

Erasmus +

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Better Effect of Training (BET)



IO1- Awareness raising to VET providers and fabrication industry (Sweden)

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IO1 – Awareness raising to VET providers and fabrication industry

Report prepared by University West as summary of the result and analysis of the interviews with Swedish companies.

Circulation: Partners (SDZVT, QMS, MHEAE, IZV, ELS)

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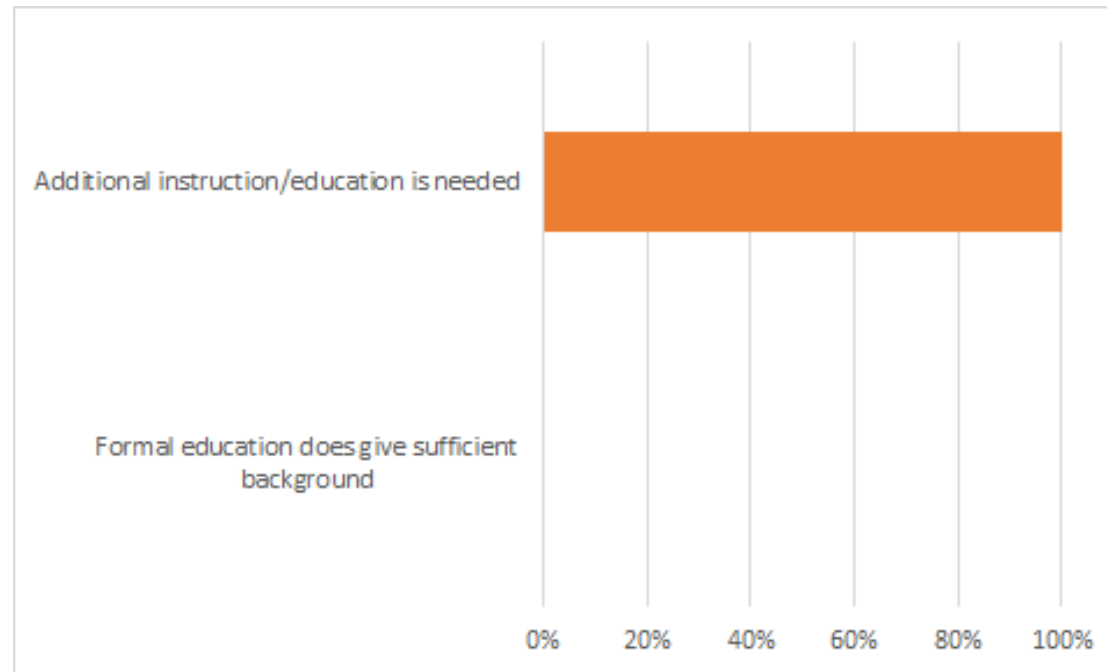
Version: 1.0, Stage: Final

Block 1- Company ID

	Company A	Company B	Company C	Company D	Company E	Company F
Employee	850 (Sweden) 90K (Worldwide)	850 and 3000 salespersons	65 (Sweden)	1700 (Sweden) 18 K (Worldwide)	25K (Sweden) Ca.41K (Worldwide).	
Turnover	0.6 %	2 403 867 KSEK	130M SEK	£2.8bn	MSEK 262,833	
Welding staff Gender ratio	30 85/15 %	14 100%	14 50 % each	200 18% for women	20 worldwide dealing with joining	9 employees one female
Age distribution	15 >50, 5 = (25-35)	Middle age	25-40 years		Average above 50 years old	35 -60; average 50, old
Type of Production	High flexibility and low scale	Serial production	Both serial and small scale	Serial	Serial and large series; they also have batch	Serial Production Small scale production
AQL	Defined	Defined	'Fadder' system	Defined	Own VCS standards	No general document Specific for different products
Cost of non-quality	Quite a lot	Special courses to reduce cost	3 levels; system, process, product	<i>non-conformances are seen as waste</i>	Very costly Process control to avoid	Not sure as it is not related to R&D
Qualification & employment	License to confirm qualification	High or tailored education	Technical educated	Specific qualification and specific processes	People with experience in materials e.g IWE/IWT	IWE certificates, more of metallurgy
VET partner	Gymnasium Engineering - Luleå	Universities & Gymnasium	Institutions & Gymnasium	<i>Owned Aerogymnasiet.</i>	Swerim	Not sure

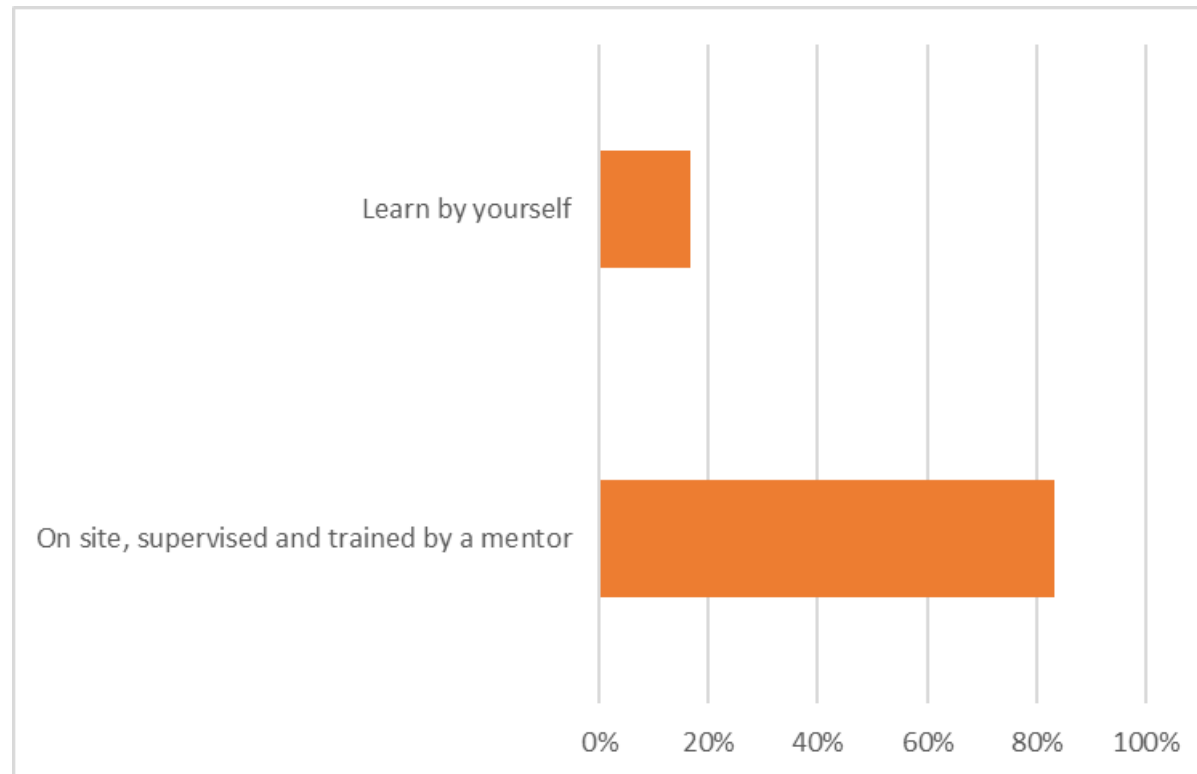
Block 2- Current status, starting point

- How companies deal with training now? Focusing on welding-AM/inspection-quality area.
- Does the formal education give sufficient background for carrying out the work in the company?



Block 2- Current status, starting point

- If not, what kind of additional education do the employees get?



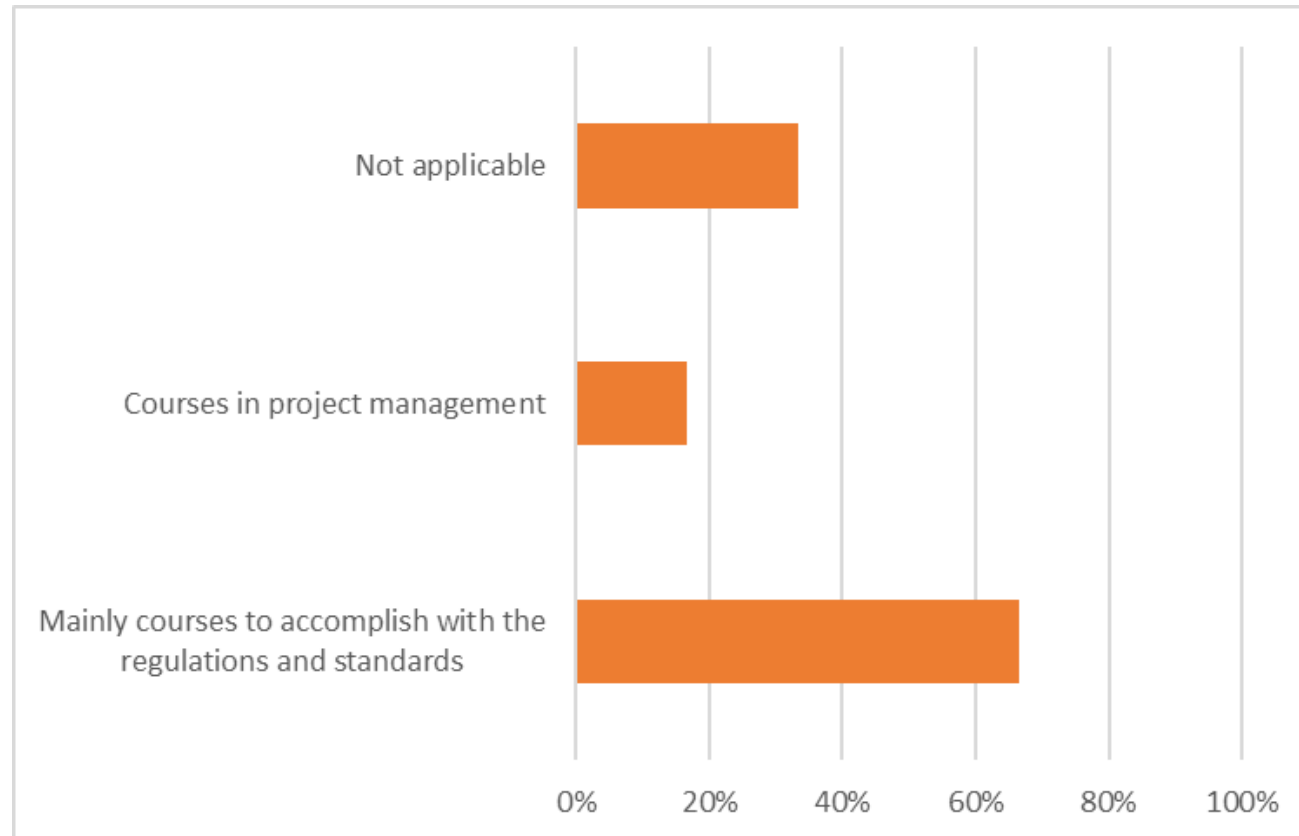
Block 2- Current status, starting point

- If your personnel need additional training, do you carry out such training by yourself or do you prefer to get such training by outside sources?



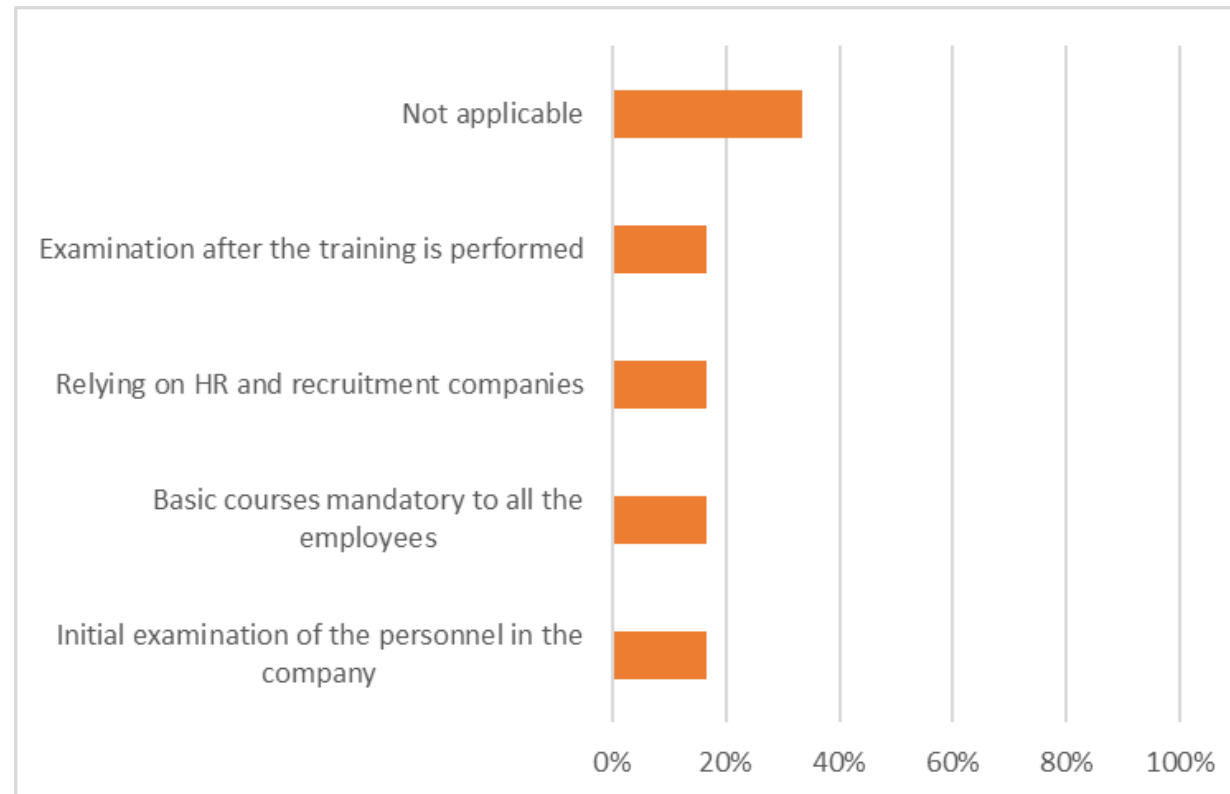
Block 2- Current status, starting point

- If the training is conducted in the company:
 - What type of training is currently being performed at the company?



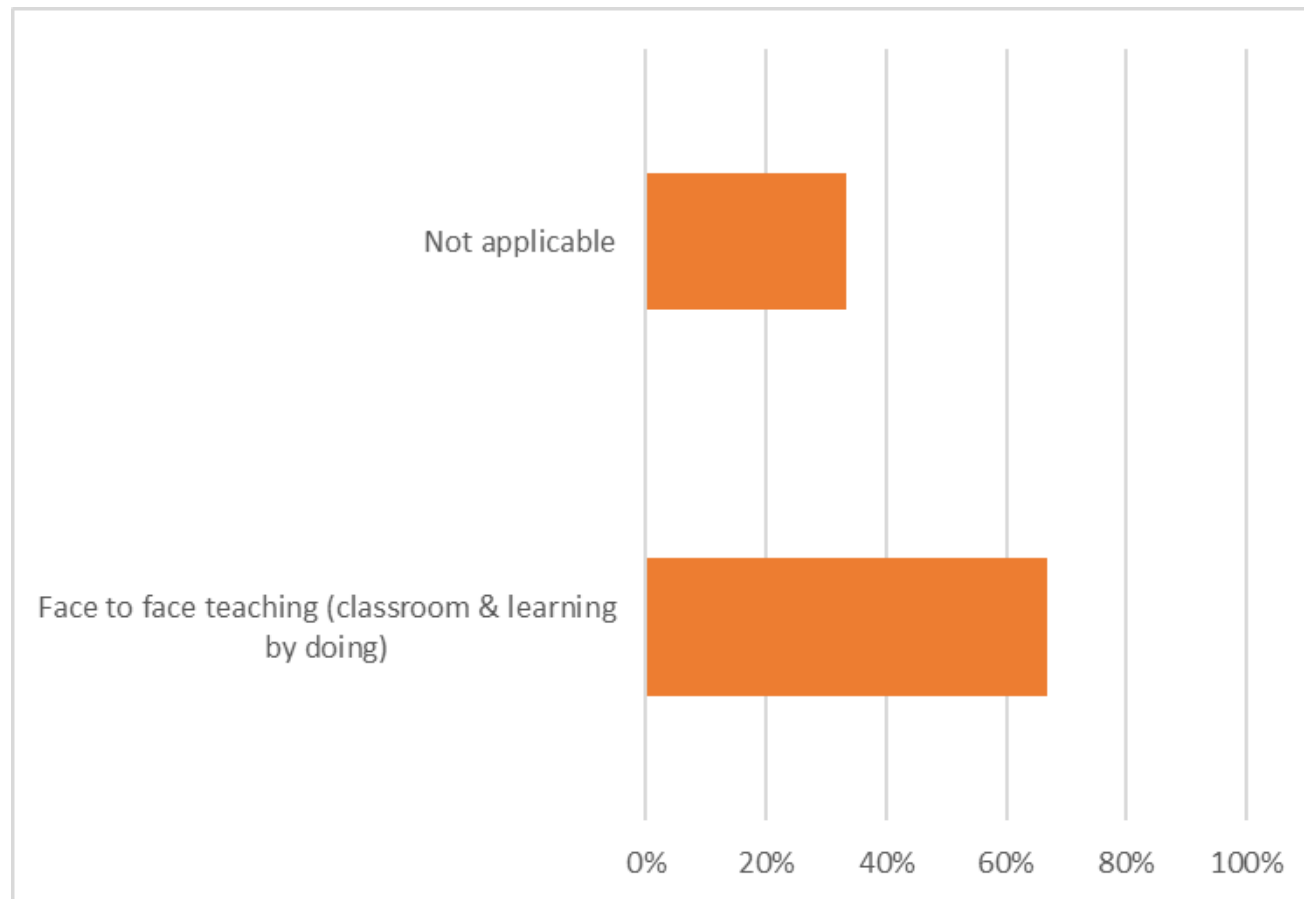
Block 2- Current status, starting point

- If the training is conducted in the company:
 - What type or prerequisites are required for your courses and how do you validate these?



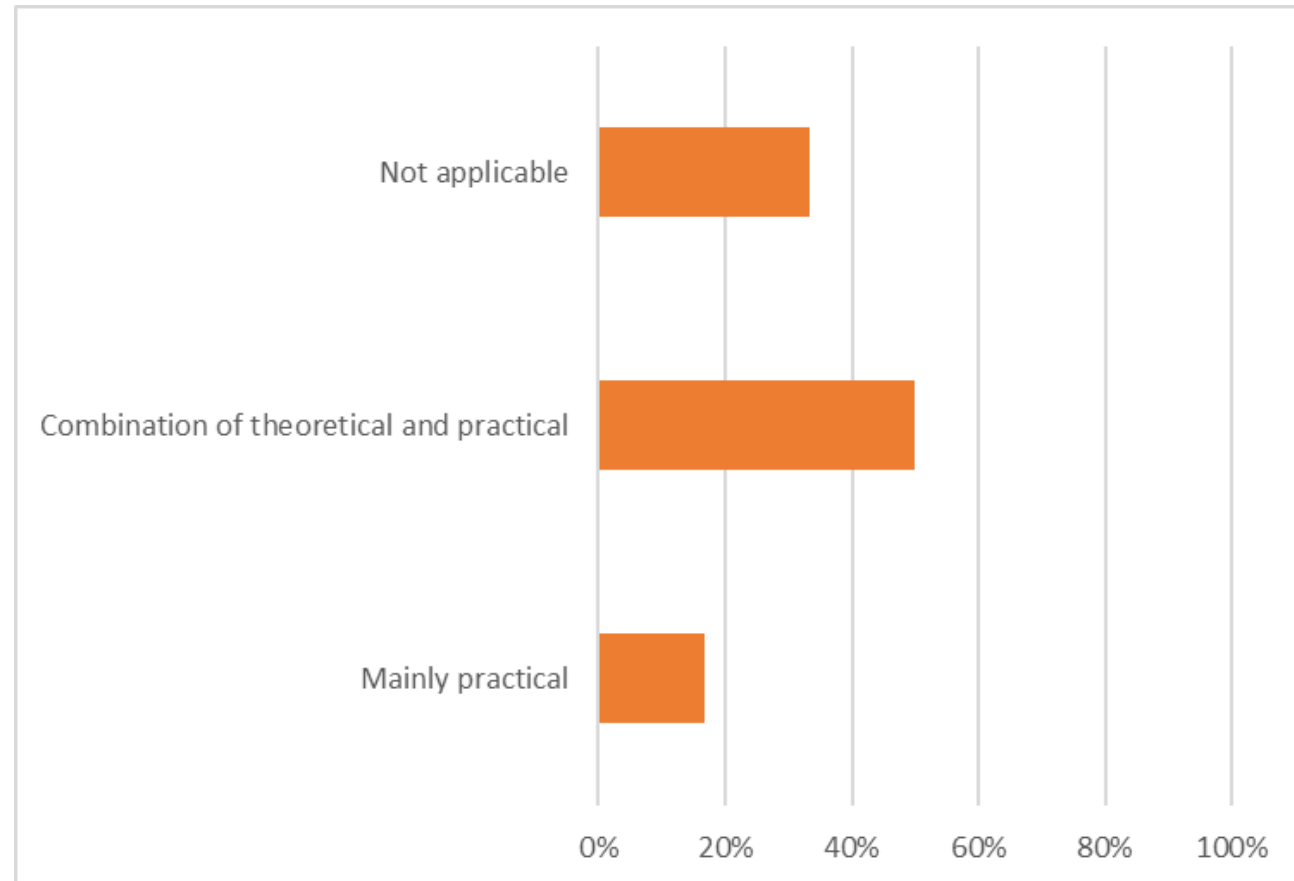
Block 2- Current status, starting point

- If the training is conducted in the company:
 - What type of pedagogy or training methods do you currently apply and why?



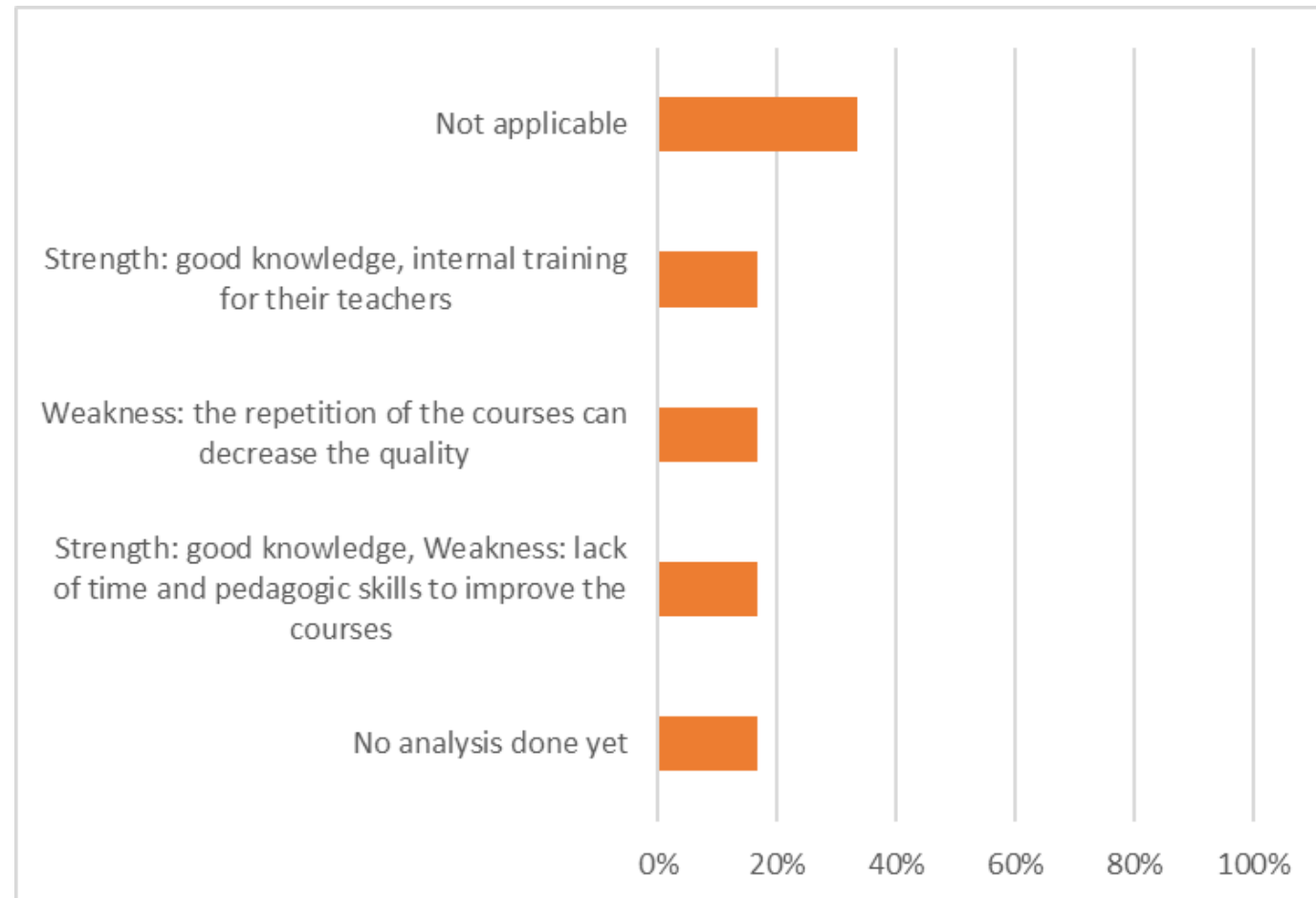
Block 2- Current status, starting point

- If the training is conducted in the company:
 - How is the composition of your courses/training in terms of theory and practice?



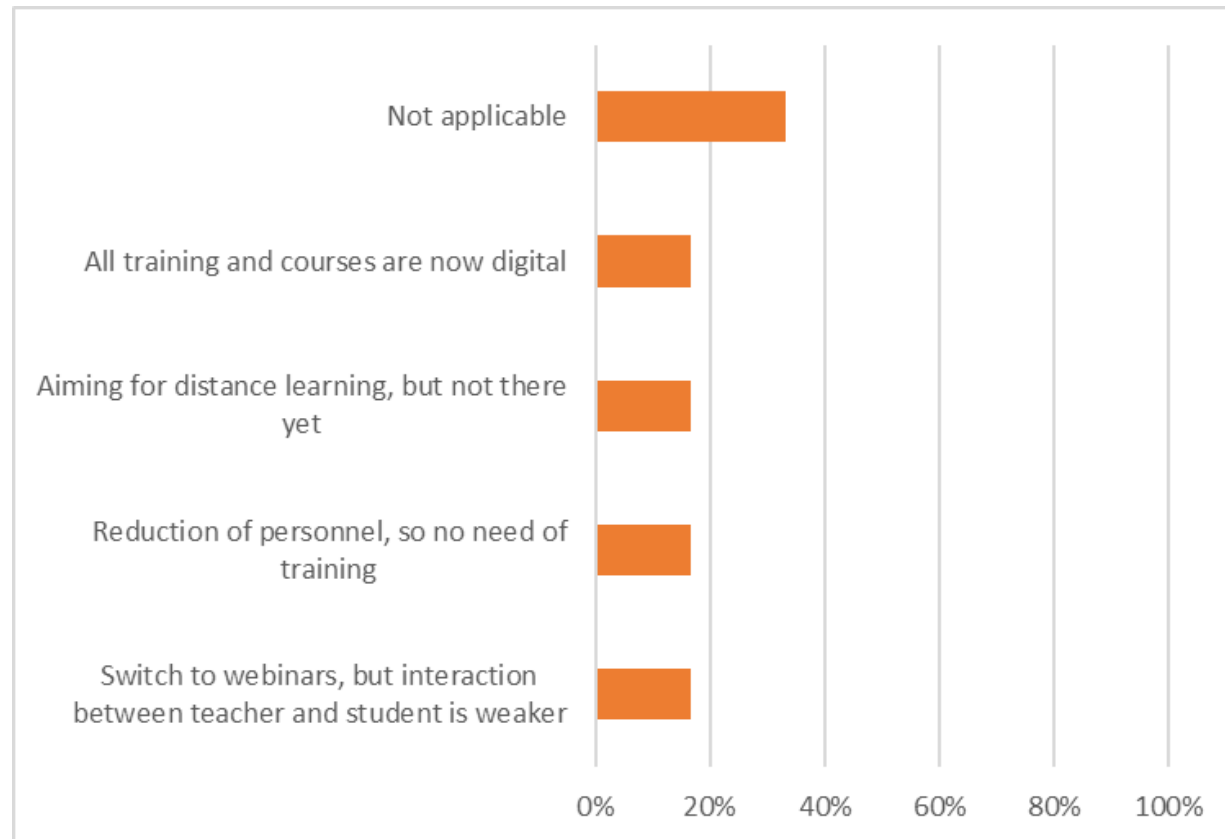
Block 2- Current status, starting point

- If the training is conducted in the company:
 - Have you identified strengths and weaknesses in your training methods?
Which ones?



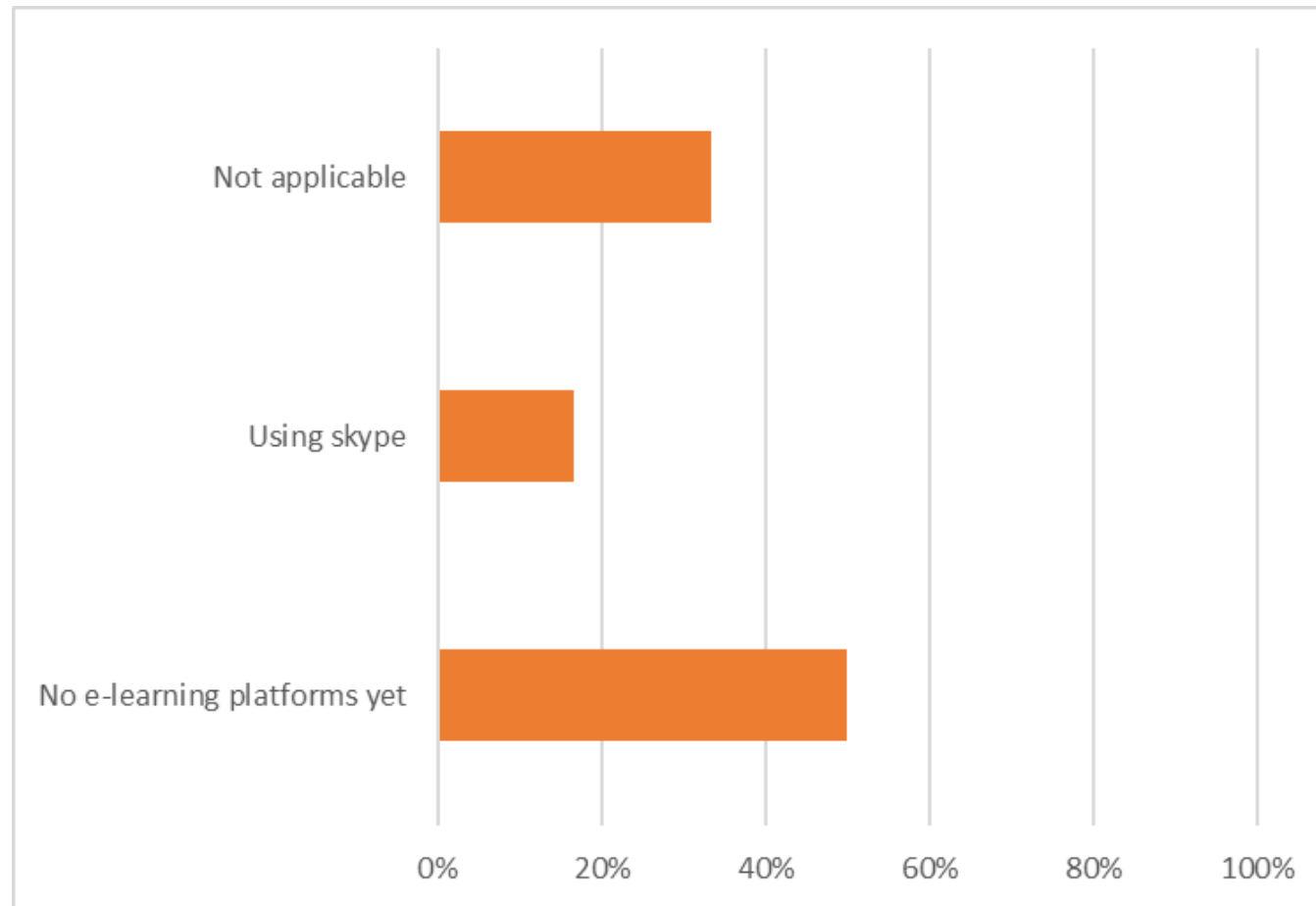
Block 2- Current status, starting point

- If the training is conducted in the company:
 - Has Covid-19 situation forced you to modify/adapt your training methodologies?



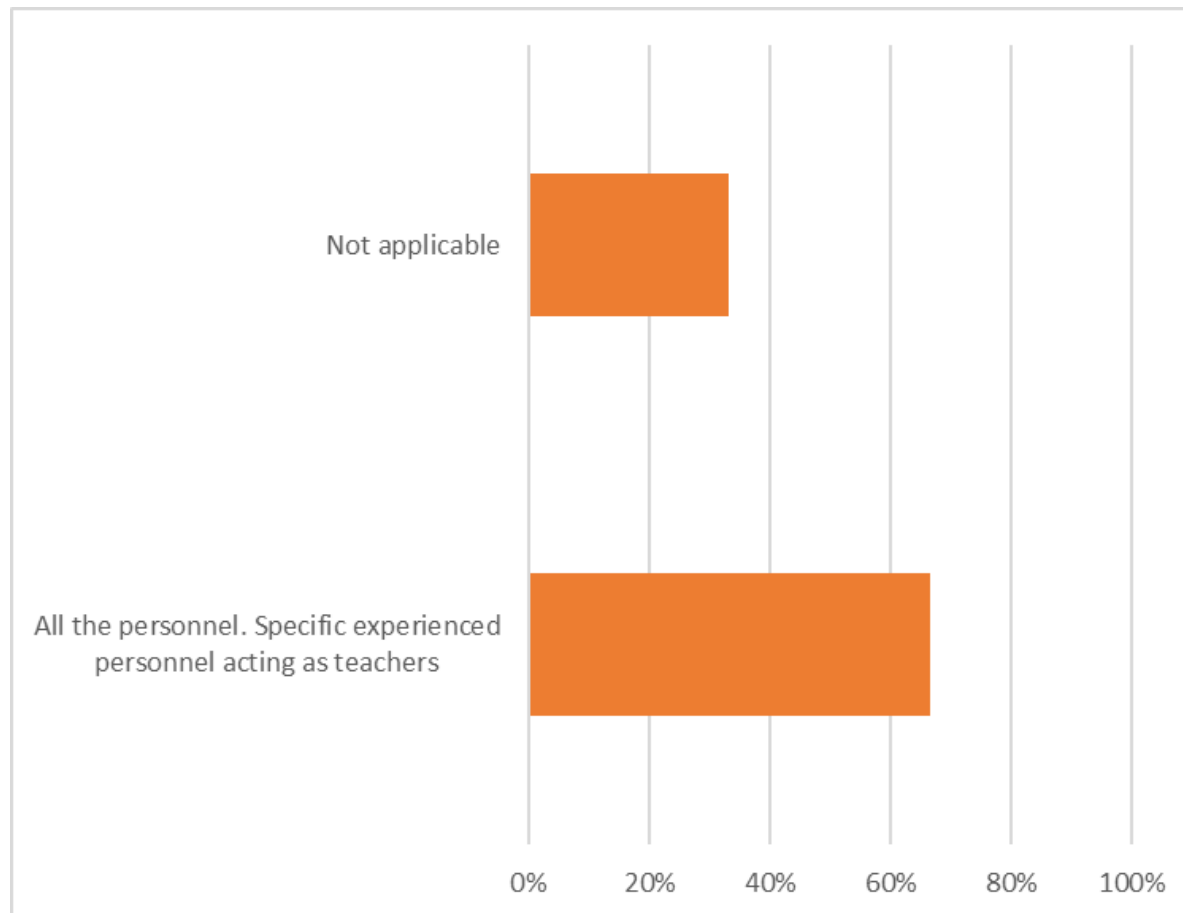
Block 2- Current status, starting point

- If the training is conducted in the company:
 - What type of learning platforms are currently being used in your existing training?



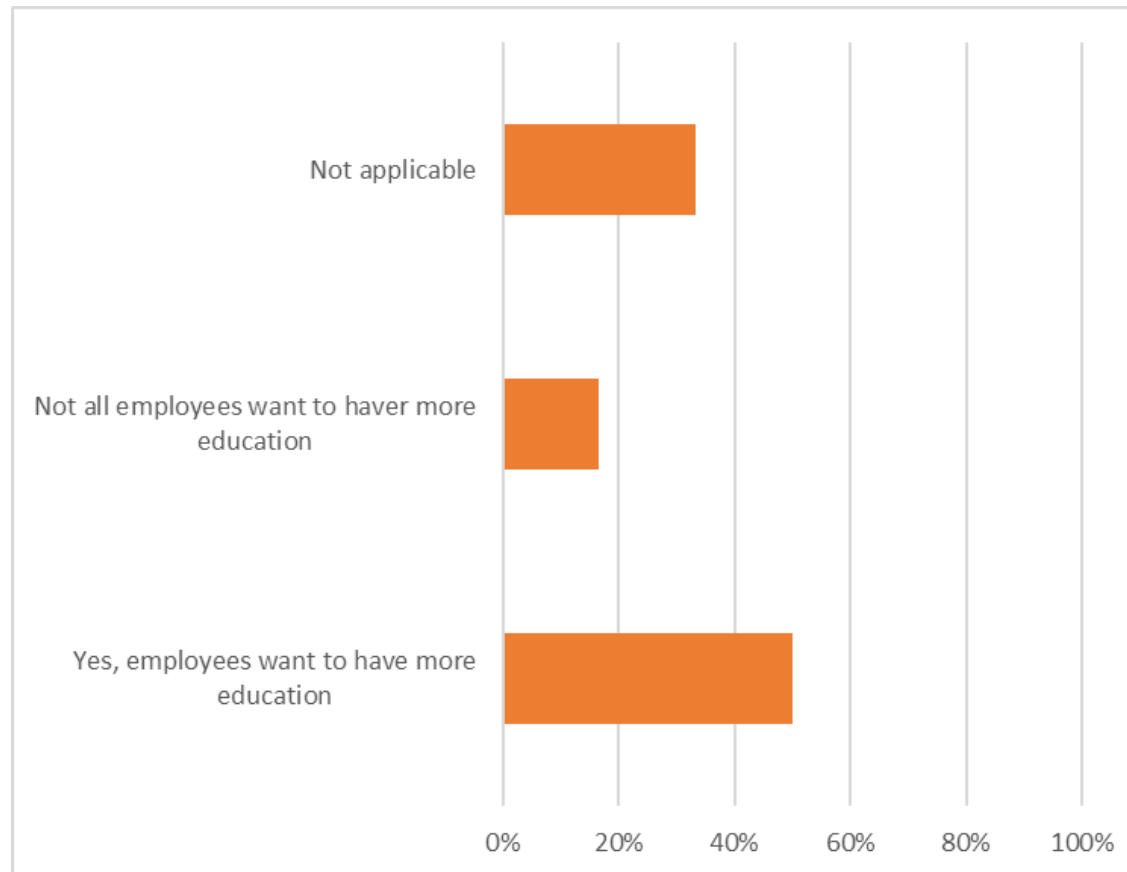
Block 2- Current status, starting point

- If the training is conducted in the company:
 - What type of personnel is involved in training?



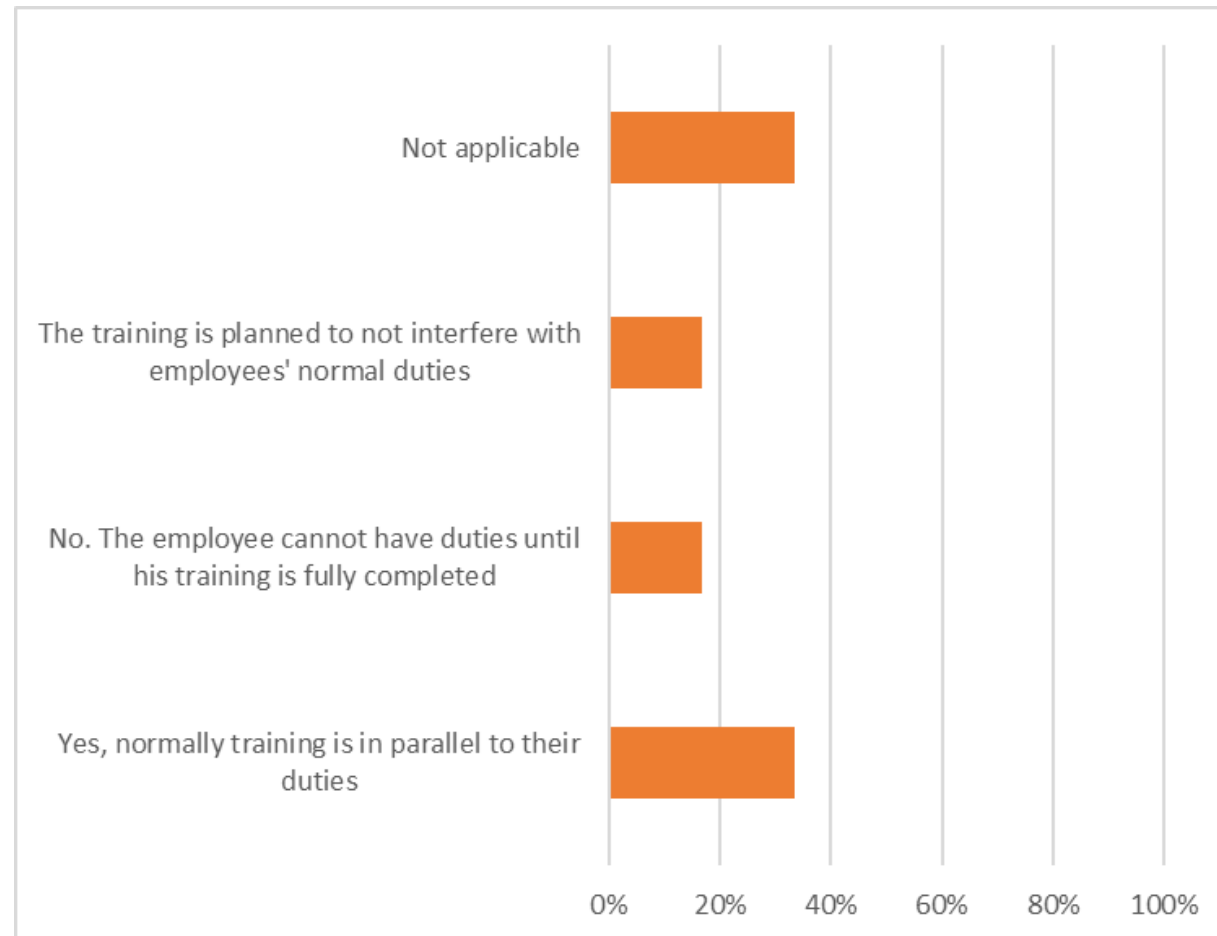
Block 2- Current status, starting point

- If the training is conducted in the company:
 - Do your employees feel they need training (employee's perception)?



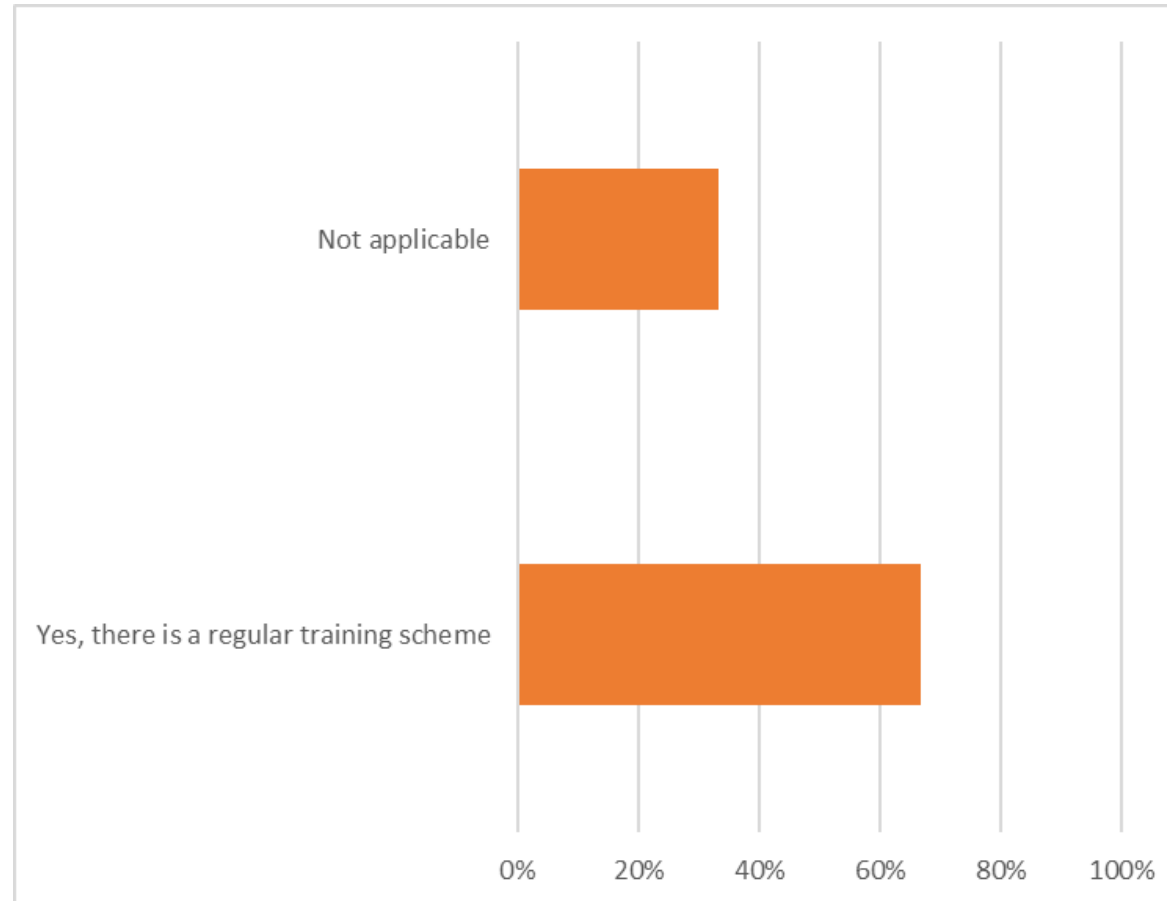
Block 2- Current status, starting point

- If the training is conducted in the company:
 - Do they have to combine their “normal duties” meanwhile taking the training?



Block 2- Current status, starting point

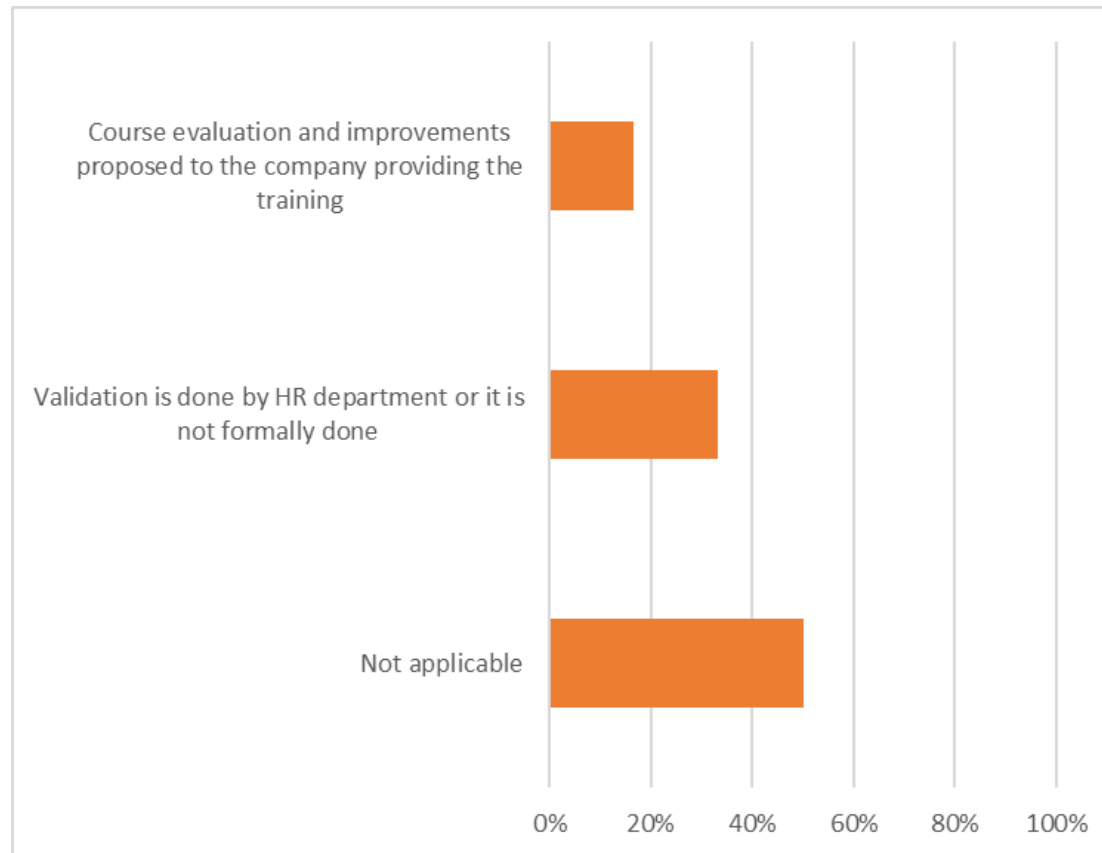
- If the training is conducted in the company:
 - Do you have a formal/informal on-the -job training scheme?



Block 2- Current status, starting point

If the training is carried out outside the company:

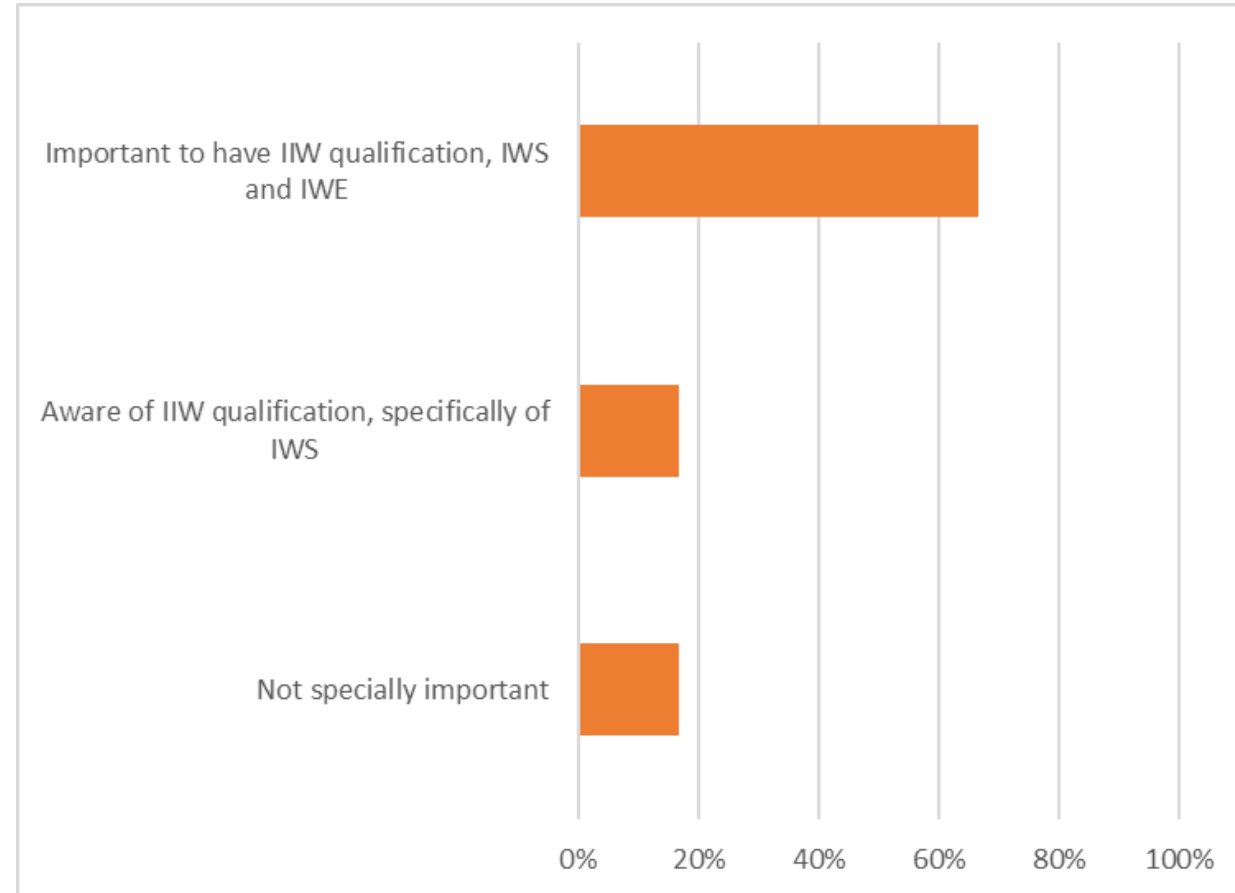
- How do you assess/validate the learning outcomes and quality of that education/training?



Block 2- Current status, starting point

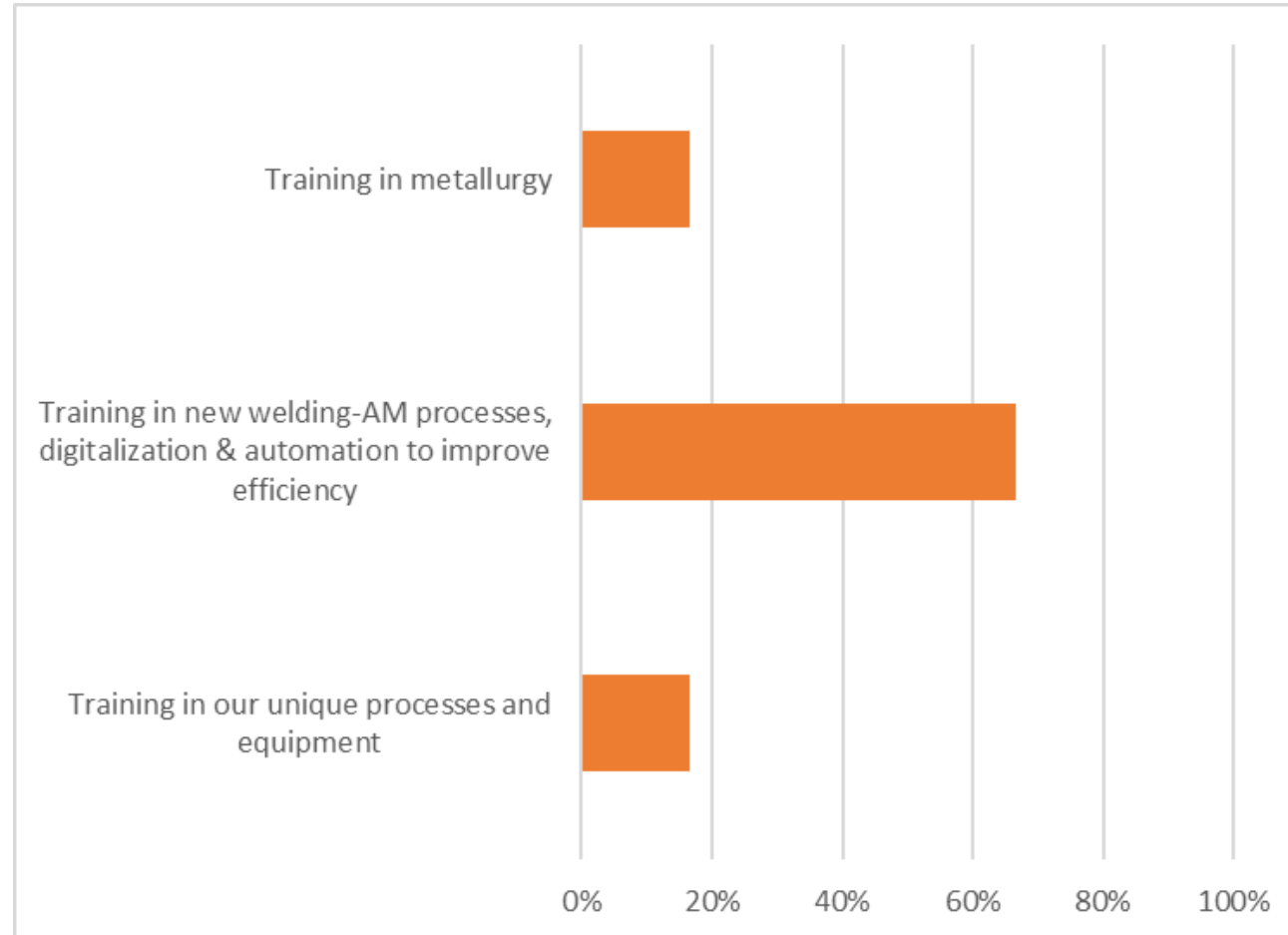
If the training is carried out outside the company:

- Is it important for you that the training/qualification is harmonized? (i.e., EWF, IIW)



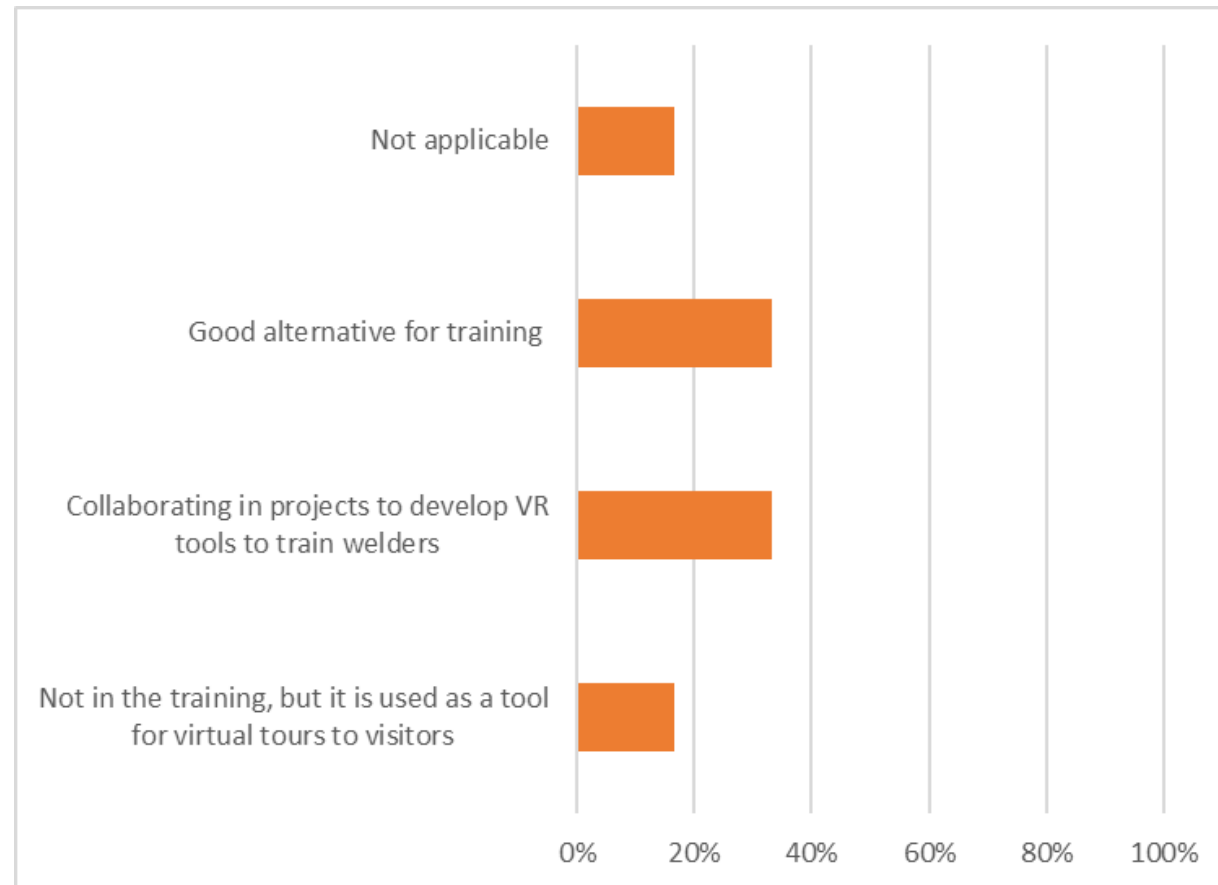
Block 3 – Views on future and improvements

- Is there any area where you foresee the need for training in the near future?



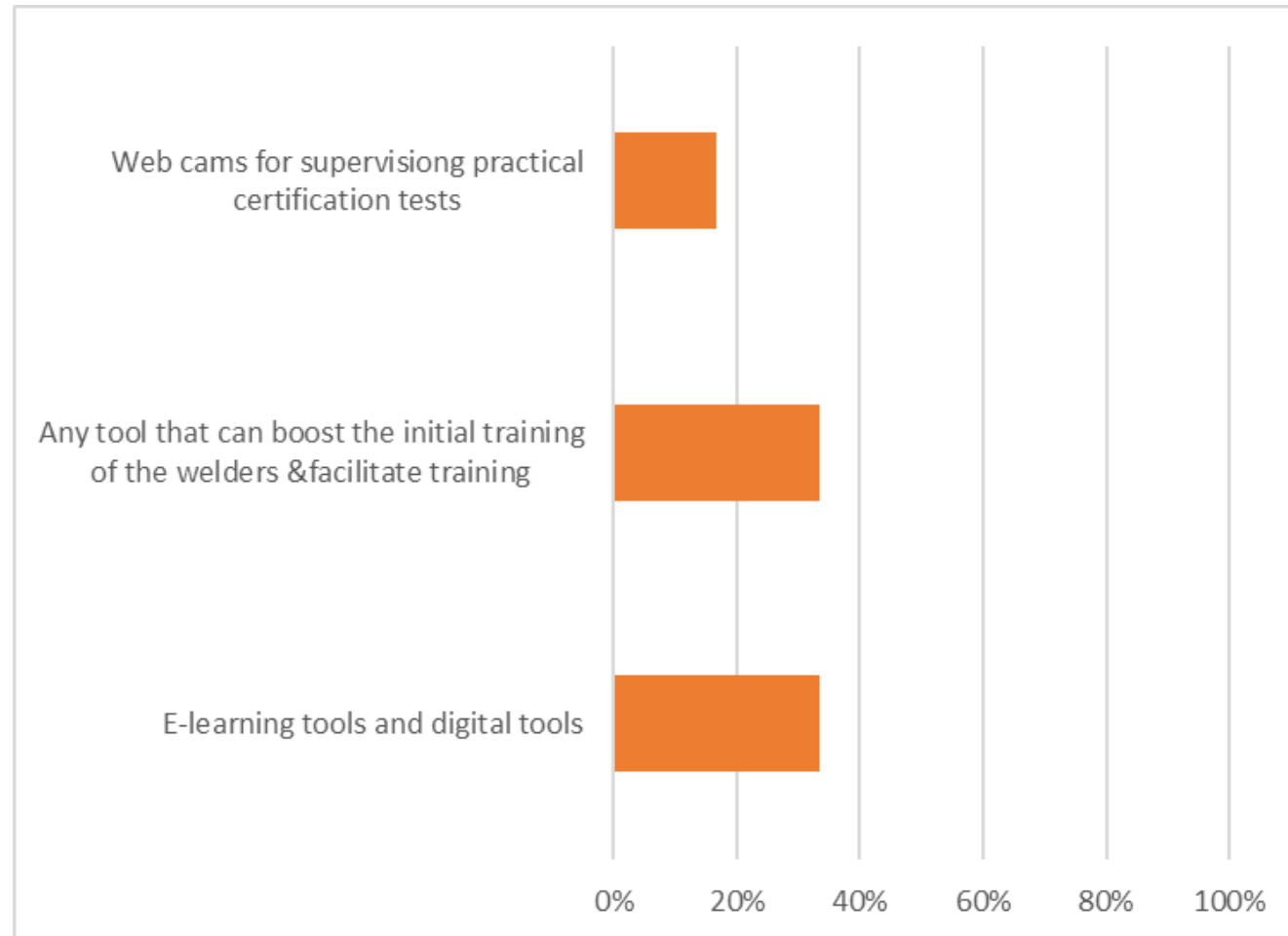
Block 3 – Views on future and improvements

- Do you foresee virtual reality as a possible tool for training in your company? Do you have experience with it?



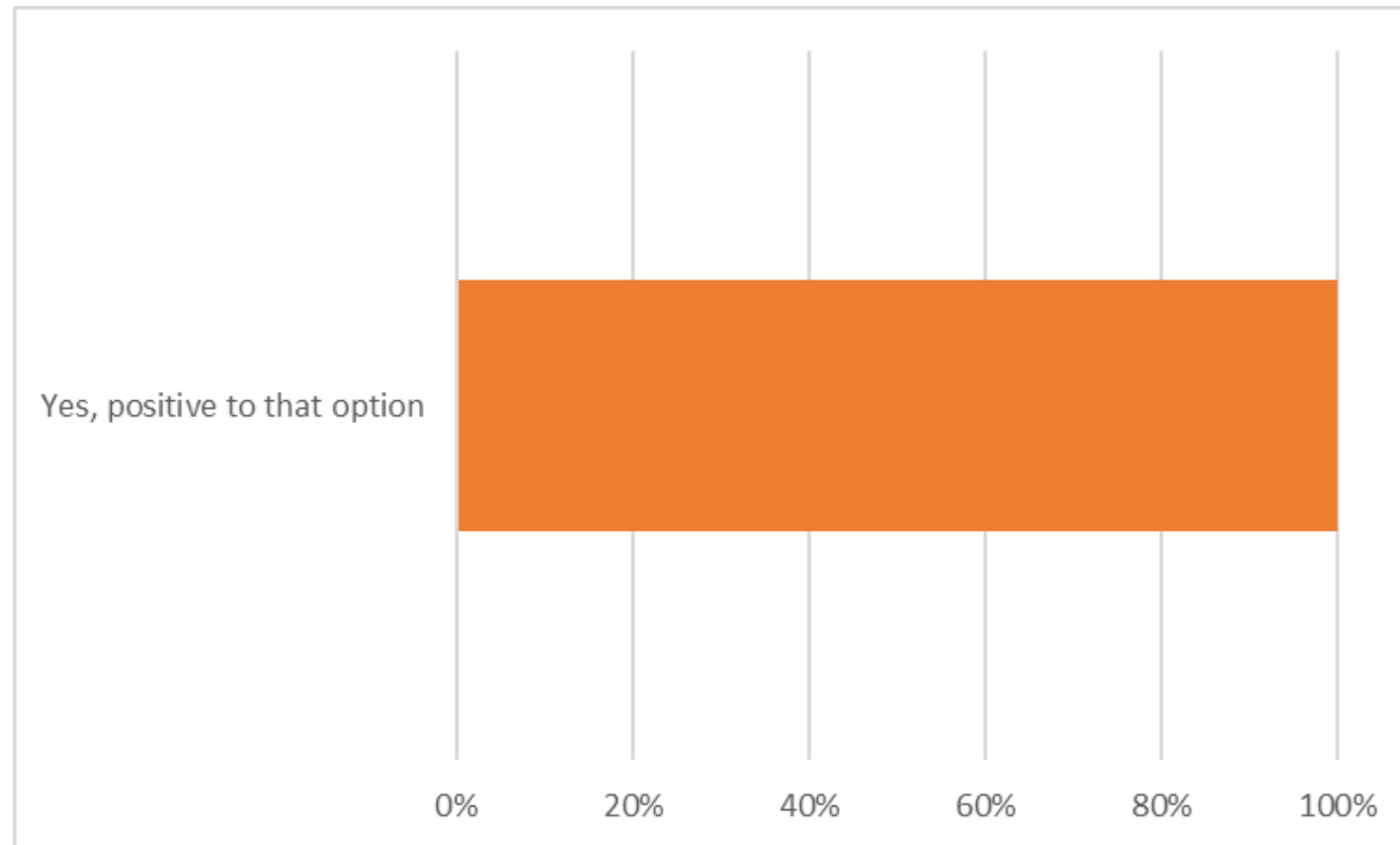
Block 3 – Views on future and improvements

- Is there any other tool/platform that you foresee as important for future training?



Block 3 – Views on future and improvements

- Would you be open to send employees to a pilot course in the framework of this project?



Concluding remarks

- Formal education does not give enough background (so VET is needed!)
- All the companies have onsite training (given by colleagues with more experience), and only a minority have external training.
- Current pedagogic approaches are traditional (practical + some classroom). However, most of them would like to have e-learning platforms (specially motivated by the pandemic), but not all the companies are there yet.
- Some other company see VR as a positive tool for their training even though it has limitations, as well as group discussions may be negatively affected.
- Important weakness for their internal training is the lack of time for the internal teachers to prepare/improve their courses and their lack of pedagogic skills.
- For most of the companies, harmonization in the welding-related education (IIW, EWF) is important.
- Current training is basically focused on fulfilling H&S regulations and personnel certifications, but future training wishes are related to automation, digitalization (Industry 4.0) & new welding processes (to boost their efficiency).

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