had a very high degree of flexibility, because of the availability/willingness of members to hold meetings often and on short notice.
- **Hierarchical structure** (and satisfaction of team members): The hierarchical structure, or rather the absence of it, was very beneficial for the flexibility and mindset of the team. The team was more flexible because there was not one leader without whom there could be no decisions made. The mindset/commitment of the team was very good, because every opinion/vote was respected equally and this made every member very invested in the project and happy within the team.
- **Support from the university**: The supplies and infrastructure needed for the successful completion of the project were provided by NTNU. The team could use the printers for the creation of the product prototype and make use of the facilities on campus to support our meetings.
- **Clarity of purpose and objectives:** We have taken a very flexible approach in finishing this project, but this was only possible because of the objectives and purpose of the project being clear at all times.
- **Understanding/involvement of end-users**:From the very beginning the shape of the product was clear because both the team members were made up out of the end-user group and the larger population of end-users was surveyed to understand their general wants and needs.

When comparing the factors identified here as the most important factors, with the factors listed on page 92(Hussein, 2018), it is obvious that our factors are present in the list, albeit under either a different-, more generalized or split (in multiple factors) definition.

5. Most important lessons from your project

When deciding to design a product, the first thing to do is to identify what kinds of goals you want to achieve by delivering that product, and what is your target audience while being aware of your constraints.

For example, in our group, after deciding to develop a product project, we asked ourselves what we could design that would have a real and concrete impact, that would arise from real needs, and whose

success (or failure) we could evaluate concretely. For this reason, we decided to develop something that could be useful to other students, and to be exact to the other students in the Applied Project Management course: our goal, therefore, became to build something (specifically a board game that would help in learning the course content) that we could control the development of, from the initiation phase to the close-up phase.

The most important thing, in fact, is to figure out how to develop a project that is successful, meaning that it arises to solve a problem (or to seize an opportunity), that is completed on time, and that adds value to the end users. By putting ourselves in the role of project managers, then, we realized that building a product for other students would facilitate not only communication (the stakeholders are our colleagues, we are ourselves), but also the likelihood of building something that was successful, and that arose from a real and easily identifiable need: the need to learn course content through play, fun, and alternative methods to traditional study.

Indeed, if we think about the initiation phase of a project, we are reminded that what leads to project development is the rational, or triggering event: and this is always related to people's needs, and being in contact with them will only facilitate the process and a better understanding of the success factors.

Our advice, therefore, is to think of something that is concretely and truly useful to people, and that the people being addressed are people close to us, such as students. What we have learned, moreover, is that working with students on a project that is designed for students brings many benefits and added value: everyone brings his or her own different experience, creating an opportunity to build something that suits everyone. In addition, just to take full advantage of everyone's experiences, what we suggest is to divide the tasks and roles as we did at the beginning, when drafting the pre-report.

Even in the actual execution phase, being both designers and potential end customers helped us to understand what to improve: we created a product that we would like to use for ourselves. Our experience, thus, suggests that creating a product that can be used by the students themselves, with whom the channels of communication are easy to open, is a potentially successful idea.

We also have several suggestions on how to implement an idea after selecting the project and product type. First, try to identify strength points and skill sets in your team, and openly communicate on the team expectations and ambition levels for the project. In this way, you can avoid misunderstandings and delays in the later stages of your project. Secondly, try to establish communication channels both internally and with your stakeholders. Also, create a workable work breakdown structure whose detailness level allows progress monitoring and delays tracking. And lastly, we suggest being open minded and agile when it comes to group sessions and discussions.

6. Reflection on learning and unlearning

During this project-assignment, the group met several challenges that required gathering of information from different kinds of sources. This was based on the different activities that were executed, below is an overview of the different activities, and a description on what needed to be learned, how it was learned, and how it affected the project-assignment:

Student-surveys

Prior to establishing an easy and more motivating way to study in the course "Applied project management", the group first needed to gather information on whether the use of flashcards and a board-game was something that people preferred instead or as an addition to ordinary lectures. This information was gathered through an online survey. From this survey, the group learnt that most of the participants of the survey were quite positive about the solution of flashcards and board-games. The group also learnt that most of the participants preferred to work in groups rather than working alone when it came to study in the course. Based on this information, the group thought it was a good idea to invent a board-game which contained the use of flashcards, but which also emphasized on the benefits of working together to solve different challenges or problems.

Creating the board-game

To be able to create an interesting board game, which highlighted the right purposes, the group had to do comprehensive research among many existing board games to gain information and inspiration for the rules. This was done by searching online through instruction-videos and websites etc. The groups learnt through this that the concept of board games with emphasis on cooperation was already a popular solution. Therefore, the variations of games were many and highly interesting. As a consequence of this research, the game-rules were made with inspiration from many of the existing games looked upon.

Creating the questions/tasks

The boardgame and the flashcards contained questions and tasks which were related to both the theory of the course "Applied project management" but also to relevant case-studies. It was therefore necessary to go over the theory in the book, and to analyze the cases chosen by the group. Collecting this information has shown to be highly important for how to formulate the questions especially related to the different cases.

Creating the game-design

The person responsible for creating the game-design, that is the game-board and the front page of the game, had to learn how to use Adobe Illustrator. The group member working on this had some

previous experience with programming and modeling, but had not used this design-tool before. Because of this, the learning of the programme was crucial for achieving a game-design, which again played a big role in making the game attractive and functional to the players.

Moving to the "unlearnt" component, we would like to highlight that when working with this project and developing the product, the group also had to put away or discard some ways of thinking, especially when it came to the way we were solving problems and working with the courses on a general basis. Some of our biases and concepts we had to unlearn are described below:

Teamwork

Most of the members of the group were mainly used to working independently with tasks, reading, studying and so on. To be able to develop this product, many of the members had to get used to discarding this way of thinking and working, and instead adapt to work in groups. This was not only because the project-assignment was stated as a group-assignment, but also because the game that was going to be invented, relied on the principles that group-work can be more beneficial than individual work. It was therefore important that the group implemented this way of thinking to themselves, and then be able to carry on this idea to others playing the game.

Studying through games

The original purpose of this assignment was to develop alternative ways for students to work with the course. To be able to do this, the group had to discard the more conventional way of studying, which is through reading, taking notes and working with tasks, with more alternative ways. The transition from "normal" studying to studying with the use of games did not come natural for most group members, since they were engineer-students that were used to work in a specific way. However, since the produced game turned out very effective and quite interesting, it all worked out fine in the end. The group is now hoping that this game will maybe change the different ways of studying for more students, as they also try this game with time.

Acknowledgments

First and foremost, we would like to express our gratitude to God Almighty who has sustained us to finish the work. We are also very thankful to our professors Bassam Hussein, and student assistants for the opportunity they created for us to learn the course lessons through this project. We are also thankful for their continued support and guidance to realize the project.

Last but not the least, we would like to extend our acknowledgement to the fellow students in the Applied project management course, especially for those who were willing to fill out our questionnaire/survey and for those who played the board game and gave us their constructive feedback.

References

[1] Hussein, B. (2018). The Road to Success: Narratives and Insights from Real-Life Projects, Fagbokforlaget.

[2] Adachi and Willoughby, (2013). More than just fun and games: The longitudinal relationships between strategic video games, self-reported problem-solving skills, and academic grades, J. Youth Adolescence 42.

[3] Siu Yin Cheung, Kai Yin Ng. (2021). Application of the educational game to enhance student learning, J. Frontiers in Education.

[4] PMBOK Guide, (2000), A Guide to the Project Management Body of Knowledge, Edition ©2000 Project Management Institute, Four Campus Boulevard, Newtown Square, PA 19073-3299 USA, http://www.pmibookstore.org/

Appendices

Appendix.1: Project Pre-Report

Appendix. 2: Board game design, rules and picture

Appendix. 3: Data base of project questions and flashcards **Appendix 4:** Link to our video presentation

Appendix 5: Student survey results

Project pre-report

Type of product

The type of product which will be developed in this project is a new learning material for the TPK 5100 course. We aim to produce a prototype of a board game with a flashcard set allowing students to learn the key points of the course quickly and easily, as well as being able to prepare for exams in an enjoyable way. We are also intending to develop rules/scoring algorithms in a way that will allow us to convey a bigger message of project management (e.g., Teamwork is the key to success).

Expected benefits

The expected benefit of the product is a facilitated learning process for the student as well as greater enjoyment of the learning process by the end user. Students would then be able to learn more from the course, allowing them to have greater skills in project management and should perform better at the exam.

In addition to learning, another benefit we want to achieve through our project is to raise people's awareness of teamwork. The main concept that needs to be learned is that working as a team brings more benefits to the project than working for one's own interest.

Stakeholders

We can see two main stakeholders in this course:

- The students
- The course coordinator

The students have a medium interest in the project as well as a considerable influence on the project, we should therefore collaborate with some of them to better suit their needs.

To clearly identify their needs and expectations from the project, we will ask them to answer a quick survey. We would ideally be able to identify a test group different from the students developing the project with whom we would test our product during the development phase and identify issues which could compromise the outcome of the project.

The course coordinator has a great interest in the project as well as a profound influence given that he did build the course and its structure to fit his teaching methods.

We should therefore collaborate with him as much as possible to create a product he would promote and recommend to the future students.

A good collaboration would also allow us to better identify the key points of the course and therefore producing more accurate flash-cards.

Risk assessment

The main risks in this project are:

- Spend too much time to identify the key points of the course.

This uncertainty can be reduced by splitting the workload among students as well as agreeing to stick to a normalized method to identify the key points of the course. Spending too much time on this part could prevent us from creating specialized flash-card for exams preparation.

- Having trouble producing a satisfactory design for the flash card & board game

Starting the design process at an early stage to allow evaluation by test students should allow us to iterate several times and find a satisfactory design.

- Provide accessibility and scalability of the board game to ensure it reaches a greater number of the Applied Project management course students.

We will attempt to provide the solution for the last point in the final report.

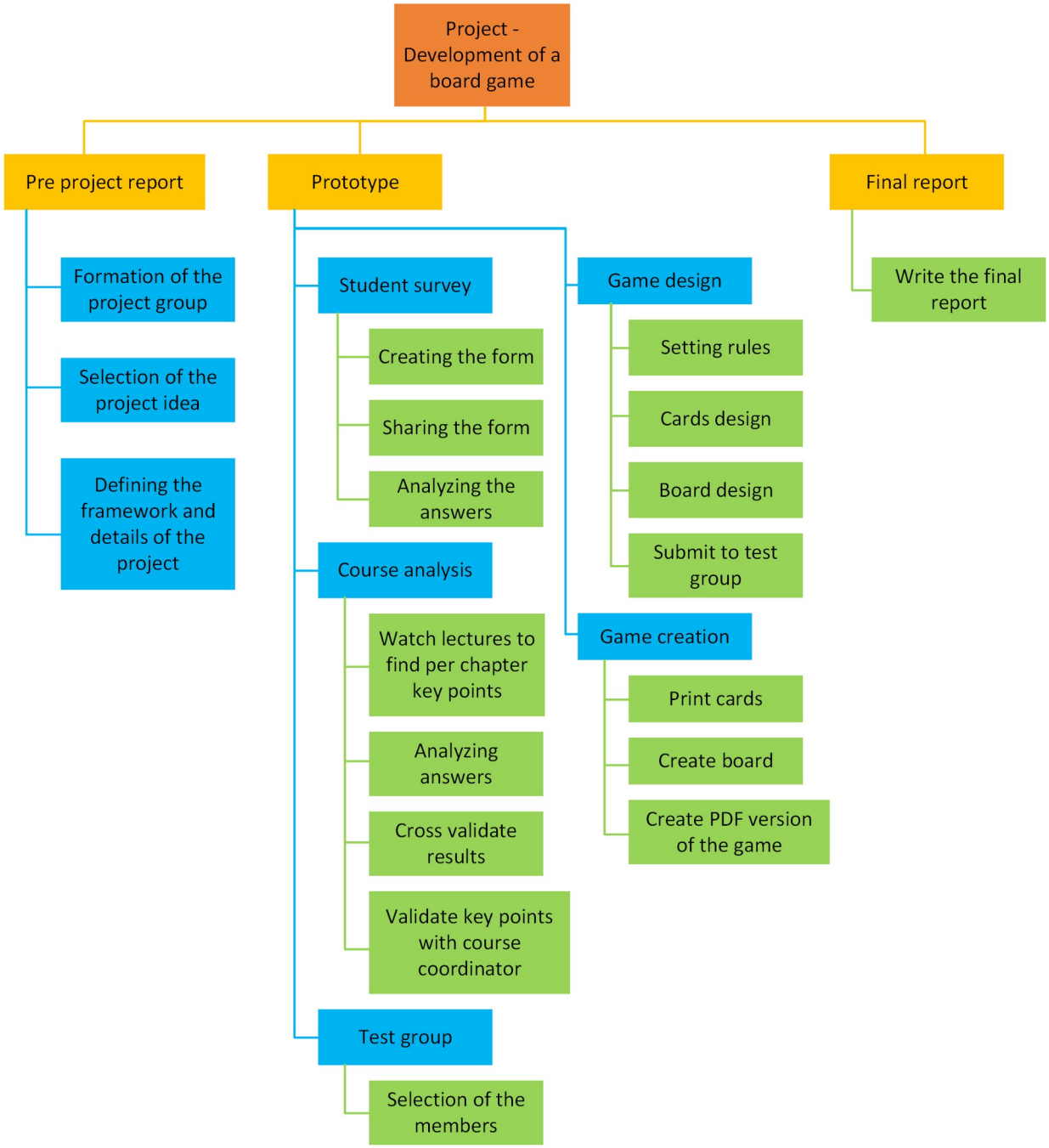
Skills

The main skill to acquire for this project is the actual course itself. Having a good understanding of project management is mandatory to produce an efficient and trustable learning set.

- Software skills to make cards more visually attractive

WBS

Overall WBS is given below. Detailed tasks breakdown could be found under the time schedule section.



Project schedule

Description of the phases/tasks/ deliverables	Status	Weeks from the Project announcement							
		W1	W2	W3	W4	W5	W6	W7	W8 -Master Deadline (03.11.2022)
Date		12.09.2022-16.09.2022	19.09.2022-23.09.2022	26.09.2022-30.09.2022	03.10.2022-07.10.2022	10.10.2022-14.10.2022	17.10.2022-21.10.2022	24.10.2022-29.10.2022	
Phase 1. Mobilization phase	Completed								
1.1.Formation of the project team & Preliminary division of responsibilities	Completed								
1.2.Selection of the project category	Completed								
1.3. Preparation of the Pre-Project Report	Completed								
Global Deliverable 1. Submission of the Project Plan	Completed		★						
Phase 2. Inception/Preparatory Phase	Not completed								
2.1. Creating forms, questions and conducting student survey	Started								
2.2. Screning course materials and identifying approaches for questions developing	Not started								
2.3. Researching on available rules and algorithms for board games	Not started								
2.4. Forming the test group for probation of the results	Not started								
2.5 .Analysis of student survey data	Not started								
Internal Deliverable 1. Student survey outocmes, test group formed, approaches for questions development formed	Not started				★				
Phase 3. Execution & Testing Phase	Not completed								
3.1.Based on above development of the rules and algorithms for board game	Not started								
3.2.Development of questions database	Not started								
3.3.Development of the flashcard design	Not started								
3.4.Testing a prototype game on the test group & inntroducing required adjustments	Not started								
Internal Develiverable 2. A prototype board game description and flash cards with questions	Not started						★		
Phase 4. Finalization & Reporting Phase	Not completed								
3.6.Printing cards & drawing board game	Not started								
3.7.Preparation of the Project Report	Not started								
Global Deliverable 2. Final Product and Project Report	Not started								★

	Duration of the phase
	Duration of the task
★	**Deliverable**

Success factors

- Clear and realistic objectives
- Good communications and feedback (within the group and with the stakeholders)
- User involvement
- Different viewpoints
- Realistic schedule
- Adequate contribution of each team member
- Team members' satisfaction with the results

Roles and responsibilities

Our team is acting in the role of a prototype developer.

There is no hierarchical structure in our team: each member is a project developer, and each member has the same level of responsibility as the others.

However, additional roles besides the developer have been defined to provide support for project development and contribute to the well-being of all members.

Proposed roles with the description:

Coordinator – interface between the stakeholders and team members,

Monitor evaluator - Responsible for assessing ideas to determine if they are valuable and viable, then take the steps to push those ideas forward

Agenda manager – Responsible for following agendas and schedules, chasing other team members in the event of the delay

Quality assurance manager – Quality check of the deliverable vs the project plan & commitments & project specification

Wellness manager – Responsible for engagement of team members, middle person in solving disagreements in the group

Creator – development of ideas

Executor – implementation of ideas

Distribution of the roles between the project team members:

Team Member	Role
Shirin Sadullaeva	Monitor evaluator, creator, executor
Maria Giosuè	Wellness manager, creator, executor
Marius Christian Hansen Larsen	Quality assurance manager, creator, executor
Bereket Belayneh Bassore	Agenda manager, creator, executor
Matthieu Duperray	Coordinator, creator, executor
Petdyar Mehrdad Alayharian	Coordinator, creator, executor

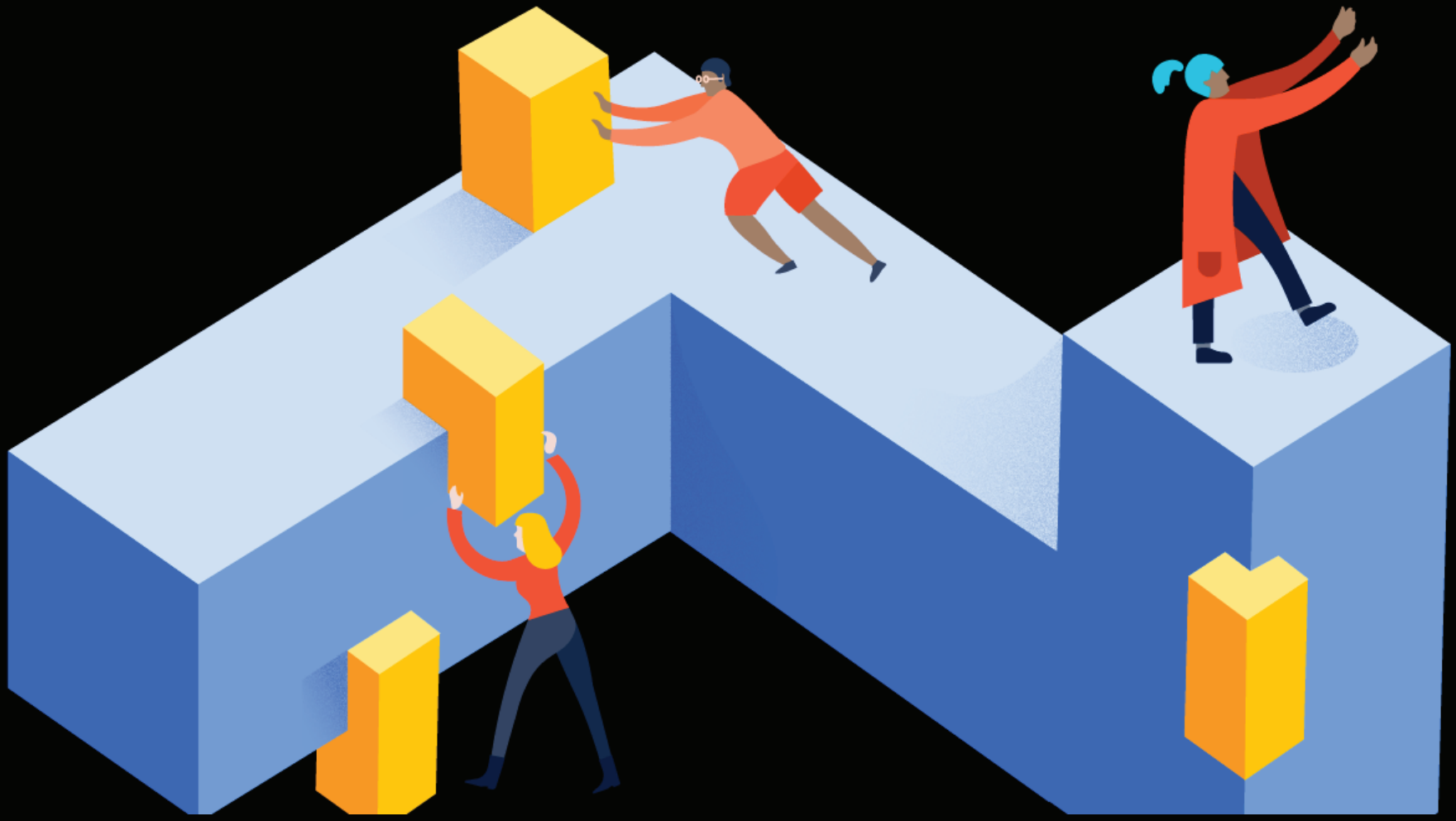
Communication plan

According to project management theory, a communication plan is a policy – driven approach to provide stakeholders with information about the course of the project.

Description	Frequency	Channel	Audience	Owner
Student survey	Once during Inception Phase	Google forms distributed through blackboard discussion and emails	Applied Project Management Course students	Petdyar Mehrdad Alayharian
Discussion with the Lecturer	Once during Mobilization phase, and over the project course as needed	Physical meetings on Thursdays + pre-agreed Team meetings or emails	Course Lecturer	Shirin Sadullaeva
Discussion with the Test Group on the proposed prototype game	Twice during Execution and Finalization phases	Physical meetings	Selected Test Group	Marius Christian Hansen Larsen, Matthieu Duperray
Project check ins	Once a week	Physical meetings + WhatsApp chat	Project Team	Maria Giosue, Bereket Belayneh Bassore

"The Road to Success" board game

Your fun guide into the world of the Applied Project Management group learning



Inspired by "The Road to Success" B. Hussein

Initiation

1

Q1 Q2

Planning

2

Q1 Q2

Execution & Control

3

Q1 Q2

Closure

4

Q1 Q2

"The Road to Success" board game

RULEBOOK

SOMETHING EVIL IS TRAPPING THE STUDENTS FROM LEARNING THE "APPLIED PM" COURSE. PM gurus have revealed there is still a way to help them through the group collaboration...

GAME OVERVIEW

"The Road to Success" is a cooperative game designed for 4-5 people. The duration to complete the game is around 1 hour. You and your fellow students, working as an individuals or a group of two should succeed in completing the project by unfolding their knowledge through situational questions. Once you have selected your character, project type and collected coins through answering flashcards, you are ready to enter the board of the project phases and complete the game. The winner (s) is the individual or the team that reaches the project completion the first. There are 8 situational questions in total that should be correctly answered throughout 4 project phases. Good luck!

GAME SETUP

The following components comrise the game: board that represents project phases, projects card deck, characters card deck, flashcard (coin - collecting questions) deck, situational questions card deck for each project type.

HOW TO START THE GAME

There are 5 project types that require different amounts of coins to start the game and 5 characters with different "superpower". At the beginning of the game, each player has to draw a card from the project card deck and from the characters card deck. Those will determine the project and the character each player will be playing with. After drawing these 2 cards every player is welcomed to decide to team up with another player (up to 2 players). Teams have to choose the project with the highest coins requirement and which character they are playing for. For the teams coins are collected by both members through answering flashcards.

TAKING TURNS

Play progresses around the table, starting with a youngest player and then proceeding clockwise. The game is turn-based, a player has to end his turn before another can start.

STEPS

FIRST STEP

The first step of the game is to collect coins to be able to start your project: you collect coins by answering flashcard questions. When it is your turn to play, the player at your right draws a card from the flashcard desk, reads the questions and the possible answers, and you have to pick one. If you have answered correctly, you keep the card and answer another question. You repeat the process until you make a mistake or until you have enough coins to start your project, in which case you can put your pin on the board, and pass your turn.

If you are working as a team, each member answers questions on separate turns, and put in common the coins earned during their respective turn. Members of a team can help each other to answer questions

"The Road to Success" board game

RULEBOOK

STEPS

SECOND STEP

During the second step, you have to progress on the board: your goal is to reach the end of your project. To go to the next step, you have to answer a project-specific question. Each project case and phase come with its own questions, which can be found in the situational card deck. If you answer the question correctly, you can go to the next step and it is the end of your turn. If you make a mistake, you stay where you are and skip your turn.

PROJECT TYPES AND COINS COLLECTION

There are 5 project cases representing 5 project types that require different entry
coin levels: Construction (16 coins); Restructuring (15 coins); IT and software (14 coins); Product development (15 coins); Research and Studies (12 coins). To collect coins for kick-starting the project you are required to answer flashcards. 1 flashcard is 1 coin.

.

PROJECT CHARACTERS

There are 5 characters in the game assigned with individual power to represent certain conditions in the real-life project implementation:

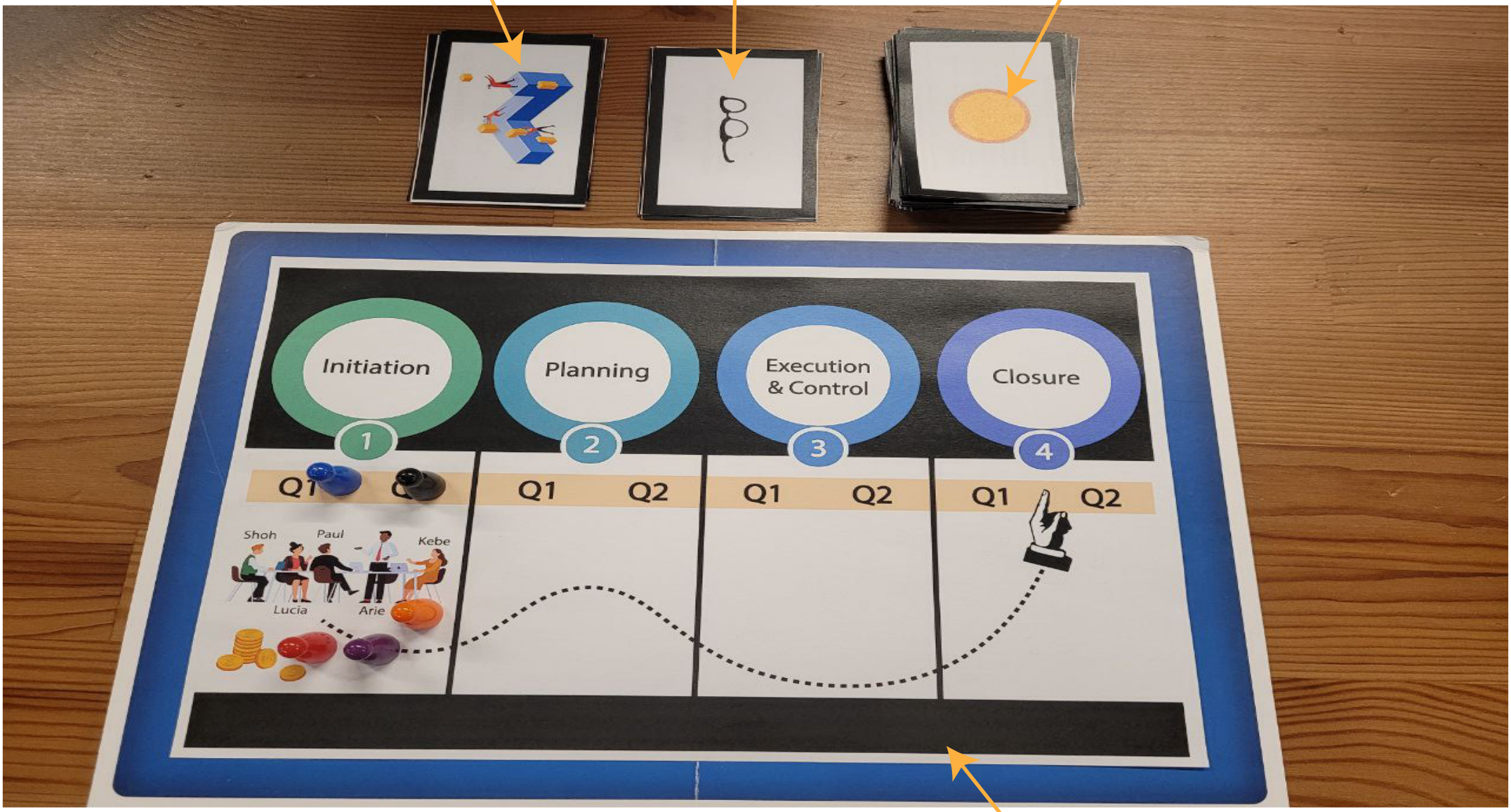
Shoh can steal 10 coins from another player of his choice at any time. If it occurs while the player is in the project phase, he then has to win 10 coins again to be able to keep making progress on the board.

Lucia can access the course book throughout the whole game but has 3 minutes to answer the question.

Paul has the right to skip 1 question over the course of the game.

Arie starts the game with 5 coins (she can draw a card from the flashcard deck and keep it without answering it).

Kebe can freeze 1 round for any player after 2 rounds of answering flashcards.


PROJECT CASES CARDS
CHARACTERS CARDS
FLASHCARDS FOR COINS COLLECTION
Initiation
Planning
Execution & Control
Closure
1
2
3
4
Q1
Q2
Q1
Q2
Q1
Q2
Q1
Q2
Shoh
Paul
Kebe
Lucia
Arie
THE BOARD

Appendix 3. Data base of game questions and flashcards

Questions

The Olympic Stadium Construction Project

Project summary:

You have been assigned as a project manager of the Olympic Stadium Construction Project. The Project objective is to design and build a world class multi-sporting venue with a capacity for 80,000 spectators for the London 2012 Olympic Games in Stratford. Project has to be completed between 2007- 2011, with an estimated budget of £300 million

Initiation phase:

Question 1. What do you think are the project triggers (rationale)?

A. *Change driven – transform east London;*
B. *Market driven – Provide huge investment opportunities for the city, tourism*
C. *Innovation driven – Sustainability practices, waste, energy, social inclusion and green building*
D. *All of the above*

Question 2. There are different strategies for managing stakeholders depending on their influence and interest scale. You are offered to fill the table below by selecting one stakeholder from the list and also choose the strategy for managing them.

CRITERIA		Interest	
		Large	Small
Influence	Critical	G1:	G2:
	Marginal	G3:	G4:

List of stakeholders: London Council Mayor of London, World community, Londoners, Athletes, Director to Finance.
Management strategies: Satisfy, Collaborate, Monitor, Inform

Planning phase:

Question 1. Identify the most suitable project lifecycle model based on the nature of the project

A. *Predictive lifecycle model;*
B. *Adaptive lifecycle model;*
C. *Holistic model*

Question 2. You have been offered to select the project success factors from the list below:

A. *Schedule compliance, budget compliance, quality of performance;*
B. *Contractor's satisfaction, environmental impact minimization;*
C. *Business & Commercial performance;*
D. *Adequate project planning, approval by the client, effective communication*

Execution & control phase:

Question 1. Before the project execution, you have been requested by the Client to submit Risk Management Plan (RMP). Re-shuffle stages below to make a correct sequence for the RMP development:

A. *Prioritize risks*
B. *Develop a response strategy*
C. *Identify major risks*
D. *Evaluate and revise*
E. *Establish the risk management plan*

Question 2. You need to choose from the list below which of the activities below can be done by both project manager and project controllers:

A. *Monitor stakeholders and deliverables;*
B. *Monitor quality and budget;*
C. *Monitor budget and schedule;*
D. *Monitor vendors and procurement process*

Closing phase:

Question 1. You have achieved the project completion within the estimated timeline, and target quality. The stadium has turned into one of London's landmark. However, the actual budget has risen from planned £300 to £486 million. Would you conclude the project was successful?

A. *Yes*
B. *No*
C. *It depends*

Question 2. After 5 years after the project commissioning, in 2016 the stadium was retrofitted. The cost of retrofitting the Stadium has risen from a budgeted £190 million to £323 million. On 1 November 2016, Sadiq Khan, mayor of London, announced an investigation into the rising costs of West Ham's London Stadium. On 1 December 2017, the report into the Stadium was published, revealing for the first time the depth of its financial difficulties. Do you think there is anything you could have done during the planning of the original construction project to prevent this retrofitting budget rise?

A. *No;*
B. *Partially, by factoring in future retrofitting possibility in the original stadium design;*
C. *Yes, this could have been fully prevented by extending construction timeline and procuring better quality materials;*

Answers

The Olympic Stadium Construction Project

Project summary:

You have been assigned as a project manager of the Olympic Stadium Construction Project. The Project objective is to design and build a world class multi-sporting venue with a capacity for 80,000 spectators for the London 2012 Olympic Games in Stratford. Project has to be completed between 2007- 2011, with an estimated budget of £300 million

Initiation phase:

Question 1. What do you think are the project triggers (rationale)?

A. *Change driven – transform east London;*
B. *Market driven – Provide huge investment opportunities for the city, tourism*
C. *Innovation driven – Sustainability practices, waste, energy, social inclusion and green building*
D. ***All of the above***

Question 2. There are different strategies for managing stakeholders depending on their influence and interest scale. You are offered to fill the table below by selecting one stakeholder from the list and also choose the strategy for managing them.

CRITERIA		Interest	
		Large	**Small**
Influence	**Critical**	G1: London Council COLLABORATE	G2: Mayor of London; Director of Finance SATISFY
	Marginal	G3: Londoners Athletes INFORM	G4: World community MONITOR

List of stakeholders: London Council Mayor of London, World community, Londoners, Athletes, Director to Finance.
Management strategies: Satisfy, Collaborate, Monitor, Inform

Planning phase:

Question 1. Identify the most suitable project lifecycle model based on the nature of the project

A. ***Predictive lifecycle model;***
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C. *Holistic model*

Question 2. You have been offered to select the project success factors from the list below:

A. *Schedule compliance, budget compliance, quality of performance;*
B. *Contractor's satisfaction, environmental impact minimization;*
C. *Business & Commercial performance;*

D. ***Adequate project planning, approval by the client, effective communication***

Execution & control phase:

Question 1. Before the project execution, you have been requested by the Client to submit Risk Management Plan (RMP). Re-shuffle stages below to make a correct sequence for the RMP development:

A. *Prioritize risks* ***(2)***
B. *Develop a response strategy* ***(3)***
C. *Identify major risks* ***(1)***
D. *Evaluate and revise* ***(5)***
E. *Establish the risk management plan* ***(4)***

Question 2. You need to choose from the list below which of the activities below can be done by both project manager and project controllers:

A. *Monitor stakeholders and deliverables;*
B. *Monitor quality and budget;*
C. ***Monitor budget and schedule;***
D. *Monitor vendors and procurement process*

Closing phase:

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B. *No*
C. *It depends*

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A. *No;*
B. ***Partially, by factoring in future retrofitting possibility in the original stadium design;***
C. *Yes, this could have been fully prevented by extending construction timeline and procuring better quality materials;*

Recruitment of men in the health sector

Project summary:

You have been given the case study of recruiting men in the health sector. The municipality decided to start a project to recruit and hire male employees in the health sector: in fact, only 10% of the health sector workers are men, and given the need for 4500 new workers, this is a great potential for hiring new men.

Initiation phase:

Question n.1 Norway risks a shortage of 40,000 health care workers by 2030, and the municipality decided to start the project due to the fear of not having enough resources for the elder boom. The need to hire new health care workers can be defined as:

A. The purpose
B. The outcome
C. The rational
D. The output

Question n.2 The municipality is the client of the project, so it has a great interest in the success of such, and can potentially influence the execution of the project itself. Another stakeholder identified is NAV, which has a great interest in the project and is very influential: without its financial support and cooperation, it is difficult to carry out the project. Given the interest/influence matrix by which stakeholders are designated, place the municipality and NAV in the right quadrants.

	Interest	
Influence	*Small*	*Large*
Critical		
Marginal		

Write in the missing space the type of strategy to be implemented for each of the two stakeholders, according to the matrix above.

NAV _____ *Municipality* _____

Planning phase:

Question n.3 Definitions of plan or specifications driven model and adaptive or incremental model will be given below: link each definition to the correct plan type.

a. *A style of development that attempts to plan for and anticipate up front all of the features a user might want in the end product and to determine how best to build those features. It is based on execution of a sequential set of work-specific phase.* ____
b. *The goal is first divided into pieces and then developed. This model reduces uncertainty because the goal is developed into smaller subgoals, and because you do not have to wait until the end of each task for evaluation. In addition, it is a flexible model in as much as it develops and grows along with the execution of the project.* ____

A. Adaptive or incremental model.
B. Plan or specifications driven model.

Question n.4 The project involves recruiting new health care workers from among men in the first phase, and after that, a preparation and training phase, supported by NAV. Which of the following is the success factor best suited to be applied to the project?

A. *Proven technology*
B. *Client consultation*
C. *Good performance by suppliers*
D. *Training provision*

Question n.5 The project manager generated great awareness of the project by making use of the media channels: he used social media, put up posters at the bus stop, and created clothing pieces that promoted the project with a slogan. Referring to this information, what kind of plan are you referring to?

A. *Production Plan*
B. *Quality Plan*
C. *Communcation Plan*

Execution & control phase:

Question n. 6 The project in its execution faced several challenges. In particular, it faced the risk of not finding desired health care workers, and the risk that other types of unwanted appliers would call for the work. According to that, given the main risk sources listed below, which of these is the correct one?

A. *Product (technology)*
B. *People*
C. *Organizational*
D. *Context*

Question n. 7 Regarding risk management, definitions will be given below: indicate in the blank space to which stage each definition belongs. Here are the options: risk identification, risk monitoring, risk planning risk assesment and prioritization:

A. *Follow up the measures, consider the change of risk, new risk factors, impact of measures* _____
B. *Consider the consequences and probabilities* _____
C. *Factors that can cause threats/opportunities for the project* _____
D. *Develop a plan that specifies which options we have in terms of risk and what measures should be taken* _____

Closing phase:

Question n. 8 The project later became a land-based project as it was extended to a large number of municipalities in addition to the municipality that had commissioned it. The prime minister and the minister of health also rewarded the project, and wanted to implement it in many parts of the nation. Referring to this information, was the project successful?

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You have been given the case study of recruiting men in the health sector. The municipality decided to start a project to recruit and hire male employees in the health sector: in fact, only 10% of the health sector workers are men, and given the need for 4500 new workers, this is a great potential for hiring new men.

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	Interest	
	Small	*Large*
Influence	*Critical*	***NAV***
	Marginal	***Municipality***

Write in the missing space the type of strategy to be implemented for each of the two stakeholders, according to the matrix above.
*NAV _**Collaborate**_ Municipality _**Inform**_*

Planning phase:

Question n.3 Definitions of plan or specifications driven model and adaptive or incremental model will be given below: link each definition to the correct plan type.

*a. A style of development that attempts to plan for and anticipate up front all of the features a user might want in the end product and to determine how best to build those features. It is based on execution of a sequential set of work-specific phase. _**B**_*
*b. The goal is first divided into pieces and then developed. This model reduces uncertainty because the goal is developed into smaller subgoals, and because you do not have to wait until the end of each task for evaluation. In addition, it is a flexible model in as much as it develops and grows along with the execution of the project. _**A**_*

A. Adaptive or incremental model.
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A. *Follow up the measures, consider the change of risk, new risk factors, impact of measures* ___**Risk Monitoring**____
B. *Consider the consequences and probabilities* ____**Risk assesment and prioritization**___
C. *Factors that can cause threats/opportunities for the project* __**Risk identification**___
D. *Develop a plan that specifies which options we have in terms of risk and what measures should be taken* __**Risk Planning**__

Closing phase:

Question n. 8 The project later became a land-based project as it was extended to a large number of municipalities in addition to the municipality that had commissioned it. The prime minister and the minister of health also rewarded the project, and wanted to implement it in many parts of the nation. Referring to this information, was the project successful?

Yes

Cost optimization of a product

Project Summary:

The following case has emphasis on what happens when you go from a small cost optimization-project to a much more complex project. The case is about the development of more cost-effective version of microchips, which due to several reasons develop into the creation of an entire new microchip.

Initiation Phase:

Question 1. The microchip called Alpha was first developed into a new product, "Alpha-1". The rationale for this development can be placed into one of the four categories of rationales stated by Jessen (2002). Which category is the most suitable for development of "Alpha-1"?

A. To solve a problem that exists and must be addressed immediately in order to maintain appropriate and profitable operation
B. To prevent a future problem
C. To achieve a business or strategic objective
D. To exploit opportunities arising from new technology or a new market

Question 2. Which category is most suitable for the following development of the Bravo-project?

A. To solve a problem that exists and must be addressed immediately in order to maintain appropriate and profitable operation
B. To prevent a future problem
C. To achieve a business or strategic objective
D. To exploit opportunities arising from new technology or a new market

Planning Phase

Question 1. With the transition from the "Bravo" to the "Bravo-Plus", the project changed its scope from a cost-optimization-project to a product development-project. According to this case study, what could be a central consequence of this

transition with respect to organization and distribution of resources?

A. The change to a product development-project created a release of resources compared to the former project-type because the new project was much less resource-demanding
B. The change to a product development-project required expertise from other departments, which were not always available. This lead to some challenges with the progress
C. The change to a product development-project had no particular effect on the type and amount of resources needed, so it did not affect the progress.
D. The change

Question 2. Who would have the highest influence in the "Bravo-Plus"-project?

A. The different testing and design-departments
B. The customers
C. The politicians
D. The investors

Question 3. The development of the new products was based on clear purposes, and the development of "Bravo" came with clear objectives. What kind of success factors can this be described as?

A. Case-specific factors
B. Structural factors
C. Cultural factors
D. None of the above

Execution Phase

Question 1. What became the main results of the project?

A. 15% shorter duration time for the project and approximately 100 % seamless transition to "Bravo"
B. Bravo-Plus became significantly cheaper than the "Alpha-1" version, and the new version had much better functionality
C. The "Bravo-plus" had approximately the same cost and functionality as the "Alpha-1"
D. Project duration became four times longer than planned and the 100% seamless transition to "Bravo" was not met

Question 2. What was the reason for the transition from "Bravo" to "BravoPlus"?

A. To make it more compatible with the new platform of the company
B. To save money with respect to weight and energy requirements
C. Because of external pressure from customers and investors
D. "Bravo" didn't work ideally

Phase 4. Closing

Question 1. What can be named as one of the main reasons for the challenges in this case?

A. Change of project-type and lack of experience from the leadership
B. Small budget according to planning
C. Disagreement between different stakeholders
D. Unexpected delays due to external uncontrollable factors

Cost optimization of a product

Project Summary

The following case has emphasis on what happens when you go from a small cost optimization-project to a much more complex project. The case is about the development of more cost-effective version of microchips, which due to several reasons develop into the creation of an entire new microchip.

Phase 1. Initiation

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C. Because of external pressure from customers and investors
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Phase 4. Closing

Question 1. What can be named as one of the main reasons for the challenges in this case?

A. Change of project-type and lack of experience from the leadership
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D. Unexpected delays due to external uncontrollable factors

Questions

Automated file processing

Summary: this case shows the importance of continuous communication between different stakeholders and project participants. It also shows the benefits of good planning and a flexible approach to achieve success in the project.

Key word: stakeholder, good communication, close monitoring

Startup phase (Initiation and Planning)

The first phase of the project was to gather the requirement and information that already existed in term of solution and what needs should be prioritized with respect to organization's action plan. The framework of the management of the project was relatively unclear in the first stage and therefore interview was held with the key personnel of the organization. Subsequently, the project requirement was recorded in a project charter which describe all the requirement. Then the project charter was approved by the project office. All the millstone and associated tasks and sub tasks are identified and linked to the organizations action plan therefore the project was anchored in the organization and taken as apriority issue.

Execution phase

To mention some of the challenges or the incidents during the execution, the scope of the work was expanded several times which was realized during execution phase. The decision of changing all the existing data base into Norwegian was made which was not part of the original plan. However, such kind of expanding of scope and prioritizing of development sequences was made in a close collaboration and dialogue of management with project teams. The project manager was not skilled at communicating requirement and ensuring the requirement were met. This was due to lack of experience and difficult to assess the scope of some of the tasks.

Completion phase

The project took almost twice of planned duration and became expensive. The project team made error in its estimates (6 months to complete the project) at startup. Two of the milestones had not been completed but these were but they were expected to be reached within one month after the formal end of the project. But the new solution/system used less than one hour to do all the works on files. The testing was carried out using historic data and project appeared to fulfill all the success criteria except time and resources. Finally, after testing, the specialist team testified how their work is simplified by the project.

Answer

Automated file processing

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Initial and planning phase

1. What was the reason for uncertainties related to estimate that was seen in the project:

A. Due to the changing of requirements

B. Lack of knowledge about the scope and work

C. Numerous and diverse expectations

D. A and B

E. All

2. Which one of the following statements are correct about the project team:

A. Project was free to expand the scope and prioritize the sequence in consultation with management team

B. The management team was solely autonomous to dictate the project changes and project team

C. Client was the main source of the changes in the project

D. All are correct

3. Which of the following was not included in the project chart during the initial phase of the project

A. Purpose of the project

B. Dependencies on the projects,

C. The strategic link of the project with the organizational business plan

D. Risks assessment

E. None of the above

Execution

4. What was the counter measures that was taken by the organization and project team in responded to the changes which came during execution phase:

A. Stick to the original plan

B. Flexible to adapt the changes

C. Drop the initial plan and start to develop a new project plan considering changes

D. Appoint a new staff member with high skill and competency to deal with uncertainties.

5. What was the 'bumps in the road' that was not anticipated at the start of the project

A. Translating the data base bases and the packages into Norwegian

B. The depth and duration of the work to establish common rule to control quality of data

C. Unclear technical frame of the project that did not separate the development, production, and testing environment clearly.

D. A and B

E. All

6. Which one of the following is true about the project manager:

A. The manager has experiences on similar projects

B. Lack general technical skills

C. Beside to project manager role, he also played system developer role in project

D. He didn't take any training at the initial phase of the project

Completion phase

7.**One of the following does not characterize the project and its completion phase:**

A. Project contribution to transformation
B. Project has impact on the business or strategy
C. Uncertainty during execution
D. Organizational complexity

8. **In addition to good planning, which one of the following was not the other factors that contributed to the project's success**

A. **Realistic estimate and Project manager effectiveness to manage the project**,
B. Effective stakeholder mapping and involvement
C. Client satisfaction
D. Top management support
E. All

Initial and planning phase

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Execution

4. What was the counter measures that was taken by the organization and project team in responded to the changes which came during execution phase:

A. Stick to the original plan

B. Flexible to adapt the changes

C. Drop the initial plan and start to develop a new project plan considering changes

D. Appoint a new staff member with high skill and competency to deal with uncertainties.

5. What was the 'bumps in the road' that was not anticipated at the start of the project

A. Translating the data base bases and the packages into Norwegian
B. The depth and duration of the work to establish common rule to control quality of data
C. Unclear technical frame of the project that did not separate the development, production, and testing environment clearly.
D. A and B
E. All

6. Which one of the following is true about the project manager:

A. have project management experiences on similar projects

B. lack general technical skill

C. beside to project manager role, he also a played system developer role in project

D. He didn't take any training at the initial phase of the project

Completion phase

7.**One of the following does not characterize the project and its completion phase:**

A. Project contribution to transformation
B. Project has impact on the business or strategy
C. Uncertainty during execution
D. Organizational complexity

8. **In addition to good planning, which one of the following was not the other factors that contributed to the project's success**

A. Realistic estimate and Project manager effectiveness to manage the project,
B. Effective stakeholder mapping and involvement
C. Client satisfaction
D. Top management support
E. All

Implementation of fast-track joint replacement surgery

Restructuring project

Project summary:

St. Olav's hospital is the second largest centre in Norway, which thus represents a significant commitment in terms of quality registration, research, and development. The hospital wants to implement fast-track surgeries.

Fast-track is a concept for the organization and implementation of surgical treatment when the objective is for the patient to achieve a normal or optimal functioning state as quickly as possible. In order for this objective to be fulfilled, the fast-track approach should focus on all relevant elements, namely preoperative information, stress reduction (surgical), pain management, mobilization, and nutrition. Fast-track involves the introduction of evidence based practices in all patient pathways, from when the procedure is decided upon to when the patient returns home after surgery.

Initiation phase:

Q1: What is the first action/step to take in the project life cycle?

……..

"Within orthopaedics, there is a high volume of activity in joint replacement surgery and the procedure itself offers great opportunities for both the standardization and streamlining of logistics and patient care. In recent years, several models for fast-track surgery have been proposed and in many cases they have been based on joint replacement surgery. The advantages of fast-track surgery have been documented from measurements of a number of parameters such as; patient satisfaction, rehabilitation time, length of stay, and treatment costs. The plans for joint replacement surgery entailed major restructuring. To carry out such reconstruction it is necessary to be able to follow and document the results in order to be certain that the department concerned delivers equally good or better results compared with departments elsewhere. In addition, there is currently a general trend towards transparency regarding treatment outcomes and this calls for good quality-assured data. The orthopaedic department at St. Olav's hospital has reorganized its research relating to joint prostheses in its centre for orthopaedic implants. Hence, it was natural that the responsibility for establishing and operating the

database should be assigned to that centre, so that data would be available for clinical research. In terms of the volume of joint replacement surgery, St. Olav's hospital is the second largest centre in Norway, which thus represents a significant commitment in terms of quality registration, research, and development."

Q2: what kind of rationale does the above text point to?

A) *preventing problems (upgrading/maintenance)*
B) *fixing a problem*
C) *reflecting company strategy*

Planning phase:

"In autumn 2009, the orthopaedic department was moved to the mobility centre (Bevegelsessenteret), so that all orthopaedic treatment would be done in one centre. Hence, it was necessary to prepare for the restructuring well in advance of occupancy of the new building."

Q3: What type of approach must be taken in this context?

A) *adaptive approach*
B) *incremental approach*
C) *specifications driven*

Q4: what is de downside of the chosen approach

A) *it is the slower approach of the options*
B) *low capacity to react to unexpected challenges*
C) *it had too many feedback moments*

Execution & control phase:

"All members of the team were highly skilled in their specialist field, but were not exempt from daily patient care. Many of them also worked shifts, which sometimes presented challenges when it came to organizing meetings that were to be attended by all members. Some team members experienced conflicts of loyalty with respect to their line manager and the project when they had to prioritize their obligations. This was not a good situation, but one that was unavoidable in the hospital. In many cases, the project manager had to perform the tasks in order to relieve team members and ensure that the project tasks were done at the right time. Throughout the project, there was always focus on the importance of good interdisciplinary collaboration and a strong anchoring in management, and this was probably a major contribution to the project's success."

Q5:This is a typical problem of what type of project organization structure?

A) *Matrix type*
B) *project type*
C) *classical type*

"To ensure good cooperation within the project team and the parent company, the project management chose to involve all xxxx from the start, to enable them to have a sense of ownership of the project. It was always emphasized that decisions should be made jointly and that there should be loyalty to the decisions that were taken."

Q6: The contact with shareholder group xxx, for what kind of shareholder group is this strategy best fitting?

A) group 1
B) group 2
C) group 3
D) group 4

Closing phase:

Project objectives:

• Perform 117 primary prosthesis operations in 2010
• Perform 400 primary prosthesis operations in 2011 and 2012
• Keep to schedule (i.e. flowchart for surgery and anaesthesia)
• The time between a patient's attendance at the pre-operative clinic and their surgery should not exceed 3 months (average waiting time from pre-operative clinic until surgery)
• Post-operative length of stay < 4 days, with 90% travelling home directly after surgery
• Patient satisfaction > 90%
• Personnel satisfaction.

In addition, the project was expected to result in the following:
• Creation and implementation of a database of quality indicators
• Creation and implementation of management tools for data collection
• Training and implementation of registration procedures for personnel.

The fast-track joint replacement surgery project was implemented on September 2010, and the following objectives were met:

• Good interdisciplinary collaboration and very satisfied patients
• Good reputation (generated great interest, with study visits from members of several other departments in Norway)
• High quality at all stages in the treatment plan, and good patient logistics and use of resources
• Increased numbers of operations per week in the same number of operating theatres as used previously.

The project was completed at the end of 2012. The measurements of parameters showed that the project was completed well on time and that all objectives

were fulfilled. A major operational change was implemented according to plan, without any increase in waiting lists for surgery:

• In total, 134 patients were operated on in 2010; the target was 117.
• Compared with the target post-operative length of stay of < 4 days and 90% travelled home directly after surgery, the corresponding results were 3 days and 90% by the end of March 2011
• By the end of March 2011, patient satisfaction was 94%, which was slightly higher than the target of 90% patient satisfaction

Q7: does the above objective and results say more about the project management succes, or the project succes?

A) project succes
B) project management succes

Q8: when looking at the objectives and the results, is the project a success?

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B) no

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Initiation phase:

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make a project charter

"Within orthopaedics, there is a high volume of activity in joint replacement surgery and the procedure itself offers great opportunities for both the standardization and streamlining of logistics and patient care. In recent years, several models for fast-track surgery have been proposed and in many cases they have been based on joint replacement surgery. The advantages of fast-track surgery have been documented from measurements of a number of parameters such as; patient satisfaction, rehabilitation time, length of stay, and treatment costs. The plans for joint replacement surgery entailed major restructuring. To carry out such reconstruction it is necessary to be able to follow and document the results in order to be certain that the department concerned delivers equally good or better results compared with departments elsewhere. In addition, there is currently a general trend towards transparency regarding treatment outcomes and this calls for good quality-assured data. The orthopaedic department at St. Olav's hospital has reorganized its research relating to joint prostheses in its centre for orthopaedic implants. Hence, it was natural that the responsibility for establishing and operating the database should be assigned to that centre, so that data would be available for clinical research. In terms of the volume of joint replacement surgery, St. Olav's hospital is the second

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Q8: when looking at the objectives and the results, is the project a succes?

A) yes
B) no

Shoh

has a mandate to steal 10 coins from another player of his choice at any time

Lucia

Can access the course book throughout the whole game but has 3 minutes to answer the question

Paul

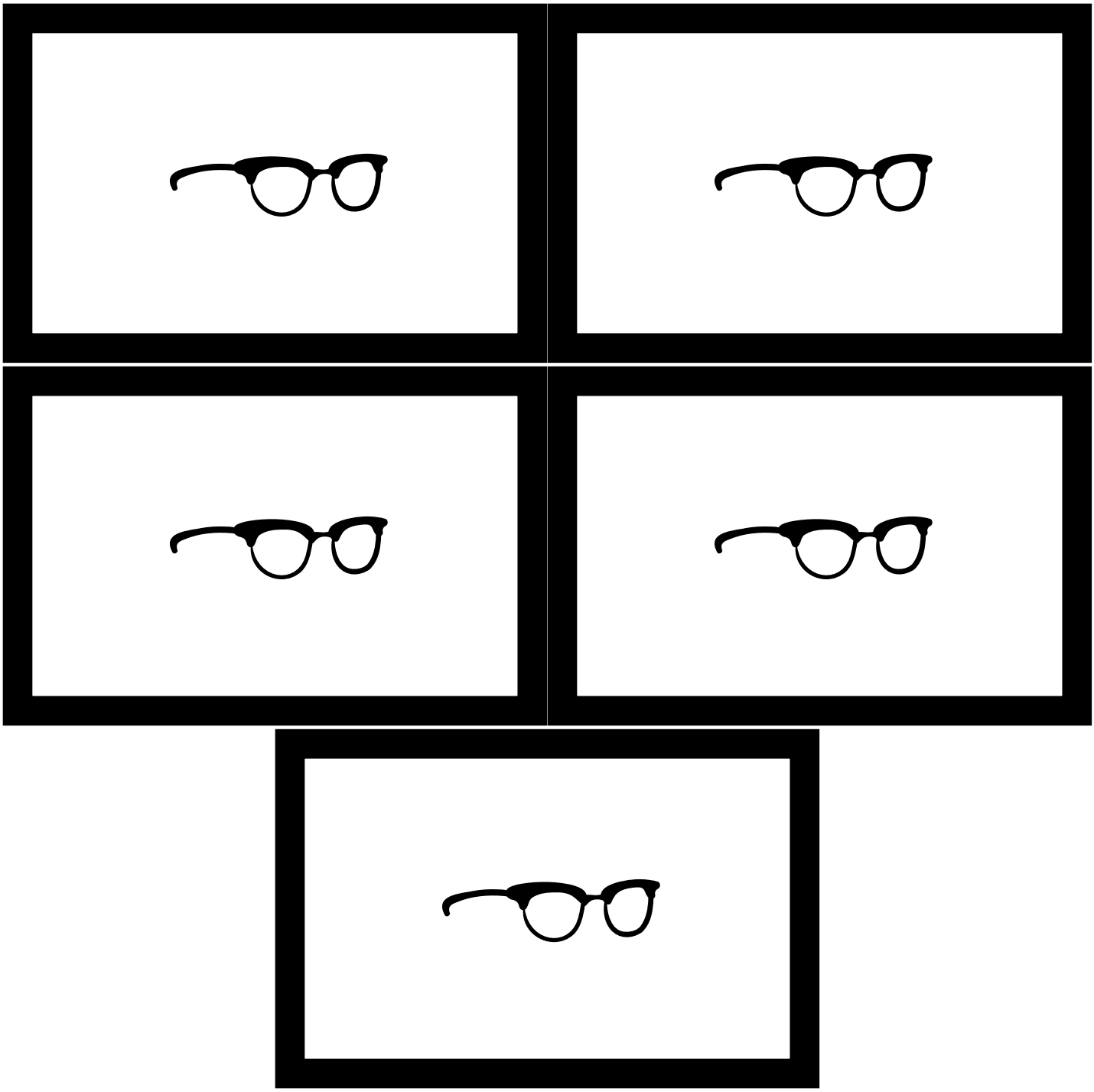
has the right to skip 1 question over the course of the game

Arie

gets the upfront 5 coins before the game start

Kebe

can freeze 1 round for any player after 2 rounds of Q&A for flashcards



Construction project

(*16* Coins to start)

Chip cost optimisation

(*14* Coins to start)

IT & Software project

(*14* Coins to start)

Recruiting in health sector

(*12* Coins to start)

Implementation of fast-track surgery

(*15* Coins to start)

Question 1: What differentiates a project from a regular operational activity?

1. A regular operational activity is a process of change.
2. A project must be carried out within certain restrictions.
3. A project always consists of people from one department only.
4. There is no difference.

Explanation: "What separates projects from regular operational activities are the projects' organizational complexity, projects being tools for change and helping implement and realize business objectives and strategy, the limitations the projects have to be completed within, as well as the uncertainty linked to the project and its completion." (p.36)

Question 2: Project characteristics is:

1. What separates a project from a regular operational activity.
2. What separates one project from another.

Explanation: See p.36-43

Question 3: "Projects are used to realize and implement business goals and strategies."

1. True
2. False

Explanation: "Projects are important tools when it comes to implementing new and realizing existing business objectives and strategies." (p.46-48)

Question 4: A project's uncertainty depends on the degree of innovation required to complete it.

1. True
2. False. A project's uncertainty is only dependent on the number of people working on the project.
3. False. A project will only experience uncertainty if the time of delivery is not clarified.
4. False. It is impossible to find a project's uncertainty in advance.

Explanation: "A project's organizational complexity increases if several organizational unities and stakeholders are involved, if resources are brought in externally, and if the final product or service is complex in itself." (p.38-39)

Question 5: Which of these factors contribute to increased organizational complexity in a project?

1. Require people from different departments.
2. External personnel are needed.
3. Several different stakeholders.
4. All the above

Explanation: "A project's organizational complexity increases if several organizational unities and stakeholders are involved, if resources are brought in externally, and if the final product or service is complex in itself." (p.37-38)

Question 6: Projects only try to improve existing processes.

1. True
2. False

Explanation: "Projects can change existing processes, products and services, but also come up with something completely unique." (p.41-43)

Question 1: In a stakeholder mapping the most common is to look at the stakeholders' influence over and involvement in the project.

1. True
2. False. The most common is to look at their interest and involvement in the project.
3. False. The most common is just to look at their interest in the project.
4. False. The most common is to look at their influence over and interest in the project.

Explanation: "The most common way to map stakeholders is using their influence over and interest in the project along the axis." (p.53)

Question 2: A stakeholder is an individual or group who:

1. Affected by or able to influence the project.
2. Ordered the project be carried out.

Question 3: Stakeholders with low influence over and interest in the project can be ignored all together.

1. True
2. False

Explanation: "The stakeholders with low influence over and interest in the project should be monitored in case this situation changes." (p.53-54)

Question 4: In a stakeholder mapping, which stakeholder should have the lowest priority?

1. Stakeholders with high influence and high interest.
2. Stakeholders with high influence and low interest
3. Stakeholders with low influence and high interest
4. Stakeholders with low influence and low interest

Question 5: What statement is most correct regarding stakeholders?

1. A stakeholder cannot have both interest in and influence over the project.
2. The stakeholders of a project can only be individual persons.
3. A stakeholder is always influenced by the result of the project.
4. A stakeholder does not necessarily have influence over the project.

Explanation: "A stakeholder is an individual or a group of individuals who are affected by or able to influence the project." (p. 49)

Question 6: Stakeholder mapping is a tool used to:

1. Implement strategies towards a stakeholder.
2. Position and categorize stakeholders relative to each other.

Question 7: A stakeholder's expectation towards the final product or service is:

1. A wanted characteristic.
2. Specific and tangible.

Question 8: A stakeholder's requirement towards the final product or service is:

1. A vague characteristic.
2. Specific and tangible.

Question 9: In a stakeholder mapping, which stakeholder should have the highest priority?

1. Stakeholders with high influence and high interest.
2. Stakeholders with high influence and low interest
3. Stakeholders with low influence and high interest
4. Stakeholders with low influence and low interest

Explanation: "Stakeholders with a high influence over and interest in the project should be considered key stakeholders. They should be closely involved in the process and have their requirements and expectations towards the project closely considered." (p.53-54)

Question 10: Which of these expectations is most likely to belong to the projects end user?

1. The project being profitable.
2. The organization's reputation growing.
3. New functionalities.
4. Compliance with rules.

Explanation: "A stakeholder is an individual or a group of individuals who are affected by or able to influence the project." (p.51)

Question 1: Which statement describes the role of the project owner?

1. Defines the problem and purpose to which the project should respond
2. Initiates the project
3. Defines the intended outcome of the project
4. All the above

Explanation: The project owner is the client, and the project should respond to the client's wishes!

Question 2: "A collection of unique processes with the intention of delivering a result within the given constraints" describes …:

1. A deliverable
2. The project lifecycle
3. The initiation phase
4. A project, from the perspective of the project organization

Question 3: The project lifecycle is defined as:

1. A visualization of the resources required and the allocation of these to reach the project's goal
2. A visualization of the most important tasks and processes required to reach the project's goal
3. A visualization of the stakeholders' interest and influence on the project
4. A visualization of the contribution from ongoing projects in a project organization towards the vision

Question 4: "Structuring and organizing the practice of projects to adhere to the different stakeholder perspectives" describes …:

1. Project management as a field of study
2. Initiation phase
3. Decision gates
4. A project

Question 5: "Anyone who has to live with the result of the project after implementation" describes:

1. The end-user
2. The project manager
3. A stakeholder (in general)
4. The owner

Question 6: Risk and opportunity:

1. Both increase throughout the project life cycle
2. Vary inversely throughout the project life cycle
3. Both decrease throughout the project life cycle
4. Do not vary throughout the project life cycle

Explanation: As time passes and more specifications are made and uncertainty is eliminated, the possibility for big changes are reduced, reducing both risk and opportunity.

Question 7: The project progresses to the next phase…

1. When it's time according to the schedule
2. When the project manager approves
3. After passing the evaluation at the decision gate
4. When assessment is needed

Question 8: Whose role is it to adjust ambitions?

1. The owner
2. Internal end-user
3. External end-user
4. Project manager

Explanation: The project owner is the client, thus has the power to choose the goals. Therefore, it is also the owner who must adjust them.

Question 9: In plan driven projects, the client interest is highest at …:

1. Initiation and close out phase
2. Initiation and planning phase
3. Planning and execution phase
4. All phases

Explanation: The client presents their wishes initially, but it usually does not matter to them how the project is carried out (planning and execution), as long as it is delivered according to the specifications in the close-out phase.

Question 10: How does the Project Manager facilitate for realization of the project's desired effects?

1. It is not possible due to contextual uncertainty beyond the control of individuals
2. Good project management and good follow-up
3. Give all the various stakeholders equal attention
4. Focus solely on maximization of the positive effects

Explanation: The project manager should facilitate to the best of their ability for the purpose to be realized, which is done through good project management and good follow-up.

Question 11: Internal end-users …:

1. Are not stakeholders
2. Belong to the project organization
3. Belong to the owner organization
4. Are clients of the owner

Question 12: What is NOT one of the purposes of defining a project lifecycle:

1. Group tasks
2. Describing the required tasks for the project's execution
3. Fixing possible occasions to terminate the project
4. Defining the project purpose together with the client

Explanation: The client defines the project purpose!

Question 13: The statement "Identification of rationale, outcome and purpose is done in the planning phase" is …:

1. True
2. Depends on the context
3. Depends on the project
4. False

Explanation: This is done in the initiation phase!

Question 14: "A visualization of the most important tasks and processes required to reach the project's goal" describes:

1. The project lifecycle
2. The mandate
3. An evaluation model
4. Stakeholder mapping

Explanation: The project lifecycle is visualized as work packages places in sequence along a timeline to respond to the trigger factor

Question 1: Which of the following is NOT a tangible description of what the project should result in?

1. Deliverables
2. End goals
3. Outcome
4. Output

Question 2: The project mandate …:

1. Forms the basis for management and control
2. Specifies how far the client is willing to go in order to complete the project
3. Is made to create a common understanding of the goals, and uncover ambiguities to avoid misunderstandings
4. All the above

Explanation: The mandate is document describing the scope of the project.

Question 3: The outcome describes …:

1. The product produced by the project
2. The need that triggered project launch
3. The intended beneficial gains of the project
4. The purpose

Explanation: The outcome/objectives are the benefits that potentially can be realized, whereas the actual product/solution etc. produced in the project is called the output.

Question 4: Which one of the following allegations is NOT true?

1. The initiation phase is the first phase in the project lifecycle
2. The greatest opportunity to influence the project is in the initiation phase
3. The mandate is the basis for governance and control throughout the project's lifetime
4. Flexibility to solve occurring problems is key in the initiation phase

Explanation: Flexibility and trust is far more crucial in the execution phase, as the initiation phase primarily deals with clarification and planning.

Question 5: Which of the following describe BEST the purpose of the initiation/conceptual phase:

1. To define the constraints
2. To define the stakeholders
3. To define the business objectives
4. To align project stakeholders to achieve project goals

Explanation: The overall purpose of stakeholder management is to create value through achievement of the project goal.

Question 6: Which of the following is NOT a rationale category?

1. A preventative move to avoid future problems
2. Seize the opportunity in new technology or new markets
3. Utilize available financial resources
4. Solve an existing problem

Explanation: The rationale would be to reach a business goal or a strategy goal, since the rationale explains why the project is required in the particular area. Available resources only facilitate for this.

Question 7: "An explanation of the reason the project is required in the particular area" describes the …:

1. Objective
2. Purpose
3. Mandate
4. Rationale

Question 8: "A desired future state" describes the …:

1. Trigger factor
2. Purpose
3. Output
4. Rationale

Question 9: Which of the following events occur before the initiation phase?

1. Project execution
2. Stimuli
3. Planning
4. Conceptualization

Explanation: The stimuli is the trigger factor that initiates the project and initiation phase is phase 1.

Question 10: "A factual description of the starting point" describes the …:

1. Trigger factor
2. Purpose
3. Output
4. Rationale

Question 11: The statement "The average waiting time from pre-operative clinic until surgery should not exceed 3 months" describes:

1. The outcome
2. The output
3. The purpose
4. The rationale

Explanation: This is an objective; something they wish to achieve.

Question 12: The statement "Develop and implement a training program for employees" describes:

1. The outcome
2. The output
3. The purpose
4. The rationale

Explanation: This is the product, a deliverable.

Question 13: "Intended benefits that could be realized when a project fulfills its purpose" is …:

1. Outcome
2. Output
3. Rationale
4. Stimuli

Question 14: The statement "To streamline and optimize routines for patients" describes:

1. The outcome
2. The output
3. The purpose
4. The rationale

Explanation: The purpose of optimization for better and more effective patient care is the higher goal for the project.

Question 15: … is a document describing the scope of the project:

1. Rationale
2. Mandate
3. Concept
4. Deliverable

Question 16: Ambiguity …:

1. Does not impact our understating of the problem
2. Is the same as uncertainty
3. Is meant to be reduced by the project mandate
4. All the above

Question 17: Working-processes, models, concepts are examples of:

1. Outcomes
2. Conceptual deliveries
3. Tangible deliveries
4. Rationale

Question 18: John F. Kennedy: Landing a man on the moon and returning him safely to the earth is:

1. The purpose of the Apollo Program
2. One of the project objectives of the Apollo Program
3. A risk factor for the Apollo Program
4. The trigger factor for the Apollo Program

Explanation: The overall purpose of the project was for mankind to have been on the moon

Question 19: Analyzing a competitor with similar products to decide on a M&A" is an example of a project …:

1. Rationale
2. Stimuli
3. Purpose
4. Mandate

Explanation: The rationale is a justification that explains why the project is needed.

Question 1: Achieving project management success is a prerequisite for achieving project success.

1. True
2. False

Explanation: Project management success is about the project's ability to satisfy the contextual and project constraints, while project success is about the project's ability to create value. As it is possible to satisfy one or the other this is false.

Question 2: The first researcher to propose the distinction between project management success and project success was:

1. De Wit
2. Shenar
3. Murphy
4. Wilson and Howcroft
5. Cooke-Davis

Question 3: Wilson and Howcroft are important in project management literature as they:

1. Illustrated that the subjective evaluation of whether a project was a success or not is merely a way of legitimizing the events of the project
2. Linked project management success to process success and established several guidelines for businesses to achieve these

Explanation: More information can be found at p. 55-58 in Road to Success. Cooke-Davis developed the model describing the success factor categories.

Question 4: The objective approach of defining success criteria assume that all stakeholders will have the perception of the project

1. True
2. False

Explanation: This assumption is true and is the main difference between the objective and the subjective approach. More information can be found at p. 54 in Road to Success.

Question 5: "Empowering project team members" could be described as:

1. Success factor
2. Scope statement
3. Risk factor
4. Success measure/criteria

Explanation: It is a success factor as it describes how the individuals in the project organization should act in order to achieve success.

Question 6: "Our goal is to deliver the project with zero accidents" is a:

1. Success factor
2. Success criterion
3. Scope statement
4. Risk factor

Explanation: It is a success criterion as it describes the desired outcome of the project.

Question 7: Success criterion is:

1. Measurable indicators used to assess project outcome
2. Ground rules we collect after completing the project
3. Activities that should be followed during project planning and execution

Question 8: "Our goal is to deliver the project on time" is a:

1. Success criterion
2. Success factor
3. Rational
4. Purpose statement

Explanation: It is a success criterion as it describes the desired outcome of the project.

Question 9: "We shall adhere to our commitments" is a:

1. Success factor
2. Objective
3. Risk factor
4. Success criterion

Explanation: It is a success factor as it describes how the individuals in the project organization should act in order to achieve success.

Question 10: The subjective approach of defining success criteria assume that estimated time and cost of the project can be predicted in the beginning.

1. True
2. False

Explanation: This is an assumption of the objective approach.

Question 11: Project management success is about:

1. How certain stakeholders perceive project implementation phase.
2. The ability of the project to create value
3. Satisfying various project and contextual constraints

Question 12: Project success is about:

1. How certain stakeholders perceive project implementation phase.
2. The ability of the project to create value
3. Satisfying various project and contextual constraints

Question 13: A success factor is:

1. Measurable indicators used to assess project outcome
2. Ground rules we collect after completing the project
3. Activities that should be followed during project planning and execution

Question 14: The definition of success in project has changed from:

1. Being limited to the project life cycle to the entire life cycle of the product or service
2. Entailing the entire product life cycle to being limited to the project life cycle
3. Being limited to the project life cycle to entailing several projects completed by the same project organization

Explanation: There exist several models that describe and classify the success factors of the project several years after completion and from the views of various stakeholders.

Question 15: A project that satisfy time and cost objectives but fails to create value:

1. Project management success
2. Project management success, but project failure
3. Failure in terms of both project management and project
4. Success on all levels

Explanation: As project management success is about the project's ability to satisfy the contextual and project constraints it will be considered a success if the time and cost objectives are withheld. Project success is about the project's ability to create value and thereby it would be considered a failure if this was not achieved.

Question 16: Which of the following is not one of the four types of success according to Shenhar:

1. Project management success
2. Benefits for the client
3. Business success for the parent organization
4. Process success
5. Future success

Question 17: Process success is about:

1. How certain stakeholders perceive project implementation phase.
2. The ability of the project to create value.
3. Satisfying various project and contextual constraints.

Question 18: A project that creates value to the client but fails to deliver on time or according to budget is a:

1. Total success
2. Total failure
3. Project management failure
4. Project failure

Explanation: This is a project success as it has created value, however a project management failure because the project did not stay within the constraints of the project.

Question 1: "Project leader authority" is a critical success factor when there is a high level of/many:

1. Organizational complexity
2. Transformation
3. Business Impact
4. Constraints
5. Uncertainty

Explanation: This success factor is critical to ensure progress in the project.

Question 2: Having clear roles and responsibilities" is a critical success factor when there is a high level of/many:

1. Organizational complexity
2. Transformation
3. Business Impact
4. Constraints
5. Uncertainty

Explanation: Clear roles and responsibilities are important if there is a high level of organizational complexity as these projects often run parallelly with other tasks. In this case it is important to ensure that the individuals know what they need to ensure progress in the project.

Question 3: Project success factors can be defined as:

1. Measurable indicators used to assess project outcome
2. Ground rules we collect after completing the project
3. Measurable indicators used to assess project output
4. Ground rules that will govern the project

Question 4: "Demands that describe how the requirements should be implemented, outlining the solution" is a/are

1. Risk limiting process
2. Excessive requirements
3. One team approach

Question 5: The focusing effect is:

1. A behavioral bias that occurs when human decision-making process attempt to satisfice
2. A cognitive bias that causes us to attribute too much weight to past events and translate them into future expectations.

Question 6: Cultural factors must be complied with in order to be able to:

1. Manage project complexity
2. Manage project uncertainty
3. To create positive and good working environment
4. Manage owner expectations

Explanation: Cultural factors describes elements regarding the culture within the organization and with its stakeholders that should be in place in order to achieve success. Hence certain cultural factors will have a great impact on the working environment.

Question 7: Project management failure leads to project failure.

1. True
2. False

Explanation: Project management success is about the project's ability to satisfy the contextual and project constraints, while project success is about the project's ability to create value. As it is possible to satisfy one or the other this is false.

Question 8: Which statement is true regarding cultural success factors:

1. Generalizable and correlated with project characteristics
2. Generalizable and independent of project characteristics
3. Project specific

Explanation: Cultural success factors describe elements regarding the culture within the organization and with its stakeholders that should be in place in order to achieve success. They are generalizable across project characteristics. There is no ideal culture in the existence of a certain project characteristic.

Question 9: Bounded rationality is:

1. A behavioral bias that occurs when human decision-making process attempt to satisfice
2. A cognitive bias that causes us to attribute too much weight to past events and translate them into future expectations.

Question 10: Loyalty and affiliation towards an organization that one is working with is:

1. Enthusiasm
2. Flexibility
3. Trust
4. Openness

Question 11: According to Gutierrez and Hussein, normative conformity may lead to:

1. Increased motivation
2. Increased team efficiency
3. Loss of creativity
4. Facilitated communication

Explanation: Normative conformity is a change in behavior or belief as a result one's desire to fulfill others' expectations and gain acceptance. Often individuals fear expressing their opinions and ideas, hence losing valuable insight and creativity.

Question 12: Normative conformity is:

1. A cognitive bias that causes us to attribute too much weight to past events and translate them into future expectations
2. A change in behavior or belief as a result one's desire to fulfill others' expectations and gain acceptance

Question 13: A project is organizational complex when:

1. It requires contribution from multiple organizational units
2. The problem has many constraints complicating the project
3. There is a high level of uncertainty
4. It requires competent people

Question 14: End-user/stakeholders' involvement is a critical success factor in a project that:

1. Is organizationally complex
2. Has high level of intended transformation
3. Has many constraints
4. Has high level of uncertainty

Explanation: To achieve the intended transformation the involvement of stakeholders is a critical success factor as it is important to create a willingness and desire for change among the stakeholders for the transformation to set foot.

Question 15: "Project manager has adequate business insights" is a critical success factor when there is a high level of/many:

1. Organizational complexity
2. Transformation
3. Business Impact
4. Constraints
5. Uncertainty

Explanation: In order to convince stakeholders that the transformation is in their best interests, it is important that the project manager understands the needs and impact of various stakeholders and include them when necessary.

Question 16: "Experienced project manager and project group" is a critical success factor when there is a high level of/many:

1. Organizational complexity
2. Transformation
3. Business Impact
4. Constraints
5. Uncertainty

Explanation: When there is a high level of uncertainty it is easier to handle deviation and elements of uncertainty when the project organization holds the "right" expertise.

Question 17: "Routines for deviation" is a critical success factor when there is a high level of/many:

1. Organizational complexity
2. Transformation
3. Business Impact
4. Constraints
5. Uncertainty

Explanation: Routines for deviation is important to ensure efficient handling of problems and/or deviation, as this will reduce the risk of extra costs, lower quality and time overruns.

Question 18: The extent to which one party is willing to depend on somebody, or something, in a given situation with a feeling of relative security is:

1. Enthusiasm
2. Flexibility
3. Trust
4. Openness

Question 19: "Common understanding of the importance of the project to the entire organization" is a critical success factor when there is a high level of/many:

1. Organizational complexity
2. Transformation
3. Business Impact
4. Constraints
5. Uncertainty

Explanation: When the project has a great impact on business it is important to create ownership and dedication to the objectives of the project. This is usually accomplished by creating a common understanding for the importance of the project.

Question 20: Identifying success factors upfront in projects ensures project success.

1. True
2. False

Explanation: Project success is about the project's ability to create value. Although it might be wise to identify the success factors, it is not given that this will lead to project success.

Question 21: Which statement is true regarding structural success factors:

1. Generalizable and correlated with project characteristics
2. Generalizable and independent of project characteristics
3. Project specific

Explanation: A structural success factor describes what the people within the project organization and its stakeholders can do in order to achieve success. It may be linked with certain project characteristics, and thus, they are generalizable.

Question 22: Which of the following is not a structural success factor:

1. Adequate early planning
2. End-user/client/stakeholders involvement
3. Collaboration (“One team”)
4. Trust

Explanation: Trust is a cultural factor, also known as a soft factor.

Question 23: Which of the following is not a cultural success factor:

1. Adequate information flow to stakeholders
2. Loyalty
3. Openness
4. Commitment

Explanation: Adequate information flow to stakeholders is a structural success factor that is important if the project has a high level of complexity.

Question 1: What kind of organization structure is known as “business as usual”?

1. Functional Structure
2. Matrix structure
3. Project Structure
4. Congressional Structure

Explanation: Functional structure is based on the different departments working on tasks within their function. See Chapter 8

Question 2: Decision most likely take longer time in:

1. Functional Structure
2. Matrix structure
3. Project Structure
4. Reverse Structure

Explanation: Double management results in more overhead.

Question 3: What kind of organization structure is logical to use for a consulting firm?

1. Functional Structure
2. Weak Matrix
3. Project Structure
4. Party Structure

Explanation: Consultants mainly work with projects attained customers

Question 4: In which structure type does the line manager and project manager have equal authority?

1. Balanced Matrix structure
2. Functional structure
3. Project Structure
4. Equal power structure

Explanation: See chapter 8.

Question 5: An organization structure where people work in different departments based on professional specialties is known as:

1. Functional structure
2. Matrix structure
3. Project structure

Question 6: Employees may become less loyal to the parent organization is a downside of functional structure.

1. True
2. False

Explanation: See Chapter 8

Question 7: Silo-thinking is biggest threat in:

1. Functional Structure
2. Matrix structure
3. Project Structure
4. Reverse Structure

Explanation: The departments are separated thus struggle to see the needs of the others. See page 79.

Question 8: Risk of Conflicts is highest in

1. Functional Structure
2. Matrix structure
3. Project Structure
4. Congressional Structure

Explanation: This is because team members may have tasks that do not align, and conflicts of interest may appear. See page 125-128.

Question 9: An organizational structure which is a mixture between functional and project structure where employees work within their department and projects at the same time is known as:

1. Functional structure
2. Matrix structure
3. Project structure

Question 10: What kind of organization structure is used to reduce slack?

1. Functional Structure
2. Matrix structure
3. Project Structure
4. Congressional Structure

Explanation: Working with tasks within the department and projects at the same time reduces the time where you have nothing to do.

Question 11: An organizational structure where people are grouped together based on the project they are working on is known as:

1. Functional structure
2. Matrix structure
3. Project structure

Question 12: Failure to understand the impact of the project on the whole organization (see and prioritize only its own needs) is known as :

1. Functional thinking
2. Streamline thinking
3. Silo-thinking
4. Technical disruption

Question 1: Which tool is used to manage scarce resources?

1. WBS
2. S-curve
3. Resource loading chart
4. Network Scheduling

Explanation: Resource loading chart illustrates the use of resources on a timeline See page 139.

Question 2: A Project may have multiple critical paths.

1. True
2. False

Explanation: Critical paths are all paths where you may not increase activity duration without affecting total project duration.

Question 3: The project S-curve is a graph showing

1. The Cost Performance Index at various times
2. Planned Value
3. Earned Value
4. Option 2 and 3 are correct

Explanation: The S-curve is a plot of Planned Value, Actual Costs and Earned Value. See page 149.

Question 4: Premises for a good project plan are:

1. Flexibility
2. Evaluation
3. Systematic and structured processes
4. All the above

Explanation: See page 129.

Question 5: S-Curve is a tool to:

1. Calculate project duration
2. Compare accrued cost with budgeted costs
3. Make the content of the project more clear
4. Allocate and plan use of scarce resource

Explanation: 1 is AON-network, 3 is WBS and 4 is resource loading chart. See page 143.

Question 6: Work packages in WBS are:

1. Weekly planned tasks in the project
2. The amount of workers hired for the project
3. A mini-project with a defined result

Question 7: Earned Value refers to:

1. The number of work hours
2. The incurred expenses
3. The value of the accomplished work
4. The project total costs

Explanation: Earned Value refers to the value of the accomplished work in terms of work hours or costs. See definition on page 147.

Question 8: Which is not true about WBS?

1. It is used to calculate project duration
2. It may be used to justify costs
3. It makes the content of the project more clear
4. It reduces complexity by breaking it down to manageable tasks

Explanation: See page 131-133.

Question 9: Flow in an AON-network is:

1. Duration of an activity
2. Number of activities in the critical path
3. How much time an activity time may be increased without affecting the project's end date
4. None of the above

Explanation: See page 93.

Question 10: When do we use resource loading chart?

1. To compare costs with estimates
2. To allocate scarce resources
3. To determine project duration
4. None of the above

Explanation: See page 139.

Question 11: Cost Performance Index (CPI) is defined as:

1. Earned Value / Actual Costs
2. Actual Costs / Earned Value
3. Earned Value / Planned Value
4. Actual Costs / Planned Value

Explanation: CPI = Earned Value / Actual Costs. See page 147.

Question 12: What an activity has a float of 4, what happens if the activity duration is increased by 2?

1. The float is decreased by 2
2. Nothing happens
3. Project duration increases by 2

Explanation: The activity still has float, thus is not part of a critical path. Increasing the activity duration reduces the time the activity duration may be increased without changing the total project duration.

Question 13: Estimated Project Duration can be defined as:

1. Planned Value / Planned Duration
2. Planned Duration / EAC
3. Actual Costs / Planned Value4
4. Planned Duration / SPI

Explanation: ED = Planned Duration / SPI. See page 148.

Question 14: Which statement is most accurate about WBS?

1. Keep the WBS very detailed level to allow for control
2. Encourage creativity
3. Use WBS to calculate project duration
4. Break up the project into smaller manageable tasks

Explanation: Work packages in WBs are mini-projects. See page 131-133.

Question 15: WBS is used to estimate project duration

1. True
2. False

Explanation: Network analysis is used to estimate project duration Hint see page 132.

Question 16: How do you calculate Float?

1. Float=LF-EF
2. Float=LF-T
3. Float=ES+T
4. Float=LS-ES
5. 1 and 4

Explanation: See page 138.

Question 17: A critical path is:

1. The path with the shortest project duration
2. The path with most activities
3. The path with the longest project duration

Question 18: What is the most common AON-link?

1. FS
2. FF
3. SF
4. SS

Explanation: It is common to look at activities See page 135.

Question 19: Estimated project duration is the incurred expenses divided on the planned value.

1. True
2. False

Explanation: Incurred expenses cannot be used to estimate the project duration. See page 148.

Question 20: Project performance can be accurately determined by evaluating the incurred expenses in relation to the budgeted costs.

1. True
2. False

Explanation: Incurred expenses compared to the budgeted costs is not an accurate measure of project performance since it does not take the value of the work accomplished into consideration. See page 146.

Question 1: Work culture is an example of organizational risk factor

1. True
2. False

Explanation: Work culture is listed as an example of organization-related factors - Therefore, work culture poses a risk to projects. See page 158.

Question 2: What may be the possible benefits of risk management?

1. Increased chance of project success
2. Cost savings
3. Modified objectives
4. Options 1 and 3 are correct

Explanation: «Increased chance» of project success is the only benefits out of the options above that is explicitly mentioned on page 151.

Question 3: What should the risk register contain?

1. Risk description and severity
2. Measures and the responsible
3. Measures status and consequences
4. All the above

Explanation: These elements are listed in the columns in table 31 on page 155.

Question 4: What are the key aspects of risk management?

1. Risk identifying, analyzing and management
2. Risk identifying, avoidance and management
3. Risk avoidance, management and acceptance
4. Risk identifying, analyzing and acceptance

Explanation: On page 151, Pinto(2013) defines risk management as «the art and science of of identifying, analyzing and managing risk throughout the project life cycle..»

Question 5: What are the most important prerequisites when dealing with risk management?

1. Skills in risk management
2. The project status and aspects
3. Necessary time to risk response
4. All the above options are correct

Explanation: «See the last bullet point on page 152.

Question 6: What is not part of the risk management process?

1. Risk identification and assessment
2. Risk acceptance and avoidance
3. Risk monitoring and response planning
4. Risk identification and monitoring

Explanation: The risk management process consists of risk identification, risk assessment, risk response planning and risk monitoring and control. See page 152.

Question 7: An important element in risk monitoring and control is risk register

1. True
2. False

Explanation: It is a good practice to use a risk register. See page 155.

Question 8: Typical examples of product-related risk factors are

1. Infrastructure to support the product or service
2. Ripple effects on the surroundings
3. Government regulations
4. Options 1 and 2 are correct

Explanation: Infrastructure to support the product or service and the ripple effect on the surroundings are listed among some of the examples of product-related risk factors. See page 156.

Question 9: What are the most important aspects needing consideration when deriving risk response?

1. Project characteristics and the risk situation
2. The risk implication for the project's objectives
3. Risk measures consequences for future projects
4. Options 1 and 2 are correct

Explanation: On page 155, project characteristics, the risk situation and the risk implication for the project's objectives are listed as aspects needing consideration.

Question 10: Risk management refers to:

1. Risk identifying
2. Risk analyzing
3. Risk management
4. All the above

Explanation: Risk management refers to risk identifying, analysing and management. See page 151 or Pinto (2013).

Question 11: Government regulations do not pose a risk to a project

1. True
2. False

Explanation: Government regulations are listed as an example of context-related factors. Therefore, government regulations pose a risk to projects. See page 159.

Question 12: In risk management, project stakeholders should not be involved.

1. True
2. False

Explanation: On page 153, stakeholder involvement is mentioned as an element in the risk identification process.

Question 13: What are the two most important aspects considered in risk assessment?

1. Event/factor predictability and correlation with other events/factors
2. Event/factor probability and consequence
3. Event/factor frequency and impact
4. All the above options are correct

Explanation: As indicated in Figure 24 on page 154, the two most important aspects to be considered are event/factor probability and consequence.

Question 14: What types of risk exist in projects?

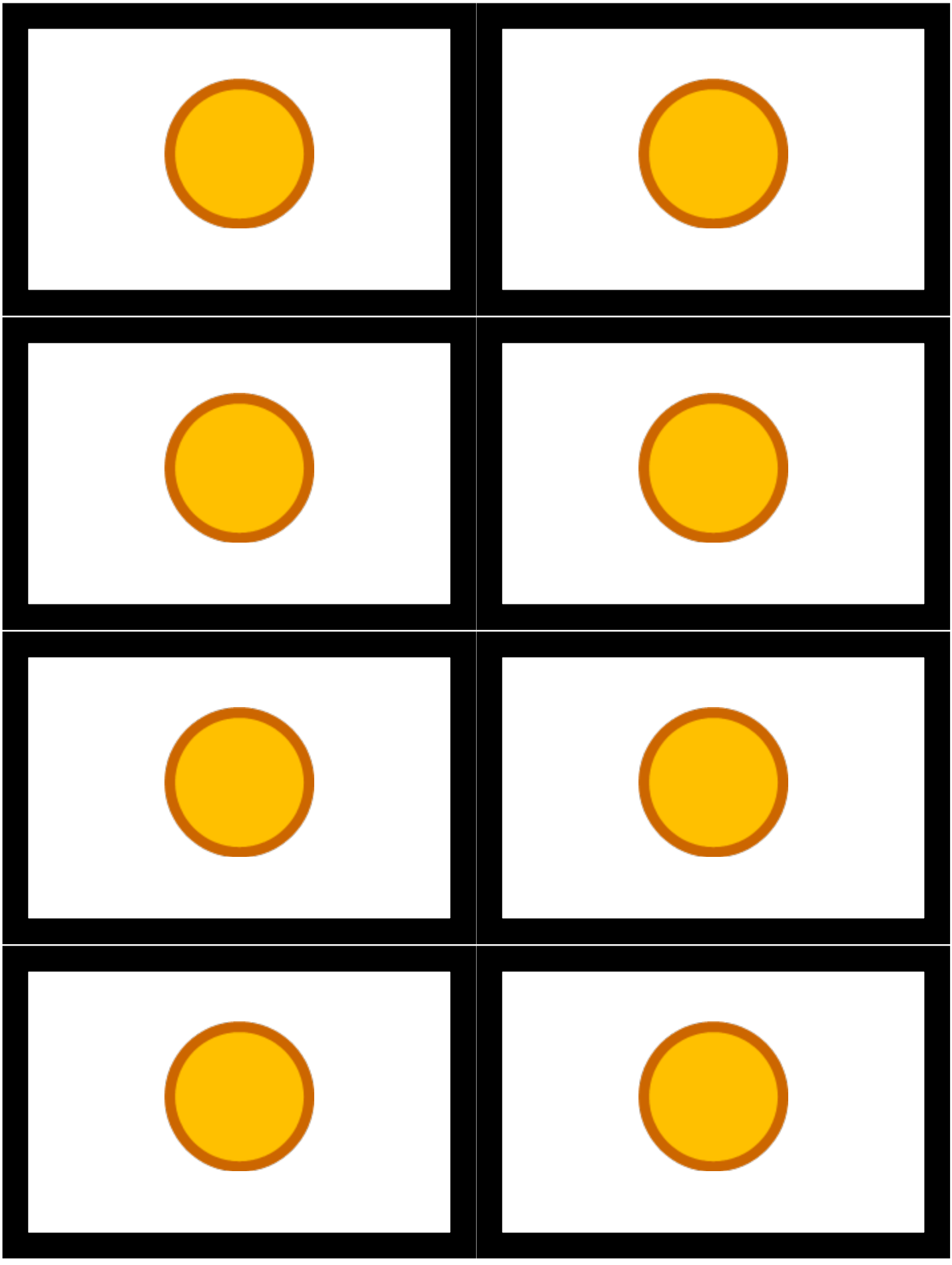
1. Product-related and contextual factors
2. Organizational and people-related factors
3. Changing willingness to undertake risk
4. Options 1 and 2 are correct

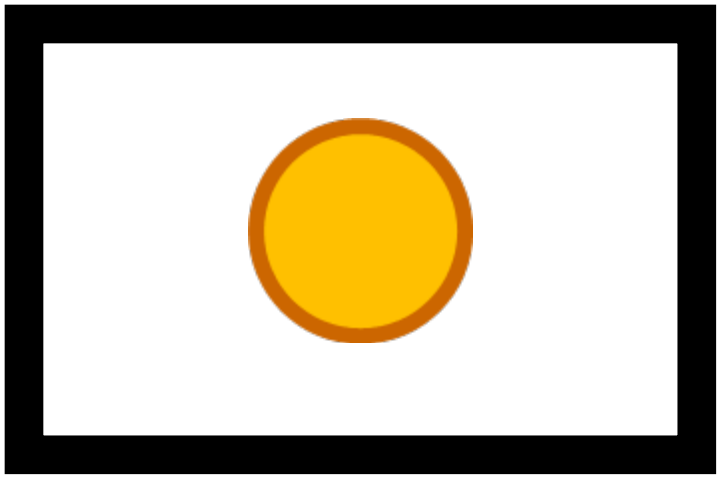
Explanation: In table 32 on page 156, the types of risk are divided into product, organizational, people and context.

Question 15: The risk management process is a human-based process with some associated problems.

1. True
2. False

Explanation: See page 151.





Appendix 4. Link to the video- presentation

https://mega.nz/folder/uV9TlB5I#34ngAxvKk7vxEi5pU60G9Q

Appendix 5. Student Survey Results

Applied Project Management Short Survey

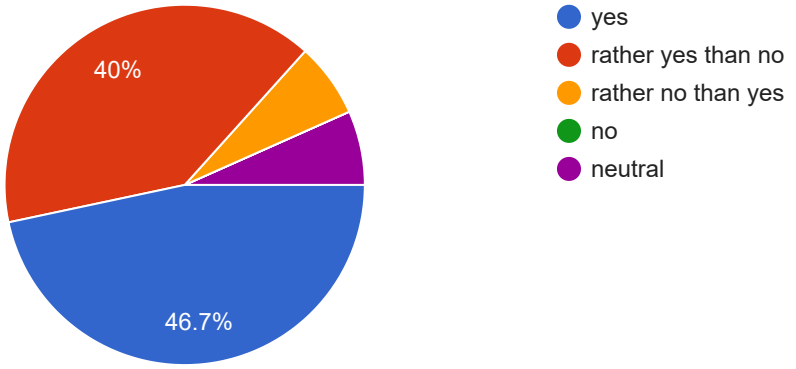
15 responses

Publish analytics

Do you like alternative ways of studies (e.g. through flashcards, board games)

Copy

15 responses



Which topic in the Applied Project Management did you experience as the most challenging so far?

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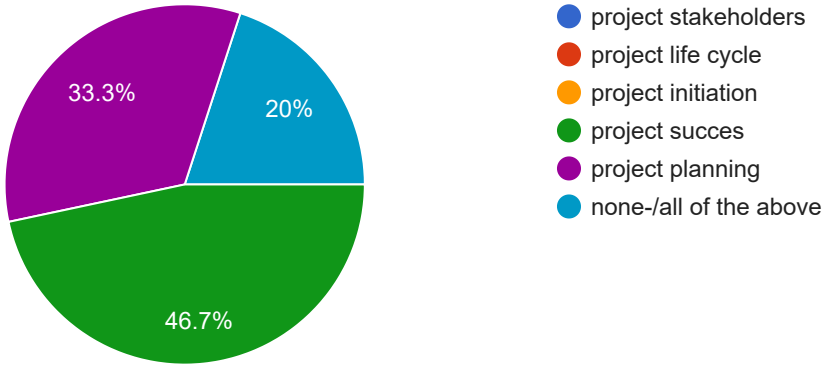
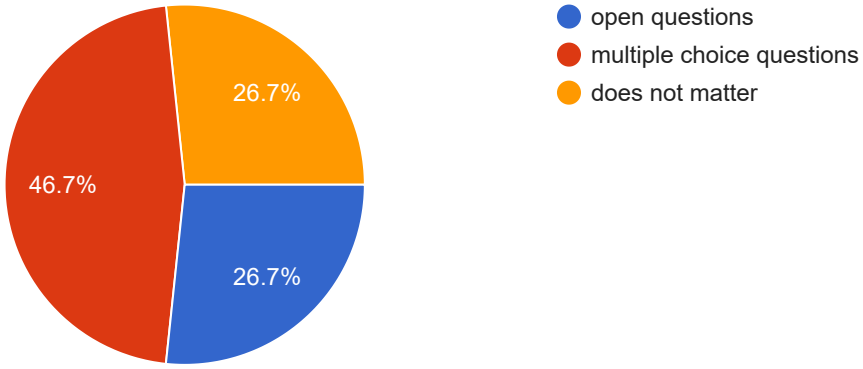
15 responses



Do you like open or multiple choice questions, to test your knowledge for learning purposes?

Copy

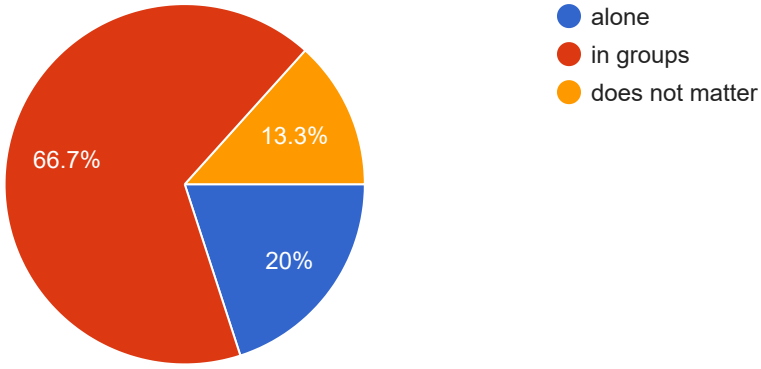
15 responses



When working with this course, do you feel that you are learning better by working alone or in groups?

Copy

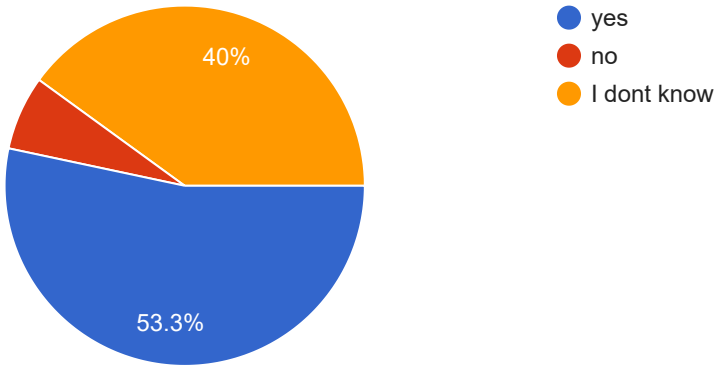
15 responses



Would you be more motivated to study the course when you have flash-cards?

Copy

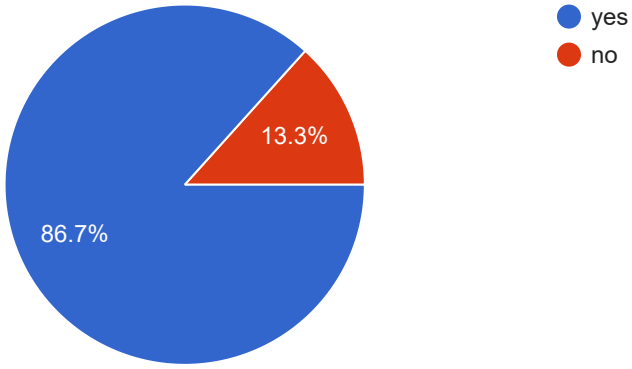
15 responses



Do you think your exam-grade will improve by the use of flashcards as an exam-preparation tool?

Copy

15 responses

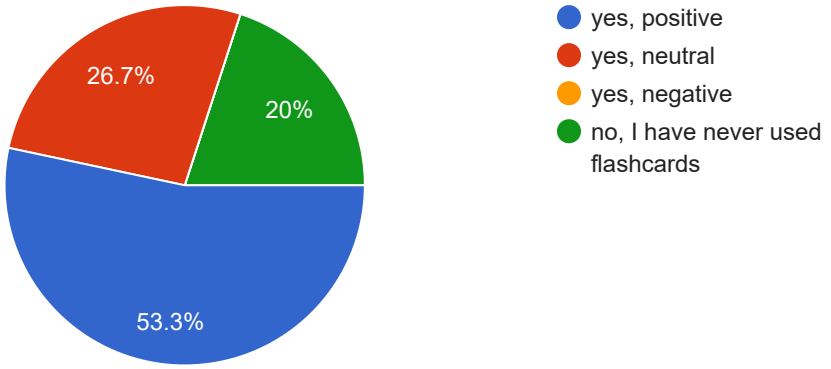


Have you ever used flashcards at some point to learn something ?;

if yes, how did you experience using them?

Copy

15 responses

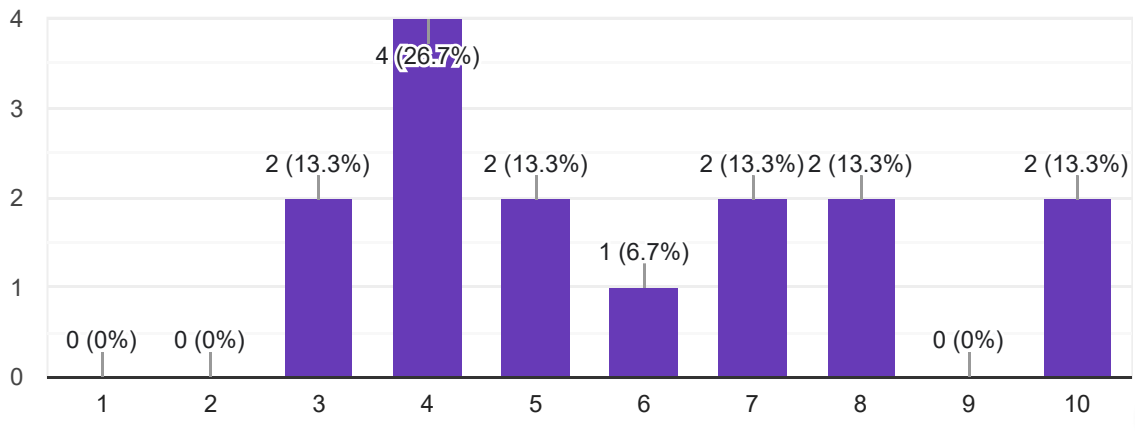


If the flashcards were to be printed by you (e.g. e-mailed to you), how likely are you to use them ?

scale 1-10

Copy

15 responses

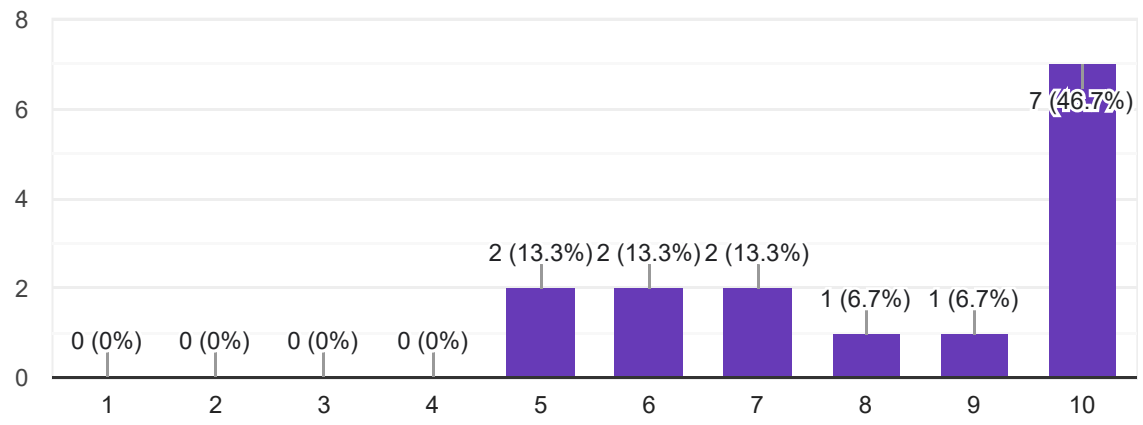


If the flashcards were distributed at the course as ready to use cards, how likely are you to use them?

Copy

scale 1-10

15 responses



If the flashcard were on an interactive app (ex Quizlet), how likely are you to use them?

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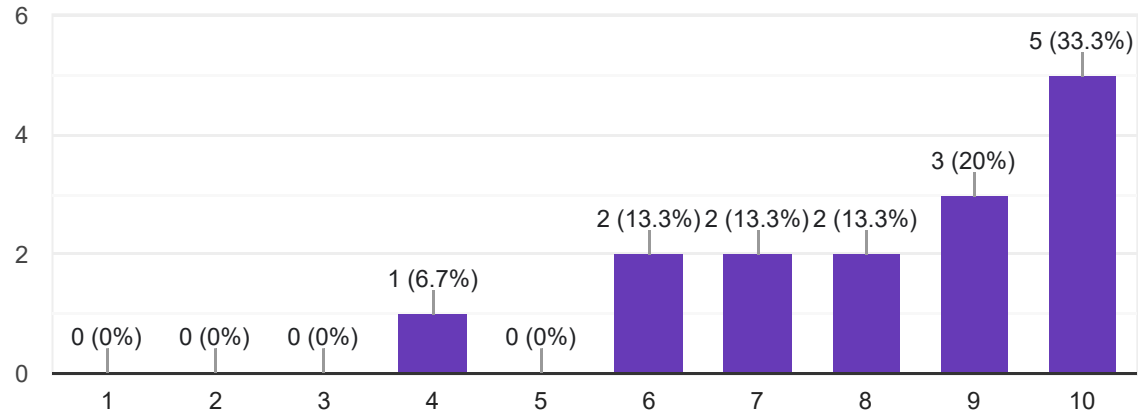
scale 1-10

15 responses



Are there any (aspects of) alternative learning methods you like very much, and why?

How are you planning to learn for the exam?

6 responses

I love education in terms of movies, I love it because it can make image in my brain, and I can get better understanding.

Read through course compendium

Reading the textbook and my notes, and go through previous exams

Mind maps

mix between the assignments and the book/lecture slides

With flashcards on app it would be interesting to have workshops or tutorials on practical issues to use the cards on an app