

Evaluation of the ENEX pilot training on Innovation Management at the University of Lodz, Poland

11-12 March, 2016, Faculty of Management

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Background

The ENEX pilot training was initially planned to take place on the 12-13th February 2016 but due unexpected circumstances it had to be postponed. The new date was 11-12th March 2016 (Friday and Saturday) and the pilot took place at the Faculty of Management, University of Lodz.

The promotion of the event was conducted through the website and social media of the University of Lodz. E-mails were also sent to the relevant faculties of the University of Lodz (so that they could disseminate among members of staff), as well as to the people employed/associated with other institutions in Lodz and other Polish cities that could have been potentially interested to participate. The candidates were signing up for the meeting by sending their name, contact details, as well as the name of the institution represented.

The aim of the training was to gather 20 participants. Prior to the pilot, 25 people expressed interest to participate, 3 of them cancelled off their participation, 1 person was scheduled on the phone on the day of the training, 1 did not show up and 1 participant attended only during the first day. In total, the ENEX pilot training was attended by 23 people. It is worth mentioning that we have received questions from interested people who could not participate if there would be other editions of the training in future.

Alongside staff engaged in the development of ENEX, two other employees of the University of Lodz were invited as the speakers for the training: dr Krzysztof Prawicki (Faculty of Chemistry), dr Dariusz Trzmielak (Centre for Technology Transfer). The classes had a form of either a form of lecture or a workshop and involved also group work of participants.

Evaluation

Upon the completion of the training the participants were asked to fill in the satisfaction questionnaire to get more insight into the profile of the participants as well as to receive a feedback on the content of the pilot. In total, 20 evaluation forms were collected after the pilot activity. The results are presented below

Pre-pilot evaluation

In order to determine the characteristics of the group of participants, a pre-pilot questionnaire was carried out. This was part of the registration form, and care is taken that all the participants filled in the questions. The majority of group consisted out of females. Most of the people were in the age group of 20 to 25 years. These results are shown in figure 1.

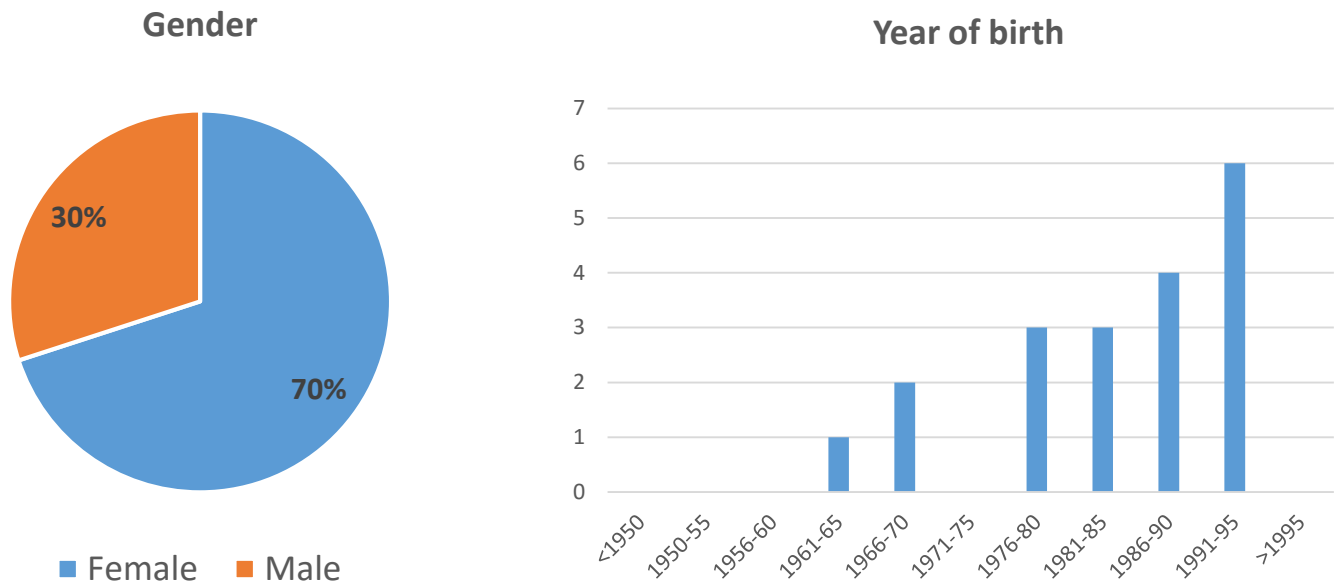


Figure 1. Division of males and females (left) and the age distributions (right).

The background of the group was rather diversified in terms of:

1. Background,
2. Education,
3. Position
4. Place of employment

The pie-charts for the above characteristics are shown in figures 2 - 5

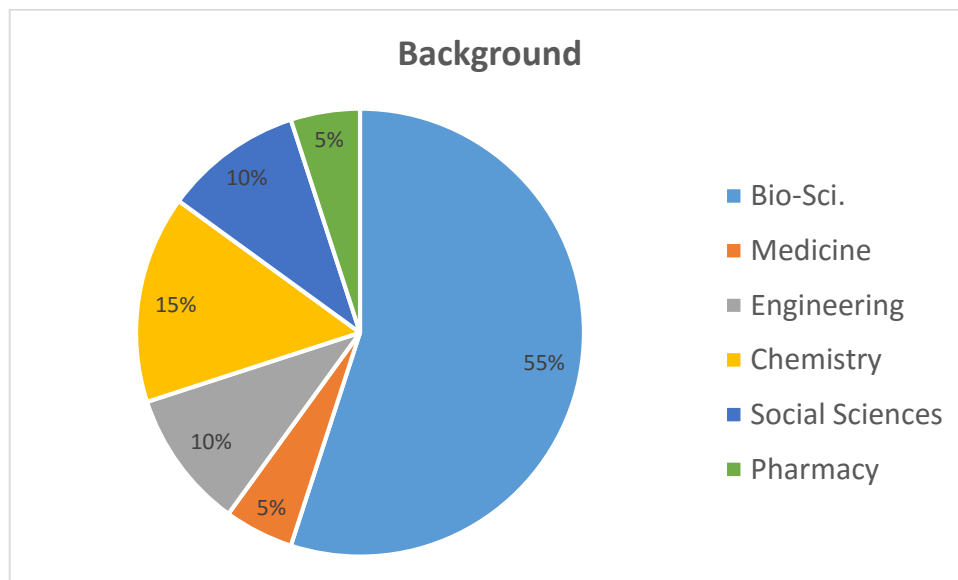


Figure 2. Background of the participants

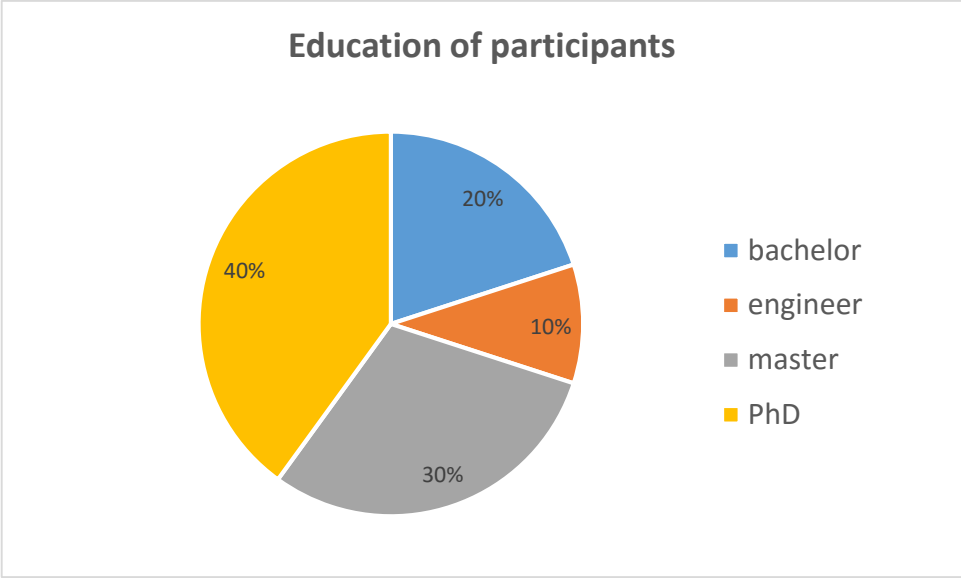


Figure 3. Education of the participants

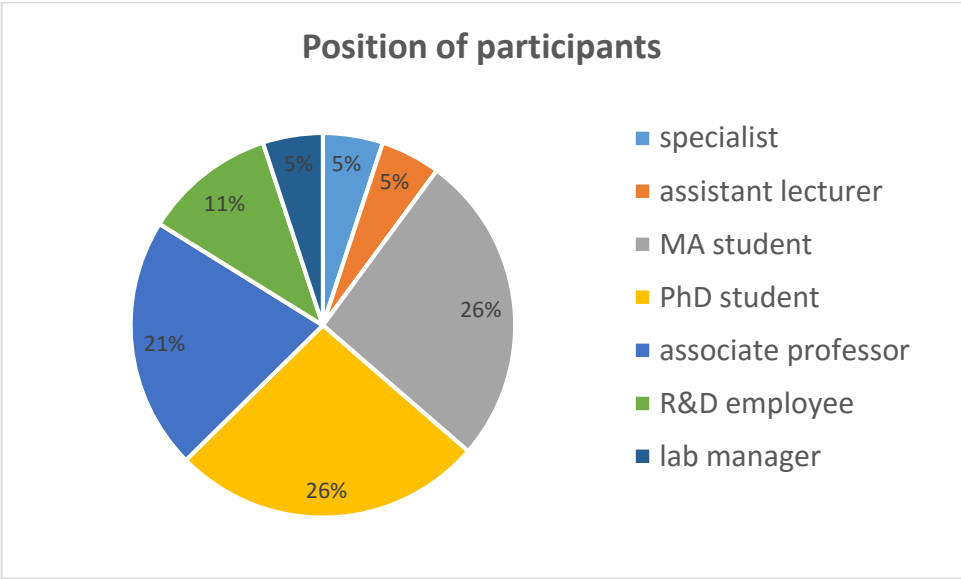


Figure 4. Position of the participants

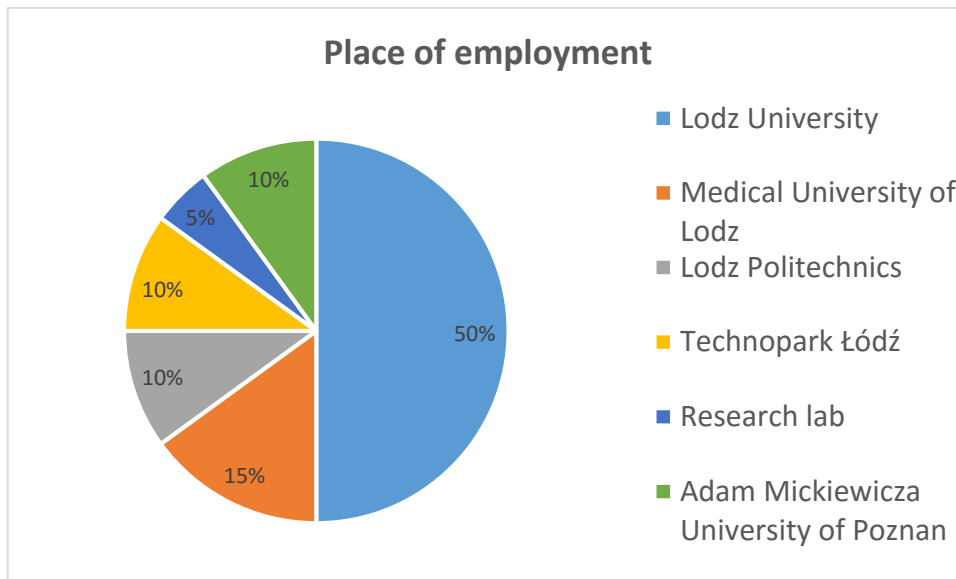


Figure 5. Employment of the participants

The majority of group (90%) did not hear of the ENEX project before. These results are shown in figure 6.

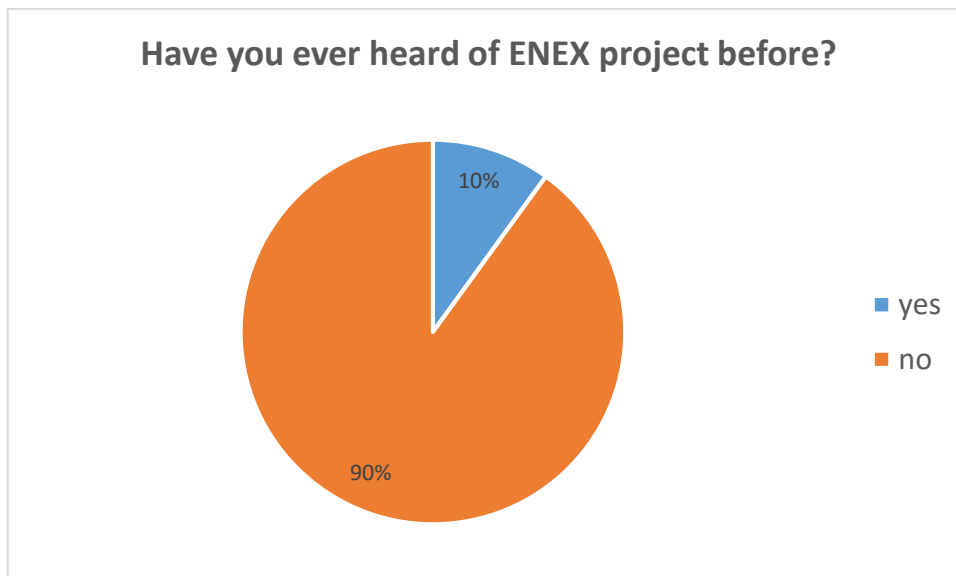


Figure 6. Awareness of the ENEX project amongst participants

Post-pilot evaluation

Impressions on the content of the ENEX pilot training (relevance of topics)

In order to check the satisfactory level of the pilot, a post-pilot questionnaire was carried out. All participants of the pilot were asked to fill-in the evaluation questionnaire. The principal scope of the questionnaire was to gain feedback on the selection of topics for the training course and to correlate the background of the trainees with their probability to profit from the training course in terms of improvement of their prior knowledge.

There pilot consisted in five topics. Each of them was subject to a careful analysis and evaluation. The participants could rate the subsequent parts of the training and suggest other topics and implements for the more rewarding learning experience. The topics were as follows:

1. Introduction to nanotechnology in business;
2. Assessment of market value of the knowledge/technology;
3. How to prepare technology offer;
4. Strategy of technology commercialization;
5. Technology commercialization – cases.

As shown in figure 7, most topics received a high level of satisfaction and were assessed as “very relevant” or “quite relevant”. The only topic that achieved lower assessment of relevance and had the highest number of neutral evaluations is “Introduction to nanotechnology in business”.

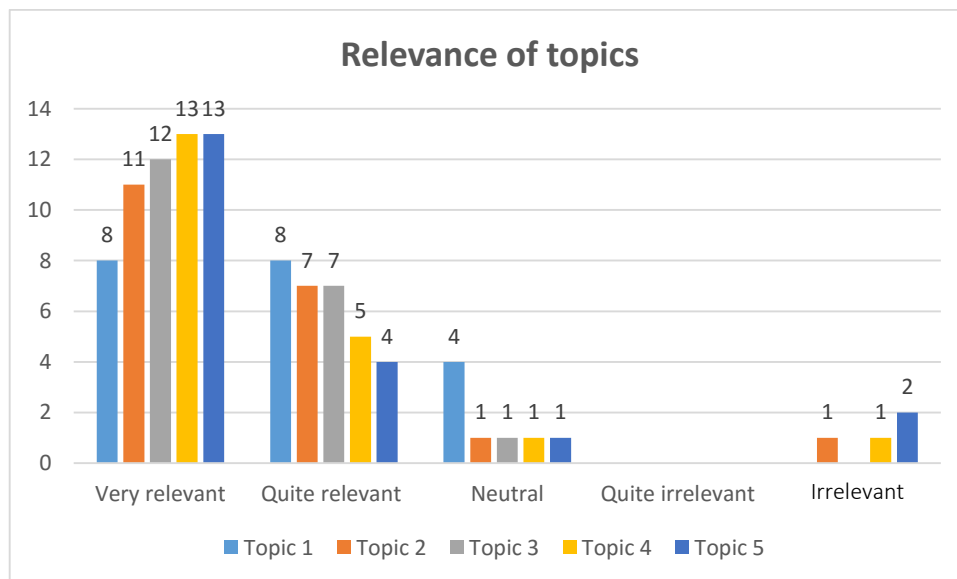


Figure 7. Relevance level of the topics.

Demand for more content

Although the piloted content was assessed well, the trainees considered that in order to meet their learning needs the following topics should also be included in the training and the final version of the curriculum:

1. Financial and economic value of the technology / valuation of technology (intellectual property);

2. Specific aspects of innovation management related to the type of technology being commercialized;
3. Intellectual property regulations;
4. Typical examples of nanotechnology companies;
5. Industry perspective case studies.

The topics indicated as requiring more content are planned in the final version of the curriculum.

Weight of topics

The participants also assessed the weight of the piloted topics in the overall content. Most of the topics were assessed as being ok. A group of pilot participants assessed the topics as being too small, however it probably can be associated with the nature of the pilot, focusing only on a sample of the final content of the curriculum.

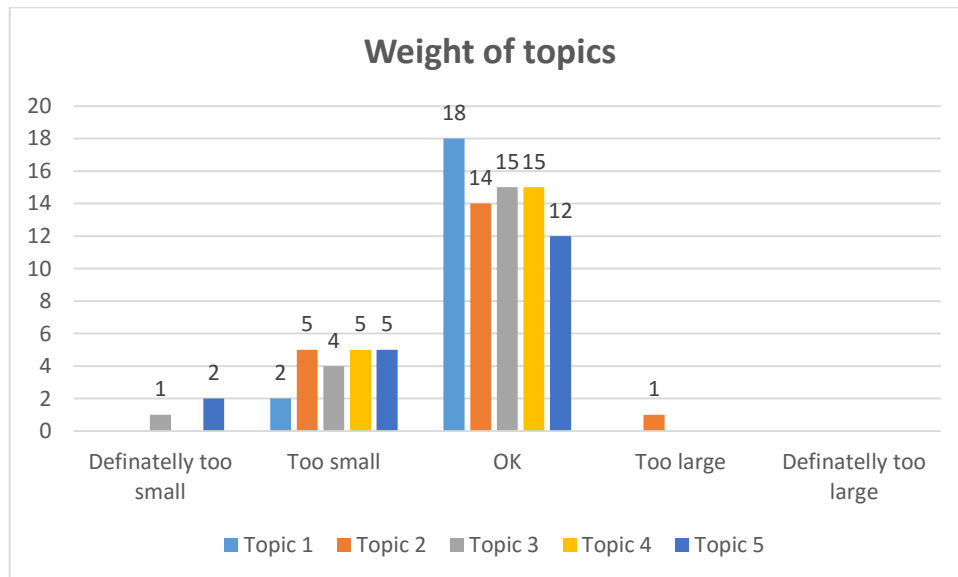


Figure 8. Satisfaction with the relative weight of the topics.

Improvement of prior knowledge

Figure 9 provides an overview on the satisfaction of the participants with respect to their ability to take advantage of the course and improve their knowledge and skills. Most of the pilot participants improved their prior knowledge.

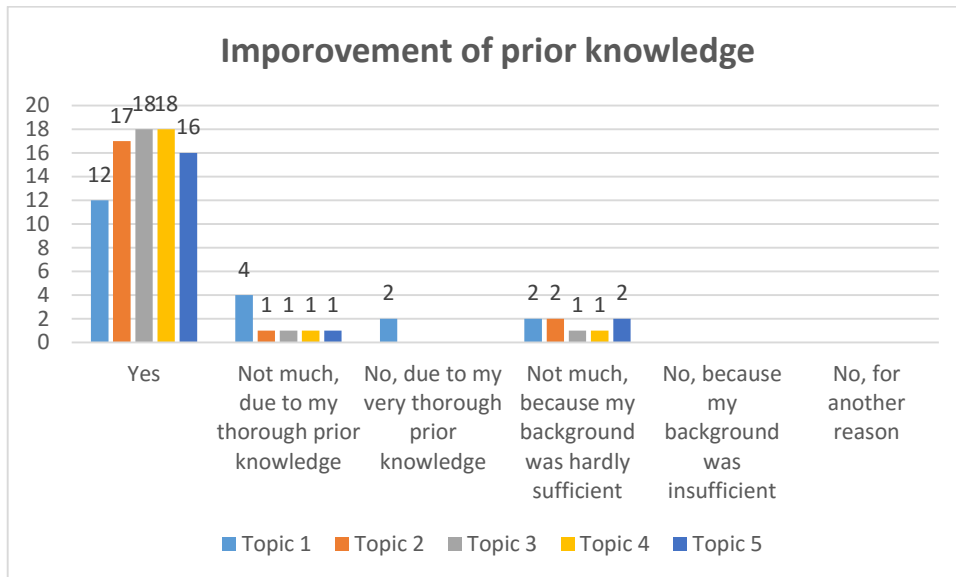


Figure 9. Knowledge improvement of participants.

Willingness to participate in / recommend the full ENEX course

The final questions in the questionnaire reflected the willingness to participate in the full ENEX e-learning course and to recommend it to the others. All of the participants displayed interest in participating in the ENEX e-learning course.

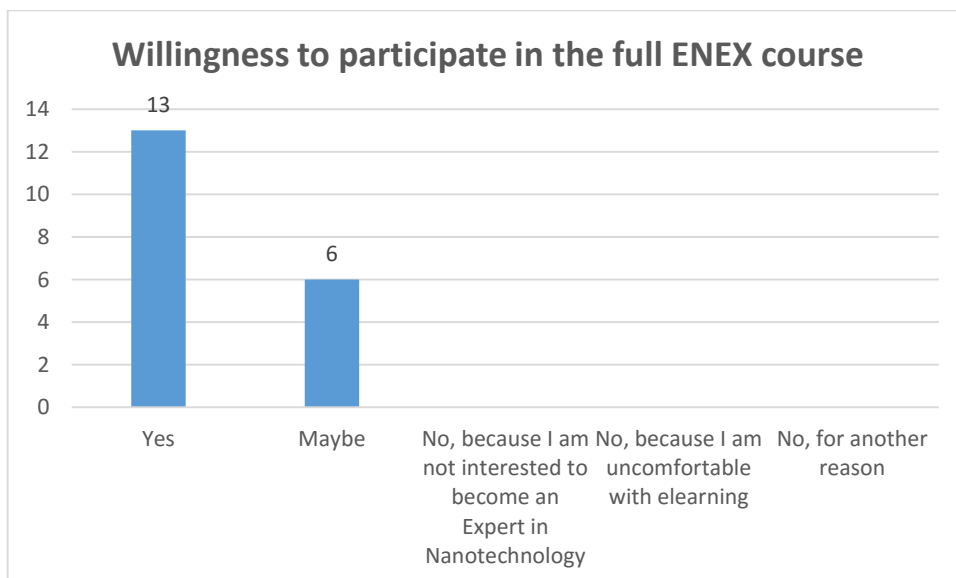


Figure 10. Willingness to participate in the full ENEX course.

Similar attitude could be observed among the participants towards recommending the full ENEX course to the others that is a good prospect for the future.

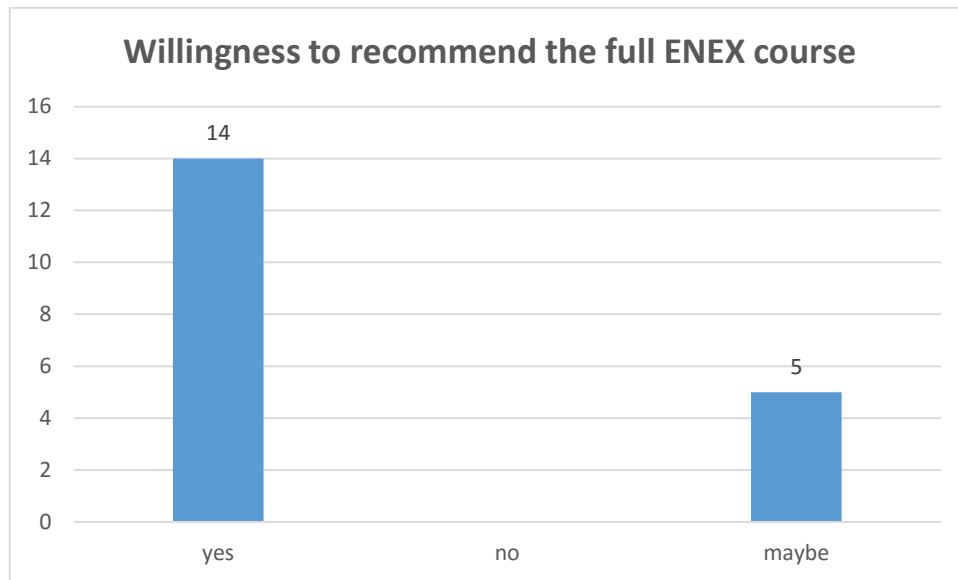


Figure 11. Willingness to recommend the full ENEX course.

Conclusions

The results of the pilot are very good and indicate that the material was well prepared in chosen for piloting. The following conclusions could be made from this evaluation:

1. Most topics received a high level of satisfaction and were assessed as “very relevant” or “quite relevant”.
2. The only topic that achieved lower assessment of relevance and had the highest number of neutral evaluations is “Introduction to nanotechnology in business”.
3. Although the piloted content was assessed well, the trainees considered that in order to meet their learning needs the following topics should also be included in the training and the final version of the curriculum:
 - a. Financial and economic value of the technology / valuation of technology (intellectual property);
 - b. Specific aspects of innovation management related to the type of technology being commercialized;
 - c. Intellectual property regulations;
 - d. Typical examples of nanotechnology companies;
 - e. Industry perspective case studies.
4. The participants assessed the weight of the piloted topics in the overall content as being ok in general.
5. A group of pilot participants assessed the topics as being too small, however it probably can be associated with the nature of the pilot, focusing only on a sample of the final content of the curriculum.
6. Most of the pilot participants improved their prior knowledge.

7. All of the participants displayed interest in participating in the ENEX e-learning course.
8. All of the participants would recommend the ENEX e-learning course to the others.

Appendix A – Piloted curriculum content

Day 1 - 11 of March 2016, room 109,

| | | |
|-------------|--------------------------------------------------------|--------------------------------------------|
| 14.00-14.15 | Welcome and organisational issues | Małgorzata Gramala, dr Paweł Głodek |
| 14.15-15.45 | Introduction to nanotechnology in business | Dr Krzysztof Prawicki |
| 15.45-16.00 | Break | |
| 16.00-19.00 | Assessment of market value of the knowledge/technology | Dr Paweł Głodek Dr Magdalena Wiśniewska |

Day 2 - 12 of March 2016, room 109,

| | | |
|-------------|---------------------------------------------------------|-----------------------------------------------------|
| 9.30-11.45 | How to prepare technology offer? | Dr Paweł Głodek Dr Magdalena Wiśniewska |
| 12.00-12.15 | Break | |
| 12.15-13.45 | Strategy of technology commercialization | Dr T. Bartosz Kalinowski |
| 13.45-14.15 | Break | |
| 14.15-15.45 | Technology commercialization – cases | Dr hab. Dariusz Trzmielak |
| 15.45-16.15 | Conclusions and final discussion. End of the course. | Dr T. Bartosz Kalinowski Dr Magdalena Wiśniewska |

Appendix B – Pilot questionnaire



Ankieta ewaluacyjna

Szkolenie „Zarządzanie innowacjami w nanotechnologii”

Pilotaż projektu „ENEX – Expert in Nanotechnology Exploitation”

Ankieta ma na celu zbadanie poziomu satysfakcji uczestnika szkolenia. Dane udostępnione przez Państwa w ankiecie będą wykorzystane w celu sporządzenia raportu ewaluacyjnego oraz pomogą w dopasowaniu rezultatów projektu do potrzeb grup docelowych.

Płeć

- Kobieta
- Mężczyzna

Rok urodzenia _____

Profil zawodowy

- Fizyka
- Chemia
- Nauki materiałowe
- Inżynieria
- Nauki humanistyczne
- Nauki przyrodnicze
- Ekonomia/Finanse/Zarządzanie
- Inne (jakie?)

Wykształcenie

Prosimy o zaznaczenie posiadanego wykształcenia wraz ze wskazaniem dziedziny nauki

- Licencjat
- Magister
- Inżynier
- Doktor
- Doktor hab.
- Inne

Miejsce pracy/nauki

Stanowisko

Dziedzina/temat prowadzonych badań (jeśli dotyczy)

.....
.....
.....

W jaki sposób dowiedzieli się Państwo o szkoleniu?

- e-mail
- strona internetowa (jaka?)
- od współpracownika
- media społecznościowe
- inne

Czy słyszeli Państwo o projekcie ENEX przed szkoleniem?

<http://www.enex-nano.com/>

tak

nie

Prosimy o wskazanie jak oceniają Państwo istotność/trafność zagadnień poruszanych podczas szkolenia (*prosimy o wstawienie „X”*)

| | Bardzo istotne | Dość istotne | Neutralne | Dość nieistotne | Istotne |
|----------------------------------------------------------------|----------------|--------------|-----------|-----------------|---------|
| Wprowadzenie do zastosowania nanotechnologii w biznesie | | | | | |
| Ocena potencjału komercyjnego technologii | | | | | |
| Budowa oferty komercjalizacji technologii dla biznesu | | | | | |
| Wybór strategii komercjalizacji technologii | | | | | |
| Komercjalizacja wiedzy na uczelni wyższej – zasady, przykłady. | | | | | |

Prosimy o wskazanie innych tematów, które Państwa zdaniem kurs powinien poruszać

.....

Jak oceniają Państwo udział poszczególnych tematów w programie szkolenia?

| | Zdecydowanie zbyt mały | Zbyt mały | W sam raz | Zbyt duży | Zdecydowanie zbyt duży |
|----------------------------------------------------------------|------------------------|-----------|-----------|-----------|------------------------|
| Wprowadzenie do zastosowania nanotechnologii w biznesie | | | | | |
| Ocena potencjału komercyjnego technologii | | | | | |
| Budowa oferty komercjalizacji technologii dla biznesu | | | | | |
| Wybór strategii komercjalizacji technologii | | | | | |
| Komercjalizacja wiedzy na uczelni wyższej – zasady, przykłady. | | | | | |

Czy szkolenie poprawiło Państwa wiedzę we wskazanych obszarach?

| | TAK | W niewielkim stopniu, gdyż moja wiedza w tym obszarze była już wcześniej dość rozległa | Nie, gdyż moja wiedza w tym obszarze była już wcześniej bardzo rozległa | W niewielkim stopniu, gdyż moje doświadczenie w tym obszarze było ledwie wystarczające | Nie, ponieważ moje doświadczenie w tym obszarze było zbyt małe | Nie, z innego powodu |
|---------------------------------------------------------|-----|----------------------------------------------------------------------------------------|-------------------------------------------------------------------------|----------------------------------------------------------------------------------------|----------------------------------------------------------------|----------------------|
| Wprowadzenie do zastosowania nanotechnologii w biznesie | | | | | | |
| Ocena potencjału komercyjnego technologii | | | | | | |
| Budowa oferty komercjalizacji technologii dla biznesu | | | | | | |
| Wybór strategii komercjalizacji technologii | | | | | | |

| | | | | | | |
|----------------------------------------------------------------|--|--|--|--|--|--|
| Komercjalizacja wiedzy na uczelni wyższej – zasady, przykłady. | | | | | | |
|----------------------------------------------------------------|--|--|--|--|--|--|

Jeśli wskazali Państwo odpowiedź “Nie, z innego powodu” przy którymś temacie, prosimy o sprecyzowanie

.....

.....

.....

Czy byliby Państwo zainteresowani uczestnictwem w pełnej otwartej wersji tego szkolenia online, w celu zostania ekspertem w wykorzystaniu nanotechnologii? (<http://www.enexnano.com>)

- tak
- być może
- nie, nie jestem zainteresowany byciem ekspertem w wykorzystaniu nanotechnologii
- nie, nie odpowiada mi e-learning
- nie, z innego powodu

Jeśli wskazali Państwo odpowiedź “Nie, z innego powodu”, prosimy o doprecyzowanie

.....

.....

.....

Czy poleciliby Państwo kurs innym (przyjaciołom, współpracownikom, partnerom biznesowym?)

tak

nie

być może

Sugestie i komentarze

.....

.....

.....

.....

.....

Dziękujemy!