

# Skill Card

## “Tracer Studies in Vocational Skills Development Projects”

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### 1. Background

This skill card is a result of an online discussion conducted in 2011/2012 by the consortium KEK/INBAS on behalf of SDC, Switzerland with subject matter experts from Vocational Skills Development (VSD) projects of SDC, HELVETAS Swiss Intercooperation, and Swisscontact. It should provide a first glance on the relevance of tracer studies and ways of application in the context of Vocational Skills Development in international cooperation projects.

### 2. Definition of Tracing in Vocational Skills Development Projects

Tracing refers to the process of identification and analysis of pathways, social and labour market integration and performance of graduates and drop-outs from educational or training programmes (**graduate tracer studies**).

### 3. Objectives of Tracing

The objective of a graduate tracer study is to gain information on the relevance and effectiveness of a VET programme which aims to prepare trainees or students for wage employment or self-employment in order to improve their livelihood and alleviate poverty.

Depending on the focus, tracing can be:

- **accountability driven**, i.e. it aims at providing facts and figures that justify a certain training intervention or its termination. The focus is on relevance and partly impact. (*Are we doing the right things?*) Key questions refer to the percentage of graduates who are employed, their levels or increase of income, success of business start-ups etc. The tracer study can be used as a monitoring and partly evaluation instrument.
- **management driven**, i.e. it aims at providing feedback to the training institution(s) that allow adaptation and improvement of the training services, better steering and learning. The focus is on results and output. (*Are we doing things right?*) Key questions refer to the usability of skills imparted in the training and the related employability of graduates, the employers' levels of satisfaction and requests for improvement etc.
- **research driven**, i.e. it aims at generating knowledge regarding career pathways and obstacles of young people in the transition process from school to work. Key questions refer to the different factors that may contribute to or hinder successful labour market integration of graduates.

In the field of development cooperation tracing is usually accountability and / or management driven used for planning and monitoring of training programmes (e.g. to decide which training course to add, to change or to phase out).

#### 4. Instruments of Tracing

**Tracer studies** are the key instrument of tracing. Tracer studies are surveys amongst graduates and in some cases of NEET (not in education, employment or training) of training programmes that are conducted in order to provide evidence with regard to the above-mentioned questions. They apply **social research techniques** such as:

- **structured questionnaires** (e.g. *pre-tracer study questionnaire, graduate questionnaire, employer questionnaire, informant questionnaire, NEET questionnaire*), applied in face to face or telephone interviews or through postal or e-mail questionnaires
- **Case Studies**
- **Focus group discussions**

There are also other, **alternative or complementary instruments** that can be applied. Some training institutions establish and support **associations of ex-students (alumni)** and use their regular meetings to collect information and feedback. This is very useful and appropriate for a management-driven approach to tracing.

Another instrument are **reverse tracer studies** that identify pathways of people who are employed in order to find out, which kind of education and training has a measurable impact on employability. This is an interesting instrument for a more research-driven approach. For accountability-driven tracing, which becomes more and more important because donor agencies and funding bodies require factual evidence of the impact of the interventions, **tracer studies** remain the **main instrument**.

#### 5. Analytical Perspective of Tracing

It is recommended to apply tracing at different project stages on a regular basis (as integral part of project cycle management): ex-ante, during project implementation and at the end of a project / ex-post.

##### **Ex-ante:**

If tracing is considered as an important part of **project monitoring and evaluation**, it needs to be ideally planned from the beginning, including **budgeting** and **pre-tracer studies**. This is also useful for establishing **baselines** which can be used to determine the impact of a certain training intervention through a “before/after comparison”. Baseline data are an important input / starting point for a project monitoring system.

##### **During project implementation:**

It is recommended to conduct a graduate tracer study **1 to 2 years after the end of the training**. This period provides sufficient time for graduates to find a job / become self-employed and to become experienced in their job while they are usually still remember the training itself well enough to be able to assess the training quality and relevance. The longer the time span between graduation and tracer study, the bigger the attribution gap between training impact and employment situation (*dilution of cause-effect relationship*). Tracing should be an embedded instrument of a project monitoring system.

### **At the end of a project / ex-post:**

Quite often tracing is implemented at the end of VSD projects (or project phases) as a **project evaluation instrument** justifying the project's interventions for the donor agencies and funding bodies and to provide a basis for decision making (e.g. for project extension, for subsequent projects, etc.). Here again, the time span between the training intervention and the tracer study and the availability of baseline data from former trainees are important factors to realize a representative tracer study and to measure the impact of the project. In order to draw any conclusion for further project interventions the tracer study should not be a stand-alone instrument but be embedded in a more comprehensive project evaluation (considering all project influencing factors and the views of different stakeholders) and be supplemented by a training needs and labour market analysis.

## **6. SWOT Analysis of Major Tracing Instruments**

There are several approaches and instruments for tracing used in various VSD project contexts and for different research purposes. The following tables are a result of a SWOT analysis and show the strengths, weaknesses, opportunities (i.e. possibilities of application) and threats (i.e. limits of application) of the major tracing instruments: **structured questionnaires, cases studies, focus group discussions and reverse tracer studies.**

### **6.1 SWOT “Structured Questionnaires”**

**Structured questionnaires** are the main instrument of tracer studies. They can be used for *face-to-face interviews* as well as for *telephone interviews* and *postal or online tracer studies*. They differ according to the target group they are addressing (e.g. *graduate questionnaire, employer questionnaire, and informant questionnaire*) and the timing (e.g. *pre-tracer study questionnaire*).

When talking about Strengths, Weaknesses, Opportunities and Threats of a structured questionnaire all the above mentioned types of applications and combinations have to be considered and selected according to the respective target group and country specific conditions. Therefore, it is difficult to say that a specific form of interview (e.g. telephone, face-to-face, online, postal) is more effective than the other one with view to the rate of response since there acceptance differs very much from target group to target group and even from country to country.

In general, the following **SWOT analyses** for “**Structured Questionnaires**” can be drawn:

<b>STRENGTHS</b>	<b>WEAKNESSES</b>
<ul style="list-style-type: none"> <li>• Simplifies the comparability of different skills development programmes</li> <li>• High representativeness (in case of random sampling and adequate sample size)</li> <li>• Efficient data analysis possible (e.g. through automatic basic analysis of data) for different sub-groups (e.g. gender disaggregated or trade-wise)</li> <li>• Quantitative analysis combined with qualitative analysis</li> <li>• Online survey: less resource intensive than written questionnaires, telephone interviews and face-to-face interviews</li> </ul>	<ul style="list-style-type: none"> <li>• Limitation of questions through standardized questionnaires</li> <li>• Cost-intensive in case of huge sample size (especially for face-to-face interviews and in case of wide geographical dissemination of graduates)</li> <li>• Tracking of graduates is time- and resource intensive</li> <li>• Online survey: low rate of returns</li> </ul>
<b>OPPORTUNITIES (Possibilities of Application)</b>	<b>THREATS (Limits of Application)</b>
<ul style="list-style-type: none"> <li>• Interviews by e-mail or facebook: cost-efficient interviews (potential weakness: representativeness)</li> <li>• Regular repetition of tracer studies with the same questionnaire during Skills Development programme implementation provides important information about relevance and progress of intervention</li> <li>• Contribution to monitoring and evaluation of skills development program</li> <li>• To improve the rate of response (e.g. of online surveys) incentive systems can be applied (e.g. the possibility to win a price when participating in the survey)</li> <li>• To enhance representativeness (sample size and composition) online surveys could be supplemented by written questionnaires (hard copy) to be disseminated during alumni and company meetings.</li> </ul>	<ul style="list-style-type: none"> <li>• Tracing of graduates: The graduates have to be located in order to interview them, which can be very time-consuming (<i>needs a well maintained graduate database</i>)</li> <li>• In case of broad geographic outreach of programs, face-to-face interviews might become too expensive regarding personnel resources (<i>alternatives: telephone interviews, online surveys</i>)</li> <li>• Skepticism of employers about surveys</li> <li>• Mix of different approaches (e.g. online questionnaires, telephone survey and alumni meetings) needs different survey instruments, thus raising the effort / cost implications of the survey and needs careful data analysis to ensure reliability of results</li> </ul>

## 6.2 SWOT “Case Studies”

A **case study** is an intensive analysis of an individual graduate’s pathways from training into employment (“a case”). In comparison to standardized interviews, case studies allow for a detailed insight into the development of individuals passing the training programme. Because of the intensive efforts necessary to research individual cases the case study method cannot produce “representative data” (in terms of quantity) for the entire target group but rather illustrate the variety of individual developments related to the programme intervention. In order to present a “wide spectrum” of individual cases, it is necessary to define clearly the criteria for selecting cases from the graduates’ entire population.

STRENGTHS	WEAKNESSES
<ul style="list-style-type: none"> <li>• Very good illustration of individual stories and points of view of success and difficulties related to the intervention</li> <li>• Case studies in form of storytelling give a vivid face and emotions related to the intervention</li> <li>• Case studies can complement and elucidate the quantitative data gathered through questionnaires</li> </ul>	<ul style="list-style-type: none"> <li>• Representativeness for entire target group not given</li> <li>• No representative quantitative data available</li> <li>• Research-intensive</li> </ul>
OPPORTUNITIES (Possibilities of Application)	THREATS (Limits of Application)
<ul style="list-style-type: none"> <li>• Attractive for reporting and visualization of interventions</li> </ul>	<ul style="list-style-type: none"> <li>• Because of time implications involved in the research of individual cases, case studies can only be applied for a limited number of graduates</li> <li>• Sensitive tool (especially for “non-success story cases”): How to guaranty anonymity of “cases” especially within a small community of graduates?</li> </ul>

### 6.3 SWOT “Focus Group Discussion”

A **focus group discussion** is a form of qualitative research in which a group of people (in our case these are graduates of a training programme), are asked about their perceptions, opinions, beliefs, and attitudes towards a product or a service (in our case about their benefit from the training programme). Questions are asked in an interactive group setting by a one or a team of facilitators (mainly in the role of “observers” who initiate and steer but not lead the process) where participants are free to exchange their opinion with other group members. In comparison to individual “face-to-face” interviews this technique allows for debates of controversial topics and offers insights into critical issues which would – most probably – not be addressed in standardized interviews. In development projects this method is very often used to gain insights into social and cultural aspects of the target group. The main advantage of this method are the fairly low cost compared to surveys, as one can get results relatively quickly and increase the sample size of a report by talking with several people at once.

STRENGTHS	WEAKNESSES
<ul style="list-style-type: none"> <li>• Chance to deepen and debate especially interesting or controversial topics in a group of graduates or employers.</li> <li>• Uncovering of topics which would remain unknown without the group interaction in addition to interviews.</li> <li>• Fairly low costs compared to surveys (e.g. face-to-face interviews)</li> <li>• Results are available quickly</li> </ul>	<ul style="list-style-type: none"> <li>• Definition of group composition very important, as there is the danger that some participants may not speak in an open way in certain groups (hierarchy, dominance of certain people, gender-issues, etc.)</li> <li>• “Observer dependency” (collection and interpretation of group discussion results by the facilitators)</li> </ul>
OPPORTUNITIES (Possibilities of Application)	THREATS (Limits of Application)
<ul style="list-style-type: none"> <li>• E.g. mix of graduates and employers in one group form an important added value</li> <li>• Useful for validating data generated through interviews</li> </ul>	<ul style="list-style-type: none"> <li>• May not be applicable face-to-face in case of very widespread geographic focus or remote areas (<i>alternative: teleconference focus group or online focus group</i>)</li> </ul>

## 6.4 SWOT “Reverse Tracer Studies”

Usually, there are many different pathways for a person to enter the labour market in a certain occupation. The **reverse tracer studies technique** is used to identify these alternative training paths in order to draw conclusions for training offers and public interventions to ensure a flexible and effective range of training possibilities / career pathways for individuals entering the training / employment system with different pre-requisites (e.g. gender, school leaving qualification, on-the-job experiences, etc.) The more training options available, the better individuals can arrange their own training packages. Reverse Tracer Studies are very research and time-intensive and usually extent the budget reserved for tracing in VSD projects. Therefore, the experiences in VSD programmes are very limited. They are mainly applied by research institutions who are commissioned by a public authority to carry out a labour market research.

STRENGTHS	WEAKNESSES
<ul style="list-style-type: none"> <li>• Comparison between career paths of own graduates with career paths of other persons</li> </ul>	<ul style="list-style-type: none"> <li>• Low rate of return: why should somebody who has no link to the project participate in the survey?</li> </ul>
OPPORTUNITIES (Possibilities of Application)	THREATS (Limits of Application)
<ul style="list-style-type: none"> <li>• As part of a systemic approach of labour market research</li> </ul>	<ul style="list-style-type: none"> <li>• Budgetary constraints</li> <li>• Research interest exceeds the scope of a single project</li> </ul>

## 7. Online tools: The use of social networks like Twitter and Facebook, email or online survey tools

- easy access, low costs and high outreach
- Bias possible/probable: The group answering (sample) may not be representative, as the group of graduates answering might not be a representative sample of the group (no random sampling). It could be e.g. the case that the ones having online access are also the more successful ones and hence leading to too positive results. But in case that a representative sample has been taken and a high responsiveness from this group is granted, it can be a cost-effective and powerful way.



## 8. Accuracy and Reliability of Tracer Studies

Tracer studies are tools to identify or estimate the impact / contribution of a specific training for the graduates to successfully entering the labor market. There is, however, the risk in attributing all observed changes to the impact of the skills development programs, even though there are many factors acting simultaneously which influence the outcomes over time (**attribution gap**). Experiences show that it is very difficult and implies a huge effort and multivariate statistics to eliminate all other influencing factors from the analysis. Therefore, one should be careful in the interpretation of the results of a tracer study and not link all observed changes directly or only to the skills development intervention.

One way to reduce the attribution gap (which is very research intensive) is to conduct a **reverse tracer study** to identify which paths to skills acquisition lead to employment. Employees are asked about prior schooling, training and work experience (e.g. job title, employment status, highest education qualification obtained, post-school, pre-career training experience, previous work record, and unemployment times etc.).

Another way are **control groups** with people not having taken the specific education or training to be included in the survey in order to detect the direct impact of the skills development program. This procedure, however, is very resource intensive, often implies ethical questions and requires good statistical knowledge in order to guarantee representative sampling.

Important for the reliability of tracer studies is also a sample size and composition that represents well the respective group of graduates.

Other factors which influence the quality of a tracer study are:

- Availability of contact data of graduates to allow a representative sampling (size and composition of the sample)
- Good preparation of interviewers ensuring high quality of conducted interviews
- Independent interviewers in order to ensure high objectivity of the survey
- Confidentiality to be guaranteed in interviews to enhance openness of interviewees
- Quality control of quantitative dataset

## 9. Conclusions and Lessons Learnt:

Here are some lessons learnt from implementing tracer studies in VSD projects:

- **A standardized approach (e.g. Helvetas Tool Kit for Tracer Studies in VET Programmes: <sup>1</sup>) can enhance efficiency:** that way, not every project has to develop its own tool and analysis can be done in an efficient way. The tool creates a selection of graphs and tables automatically, making analysis and comparability easier. At the same time there is **limitation through standardization** with a given selection of questions and standardized analysis. Some questions may not be relevant for the specific project, while other questions relevant for the specific project have to be added. Therefore, it is recommended to combine the tool with project or context-specific questions and analysis, forum discussions and case studies.
- **The combination of qualitative and quantitative approaches** is important (**method triangulation** enhances accuracy and reliability of tracer studies).
- **A random, representative sampling is important** – in case of high complexity it is recommended to collaborate with a statistician.
- **Tracing the graduates' addresses a challenge:** Often, it is a big effort to contact graduates, but it is crucial for the representativeness of the survey to have a representative sample. Therefore, the maintenance of a database / register with graduates contact data is of major importance. An alumni network can also be an effective instrument to keep contact data of graduates up to date.
- **Selection of independent interviewers and their training on how to conduct the interviews is important** (with test runs, consistent implementation, anonymity, etc.).
- **There is a difficulty of getting “correct” answers:** This bias, which is not only specific to tracer studies, but to interviews in general, is difficult to estimate. There is a certain risk that people want to please the donor/implementing agency and therefore answer too positive. Some important measures to tackle this problem are to have independent interviewers, to create a good interview atmosphere and good introduction when starting it and to guarantee that the data are treated confidentially.
- **Income calculation not always easy:** In case of employees, our experience has shown that it is often possible to get to know and cross-check income figures, but in case of self-employment it is not always easy. Therefore it is recommended to define the calculation or estimation prior to execution. This worked not too badly for small businesses, e.g. hairdressers and electricians, but showed to be difficult e.g. for farmers.
- **Management response** to the tracer study shall be planned in order to improve the Skills Development intervention.

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• <sup>1</sup> The Helvetas VET Tracer Studies Tool Kit can be downloaded from:  
[http://www.helvetas.org/advisory\\_services/our\\_services\\_and\\_working\\_areas/skills\\_development\\_and\\_education/tracer\\_studies\\_tool\\_kit.cfm](http://www.helvetas.org/advisory_services/our_services_and_working_areas/skills_development_and_education/tracer_studies_tool_kit.cfm)