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**DMYTRO MOTORNYI TAVRIA STATE AGROTECHNOLOGICAL UNIVERSITY**

**Business and Economics Faculty**

**Marketing Department**

**DESIGN THINKING**

STUDENT GUIDES FOR PRACTICAL CLASSES

for the Master Degree applicants

on the ***075 Marketing*** Speciality

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**INTRODUCTION**

Operating in a competitive environment requires business representatives to implement innovative approaches and technologies of doing business, meet the needs of key consumers based on a detailed study of their needs and individual needs, the formation of original marketing strategies and market specific needs of certain populations. Understanding by modern marketers of the use of such an effective method of generating innovative ways to solve marketing problems, as design thinking, is aimed at forming knowledge, skills and abilities to find ways to creatively solve applied problems in group work within the team.

Design thinking, a method of creative and collaborative problem solving originating in the tactics of designers, is a product design and development process that is, more and more, being used as a tool to move innovation forward and structure creation processes. By embedding learning and reflective practices into the structure of design thinking, a hybrid model emerges that is a more effective tool for framing and solving these types of problems within teams.

Design thinking as a method of creative joint solution of existing problems is a process of product design and development and is increasingly used as a tool to promote innovation and structure product development processes. The harmonious combination of learning and reflective practices in the structure of design thinking forms a hybrid model which is the most effective tool for creating and solving problems of teamwork on the collective creation of innovations.

*The purpose of the course* is to master the theoretical knowledge and practical skills needed to identify existing problems of potential customers and generate innovative ways to solve them.

*Course objectives* include formation of a systematic approach to design thinking; strengthening the skills of creative thinking in solving problems; strengthening the skills of teamwork in the search for innovative ways to solve existing problems; mastering the methods of generating innovative approaches to solving the existing problem.

The Student Guides will assist the student in interactive, self-directed learning. Student Guides were developed to offer the learner an opportunity for independent learning and teach the invaluable skill of how to learn. The learner will be able to develop a unique set of technical, research and critical thinking skills that will enable him/her to continue a high level of thinking and learning following the conclusion of the course.

**MODULE 1. *METHODS OF PROBLEM DIAGNOSTICS***

**PRACTICAL CLASS 1**

**DESIGN THINKING APPROACH: PRINCIPLES AND PROCESS. EMPATHY: UNDERSTANDING HUMAN NEEDS AND HARDSHIPS**

***Goal:***to find out the essence and specifics of design thinking in the system of modern methods of innovation.

After the class a student is going to

***know*** the algorithm for developing problem-solving and decision-making strategies;

***be able to*** adapt and apply new advances in the theory and practice of marketing to achieve specific goals and solve the problems of the market entity; plan and conduct their own research in the field of marketing, analyse its results and justify the adoption of effective marketing decisions in conditions of uncertainty.

***Time – 4 hours.***

***References:***[1,3,4,5,6,7, 8,13,15,17].

***Task 1 Choosing the object of empathy***

A quality project or product solves user problems. To understand them, you need to show empathy and to learn what, how and why people do, what are their values and needs. Choose the target audience that will be the object of study for the empathy stage.

Conduct research by obtaining information from open sources, such as statistics, forums with reviews or publications in the media, or interacting with users directly - to conduct an interview or experiment, to observe them.

***Task 2 Experience of the object of empathy***

Choose the means to "try on" the experience of the object of empathy. For example, in order to feel like a person with certain limitations, special costumes have been created (Fig. 1).



Fig. 1. Empathy suit

***Task 3* *Stakeholder map***

Stakeholders are anyone who interacts directly or indirectly with your product or service. On the map, the positions of people and organizations are reflected in the degree of their influence on the situation. To create a map of stakeholders you need to:

1 create a list of stakeholders. Think about who is involved in the use or maintenance of your product or service in one way or another

2 write down everyone: from the cleaner to key users

3 move the stakeholder map template to a wall or interactive flipchart

4 distribute the stakeholders on the map. Write the name of the product in the centre. In the near circle, display those who have a direct impact on the product. In a distant circle - who influences indirectly. Complete the stakeholder map as research progresses.

***Task 4* *Structuring problems***

All collected information should be structured and presented in a way understandable to the whole team. For this purpose it is necessary to:

1 divide into groups with similar problems.

2 highlight the person-model - to visualize the user, to understand more precisely whose problem needs to be solved.

3 write important user quotes from interviews, reviews and publications in the media.

***Control questions***

1. Explain what is the essence of design thinking?

2. Describe the main purpose of the application of design thinking.

3. What are the key features of design thinking?

4. What is the essence of the divergent phase of design thinking?

5. What is the essence of the convergent phase of design thinking?

6. How are elements such as inspiration, idea, realization related?

7. What stages of the process of design thinking are identified by experts?

8. What is the essence of empathy in the process of design thinking?

9. What is the purpose of creating empathy cards?

10. Explain the meaning of the term *insight*

**PRACTICAL CLASS 2**

**IDENTIFYING THE PROBLEM: REFORMULATION AND DEFINING THE PROBLEM IN HUMAN-ORIENTED WAYS**

***Goal:*** to find out the directions and tools for identifying problems in human-oriented ways.

After the class a student is going to

***know*** the algorithm for developing problem-solving and decision-making strategies;

***be able to*** determine approaches to the practical application of modern tools for determining the problem of a potential consumer in human-oriented ways.

***Time – 4 hours.***

***References:***[1,2,3,5,6,7,10,13,18].

***Task 1 In-depth interview***

Gather information during contact with the user, in which the respondent shares his experience with you.

1. Select users whose experience is interesting. Prepare a list of questions for the interview. Use open-ended questions.

2. Communicate in an informal atmosphere.

3. Write down fresh thoughts during the interview - findings that can help in the future, with the use of information technology.

***Task 2*** ***Map of empathy***

In the context of a specific task you should to develop a map of empathy and consumer profile. In the centre it is necessary to place the user selected from the target audience; divide the map space into sectors (4-6) depending on the goals.

Based on the results, make a presentation about the target audience in the form of a presentation.

***Task 3 Consumer path map***

Create a step-by-step scenario of user actions based on research data using the User Path Map template.

Note what the user does at each step, what actions he takes.

Mark time intervals: these can be (hours, minutes) or key stages (before, during, after).

Mark points of contact and characteristic emotional reactions.

Capture vivid user quotes for each step. This will make it easier to understand what and why is causing the user emotions.

***Control questions***

1. Explain what is the essence of empathy?

2. What methods of analysis of consumer behaviour are used at the stage of empathy in design thinking?

3. Explain what is the meaning of the concept of ethnography as a qualitative method of consumer research?

4. What is the task of creating a map of empathy?

5. Explain the meaning of the concept of consumer profile.

**PRACTICAL CLASS 3**

**GENERATING IDEAS: TECHNIQUES AND TOOLS FOR CREATING THE CONCEPT OF SOLUTIONS**

***Goal:***to get acquainted with the directions of practical application of different approaches to the process of generating ideas.

After the class a student is going to

*know* possibilities of application of various techniques and tools of creation of conceptual solutions of existing problems;

***be able to*** identify opportunities for the application of various methods and techniques for generating innovative ideas.

***Time – 4 hours.***

***References:*** [1,3,6,7, 8,11,12,15,16].

***Task 1*** ***Focusing***

1. Based on the information obtained in the process of working on the stage of empathy, make a holistic picture in which to determine the most important.

2. Develop a concept - the basis for future projects.

The task of focusing is to clearly articulate the problem and make it a question: "How can we help a particular person to do something with our product or service in a certain way?".

At this stage, create a list of solutions as you can help. The more accurately formulate the question, the easier it is to find an effective solution to the problem. Now it is not necessary to choose the best ideas, it is important to gather as many opinions as possible.

To do this, it is important to eliminate criticism, to create a positive atmosphere where everyone can express themselves, interview people with different experiences. Optimally use the method of brainstorming: ask the team to write on the stickers a few ideas - from the most obvious to the absurd - and discuss them.

***Task 2 Brainstorming***

This is a method of generating ideas in the mode of teamwork, which stimulates their own creative activity due to the large number of heterogeneous and original solutions of other participants in the assault.

We use knowledge in different areas and creative thinking of team members to create the maximum possible number of ideas and solutions to the problem.

Follow the principles:

1. No criticism. Participants should feel free to express their opinions.

2. The principle of "Yes, and ...". Support and develop other people's thoughts.

3. Encourage crazy ideas. Even if they are not realistic, it can inspire another great idea.

4. Visualize your ideas. One simple sketch can say more than many words.

5. Speak one by one. All ideas must be heard, so you can not interrupt.

6. Keep focus on the topic.

7. Strive for the greatest number of ideas. A good result is 15 ideas from each team member.

***Task 3*** ***Ideas generating***

1. Identify three criteria (for example, "most impressive", "rational choice" and "most unexpected") that can be used to vote for ideas.

2. Highlight two or three best ideas for prototyping. Among the ideas that arise are:

- remove everything that is already well known and used by all;

- reject the obvious;

- consider what seems questionable and / or unusual;

- choose 3 ideas.

***Task 4 Ideas choosing***

For each of the three selected ideas:

1. Come up with a name (the idea will be more specific and understandable);

2. Describe the idea in one sentence, answering the questions:

• what it is? (Category of object);

• for whom is it? (Target user);

• why should it involve? (Advantages);

• method of providing benefits.

2. Formulate a proposal:

3. Describe the difference between your ideas. There should be one key difference, and several less significant ones are possible.

***Task 5*** **Smart map of ideas**

A method of presenting information in the form of interconnected meanings. We apply as soon as the logic of establishing connections is affected.

Use the appropriate information technology to create a smart map.

1. The central image that conveys the theme (subject) of study is something to start with: it stimulates the imagination and evokes associations. If you want to put a word in the centre, let it look three-dimensional and accompanied by an image (we do not require special artistic skills).

2. The following is the branches departing from the central image. These branches represent key topics related to the subject of study.

3. Sign the branches in one word or mark with a picture.

4. Create secondary branches that deviate from the main.

5. Now that you have a structure of main branches, you can move freely around the intelligence map from branch to branch, fill in the blanks and add new additional branches as associations arise.

If desired, you can add arrows, connecting lines and links between the main branches to emphasize the relationship between them.

***Task 6 Ideas development***

At this stage, the best ideas are selected in terms of human usefulness, value for the project and technical feasibility.

Use the method of control questions. It is desirable to test each idea on a short questionnaire such as:

• The idea to implement to such a number?

• Reasonable or estimated costs?

• How will this idea, if implemented, fail?

***Task 7*** ***Visualization of the idea***

Visualize the idea using information technology.

It is ideal to choose a solution that users need and like those who implement it. You can use the following steps to select ideas:

Formulate selection criteria, for example, choose the most innovative or the most budget idea.

For the convenience of voting, write down all the ideas in one service. If the work is carried out in a team, each member of the team must be given the right to one vote. Each team member must mark one (preferably not their own) favourite idea with a certain sign or colour.

The next step is to vote for one idea for prototyping. Prototypes are a tool that helps to assess the performance of each idea.

***Control questions***

1. What is the purpose of the focusing process?

2. Explain the essence of the concept of "composite consumer"

3. Describe the content of the problem formulation procedure.

4. How do we search, sort and structure basic ideas?

5. What is the purpose of generating ideas?

6. What methods of generating ideas do you know?

7. What factors influence the choice of a method of generating ideas?

**MODULE 2. *MODELING THE CONCEPT OF PROBLEM SOLVING***

**PRACTICAL CLASS 4**

**PROTOTYPING: APPLICATION OF A PRACTICAL APPROACH TO MODELING IDEAS**

***Goal:***identify areas for modelling ideas by prototyping.

After the class a student is going to

*know* possibilities of application of various techniques and tools of creation of prototypes;

***be able to*** identify opportunities for prototyping based on the use of information technology.

***Time – 6 hours.***

***References:*** [1,2,3,4,6,7, 9,12,16,17].

***Task 1*** ***Prototype idea***

Develop prototypes based on the best ideas.

You should not spend too much time on one prototype. It is better to switch to another prototype before the emotional attachment occurs.

Think of the user. What do you want to test with your user? What behaviour (reaction) do you expect? The answers to these questions will help you focus when creating your prototype and get meaningful results during testing.

One prototype is one question. Determine what you are going to protest. Break the whole concept into parts and create several prototypes that would answer the questions in each part. Prototype testing should answer small very specific questions.

***Task 2*** ***Canvas***

This is a tool for the product team, which helps to place all the desires and functions on the timeline. After the stage of generating ideas, place stickers with ideas on the canvas. The MVP (Minimum Viable Product) stage includes several basic ideas that will help test the viability of the product.

On the second wave, place stickers with ideas or features that a key product should have.

The third wave is a full-scale product. Vision of the future product: "Which product should we end up with?"

***Task 3*** ***Prototype making***

Model a working prototype of the most basic custom functions or product improvements from the tools at hand based on the use of appropriate information technology. Think about the user's path when creating a prototype. Try to recreate a specific environment of its use for more valuable information.

Designing a prototype in software will allow users to be more immersed in the idea.

***Control questions***

1. What is the purpose of the prototyping process?

2. What does the term "prototype" mean?

3. What tools are used to create a prototype of a new product or service?

4. What is the purpose of storytelling as a prototyping tool?

5. What is the purpose of bodystorming as a prototyping tool?

6. What is the purpose of using sideboards in the prototyping process?

7. What are the key principles to follow when creating prototypes of new products and services?

**PRACTICAL CLASS 5**

**TESTING: DEVELOPING A PROTOTYPE OF THE VARIANT OF SOLVING THE PROBLEM AND ESTIMATING THE OBTAINED RESULTS**

***Goal:***to find out the content of the procedure of testing innovative development and approaches to the evaluation of the obtained results.

After the class a student is going to

*know* possibilities of application of various techniques and tools of creation of prototypes;

***be able to*** identify opportunities for prototyping based on the use of information technology.

***Time – 10 hours.***

***References:*** [1,3,4,5,6,7, 8, 9,13,14,17,18].

***Task 1*** ***Testing***

Test the prototype taking into account the above recommendations.

In order to be even more absorbed in the thoughts and feelings of the user, the designers offer:

1. Draw your thoughts (for example, draw a picture of how the user is set to work, or depict your thoughts on how to spend money in the best way).

2. Play the game with pre-made cards. The user plays by the rules devised by the designer, and this helps to get to know him better.

3. Be in a simulated situation.

During testing, keep asking people what they don't like about your decision. Do not forget to add the question "Why?" Demonstrate what you are talking about. Give the user access to the prototype and give him the opportunity to learn how to use it.

Do not explain your understanding or the reasons why you created this prototype. Ask the user to comment on what he does and feels during testing, to share impressions. Observe how and what users use and what they DO NOT use! Do not try to correct user actions.

Ask questions. "Show me why it works (doesn't work) for you." Answer the question: "What do you think about how this button should work?"

Focus on what you don't already know about the problem you're developing a solution for.

***Task 2*** ***Conclusions***

There is a simple rule: always create a prototype, believing that you are right, but test the prototype, knowing that you are wrong.

The testing process is cyclical: the creation of innovations only begins when the first testing ends.

Draw conclusions based on the results obtained during testing.

***Control questions***

1. What is the purpose of the process of testing a prototype of a new product or service?

2. What types of prototype testing do you know?

3. How to carry out the procedure of testing the prototype?

4. For what purpose is it necessary to carry out the procedure of testing a prototype of a new product or service?

5. In which case will the test results be considered positive or negative?

**CRITERIA FOR LEARNING RESULTS EVALUATION**

For the oral answer to the main questions of the topic a student gets:

*Excellent* when the question is fully disclosed, all major categories are covered; examples are given (2 points);

*Good* when the question is fully disclosed, all major categories are disclosed, but examples are not given (1.5 points);

*Satisfactory when* the issue is not fully disclosed, without explanation of the main categories (1 point);

*Unsatisfactory* when the question is not solved, the categories are not explained (0 points).

For the participation in the discussion of problematic issues a student can get 1 point additionally.

For solving problems at a practical class a student receives:

*Excellent* when the task performed in accordance with the methodology, provided explanations of the task, substantiated results (2 points);

*Good* when the tasks are performed correctly, but inaccuracies in the explanation or justification of the results (1.5 points);

*Satisfactory* when the task is performed correctly, but there are no explanations and justifications for the results (1 point);

*Unsatisfactory* when the task is not completed (0 points).

The tasks of current control on a subject are evaluated as:

1 point when the answers are correct in full;

0.5 points when they are correct in the vast majority of tasks

**RECOMENDED SOURCES**

***Basic***

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