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# Adapting Green Skills to Vocational Education and Training: Questionnaire Report

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Prepared for

Adapting Green Skills Project

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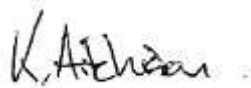
## Final Report

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Signature and Date:



## **1 EXECUTIVE SUMMARY**

An online survey of educators and employers in three European countries identified that employers consider green skills to be relevant, important and needed in their workplaces. However, they do not consider that their staffs always have the relevant skills, and there is a mismatch between the green skills needed and the green skills actually being used.

Educators consider the broader area of green skills to be a developing area, within which they prioritise the field of environmental awareness. While employers also consider this to be an important area, they also have VET needs in the fields of expert procedural knowledge and practical involvement, suggesting there is a need (and an opportunity, as the delivery models develop) to more closely align the skills being taught by VET providers to those needed in the workplace.

## 2 BACKGROUND

"Adapting Green Skills to Vocational Education" is a project co-funded by the Lifelong Learning Programme of the European Union which aims to include green skills into the vocational education and training (VET) systems of five partner countries – Bulgaria, Czech Republic, Germany, Turkey and the United Kingdom. It is a two-year project, funded under the *Leonardo da Vinci Lifelong Learning Programme – Partnerships* strand, and which started in October 2013.

At the first project partner meeting it was agreed that information would be gathered from both employers and educators in the five partner countries concerning their experiences of and attitudes to green skills in the workplace. This would be led by Landward Research Ltd and would be undertaken by means of online questionnaire survey.

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### 2.1 Scope

Each partner country (two partners in both Turkey and Germany, one in each of the other three countries) was to identify small 'closed' populations of employers and educators who would be directly approached to obtain data. This was not to be an 'open' survey – eg to be completed by visitors to a website – but a process by which the partners had control over who could contribute, in order to get as representative results as possible. The samples were always small in order to get indicative results rather than results that could be extrapolated to the whole sector within each country or across the five partner countries.

### 3 METHODOLOGY

The proposed methodology was for one partner (Landward Research Ltd) to design a questionnaire. The questions would be translated by the other partners into their national languages, which would then be returned to Landward Research Ltd together with national lists of email addresses for potential respondents; the survey would then be run via an online service by Landward Research Ltd, who would collate and report on the results.

#### 3.1 Questionnaire Design

The questionnaire was designed using *Novisurvey* software as a service, a system whereby responses to surveys are collected by sending email invitations to follow specific URL links. The survey was designed using conditional logic and intelligent question trees as new questions were generated from previous answers. This meant that the process of answering and completing the questionnaire would be as straightforward as possible for respondents. The system could operate simultaneously in multiple languages, and was intended to be used in English, Turkish, German, Bulgarian and Czech.

#### 3.2 Pilot

Questionnaire Test Report (internal project document, 2<sup>nd</sup> September 2014)

*Landward Research Ltd. Yiwei Zhao*

*The questionnaire was piloted in 17 UK organisations through Novi system (<https://novisurvey.net/n/zzi9m.aspx>) on 15 August 2014 and a reminder was sent a week after on 22 August 2015. 4 out of 17 organisations responded to the questionnaire with 3 effective responses making the effective response rate at 18%. 2 answered right after the initial invitations and two after the reminders. The average length of responding time was 1.7s.*

*All responses were from employers. The logic structure of the survey worked well. However, due to the limited responses during the pilot, it is encouraged to find methods to increase the future response rate.*

#### 3.3 Redeployment

Some partners found it difficult to provide information required for the questionnaire delivery model, specifically regarding data protection issues over sharing potential respondents' email addresses.

A workaround solution was found, whereby the *Novisurvey* questionnaire was emulated in *Google Docs* by the Czech partner, Riva O.S., and that was shared with all partners to allow them to undertake their own, self-directed surveys, with returned datasets to be provided to Landward Research Ltd for aggregate analysis and reporting.

## 4 RESULTS

Responses were partial and response rates were average. We received answers from all partners from Germany 16 educators and 4 employers, Bulgaria – 6 Employers and 14 educators; UK responses only came from a very small sample of only three employers, Turkey responses only came from educators; and Czech Republic responses received came also from both employers and educators.

### 4.1 Employers

Responses were received from 11 employers in the Czech Republic, 3 in the United Kingdom, 4 in Germany and 6 in Bulgaria a total of 24 employers.

#### 4.1.1 Relevance

Employers were asked “Do you think that green skills could be relevant to your workplace?”

YES	NO
18	6
75%	25%

A very clear majority of respondents did think that green skills could be relevant in their workplace.

#### 4.1.2 Importance

Employers were then asked “What do you understand to be the most important aspect of green skills”, and could choose one answer from a multiple choice list.

##### What do you understand to be the most important aspect of green skills?

<i>Environmental awareness</i>	7	29.17%
<i>Expert procedural knowledge on energy, waste, resource efficiency, sustainable development etc</i>	6	25.00%
<i>Being practically involved in saving energy, protecting ecosystems etc.</i>	9	37.50%
<i>Being responsible for environmental management</i>	2	8.33%
<i>Other (Please write all answers below:)</i>	0	

“Environmental awareness” was very slightly the preferred answer, although expert procedural knowledge and practical involvement were also often considered to be the most important aspect of green skills.

#### 4.1.3 Need

“Do your staff need green skills?”

YES	NO
17	7
70.83%	29.17%

While an overwhelming majority of employers did consider that their staff needed green skills, it is interesting that this proportion is slightly lower than that considering that green skills could be important in the workplace – a slightly greater sense of need over importance, suggesting one respondent did not consider these skills to be important, yet their staff still needed them.

#### 4.1.4 Workforce Skills

“Do your staff have green skills?”

YES	NO
11	13
45.83%	54.17%

Only a minority of respondents considered that their staff had green skills, much lower than the proportion that considered that their staff needed such skills or that they were important in the workplace.

#### 4.1.5 Green Skills Used in the Workplace

Respondents were asked to identify which green skills their staff use in the workplace, and could

##### Please name the green skills that you use in the workplace

<i>Environmental awareness</i>	7	29.17%
<i>Expert procedural knowledge on energy, waste, resource efficiency, sustainable development etc</i>	9	37.50%
<i>Being practically involved in saving energy, protecting ecosystems etc.</i>	4	16.67%
<i>Being responsible for environmental management</i>	3	12.50%
<i>Other (Please write all answers below:)</i>	5	20.83%

mark as many answers as they thought relevant.

Saving resources, recycling

The most frequently reported skills in use – awareness and procedural knowledge – do not match precisely to the reported understanding of which green skills are most important, suggesting there is an imbalance between perceived skills needs and skills delivery.

#### 4.1.6 Analysis

Even with a very small dataset, it is possible to see that the employers invited to contribute to this survey do consider that green skills are relevant, important and needed in their workplaces. However, they do not consider that their staffs always have the relevant skills, and there is a mismatch between the green skills needed and the green skills actually being used, suggesting that there is a need for more comprehensive green skills reviews (precisely elaborating the skills present in-house and needed by employers) to allow for the development of training or recruitment plans to address these potential skills gaps or shortages.

## 4.2 Educators

Responses were received from 12 educators in the Czech Republic, 20 in Turkey, 14 in Bulgaria and 16 in Germany a total of 62 educators.

### 4.2.1 Relevance

Respondents were asked “Do you think that green skills could be relevant in the teaching you provide?”

YES	NO
49	13
79.03%	20.97%

The overwhelming majority of respondents believed that green skills could be relevant in the teaching that they provided.

### 4.2.2 Importance

Educators were asked “What do you understand to be the most important aspect of green skills”, and could choose one answer from a multiple choice list.

#### What do you understand to be the most important aspect of green skills?

<i>Environmental awareness</i>	16	25.81%
<i>Expert procedural knowledge on energy, waste, resource efficiency, sustainable development etc</i>	12	19.35%
<i>Being practically involved in saving energy, protecting ecosystems etc.</i>	22	35.48%
<i>Being responsible for environmental management</i>	6	9.68%
<i>Other (Please write all answers below:)</i>	6	9.68%

environmental behaviour of employees in daily working activities; sustainable life; three free text responses of meaningless strings of characters could not be interpreted, disposal of chemical products

Environmental awareness is clearly considered to be the most important aspect of green skills to the educators who responded to this survey, with expert procedural knowledge and practical involvement also being important to substantial numbers of respondents.

#### 4.2.3 Teach

“Do you teach green skills?”

YES	NO
25	17
59.52%	40.48%

Responses to this question were received from Czech Republic, German and Bulgarian respondents.

The majority of the small sample of respondents to this question do consider that they teach green skills.

#### 4.2.4 Skills Taught

Respondents were asked to identify which green skills they taught, and could mark as many answers

##### Please name the green skills that you teach

<i>Environmental awareness</i>	26	65.00%
<i>Expert procedural knowledge on energy, waste, resource efficiency, sustainable development etc</i>	18	45.00%
<i>Being practically involved in saving energy, protecting ecosystems etc.</i>	22	55.00%
<i>Being responsible for environmental management</i>	7	17.50%
<i>Other (Please write all answers below:)</i>	0	0.00%

as they thought relevant.

Responses to this question were only received from Czech Republic respondents, and each only marked one answer.

Environmental awareness was by far the most frequently identified are of green skills being taught, which matches with how this rated in terms of educators' perceptions of importance.

#### 4.2.5 Resources

“Do you think you have sufficient resources to teach green skills?”

YES	NO
16	20
44.44%	55.56%



Responses to this question were received from Czech Republic, German and Bulgarian respondents.

A slight majority of respondents considered that they did have sufficient resources to teach green skills.

#### 4.2.6 Future Intent

“Do you intend to develop green skills education in the future?”

YES	NO
41	16
71.93%	28.07%

All Turkish respondents to this question intended to develop this area in the future.

The vast majority of respondents did intend to develop green skills education in the future; given that the level of response to this question was much higher than to the two previous questions (which were both about current delivery), this could be interpreted as indicating that many respondents were not yet teaching green skills, but were planning to engage in so doing in the near future.

#### 4.2.7 Problems

Respondents were asked to identify which problems they encountered teaching green skills, and

##### What are the problems you encounter in teaching green skills?

<i>Too few staff have knowledge of green skills</i>	10	16.13%
<i>There is no didactic framework for teaching green skills</i>	16	25.81%
<i>Lack of adequate and specific learning facilities</i>	18	29.03%
<i>Low student interest in green skills</i>	12	19.35%
<i>Other (Please write all answers below:)</i>	6	9.68%

could mark as many answers as they thought relevant.

Lack of interest of employers; lack of importance for companies and organisations; separate approach - diversification between work and daily life; three unusable, meaningless text responses

The distribution of responses to the categories of potential problems that could be encountered when teaching green skills was relatively even, and so it has to be considered that all of the potential problem categories (experience, methodology, materials, and student engagement) represent real issues in the teaching of these skills.

#### 4.2.8 Future Development

Respondents were asked “Please tell us how you think green skills could develop in the future (Please write all comments)”.

“We need to have an integrated approach that includes children from a young age, parents and teachers. If all start at an early age, then it will be much easier for employers to continue or make those skills sustainable, instead of having to build them.”

“It will be more important, apprenticing companies try to get environment certifications, apprentices have to implement.”, “Ecology vs. Economy”; “It will be considerably more important in future.”; “In view to the growing need to handle the existing resources sustainable, we assume a rising importance of the green skills.”

“Depending on the education the theme is already well integrated into the lessons. I think, that there will be hardly more development in this field in the future. “; “The questionnaire is too unspecific. The provision of green skills is highly dependent on the apprenticeship.”

“Importance increases because of scarce resources, renewable energies.”, “Further will certainly increase the importance respectively become more important. The curricula in this regard are designed to be open enough that these topics can be integrated depending on the sector / department.”

#### 4.2.9 Analysis

Educators responding to the questionnaire considered that environmental awareness was both the most important aspect of green skills and was the most frequently taught aspect; this may either represent a good matching of skills importance to delivery, or a self-fulfilling model.

A higher proportion of educators considered that green skills were relevant than were actually teaching green skills; combined with the very high proportion who are planning to (further) develop green skills education in the future strongly suggests that this is an area that is currently in the process of growing in significance in educational organisations.

However, many respondents feel under-resourced to do so, and a range of potential problems have been identified.

### 4.3 Comparison between Employers and Educators

The educators who responded to this questionnaire clearly prioritise the teaching of environmental awareness, the area that they consider to be the most important of the categories they were presented with.

However, while more employers identified this area as being the most important to them, nearly as many flagged expert knowledge and practical experience as being the most important areas, and these identified workplace needs may not be being addressed by VET providers – a mismatch that could possibly be addressed through a process of making educators more aware of the needs of the workplace.