## Module 5 Science communication and how to communicate your ideas to the world

. . . . . . .

This section is aimed at highlighting the importance of science communication and promoting the ability of scientists as entrepreneurs to represent their research and the results of research and experimental development.

The usual way for scientists to present their research results is at conferences, seminars, scientific community meetings and other scientific events. However, as technology evolves, there is a growing need for more public communication on social networks. Moreover, when research is presented in the commercialisation process, it makes sense to prepare presentable and visual presentations.

The entrepreneurial scientist should be proficient in the social networks Facebook and LinkedIn, as well as in the use of canva.com to prepare visual presentations of scientific knowledge and scientific results.

The following elements are important in science communication:

- The image of a scientist. The communication of a scientist through social networks also creates an image of the scientist himself, providing insight into the content of his research, the scientist's journey and the links between the scientist and scientific discovery. Consistent communication creates a positive image of the researcher and his/her approach, and when it comes to presenting research with a view to commercialisation, it also takes into account who is doing the research.
- Research innovation. Nowadays, research should focus on solutions to global challenges and also on the applicability of research to today's solutions. It is particularly important when research findings can be implemented in practice and commercialised, both in terms of creating new solutions for the market and replacing existing ones. The solutions that create the biggest breakthroughs are those based on innovation.
- Relevance of the research results. The research and the scientist's efforts show how
  relevant the results themselves are to the general public. Often, commercialisation
  starts with whether or not people know about the research being done. Therefore, it
  is appropriate to fully disclose research as relevant solutions based on a scientific
  process that has taken a long time to develop.
- Understandable presentation.

In this section, we will briefly discuss the opportunities for research communication on Facebook and LinkedIn. A brief introduction to canva.com and the basic rules for preparing presentations and commercial offers.

### Social networking site "Facebook"



By far one of the most prominent social networks with the largest number of users. However, over time, both the target group of the network and the objectives of the target group have changed, and that is why we have the social network itself. The first focus is on personal needs and personal interactions with members of a profile. Secondly, it is important to note that Facebook remains a useful platform for buy-to-sell and SMEs, both for opinion-forming and for spreading awareness of the product available. Thirdly, there is often the dilemma of whether a profile is private or public, whether you can only share your posts and images, or if you can rebrand your profile with your work environment. And yet there is no one right formula, although one certain thing is that all the information available about you on the internet is public.

Most of all, it is important to emphasise that active participation in social networks brings new social contacts, partners, projects or even job offers. Searching for any information on a social network is much faster than using traditional information channels. To describe the main social networking purpose, it can be said that:

- "Facebook" profiles are a personal space for self-expression. The aim is to communicate and share information with your closest contacts and absorb information from them. Monitor the information sources you like.
- "Facebook" profile a space for combining personal and professional information. Deciding to welcome your family, friends and colleagues.
- "Facebook" profiles an opportunity to present yourself as a professional in your field. The main flow of information comes from the professional field.
- "Facebook" profile a platform for selling products or services. Nowadays, it's most convenient when it comes to presenting the products or services you have created.

It is also useful to hygiene your "Facebook" profile to manage the flow of information. This involves a careful review of the list of friends, pages that are liked, group memberships and so on. The content can only be managed and seen to be more relevant with regular monitoring.

Facebook is useful for creating communities and sharing ideas on science entrepreneurship, exchanging ideas or getting the views of an audience. It is useful to conduct mini-polls, and opinion polls on issues of interest to scientists, for example, and to belong to groups where you can share your scientific findings with the media. There are also project search groups where you can share project ideas and find partners.

### Social networking site "Facebook"



However, you should note what is important for the information on Facebook:

- Clarity and accuracy of information.
- Valid and unique information.
- The text of the recordings should be concise and illustrated with either visual material or video.
- Proportionate use of visual and video material.
- Unique visual and video material. Natural environment video material. May include videos of the researcher's workplace, research trials. Photos should also reflect a natural, working environment. The Canva.com software allows you to both plan the grid of recordings and create the visual solutions for the recordings themselves.
- Each post must have a clear purpose, be specific and not be ambiguous (unless that is the intention).
- Each post must have a clear purpose, be specific and not be ambiguous (unless that is the intention).
- It should be noted that with the increased use of "LinkedIn", a large part of the community has moved to this network.
- However, it is important to remember that records and information shared on the
  internet are there to stay. Sometimes emotions can get to the point where we can
  be quite critical about certain issues, negative about certain things, etc. Such a
  comment is sure to be supported by those who think like you. However, the same
  comment will also reach a group of social network users who disagree with and
  oppose your statements. This can lead to quite a fierce discussion, a virtual
  argument, and unethical responses can be photographed and then used in a wide
  range of contexts.

Facebook is basically more for informational networking or for selling a specific product, but if the aim is to educate the public and to build up one's image as an entrepreneurial scientist, it makes more sense to take advantage of the opportunities and benefits offered by LinkedIn.

**Recommendation.** Experiment with your current Facebook audience and ask them if they would like to know more about your work, your scientific activities, etc. By asking the audience to click like if they would like to see more, and to choose the laughing face if they would not like to see more of this information. The results will be evident. Normally, sharing your participation in conferences, internships or other research-related information on social media gets a lot of attention from your audience, but if you started sharing your research results, would your audience want to? Also, when creating a profile on any social network, you need to plan well and have a clear objective: is the social network necessary and appropriate for your activities?

### Social networking site "LinkedIn"

. . . . . . .

Although this social network is currently taking over some of its functions from other social networks, it has been called a professional social network since its inception. In the labour market, LinkedIn is becoming the analogue of the CV. This social network asks for:

- state your name and surname when registering. Other social networks allow us to improvise with nicknames, but this social network gives priority to real people;
- to fill in the following basic information: job title, position held, brief description of yourself;
- List the experience. This section may include all your previous jobs, positions held, job descriptions, and length of service. Please note that this is also included in the CV;
- indicate your education. This section asks you to indicate the educational institutions where you have studied, what you have studied and when;
- indicate your volunteering experience;
- specify skills and endorsements. In this section you should provide information on your existing competences, e.g. project management, etc. In addition, this social network sends out requests to the network members of your profile about how they would rate your skills. This means that anyone with whom you have a professional relationship can leave an assessment of your competences. This can be seen as a recommendation;
- identify accomplishments. Another section that is equivalent to a CV. In this section, you can include articles, methodological material, projects and their descriptions, and language skills. If this part of your profile is visible to the public, you are likely to receive invitations to participate in projects in your field of interest;
- to upload a photo. This is not the last element, but one of the most important. While other social networks do not impose restrictions on photos, and we can upload photos that seem appropriate, LinkedIn, as a professional network, clearly defines the requirements for photos. It should be a formal, professional photo, not a photo from a holiday "under the palm tree";
- be proactive. User activity is important in all social networks. In order to represent yourself on this particular social network, it is recommended not only to share information, but also to post your own insights, to share your thoughts as an expert, and to comment on the ideas presented by others. However, as everywhere, your comments should be ethical and tolerant.

Although initially seen as more of a job search network, it is now becoming a source of professional news. By following organisations related to one's field of activity and other educators who are active in the social network, it is possible to actively exchange professional knowledge and update one's competences. Although it is recommended to complete all your profile information in English (especially useful when collaborating with partners from abroad), if your main audience is Lithuanian, it is recommended to share and post in Lithuanian.

### Social networking site "LinkedIn"



**Recommendation.** Open your CV and then your LinekdIn profile and carefully assess the main differences. Are the differences really significant?

It should be noted that many organisations, events and conferences want to reflect sustainability aspects and often no longer use flyers or business cards. At these types of events, it is common to hear offers to exchange "LinkedIn" profiles. Because a tidy and complete "LinkedIn" profile can be a great business card and an opportunity to get to know your fellow researcher better. It should be noted that on "LinkedIn" it is important to:

- Consistent and systematic content development;
- Demonstrating your professionalism;
- Reliable and valid information;
- Providing up-to-date information;
- Respectful communication;
- Shaping and developing a professional image.

"LinkedIn" is becoming a space for professionals to express themselves and where everyone can have an audience sympathetic to the scientific field represented by the creator of the "LinkedIn" profile.

Increasing numbers of researchers are not only talking about their research, but also inviting people to take part in it, announcing the results of their research, and thus creating a network of like-minded people. Discussing your work on "LinkedIn" will get significantly more attention than talking about your leisure time. It also gives an opportunity to hear professional suggestions on issues that are important to you, to actively participate in discussions and to present your own research results. However, you should keep in mind that the content should be developed in a coherent way. In addition, participants can join groups based on the theme of the activity.



### Social network comparison

This publication focuses on only two social networks that can directly influence the activities of a researcher entrepreneur. "Facebook" and "LinkedIn" are also the two social networks that can most realistically fulfil a scientist's ambitions to represent his/her research. While comparing the two networks, it should be noted that:

- "Facebook" provides more personal information and "LinkedIN" more professional information.
- It is recommended to post two posts per week on Facebook and at least one post per week on LinkedIn to reach the target audience.
- Both social networks need to produce information in an orderly, high quality and factual manner.
- Quality photos must be uploaded on both (pexels.com is a free photo portal if you lack illustrations).
- Video information is spreading rapidly on "Facebook", which is not yet the case on "LinkedIN".
- The information on both social networks needs to be active, up-to-date and relevant to the audience to which it is presented.

Every social network and work on it requires preparation and individual attention until you know your audience, and recognise what is relevant to them. Therefore, it makes sense to choose at least one social network to start with, which will help you to find your way around and to keep your posts targeted.

### Canva.com - graphic, visual solutions for the real Canva entrepreneur

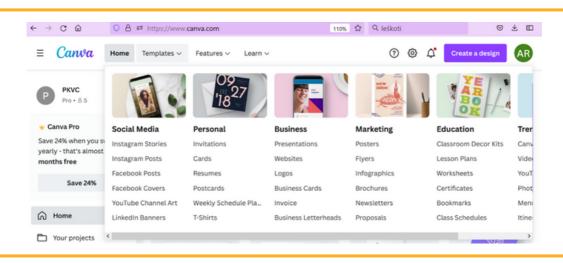


Canva is a tool that has revolutionised everyone's ability to create engaging content. From the ability to visualise a message to the ability to create video content, this application provides the ability to visualise. The most important feature of this application is the large number of free designs created by professionals. Everything is free to use without any restrictions. There is also a pro level, where a fee is charged, then even more possibilities are available. The basic free use of the app is open to everyone. Therefore, with this app it is possible to encourage students to create their own content, as well as for teachers to transfer their content creation here. In this part of the topic, we will briefly introduce the basic overview of Canva.

## Canva.com - graphic, visual solutions for the real entrepreneur

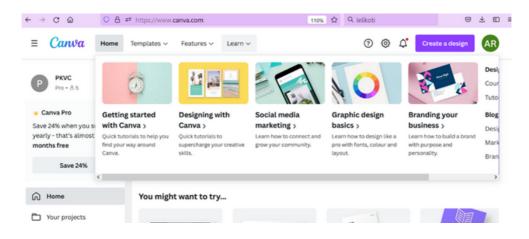


Key features. In the menu, you'll see all the designs you've used and all the work you've started and finished. The app is special because it saves your work automatically (in case you accidentally shut down the app, the internet goes down, etc.). The app also allows you to share your work in progress with a colleague who is connected to the app - they can make corrections directly in the app. Canva.com has an advanced content scheduler function: once you have created a post for social networks, you can set a time when the post will be automatically published on the social network - this is how communication scheduling systems work. Folders can be set up in their own system.



It should be noted that Canva is very educator-friendly, with a separate section of templates specifically for working with pupils and students. In the Education section, anyone can create classroom decor kits, lesson plans, worksheets, certificates, bookmarks. Each section has more than 1000 ready-made templates where the educator can upload the information they already have and present it visually.

As Canva strives to be extremely user-friendly, there is even a separate self-learning programme where you can explore all the possibilities of using Canva.com.

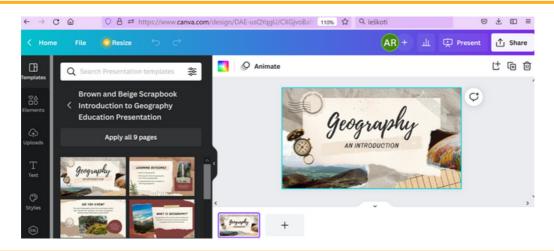


## Canva.com - graphic, visual solutions for the real entrepreneur

To improve your knowledge of material visualisation and preparation, you can study for free on Coursera.org. Coursera.org is one of the most popular and largest learning community platforms. Its training materials are prepared by universities around the world. The platform provides most of its information in English (other languages are also available, but with significantly fewer options). The search engine will give you a range of learning offers if you enter a topic of interest. The training is free of charge, but if you want to get a certificate, you will have to pay a fee. With free training, you get free access to the material you are interested in, and you can participate in billing. This platform is useful both for finding new information and for reviewing new methods, which can then be used successfully in your professional life.

The advantages and disadvantages of working with Canva are:

- (a) Extremely large supply of ready-made templates
- b) Fast and easy use for every user
- c) The usual template creation model
- d) Ease of sharing the content created with the team
- e) Login and use of most templates is free
- f) Various saving formats available
- g) Created templates remain and are automatically saved
- h) Some fonts are not adapted to Lithuanian
- i) No popular power point template
- j) Only works with internet connection



Then it comes to the development site, there are a lot of interfaces with word or other commonly used tools. A template is selected, and any corrections can be made within the template itself. You can also manage all the elements, upload existing visuals, choose the text style, colour font and other parts. Also included below are the parts on how to share your templates created through which applications. Canva.com itself also has a large number of integrations with other content.

Assi	M	OK	1+0
	911		





### assignments

Briefly describe your research (5 sentences)

Write how you would present your research to family and friends (3 sentences)

Write how you would present your research to colleagues (3 sentences)

Which presentation do you think would be suitable for "Facebook" and which for "LinkedIn"?

2

### assignments -

## 3 assignments

Which profiles do you follow on "Facebook" and "LinkedIn" and why? Profile 1

Profile 2

\_\_\_\_\_

Profile 3

Profile 4

Profile 5

# **Assignments**



### 4

### assignments

You are welcome to join the Canva.com platform and become a content creator. Once you have signed up, choose "LinkedIn" templates and create your first post related to your profession and your research. Remember that the post also needs text, so your post should look like this 5 sentences about your research and a visual solution.



#1

### Questions for the discussion?

- 1. What kind of audience do you think is interested in learning about your research?
- 2. Do you use the social networking site "Facebook"? What do you use it for?
- 3. Do you use the social network "LinkedIn"? What do you use it for?
- 4. What do you think is the hardest part of writing content for social networks?
- 5. Would you be able to film and photograph your research work by yourself?

#2

#### **Useful links**

- canva.com
- https://www.linkedin.com/business/sales/blog/profile-best-practices/17-steps-to-a-better-linkedin-profile-in-2017
- pexels.com
- https://www.youtube.com/watch?v=70WNlkwZ0ew
- https://www.youtube.com/watch?v=xQgMR9taVCY

#3

#### Become a co-author

This handbook is unique in that we invite everyone to co-author it. If you are an expert and work in the field of entrepreneurship, if you want to share useful information with the readers, if you are a creator of unique tasks and believe that you can contribute to entrepreneurship in one way or another, we invite you to share your information and we will add a new chapter to the handbook that you have created.

More information: TTO Edvinas Samys edvinas.samys@vdu.lt

#### References

Barba-Sánchez, V., Arias-Antúnez, E., Orozco, L. (2019). Smart cities as a source for entrepreneurial opportunities: Evidence for Spain. Technological Forecasting and Social Change, 148, 119713.

Barba-Sánchez, V., Atienza-Sahuquillo C. (2011). Las teorías motivacionales y su aplicación a la creación de empresas: revisión de los principales trabajos de investigación empíricos. Saarbrücker: EAE.

Barba-Sánchez, V., Atienza-Sahuquillo C. (2012). Entrepreneurial behavior: Impact of motivation factors on decision to create a new venture. Investigaciones Europeas de Dirección y Economía de la Empresa, 18 (2), 132-138.

Barba-Sánchez, V., Atienza-Sahuquillo C. (2017). Entrepreneurial motivation and self-employment: evidence from expectancy theory. International Entrepreneurship and Management Journal, 2017, 13(4), 1097–1115.

Barba-Sánchez, V., Atienza-Sahuquillo C. (2018). Entrepreneurial intention among engineering students: The role of entrepreneurship education. European Research on Management and Business Economics, 2018, 24(1), 53-61.

Barba-Sánchez, V., Martínez-Ruiz, M.P. (2009). A longitudinal study to assess the most influential entrepreneurial features on a new firm's growth. Journal of Small Business & Entrepreneurship, 22 (3), 253-266.

Barba-Sanchez, V., Mitre, M., and Del Brio, J. (2022). The entrepreneurial intention of university students: an environmental perspective. European Research on Management and Business Economics, 28, 100184. doi: 10.1016/j.iedeen.2021.100184

Barba-Sánchez, V., Molina Ramírez, E. (2014). Entrepreneurship as a Survival-Seeking Strategy for Indigenous Communities: The Case of Indigenous Ecotourism SMEs in Mexico. In Handbook of research on strategic management in small and medium enterprises, pp. 398-420, IGI Global.

Barba-Sanchez, V., Molina-Ramírez, E. (2016). Social Entrepreneurship in Mexico. In Laratta, R. Social Enterprise -Context-Dependent Dynamics in a Global Perspective. (#4) Rijeka: InTechOpen.

Barba-Sánchez, V., Salinero, Y., Jiménez, P. (2021). Monetising the social value of inclusive entrepreneurship: The case of the Abono Café social economy enterprise. CIRIEC-España Revista de Economia Pública Social y Cooperativa, 101, 115-141.

Barba-Sánchez, V., Salinero, Y., Jiménez-Estevez, P., and Galindo, E. (2021). Contribution of Entrepreneurship to the Social Integration of People Intellectual Disabilities: a Case Study Based on the Analysis of Social Networks. Frontiers in Psychology, 12:725060. doi: 10.3389/fpsyg.2021.725060

Gartner, W. B. (1990). What are we talking about when we talk about entrepreneurship? Journal of Business Venturing Journal of Business Venturing, 5(1), 15-28.

Ries, E. (2011), The Lean Startup: How Today's Entrepreneurs Use Continuous Innovation to Create Radically Successful Business, Crown Business, New York, NY.

#### References

Käthe Schneider, Carlos Albornoz. Theoretical Model of Fundamental Entrepreneurial Competencies, Science Journal of Education. Volume 6, Issue 1, February 2018, pp. 8-16. doi: 10.11648/j.sjedu.20180601.12

Sharma, A. (2021). Entrepreneurial Finance: External Financing Mechanisms of Start-ups with Special Emphasis on the Role of Venture Capital in the Indian Startup Ecosystem. International Journal of Scientific and Management Research Vol.4 Issue 8, 32-47. DOI: http://doi.org/10.37502/IJSMR.2021.4803

Garner, W. (1990). What are we talking about when we talk about entrepreneurship? The Journal of Business Venturing, 5, 15-25.DOI:10.1016/0883-9026(90)90023-M

Nieman, G.H., Hough, J. & Nieuwenhuizen, C. (Ed.) (2003). Entrepreneurship: A SouthAfrican Perspective. Pretoria: Van Schaik.

Caird, S. (2012). General measure of Enterprising Tendency test.www.get2test.net DOI:10.13140/RG.2.1.4243.7520

Haleem, A. et al. (2022). Artificial intelligence (AI) applications for marketing: A literature-based study. International Journal of Intelligent Networks, Vol.3, 119-132. DOI: https://doi.org/10.1016/j.ijin.2022.08.005

Shah D., Shay E. (2019). How and why artificial intelligence, mixed reality and blockchain technologies will change marketing we know today. In Parvatiyar A., Sisodia R. (Eds.), Handbook of advances in marketing in an era of disruptions: Essays in honour of Jagdish N. Sheth (pp. 377–390). SAGE.

Paschen J., Paschen U., Pala E., Kietzmann J. (2020). Artificial intelligence (AI) and value co-creation in B2B sales: Activities, actors and resources. Australasian Marketing Journal. Advance online publication. https://doi.org/10.1016/j.ausmj.2020.06.004

Yang, Y., Liu, Y., Lv, X., Ai, J., Li, Y.(2022). Anthropomorphism and customers' willingness to use artificial intelligence service agents. Journal of Hospitality Marketing & Management, Vol. 31, 1-23.

Syam, N., Sharma, A. (2018). Waiting for a sales renaissance in the fourth industrial revolution: Machine learning and artificial intelligence in sales research and practice. Industrial Marketing Management, Vol. 69, 135-146. DOI: https://doi.org/10.1016/j.indmarman.2017.12.019

Martinez, J. (2011) Metodos de investigación cualitativa. Research Journal Silogismo, Vol. 1, No. 08.

http://www.cide.edu.co/ojs/index.php/silogismo/article/view/64/53

Bereca, M., D. (2013). Quantitative versus Qualitative in Neuromarketing Research. Munich Personal RePRc Archive, https://mpra.ub.uni-muenchen.de/44134/

Calvert, G. A. and Brammer, M. J. (2012). Predicting Consumer Behavior: Using Novel Mind-Reading Approaches. IEEE Pulse, Vol. 3, Issue 3, 38-41. DOI: 10.1109/MPUL.2012.2189167

#### References

Zurawicki, L. (2010). Neuromarketing. Exploring the Brain of the Consumer. University of Massachusetts, Boston, Boston.

Rosenman, R., Tennekoon, V., Hill, L. G. (2011). Measuring bias in self-reported data. International Journal of Behavioural and Healthcare Research, Vol. 2, No. 4, 320-332.

Yasmin, A., Tasneem, S. & Fatema, K. (2015). Effectiveness of Digital Marketing in the Challenging Age: An Empirical Study. International Journal of Management Science and Business Administration, Vol. 1, Issue 5, 69-80. DOI: 10.18775/ijmsba.1849-5664-5419.2014.15.1006

Chen, H., Yoon, S. S. (2022). Does technology innovation in finance alleviate financing constraints and reduce debt-financing costs? Evidence from China. Asia pacific Business review, Vol. 28, Issue 4, 467-492. https://doi.org/10.1080/13602381.2021.1874665

Van Werven, R., Bouwmeester, O., Cornelissen, J. P. (2019). Pitching a business idea to investors: How new venture founders use micro-level rhetoric to achieve narrative plausibility and resonance. International Small Business Journal: Researching Entrepreneurship, Vol. 37, Issue 3. DOI:

https://doi.org/10.1177/0266242618818249