

# Interactive Webpage Providing a Project Management Online Course for Beginners with Animation Videos and Quizzes for Self-Testing

# Preface

The purpose of this project report is to look back at the process and results of the project we executed for the course Applied Project Management at NTNU in Trondheim. We discuss our efforts, the challenges we came across and the things we take away after the execution of this digitalization project. We would like to thank the professor of this course, Bassam Hussein, for the valuable input and knowledge that lie at the basis of the final product. In addition, we would like to thank all the testers who have taken the time to test and evaluate our product.

Group number: 9

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# 1. Digitalization projects

*A. Describe your product, its intended purpose and why you have selected to produce this product.*

The product is a website available as both desktop and mobile version. It provides several animation videos which describe six topics of the NTNU course “TPK5100 Applied Project Management” in a simple way. It is meant for beginners, so the information included is kind of an introduction to each topic with some of the most important parts of the topic. On the start page, an introduction video is included, which describes the website’s purpose and functionality and the basics of an example case. The following animation videos are using this case as an example to describe the specific topics. After each animation video, the user has the chance to answer three multiple choice questions to check his or her knowledge after watching the video. At the end, the user has the chance to give feedback about his or her learning outcome. Therefore, he or she can enter his or her profession and previous experience. The learning outcome can be entered through a 5-star rating. Additionally, the user can enter how likely he or she will attend the NTNU course. This feedback information is saved in a database in order to document the product usage. If necessary, additional content can be added or the existing contents of the website can be changed.

We chose to create this product, because we want to help people who have no understanding of project management. The user gets basic information about key points of project management. After using the product, the user got an overview of some of the content of “TPK5100 Applied Project Management”. If the user is a student at NTNU, he or she is more able to decide whether to attend the NTNU course after using the website.

*B. After having the opportunity of working on a small-scale digitalization project, what are, in your opinion, the main challenges that your group has experienced with this type of projects? You should base your statements on your own reflections and preferably support these reflections using project management literature.*

After working on our digitalization project, we have experienced some challenges during project implementation. At the beginning, we were worried about how we ensure that our learning tool fits to the end users. This circumstance is also described in Basham Hussein’s book “The Road to Success”. He says, that “the main challenge in IT projects is to capture and manage successfully the expectations of (...) those who will use the new IT solutions” [Hussein 2018]. Our learning tool can be categorized as a kind of digitalization project, but also as a software and IT project.

Therefore, this statement supports our own sensation. We decided to create a tool for beginners who do not have any knowledge about the basics of project management. So, it was easier for us to trace out the content and the potential learning outcome, as we were also beginners before we took the course at NTNU. Nevertheless, our product includes different topics of project management. So, even partly experienced people can get a value of our product.

At the beginning, we recognized that some of us already had some basic experiences in a software tool we used to create our animation videos (*powtoon.com*), but the most of us never worked with such tools before. Hence, there were differences in our skill levels we had to balance, so that every project member was able to create an animation video with almost the same level of quality. This was necessary because due to the limited time we split the video creation part. So, every group member had to create a video on its own with final test and feedback of the other group members.

In addition to the animation video creation we had to create a webpage, but nobody of our project group did this before or had skills in this field. So, it was challenging to find a good and especially free software tool (we used *wix.com*) for our application. It had to be both fast to understand and containing the features we needed. For instance, the webpage contains a feedback tool. Therefore, we had to take care that the website tool allows us, to implement this feature with a free database for the feedback storage in the background.

For the decision process where we selected the technology and the tools to use for the implementation of the website we at first had the challenge to get knowledge about the state of technology these days. This is a crucial step in a digitalization process. As mentioned before, all of us had none or just basic knowledge of website and video creation. So in addition, to analyse the needed versus the available competences was our second challenge in the decision process for the used tools. All these steps are key factors in digitalization processes, as mentioned in [Päivi Parviainen, Jukka Kääriäinen, Maarit Tihinen, Susanna Teppola (2017), page 71].

After the decision, which software tools we would use, another challenge came up. The fact, that we only used free software tools led to some constraints about the features of the tools. Therefore, we had to adapt our ideas and plans depending on what we were able to implement in the tools. For example, the free version of the animation video creation tool (*powtoon.com*) limits the length of a video to three minutes. Furthermore, this version only includes limited animation features regarding the characters, gadgets, animations, transitions and so on. So, we had to find a good way to get the most out of it.

## **2. Self-evaluation of the project management effort in the project, success or failure? And why?**

- A) *The group should make an overall evaluation of their own project. This is an evaluation of how well the group managed the project, how well was the organization of the project group. How well the group identified and managed risks. Did the group manage to deliver the project results according to your originally stated success criteria (according to your original plan)? Is there any deviation between the stated success criteria and your final evaluation of the project?*

Delivering a good project with students you have never met before can be a major challenge. All of us were very aware of this and that is why we put a lot of effort into the project plan in order to set clear goals and make good arrangements. We had great confidence in this plan, especially after the excellent feedback we got, confirming our thoughts. This plan was a big contribution to the project management success which we feel we have accomplished. By sticking to the plan, we were able to deliver our product within time, costs and scope requirements. We even had additional time in the end to add an extra feature to the website in the form of a feedback system.

The risk factors that could have harmed our organizational success appeared to be no problem at all thanks to:

- a sufficient amount of meetings after lectures
- good communication through *WhatsApp* and *Trello*
- keeping each other responsible even though there was no single project manager
- good time management from all team members regarding other courses/assignments

Additionally, risk factors with regards to people were overcome. The required technical skills to make our product and the lack of experience regarding this kind of project could be seen as a risk factor in the beginning. However, we feel like this helped us in staying motivated throughout the assignment since we are all very eager to learn new skills. Another critical risk that stated 'test users could not be available' was overcome thanks to reliable friends and a great network. Furthermore, we did not face any other risk factors that were not anticipated which indicates excellent (rather pessimistic) risk assessment.

Looking at the predefined success criteria, our statement that we achieved project management success is once again confirmed. Although a lot of work was done individually, we feel like we have become a great project team that can rely on each other and knows each other's strengths and weaknesses. The product has been delivered in time, we all feel like we have learned a lot through it and we are still motivated to study for the exam which indicates that the project was finished with quite ease.

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

We evaluate our project management effort as successful.

Scale	Strongly Disagree	Disagree	Neither agree nor disagree	Agree	Strongly Agree
Your response					<b>X</b>

### 3. Self-evaluation of the value to the learners? (Evaluation of project success) Can you document your assessment?

*The group should make an overall evaluation of the impact of their own product on learners. The group should provide and support the evaluation with documentations. These documentations could include:*

- A) Describe your target audience and the learning objectives of your product*
- B) A description of the method used to evaluate the final product*
- C) The number of informants who have contributed to the evaluation, and how these informants have been selected*
- D) Results of tests, surveys or interviews with students or persons who have reviewed the final product*
- E) Please evaluate the degree of your support to the following statement (group-based evaluation):*

	Our product is of high quality and we recommend it to be used as learning aid in project management.				
Scale	Strongly Disagree	Disagree	Neither agree nor disagree	Agree	Strongly Agree
Your response					X

#### Target Audience and Learning Objectives

Our product is meant for users who are not experienced in project management. It provides general basic knowledge in simple animation videos with simple questions for self-testing. The topics are oriented on the NTNU course «Applied Project Management». The user gets an overview of this course.

The target audience consists of two different groups. The first group contains people who want to learn or refresh some basic knowledge about project management. They just want to get in touch with project management or forgot some basic points which they want to refresh. The second group consists of students which want to decide whether they want to attend the NTNU course

«Applied Project Management». They can use the website as kind of an introduction to the most important topics and a course overview. After using the website, a student is more able to decide whether he or she want to attend the NTNU course.

The website could also be useful for students of the NTNU course learning for the exam, but this was not our main objective and therefore not evaluated due to the limited time.

## **Interview Method**

We wanted to know how potential end users react to our product. Our product is meant for users who are not experienced in project management. Therefore, it was necessary for us to know our interview partner and his or her personal experiences and background to get applicable feedback. So, we decided to make personal interviews where we can observe the reactions, emotions and behaviour of each test user in every situation while they are using our website. This interviews where either done in a personal meeting or via video chat. The users were directly confronted with the website and did not get any advice in advance. We wanted to have a realistic use case, where end users have nothing but the website. Since we did not know the usability of the website, we helped them out, if there was any question.

The most results of the personal interviews were positive. So, we quickly went over to non-personal testing, where the test user got nothing but the website link. After the test users tested the website on their own, they gave us a feedback on video chat, telephone or in written form. This was the most important test with the most test users, because the actual end users will also have nothing but the website link.

## **Choosing Participants**

We decided to not chose evaluation participants from the NTNU course «Applied Project Management», because the website is meant for beginners who do not have any experience in project management and never attended the course before. The website could also be useful for students in the NTNU course, but it was not our main objective. If there was more time available for the project, we would also have chosen students from the NTNU course. This could be a possibility in further steps if anybody will continue working on the website in the future.



Additionally, we wanted to test the website on different age groups. As we did not get access to many people older or younger than us in that short amount of project time, we decided to test the website within our families by for instance asking our parents and siblings. For the tests within our age group we asked some of our friends as they were available, motivated and not experienced in project management.

In addition to the test principle described above, we needed test participants with excellent English language skills to be able to specifically test the texts written on the website. We had no chance to get support from a narrative English speaker. Luckily, we had some friends with very good knowledge of the English language. So, we asked them to have a look especially on our texts on the website.

For the interviews with personal meetings or video chats we had four participants. These tests were very time consuming, so we decided to not make too many of them in the short amount of time. The participants were in our age, because we found no older or younger persons fitting to our needs and available for such a detailed test during the evaluation phase.

For the second interview method, the non-personal testing, we had fourteen participants during the evaluation phase. During these tests we also got some feedback from persons who are older or younger than us.

Before the evaluation phase we had more test participants. But these tests were made to improve our product, not to evaluate the final product. After each of these tests we changed our product until the test participants had only little recommendations. In this section of our report, only the evaluation of the end product is asked. So, we can only mention the positive feedback given in the tests from the time before the evaluation phase. The negative feedback was already eliminated through improvement of our website before the evaluation phase.

## **Evaluation Result**

Most aspects of the test user's feedback repeated. So, we decided to write down a summary of all the feedback we got in the table below without naming single test persons. The age of the users made no specific difference in the feedback. So, we have summarized the feedback over all ages in this one table, too.

Positive Feedback	Neutral and Negative Feedback
<p><b><i>Functional / Website</i></b></p> <ol style="list-style-type: none"> <li>1. The website has a very good structure.</li> <li>2. All the functionalities are working. There is no bug in the implementation.</li> <li>3. The website is clear and easy to use.</li> <li>4. Every text written on the website is clear and readable.</li> <li>5. Very good animations in the videos supporting the content.</li> <li>6. Very good English language, which is understandable with basic knowledge of the language.</li> </ol> <p><b><i>Learning / Outcome</i></b></p> <ol style="list-style-type: none"> <li>7. The website is interesting. Some of the participants wanted to attend the NTNU course even though they did not have any interest in project management, before.</li> <li>8. It is a great idea to have short animation videos for each topic and not one large video or a text. With these short videos, the content does not overstrain and is very understandable.</li> <li>9. The website gives a good overview over project management. People with no previous knowledge felt educated after using the website and felt like they now know what project management is about. People with a little previous knowledge about project management found it very good to have a little overview for refreshing their knowledge.</li> </ol>	<p><b><i>Functional / Website</i></b></p> <ol style="list-style-type: none"> <li>1. At some moments in the videos you need to have good English skills to follow the speed of the written text.</li> <li>2. The texts in the videos are not bad, but an additional speaker would be a little better.</li> <li>3. Video suggestions from Youtube.com after the videos are a little bit suspect.</li> </ol> <p><b><i>Learning / Outcome</i></b></p> <ol style="list-style-type: none"> <li>4. One additional last quiz with the most important points of all topics would be a good close-up.</li> </ol>

#### **4. Factors that have contributed to failure / success.**

*In this section students should list and elaborate on all the factors that they believe have contributed to the success or to problems of their project. Which factor was the most significant and why? Compare your identified factors with the factors listed in (Hussein 2018) pp-92.*

In this part we will go through all the factors that have contributed to our, as we have concluded above, project success. So, as it is defined in Hussein's book 'The Road to Success', we will have a look at the factors that increased the likelihood of a project success. However we will also take into consideration the factors that decreased the chances of a success.

Let's kick this off with a basic but fundamental factor, namely a good coordination with our stakeholders. What is our stakeholder looking for? In our project this was very clear and that is a crucial thing. Our stakeholder was looking for a digitalization project and so we could start with brainstorming. Right there we have a second success factor, a proper choice of project. This is something you do not know at the moment itself. However we felt comfortable with the project idea and we decided as a group to go for it. We defined a clear project purpose and we set some objectives together. In this way we knew in which direction we had to go.

Another important factor that certainly increased the likelihood of our project to be a success was to start as early as possible. Right after we knew about the instructions, every member of our group was motivated, which can be seen as a success factor on its own, and started thinking about various project ideas. In this way we had our idea quite fast and then we could make an adequate project planning where we clearly stated what to do and by when.

It was already mentioned, but we really want to name it again, because personally we think this was one of our key factors or maybe the one key factor that led us to a success: our motivation. Everyone felt attracted by the project and motivated to let it work out. In addition, we were not only motivated, but also dedicated enough to fulfill our tasks by the time we agreed upon.

To be able to complete our project we had to dispose of the technological knowledge. Most of us had to learn how to use *powtoon.com*, the website where we made the animation videos. All of us succeeded in doing so. Then we got the knowledge about how to make our own website through days full of motivation to search, try and learn important functions of the website creation tool we used. This made it possible to complete our project successful in time.

A last and overall success factor we really can't forget to mention is the communication. After each lecture we did a meeting. Some of the meetings last for a few minutes and others several hours. Next to these meetings we created a group on *WhatsApp* and a working space on the online management tool *Trello* for further communication. Without any doubt we can say we had a very effective and good way to communicate with each other.

There is no real factor that brought our project almost to a failure, but if there is something we would do in another way next time, it is to listen more to our end user. We had test users and a good testing and evaluation phase, but we only did that at the end when the project was almost finished. Next time we would ask their opinion in the beginning as well.

Next thing to talk about is the most significant factor that led us to our project success. This is a difficult one, because we are convinced that we excelled in quite a few factors. But if we have to choose one, we would go for the motivation of our group. Motivation is something really important and crucial. Your project team can have a really good communication system and a perfect project planning system, but if none of your team members is motivated to make the project a success, things won't go optimal. But this was not the case in our project team. Every single one of us was motivated to make this project a success. Even after it was finished we still thought about how we could improve it.

Having a look at the factors listed in the book «The Road to Success» (Bassam Hussein) on page 92, most of them are similar to the ones we have. The list in the book is quite extensive and in the part above we did not mention all of the success factors, but only the most important ones, the ones that increased the likelihood to make our project a success the most. A lot of the factors in the list are applicable to our project as well and then we are thinking of: Trust within the team, creativity of the project team, clarity of roles and responsibilities for those involved in the project,... On the other hand we can mention success factors that we did not have in our project. For example we did not learn lessons from previous projects.

As a conclusion we can say that we had way more factors that improved the likelihood of a project success than factors that would turn our project in a failure. The way we tackled this project can be seen as a paragon for future projects, and we enjoyed it!

## 5. Most important lessons from your project

*If you should give clear-cut advice to other students on how they should work on similar projects what you will say to them?*

1. Communicate with the other team members and don't be afraid to tell when you do not agree with certain points, this will eventually contribute to the overall quality.
2. Make sure you all agree on the actual goal of the project before you start to produce content.
3. If something is not clear about what is expected in the assignment, don't be afraid to ask the professor (project owner) or other stakeholders for clarifications.
4. We underestimated the value of testing the products with the end users. The testing gives you extremely valuable input as people outside of the project group may see things differently than you would.
5. Try to speak to each other on a regular basis. This does not have to be long, but it is important that at each point in time, you still agree on the responsibilities and expectations of the project. We, for example, reconciled our thoughts weekly after the lectures.
6. Try to be original and take time to think about something other groups probably would not have thought about. This helps you to stand out from the crowd.
7. We strongly recommend to be strict on deadlines. This will reduce the amount of frustration and gives you the feeling that the project is evolving in a systematic matter. One or two days later might not seem big of a deal, but it will make the way of working a lot more enjoyable if every one is on time.
8. Try to define a purpose that makes every team member happy and highly motivated, so that everybody can enjoy and does his or her best. Most important: Have fun!

## 6. References

[1]

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

[2]

Päivi Parviainen, Jukka Kääriäinen, Maarit Tihinen, Susanna Teppola (2017), Tackling the digitalization challenge: how to benefit from digitalization in practice, ISSN (print): 2182-7796, ISSN (online): 2182-7788,  
Available online at <http://www.sciencesphere.org/ijispm/archive/ijispm-0501.pdf#page=67>

[3]

Jeffrey K. Pinto (2016), Project Management – Achieving Competitive Advantage (Fourth Edition), Pearson Education Limited

We have found and read some more literature on digital transformation and IT projects, but the above ones fit best with our product, our reviews and our reflections in this report.

# Your peer-review evaluation report

**We were assigned the combination of groups 5 & 12 for the peer-review.**

## **Strengths**

Overall, the final product has a professional look and you can see the group put effort in thinking how they should tackle the problem. Next to that, they deal with a lot of aspects relevant to the course and try to include the most important concepts. The final product is also coherent and the same elements return, which is not easy when working together with multiple people. Moreover, it gives a visually attractive description of a case, which is easier to comprehend than a long, written text. The format, a video, is also very user-friendly and can be distributed through a lot of available media. In this way it is also easy to include in the courses. This is reinforced by the fact that the video is not too long for people to lose attention or take up too much of their time. As a user it is very pleasant that a voice-over guides you through the story and we personally had no problems of having to stop the video because you missed something.

## **Weaknesses**

Even though we feel the product is of high quality, we do have some remarks. For us as a user it was sometimes difficult to follow the overall structure. The video deals with different concepts, but these are not really introduced by the voice-over which makes the transition between the different parts not as clear as hoped-for. Sometimes, the pause between the sentences should also be a little bit longer to make a more clear distinction. Next to that, the video now already has a short results section, but maybe there should have been a higher emphasis on the implications of the different presented characteristics and issues to enhance the effect of learning. However, the video might in this light be used by students to do the analysis themselves. Finally, the watermarks should be removed in order to be used in a professional context, but we fully understand that this expense was not relevant in the light of this assignment.

	The product we reviewed is of high quality and we recommend it to be used as learning aid in project management.				
Scale	Strongly Disagree	Disagree	Neither agree nor disagree	Agree	Strongly Agree
Your response				X	

We would recommend a grade of **7 out of 10** for this final product.



# Attachment

## Information about the tools used to develop the product

The website <https://digitalwebpm.wixsite.com/learn> is the output of the digitalization project. It is made with the online tool [wix.com](https://wix.com). For the login, a Google account was created. With this Google account you can login on *wix.com*. There you are able to edit the website or have a look on the feedback data from users (see next page). This Google account can be provided by the project group after the course grading for further development.

For only viewing the feedback given by users of the website, a second Google account was created (see below). With this, the feedback database is accessible, but editing the website is disabled in this account.

The animation videos on the website were created with the free version of the online tool *powtoon.com*. The first Google account can also be used to login into this online tool and create new videos.

The existing learning videos are saved in the *youtube.com* account connected to the first Google account. They are marked as “unlisted”, which means, that they cannot be found via the search bar on *youtube.com*. They only can be watched through their direct links. These direct links are implemented in the website.

### Second Google Login Credentials (For Viewing Feedback Data On Wix.com)

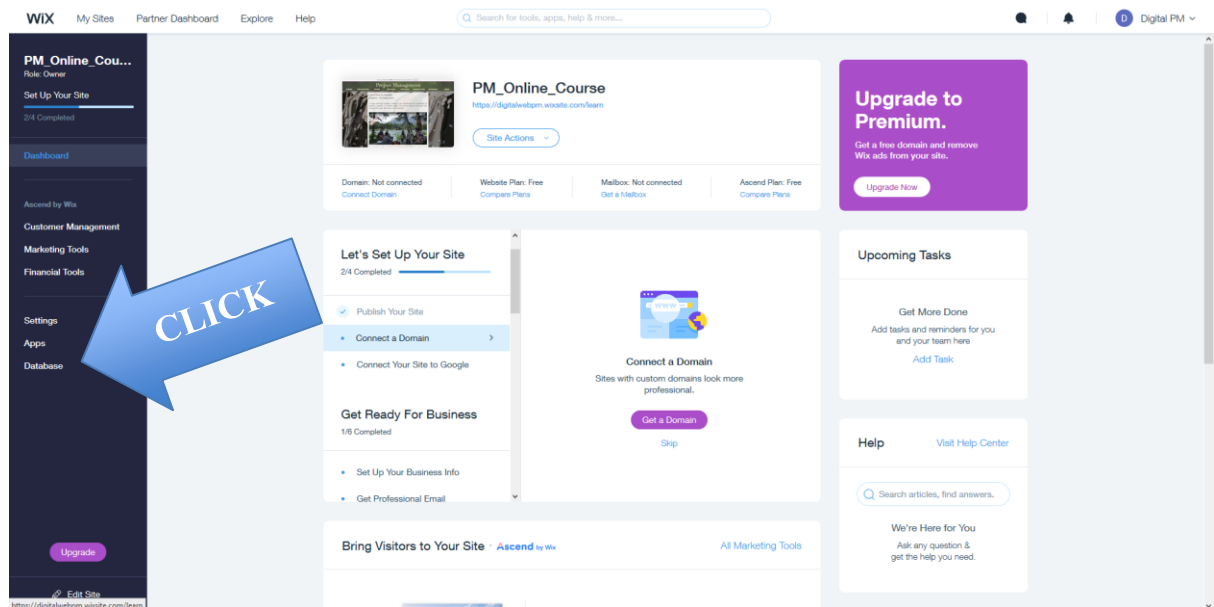
E-Mail: digital.web.pm.data@gmail.com

Password: xyHA33-#GOforWARD

## User feedback data

The user of the website is able to give a feedback on the learning outcome. This feedback is logged and saved in the *wix.com* account. You can find it through the following steps:

1. Select “Database” on the left side after login on *wix.com*.



2. Select the database “UserSatisfaction” to view it.

