

SKILLS DEVELOPMENT IMPACT EVALUATION
A practical guide

Skills development impact evaluation

A practical guide

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Presentation

This Guide is the result of the collective construction of knowledge carried out by ILO/Cinterfor member institutions and their experts who have contributed with valuable knowledge and experiences. Likewise, the members of the Governing Body of the ILO who participated have enriched the discussion and have helped to create a document that abides by the decisions adopted by the International Labour Conference and the Governing Body.

In this way, the Guide follows the suggestions made by the Programme and Budget Proposal for 2012-2013¹ which states that "ILO/Cinterfor will continue to support a learning and cooperation community among national vocational training institutions in the Latin America and Caribbean region, including through web-based information systems, regional meetings and South-South cooperation arrangements".

At the same time, it observes the Recommendation on human resources development² that mentions the importance of evaluating the impact of education, training and lifelong learning policies; and taking into account benchmarks in relation to comparable countries, regions and sectors when making decisions about investment in education and training.

For those who invest in the development of competencies, whether governments, enterprises, trade unions, organizations and people; it is fundamental to determine, with some degree of certainty, the return of the investment and the impact of training.

The process of collective construction which resulted in this Guide has widely encouraged the strengthening of the network, by promoting both personal and virtual contact among experts on skills development and by fostering relationships and exchanges, that is, knowledge management.

It is a practical, useful and relevant tool that takes into account the different contexts in the development of countries and organizations that are in charge of this fundamental task of skills development. It caters for the priority mentioned by ILO/Cinterfor³ member institutions about the importance of finding out (regardless of the statistics of performed actions, number of participants and access to employment) to what extent have people improved their labour integration and mobility, the quality of employment, salaries, health conditions and access to rights; as well as determining if training is actually addressing the demand of productive sectors and contributing to labour productivity and competitiveness of enterprises and countries.

1 GB 310/PFA/2

2 Recommendation 195 concerning Human Resources Development, 2004.

3 39th Technical Committee Meeting, Brasilia, October 2009.

We would like to express our deepest gratitude to ILO/Cinterfor member institutions and their experts who have generously shared their knowledge in order to deliver this document to the vocational training world. We expect to continue enriching it through the advances made by them in impact evaluation policies and actions so as to ensure people's access to a decent and productive work.

Martha Pacheco
ILO/Cinterfor Director

Introduction

Why is a skills development impact evaluation guide necessary?

During the last decades, many impact evaluation experiences have been carried out by member institutions of the network coordinated by ILO/Cinterfor with a view to finding practical solutions that suit their needs.

ILO has stressed the importance of considering benchmarks in relation to comparable countries, regions and sectors when making decisions about investment in education and training, as well as evaluating the impact of such policies⁴.

For those who allocate resources and efforts to the skills development, whether governments, enterprises, individuals, training institutions or others, it is essential to determine the impact of their actions and their return of investment, and to know to what extent objectives have been fulfilled. Therefore, they need to go through evaluation processes that create valid, useful and reliable information.

In practical terms, when making decisions about the implementation of impact evaluations, people face a number of myths about the technical complexity and the costs involved which many times discourage them from carrying out these evaluations.

Additionally, as it will be further explained in this Guide, the participation of learners as well as all parties interested in training is fundamental for successful impact evaluation. Therefore, through this Guide we expect that everyone involved in an evaluation process has the chance of developing basic skills to better understand it and make use of the language related to it.

What does this Guide entail?

It is a tool that offers a set of key concepts, practical issues and learnt lessons that can be used to incorporate impact evaluation into the training activities undertaken by institutions and organizations.

The topic is presented in a practical way and does not adhere to any methodological orthodoxy; on the contrary, it is intended to make useful and specific contributions to bolster further consideration and decision-making so as to find solutions that better adjust to the different national realities of the countries that are members of the ILO/Cinterfor network.

⁴ ILO Recommendation 195. *Op. cit.*

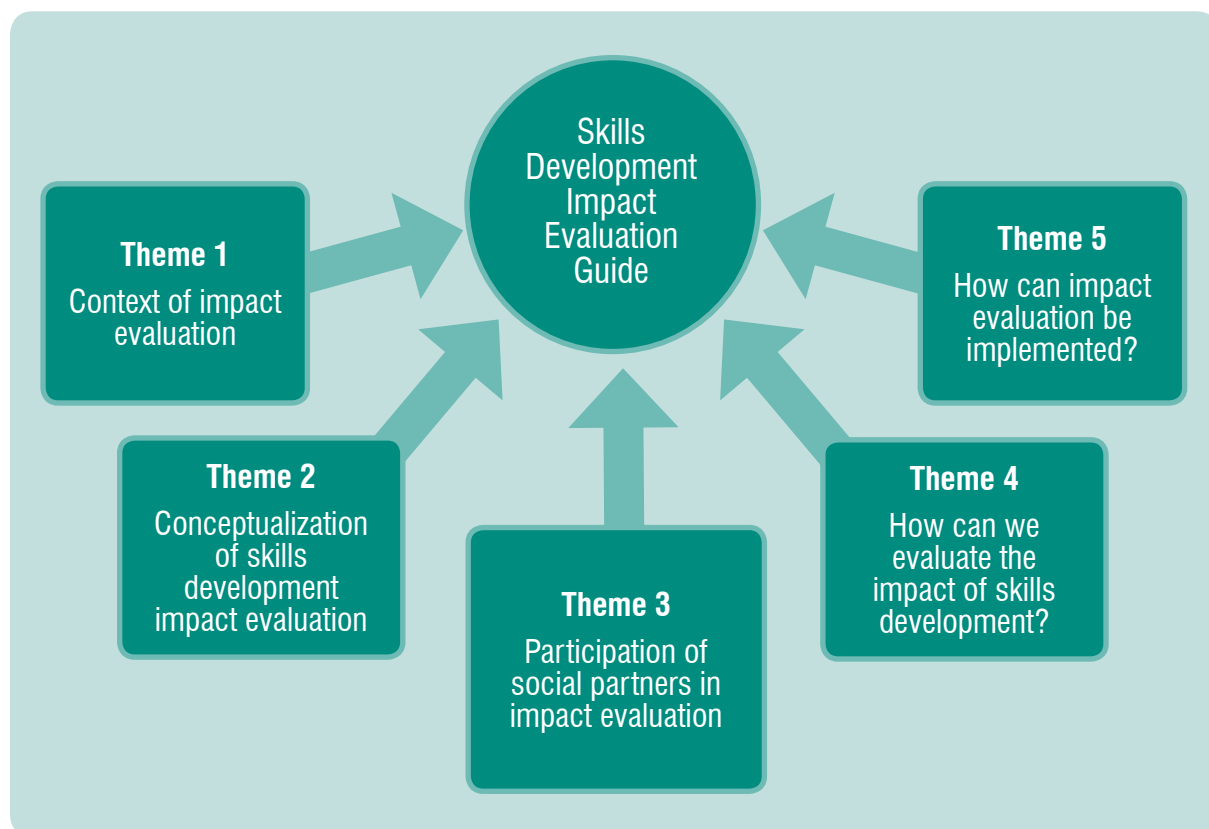
It provides the basis for planning decisions, implementing and analysing evaluations. This Guide is intended to respond to the challenge of continuous updating and dynamism by constantly evolving; actually, there is a virtual learning community which will keep on fostering the collective construction of knowledge. Therefore, mechanisms to exchange experiences and tools are to be opened to all those interested in improving and expanding knowledge on training impact evaluation.

Who is it for?

This Guide is oriented to everyone involved in decision-making, designing, implementing and evaluating skills development policies from governments, training institutions and enterprises of all sizes in the member countries of the ILO/Cinterfor network.

How is it structured?

It is structured according to five themes that deal with the issues that have been considered as key by participants throughout the drafting process.



Theme 1 offers a background perspective of skills development to show their relationship with the Millennium Development Goals (MDGs), social and economic development and it refers to impact in people, enterprises and society. It also presents the connection between impact evaluation and decent work and, finally, it introduces the notion of results-based management in impact evaluation.

Theme 2 deals with basic concepts of impact evaluation, the different moments in which it is applied, and the difference between evaluating and monitoring. Following a practical perspective, the following questions on impact evaluation are answered: Why? and What is it for?

Theme 3 explores the key aspects for the participation of social partners in skills development impact evaluation, in particular, the importance of fostering institutional frameworks and events that may enable social dialogue on policies and training strategies and the development of labour competencies and thus promoting the interests of people, enterprises, the economy and the society.

Theme 4 explains the fundamental technical aspects of impact evaluation. It describes impact indicators and the quantitative and qualitative evaluation methods including their corresponding characteristics, stages and technical requirements.

Finally, **Theme 5** presents some practical issues at the time of implementing an evaluation and its stages, and some considerations to be taken into account when undertaking evaluation processes. This section is still under construction and we expect to expand it while different representatives and actors related to skills development carry out more impact evaluations and therefore increase their knowledge to make more and better recommendations and solutions. For this purpose, ILO/Cinterfor website (www.oitcinterfor.org) will be used to lodge the Guide and all its related knowledge products.

What are the characteristics of this Guide and how can it be used?

As it has already been mentioned, this Guide does not recommend any methodology in particular; therefore, it does not include a repertoire of solutions. On the contrary, it is an instrument of support that intends to develop thinking and action skills in users.

Therefore, every theme is structured in the following way:

- objectives are set forth at the beginning;
- key questions for further considerations and their application in context are then developed;
- finally, additional knowledge and experiences are included; in the case of Theme 4, tools are added. All the material is available in ILO/Cinterfor website.

This Guide can be read in order from Theme 1 to Theme 5, or by selecting specific contents from a certain Theme according to the particular needs of each reader.

Furthermore, the reader may visit ILO/Cinterfor website to check news about experiences, cases and tools that will be published and regularly updated with the help of the network.

This first edition is also presented in a USB flash drive including all additional materials available online. The following updates will be available on ILO/Cinterfor website.

Theme 1

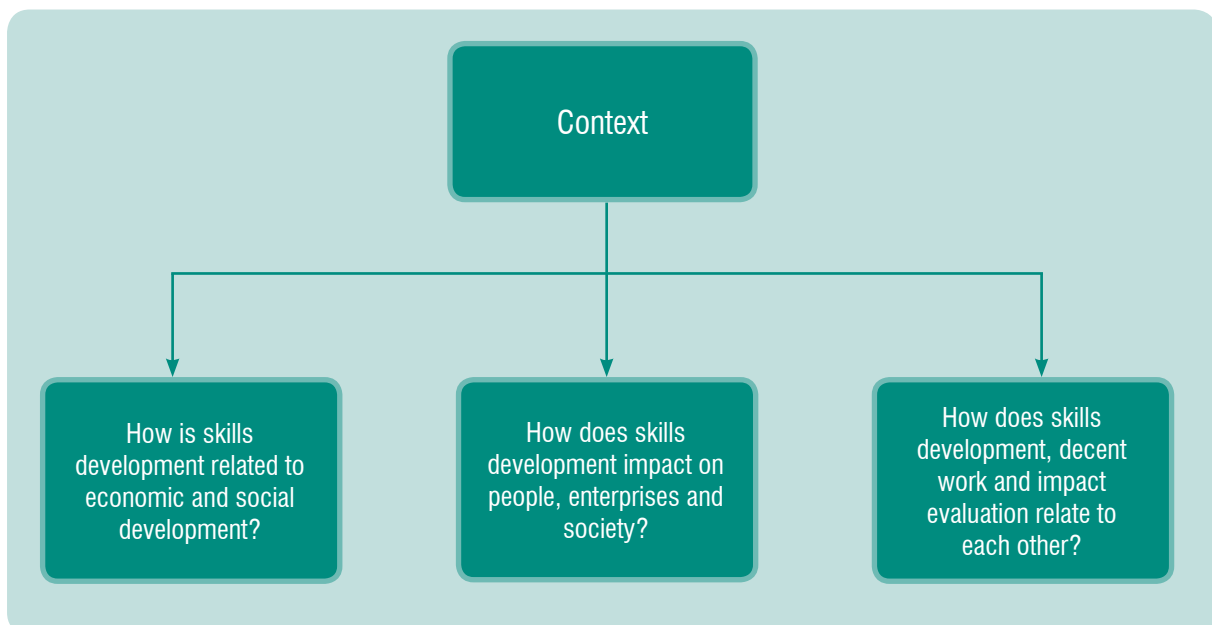
Context

This Theme describes the framework in which training⁵ produces economic and social outcomes; it sets out its relationship with the Millennium Development Goals (MDGs) and with economic and social development, and addresses the impact on people, enterprises and the society. It finally explains the link between impact evaluation and decent work.

Objectives:

By the end of this theme, the reader will be able to:

- **Relate skills development to economic and social development.**
- **Identify the impact made with skills development.**
- **Link skills development, evaluation and the concept of decent work.**



⁵ The concepts of training and skills development will be used interchangeably to refer to the process of acquiring and improving skills for work, and for life, as a result of a training action.

1.1. How is skills development related to economic and social development?

Education, skills development and lifelong learning are central pillars for the employment of workers. They also improve their employability conditions and their quality of life, and contribute to sustainable business development. These purposes are linked to the MDG⁶, particularly those related to reduce poverty.

The first MDG, *Eradicate extreme poverty and hunger*, as well as the target to achieve such goal *Achieve full and productive employment and decent work for all, including women and young people*, are comprised by the aims of the programmes on training and development of competencies promoted by Ministries of Education and Labour and which are implemented by them and by public and private institutions. One of the strategic areas of ILO's mandate is the outcome: *More women and men have access to productive employment, decent work and income opportunities*⁷, for which the development of competencies is essential.

In recent discussions on the importance of the development of skills and competencies, the ILO has emphasized that *"Education and training are necessary for economic and employment growth and social development. They also contribute to personal growth and provide the foundation of an informed citizenry. Education and training are a means to empower people, improve the quality and organization of work, enhance citizens productivity, raise workers incomes, improve enterprise competitiveness, promote job security and social equity and inclusion. Skills development is a central pillar of decent work*⁸, with a vision of lifelong learning consistent with public policies in the economical, fiscal, social and labour market areas, all of which are essential for a sustainable economic growth, job creation and social development.

Skills development are the basis for the competitiveness of economies and enterprises. From a social perspective, they are a tool for fighting against poverty, promoting equal opportunities by means of integrating people in terms of labour, social context and citizenship.⁹ Vocational training is one of the policies implemented to achieve the main objectives of the decent work strategy¹⁰.

1.2. How does skills development impact on people, enterprises and society?

Recommendation 195 (ILO, 2004) encourages member countries to *support and facilitate research on human resources development and training* which could include *investment in training, as well as the effectiveness and impact of training*.

With a favourable economic and social environment, skills development contribute to improve the performance of people and enterprises, which results in the increase of employment and development for society¹¹.

6 MDG are part of a plan of all countries and the leading development institutions worldwide; they were launched during the 2010 United Nations World Summit. See: <http://www.un.org/spanish/millenniumgoals/bkgd.shtml>

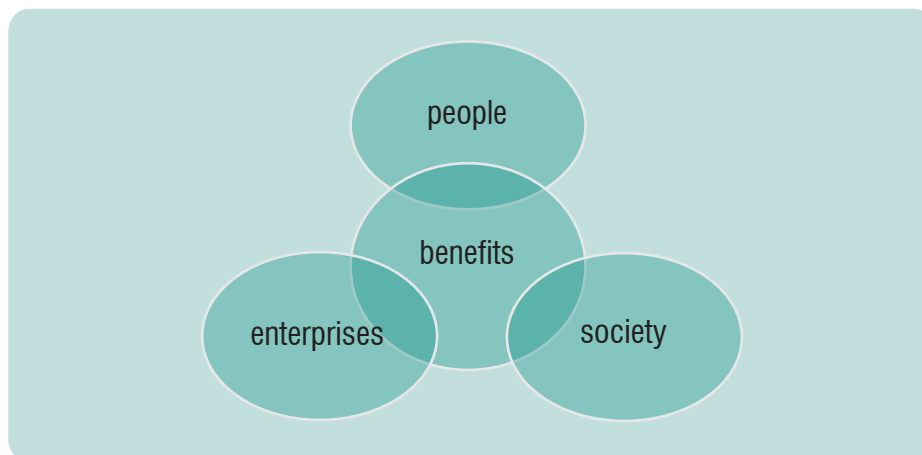
7 ILO. Programme and Budget for the biennium 2010-2011. Geneva. 2009.

8 Resolution concerning human resources training and development. ILO. ILC 88th Session, Geneva, 2000.

9 ILO. Recommendation No. 195. Op. cit.

10 ILO. Decent work in the Americas: An agenda for the Hemisphere 2006-2015. Report of the Director-General. Sixteenth American Regional Meeting, Brasilia, 2006.

11 Conclusions on skills for improved productivity, employment growth and development. ILO. ILC 97th Session, Geneva, 2008.



People who participate in training can access better working and payment conditions, a higher employability and a better quality of life. Developing qualifications and competencies should guarantee their capacity to adapt to changes in technologies and the organization of work.

Recent research conducted by CEDEFOP has proved that vocational training can foster confidence and self-esteem, contributing to the individual's engagement with their family and society.¹²

In Latin America and the Caribbean, factors such as heterogeneity and labour market segmentation affect the training impact. Almost one-third of the labour market is located in rural areas, and more than half of the employment involves independent workers, domestic workers, unpaid family workers or wage-earning workers in micro-enterprises. A high proportion of the active population is young and vulnerable to unemployment. Most of the poverty, informality and the decent work deficit in the region is concentrated in these segments.¹³

Even though there are important developments in the region, as well as state-of-the-art institutions, it is also true that a number of local training systems are having difficulties in accessing certain population groups which leads to labour exclusion and require improving the articulation between supply and demand.

Enterprises, of all sizes, that regard workers as an important source of competitive advantage and as assets and agents of change, can be more innovative and sustainable.

For this purpose, enterprises must identify the qualifications they need, promote a culture of lifelong learning, foster on-the-job training and facilitate knowledge sharing. Sustainable enterprises include human resources development in their strategy and acting with equity when developing the qualifications and competencies of their workers. By investing in their human resources, they successfully compete in increasingly demanding and integrated global markets.¹⁴

The segmentation of the labour market is also verified in the entrepreneurial structure. High productivity levels are only observed in certain branches of activity, while in others they are quite lower than the average. Branches with the higher productivity levels employ a low percentage of workers.

¹² CEDEFOP. Vocational education and training is good for you. The social benefits of VET for individuals. 2011.

¹³ ILO. Decent work in the Americas. Op. cit.

¹⁴ Resolution concerning the promotion of sustainable enterprises. Geneva, ILO. ILC 96th Session, Geneva, 2007.

ILO estimates that 75 per cent of workers are involved in the informal economy, which accounts for 40 per cent of GDP; regarding the rural sector, a significant portion of employment is created in small-scale family agricultural units.¹⁵ The development of competencies is essential so that the workforce can move from informal economy to employments within the formal economy, and in order to increase labour productivity.

Society perceives the impact of the development of competencies as jobs of higher quality, higher employment and formality rates, reduction of poverty, social inclusion, respect for labour rights and competitiveness on global markets.¹⁶

Training should respond to the productive, technological, labour and socio-cultural context, as well as to the characteristics, conditions, needs and expectations of its target individuals. This is the double relevance of training, both social and economical.

Additionally, the development of qualifications can also help build more equitable societies. There is a close relationship between the various forms of labour market exclusion – such as unemployment, underemployment and low wages – and poverty and discrimination.¹⁷ Therefore, training actions which contribute to solve such forms of exclusion will have a direct bearing on the fight against poverty and social exclusion. Social benefits include sensitive issues such as reducing violence and crime rates, and becoming more integrated to the family, the community or the society as a whole.¹⁸

An adequate training environment encourages team learning, as well as the development of knowledge and better attitudes, motivations and values, all of which lead to a better social integration. The recognition granted with a certificate of competence has a significant value in the labour market and in the educational environment, promoting social participation and the commitment to lifelong learning.

1.3. How does skills development, decent work and impact evaluation relate to each other?

The primary goal of the ILO is to promote opportunities for women and men to obtain decent and productive work, in conditions of freedom, equity, security and human dignity. It is the converging focus of ILO's four strategic objectives: the promotion of fundamental rights at work, employment, social protection, and social dialogue.¹⁹

Skills development and qualifications pave the way for obtaining decent and productive work.

The use of adequate indicators for impact evaluation can provide relevant information to assess the different dimensions of the decent work approach.

15 ILO. Decent work in the Americas. *Op. cit.*

16 Resolution concerning the promotion of sustainable enterprises. *Op. cit.*

17 Decent work in the Americas. *Op. cit.*

18 ILO. Vocational education and training is good for you. CEDEFOP. *Op. cit.*

19 ILO. Report of the Director-General, ILC 87th Session. Geneva. 1999.

The general framework of decent work indicators includes the following measurement areas²⁰:

1. Employment opportunities.
2. Adequate earnings and productive work.
3. Decent hours.
4. Combining work, family and personal life.
5. Work that should be abolished.
6. Stability and security of work.
7. Equal opportunity and treatment in employment.
8. Safe work environment.
9. Social security.
10. Social dialogue, workers' and employers' representation.
11. Economic and social context for decent work.

SUPPORT MATERIAL FOR THIS THEME

www.oitcinterfor.org

Related knowledge

1. Millennium Development Goals.
2. Guide on new MDG employment indicators.
3. Decent work: concept and indicators.
4. Decent work in the Americas: An agenda for the hemispheres 2006-2015.
5. ILO Recommendation 195 on human resources development. 2004.
6. Resolution concerning the promotion of sustainable enterprises. ILO, 2007.
7. Conclusions on skills for improved productivity, employment growth and development. ILO, 2008.

Experiences and applications

1. Indicators for MDG follow-up. UN Stats.
2. Measuring decent work with statistical indicators. ILO, 2003.
3. Trabajo decente: significados y alcances del concepto. Indicadores propuestos para su medición. MTEySS. Argentina.
4. Quality, relevance and equity. An integrated approach to vocational training. ILO/Cinterfor. 2008.

²⁰ ILO. Guide to the new Millennium Development Goals Employment Indicators. Geneva. June 2009.

Theme 2

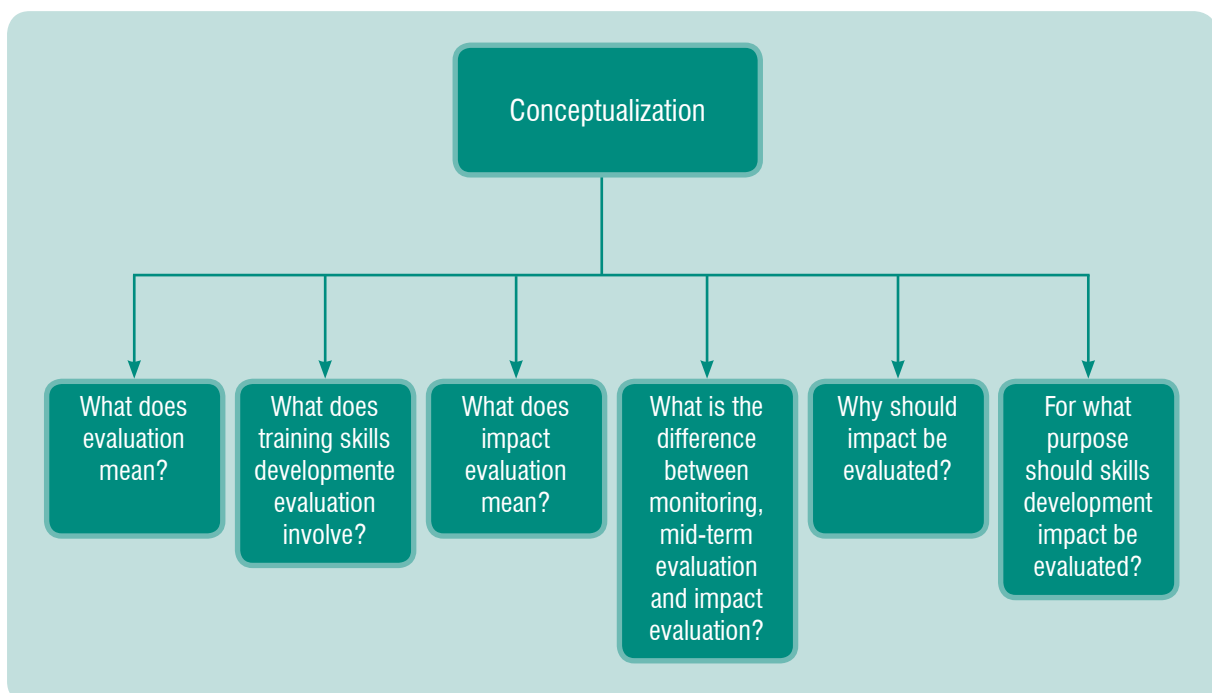
Conceptualization

This theme develops key concepts on evaluation, it shows its diversity in order to differentiate them and determine what impact evaluation is and what it is not. It describes the different cases in which evaluation is applied to skills development, and explains the difference between evaluating and monitoring. Finally, with a practical emphasis, it raises the following questions: why should we evaluate? And, what for?

Objectives:

By the end of this theme, the reader will be able to:

- Identify key concepts regarding evaluation.
- Analyze the purpose and usefulness of skills development impact evaluation.
- Recognize the value of the information obtained through impact evaluation for management and decision-making purposes.



2.1. What does evaluation mean?

The literature on evaluation is extensive and varied. Certain definitions are stated below:

- The systematic and objective assessment of an ongoing or completed project, programme or policy, its design, implementation and results. The aim is to determine the relevance and fulfilment of objectives, development efficiency, effectiveness, impact and sustainability. (OECD, 2010)
- A systematic, ongoing and comprehensive process, aimed at determining to what extent have the previously set objectives been achieved. (Serie metodológica Volume 6-2005, SENAR, Brazil)
- The systematic and ongoing process that incorporates the study of processes, outcomes and impact as well as the view of the subjects towards whom the actions are directed. (Diseño de la evaluación de impacto de las políticas de formación continua, 2010, MTESS, Argentina)

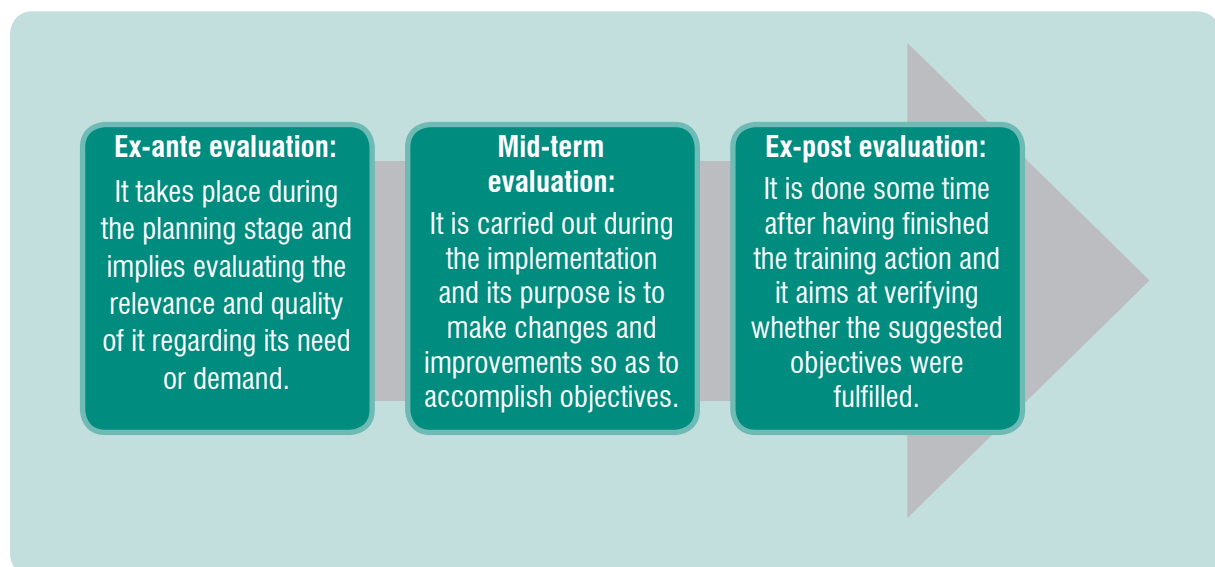
Despite subtle differences, most definitions emphasize the need to verify the achievement of objectives, as well as the systematic, ongoing and comprehensive nature of the evaluation processes.

When considering the evaluation of any project, programme or policy, a number of key concepts should be noted, such as:

- the moment at which the evaluation is carried out;
- the questions the evaluation is expected to answer;
- the criteria and dimensions orienting the evaluation.

The moment for evaluation:

It refers to the moment in time when the evaluation is carried out:



Depending on the time when the evaluation takes place, not only its purpose changes, but also the essential questions to be answered, the dimensions or criteria on which the evaluation is focused, and the tools and indicators used to measure whether the established objectives have been fulfilled.

2.2. What does skills development evaluation involve?

As it was explained in context, it is necessary to know the degree to which skills development programmes contribute to achieve objectives regarding employment and the improvement of social and economic conditions of people, enterprises and the society as a whole.

The ILO states that *“While mechanisms and processes are important, the effectiveness of such mechanisms should be assessed in terms of outcomes. Setting qualitative and quantitative indicators of success in achieving the educational and training targets in line with the Decent Work Agenda are useful in building common understanding of success, shortcomings, and lessons learnt”*²¹.

Interventions for skills development usually include evaluations of satisfaction or lessons learnt. However, either direct or indirect outputs and outcomes are evaluated less frequently, even though those responsible for its implementation, enterprises and participants themselves, are more and more interested in knowing about them.

Five levels are proposed in the evaluation of training actions²². A fifth level has been included, the return on investment approach²³, supplementary to impact evaluation.

These different levels should be considered as a system, since there is a causal and sequential relationship between them²⁴.

21 Conclusions on skills for improved productivity, employment growth and development. *Op. cit.*

22 Based on D. Kirkpatrick. Evaluación de acciones formativas (Evaluation of Training Actions). Barcelona. 2004.

23 ROI, acronym for Return On Investment. Pulliam, P., Phillips, J., *ROI Basics*, United States of America: 2005.

24 *Ibid.*

Skills development impact evaluation

Evaluation level	What is evaluated?	How is information obtained?
<p>1 Reaction or satisfaction of trainees.</p> <p>It is the first stage of an effective training.</p> <p>It partially assesses the design and particularly focuses on the process and the resources used, from the trainee's point of view.</p>	<p>It examines how trainees react to training: how they assess the relevance of content, the performance of teachers, the organization, the methodology, the achievement of objectives and other general aspects of the training intervention.</p>	<p>It generally involves the use of questionnaires that trainees fill in once the training action is completed. Other techniques, such as work groups or in-depth interviews, are also used. In most training institutions, the use of satisfaction questionnaires is common practice.</p>
<p>2 Learning</p> <p>The first results of the training are assessed, which are often the main goal of training activities. If the trainee has not learned, the next levels cannot be accomplished.</p>	<p>It seeks to assess the effectiveness of the training action in terms of how it developed the competencies of trainees. This level includes evaluation tests, increasingly linked to proving the acquisition of a certain competency, through various means.</p>	<p>The evaluation of this level is carried out using instruments for assessing learning, for instance: tests, observation of performance, portfolio of evidence or other appropriate modalities for the type of competency to be evaluated.</p>
<p>3 Transference or applicability</p> <p>It takes a further step towards knowing the impact of training; apart from the changes in people's competencies, the aim is to evaluate the extent to which training is being applied at the workplace.</p>	<p>Even though training may have been developed in a correct way, it may be the case that lessons learnt are not put into practice for different reasons. Apart from verifying whether lessons learnt are transferred to labour performance, the evaluation identifies factors that had a bearing on the transference. It is a step forward in verifying the changes produced by training.</p>	<p>It generally involves the use of questionnaires or surveys for trainees and for those who directly supervise them.</p> <p>This level of evaluation is most widely used in the business environment.</p>
<p>4 Impact</p> <p>This level is the one discussed in this Guide; the translation of training's results into impacts. The "cause-effect" relationship is evaluated at this level.</p>	<p>It seeks to verify the achievement of the training objectives, with a different scope depending on the type of intervention. It may involve impacts generated by the training action in the result of people's work, the organizational results or the society as a whole.</p>	<p>Defining reliable, measurable, simple and valid indicators. It is also necessary to examine the impacts of qualitative nature that training has generated. The methodologies for obtaining information are varied and are developed on Theme 4.</p>
<p>5 Return on investment (ROI)</p> <p>This level involves placing economic values on impacts to estimate the profitability of the investment made when training was carried out.</p>	<p>It compares the investment costs with the value of obtained benefits, in monetary terms.</p>	<p>In order to estimate profitability, results are linked to costs. The costs for providing training should be considered, and those for not providing it could also be considered.</p>

Annex 1 includes an application example.

2.3. What does impact evaluation mean?

Impact evaluation is a specific type of evaluation. Some definitions are stated below:

- ✓ Term that indicates if the project had an effect on its environment in terms of economic, technical, socio-cultural, institutional, and environmental factors. (OECD, 1992)
- ✓ It is a type of summative evaluation carried out at the end of an intervention in order to determine to what extent the predicted results took place. (ECLAC-ILPES, 2005)
- ✓ It tries to establish if there were changes, their extent, which segments of target population they affected and to what extent and how the different project components contributed to the achievement of their goals. (Cohen and Franco, 2002)
- ✓ Measurement of changes in the welfare of individuals, which may be attributed to a specific policy or programme. (World Bank, 2003)

When addressing impact evaluation, the following must be noted:

- ➔ **The causality relation:** it is about knowing the changes that take place after a specific policy or programme – at a social level, within the enterprise or on its participants – and identifying to which extent these changes (effect) are attributable to the programme (cause).
- ➔ **The variety of impacts** an intervention may have: economic, technical, socio-cultural, etc., which may be foreseen (defined among the objectives of the action to be evaluated) or unforeseen.
- ➔ **The different impacts** on people, enterprises and society.

The impact evaluation is based on the contrast between the original situation and what happens once the training has taken place. This contrast reveals changes that can be attributed to the intervention under evaluation.



As it was previously mentioned, an impact evaluation should provide answers to a number of questions regarding the impact on society, enterprises and people:

To measure the impact on society, the following questions, among others, can be raised:

- Has the quality of skills development programmes in which public funds are invested improved?
- Have populations vulnerable to unemployment, youth, women, people with disabilities or ethnic minorities had more opportunities to access training?
- Has skills development enabled access to decent jobs?
- What is the economic return of the training budget?
- Are economic and tax policies creating a favourable environment so that skills development can contribute to improved productivity, employment growth and development?

In order to measure the impact, enterprises can consider:

- What productivity improvements can be attributed to the training action?
- Are positive changes in working conditions verified?
- Are work processes more efficient as a result of the new competencies developed?
- Have accidents at work been reduced?
- Has the working environment improved as a result of the training action?
- Has the proportion of rejected final products been reduced?
- How much is the return for each unit invested in learning?

In order to measure the impact on people, the following questions may be posed:

- Has training been useful to find a job?
- Have competencies demanded at work been developed?
- Has income improved as a result of the newly acquired competencies?
- Has employability improved?
- Have working conditions improved?
- What changes have been observed in welfare?

Organizations implementing skills development programmes should have all these questions into account, from the moment of designing their programmes, to their implementation and impact evaluation.

2.4. What is the difference between monitoring, mid-term evaluation and impact evaluation?

Monitoring is developed during the implementation of the training action, aimed at detecting deficiencies, obstacles and/or adjustment needs in a timely manner to enhance management and the expected results.

Additionally, monitoring involves a strict and ongoing follow-up of what is happening during implementation, and it analyzes how management indicators are evolving. The monitoring of indicators systematically collects and reports trends with the purpose of informing those in charge of the implementation and management of the programme.

The mid-term evaluation of the programme explores the conditions which may facilitate or hinder the achievement of objectives. It periodically examines what is going on to answer specific questions, related to design, implementation, and results, in order to intervene in a timely manner.

Both the programme's monitoring and intermediate evaluation, or performance evaluation, are developed during implementation with the purpose of introducing corrective measures to keep the programme in the intended course before its completion.

The impact is measured when the programme is completed and it intends to establish the cause-effect relationship between a training action and the results.

2.5. Why should impact be evaluated?

Due to the importance placed on the development of competencies and qualifications, as well as the significant amount of public and private investments, it is necessary to know the impact of actions.

The need for impact evaluation is being increasingly recognized in institutional, public and private sectors, as well as by people interested in training. Knowing the skills development programmes' outputs, outcomes and impacts is essential to make decisions favouring their quality, relevance and equity.

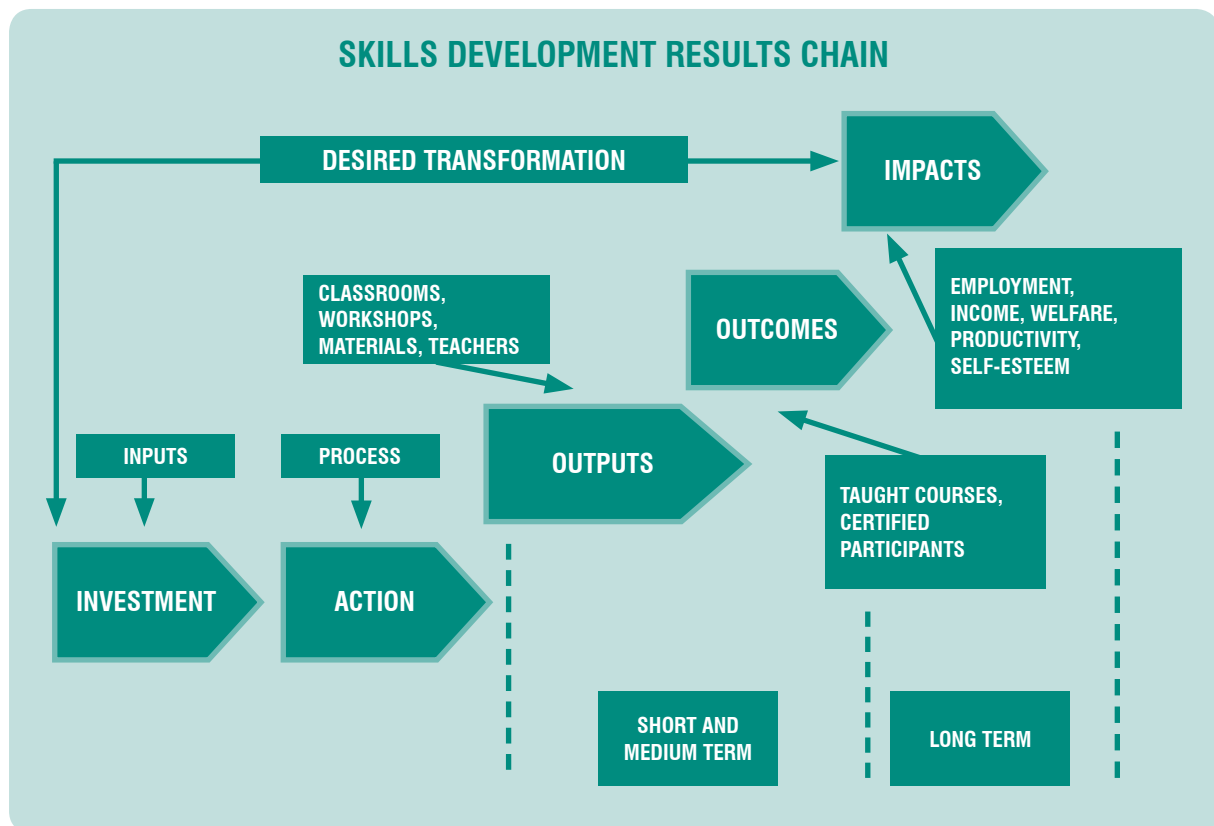
The belief that it involves demanding processes in terms of information and time, and that they are thus relatively complex and expensive, often prevents the use of this practical tool. Regarding evaluation, the most orthodox methods are not always the best, since sometimes they can only be reproduced in laboratories and are not related to the daily practice of training.

Along these lines, some people think that impact evaluation is not always justified and that selective criteria must be used in order to determine in which cases it should be carried out. On this regard, this Guide proposes the following rule: *"if you must decide between evaluating or not evaluating, it is always better to evaluate"*²⁵, which can be supplemented with: *"what is not measured cannot be improved"*.

For a training action to make sense and produce outcomes, it must respond to a training need. After identifying this need, i.e. the training demand, objectives to be achieved are defined, resources are allocated and processes which lead to learning are carried out. The quality, relevance and equity of interventions will determine the

²⁵ Grubb, W. Norton; Ryan, Paul. The roles of evaluation for vocational education and training: Plain talk on the field of dreams. ILO, Geneva, 1999.

effects on people, enterprises and society. Whenever this cycle is regarded as a process, it is referred to as a results chain, as it is shown in the diagram below:



Inputs are mainly financial resources, which are used to develop a learning process, build a centre, design a skills development programme, create teaching resources, and train teachers, among other things.

Once the investment is made, the supply is increased by outputs like equipped training centres, teaching materials, training workshops, competency-based curricula. Desired outcomes take place once the training process has been developed, in response to the demand.

Generally, outcomes are seen in the short term, and they can be measured right after the end of each course, for instance: trained participants, certificates awarded, competence evaluations applied.

Impact is the ultimate goal of skills development, which should be reflected in improvements in the welfare of participants, the productivity of enterprises and society as a whole. Annex 3 presents the variables selected in a case of impact evaluation.

2.6. For what purpose should skills development impact be evaluated?

Information generated by evaluation supports the decision-making process, which helps to adjust, extend, reduce or replace interventions. It is useful for programme managers, public policy-makers, enterprises and people in general, in order to:

- Check whether a training system is supply-oriented, or if it is really a response to the demand.²⁶ If a training programme is merely supply-oriented, it is practically unfeasible.
- Contribute to the creation of better systems for skills development.
- Create a wider and permanent information system which supports the definition of more consistent skills development policies.²⁷
- Improve the management of programmes and implement organizational learning processes.
- Spread knowledge on the programme and the various activities developed.
- Encourage an enhanced management and understanding of all parties involved.
- Promote accountability and transparency in the use of resources.
- Know to which extent has skills development helped to improve the enterprise's results and whether the investment has had a positive return.
- Specify the value of the training provided by enterprises, particularly when this type of training needs to be promoted.²⁸
- Promote a culture of lifelong learning and skills development within organizations.
- Stimulate learning and an enhanced decision-making process for people's career development.

SUPPORT MATERIAL FOR THIS THEME

www.oitcenterfor.org

Related knowledge

1. Manual para la evaluación de impacto de proyectos de lucha contra la pobreza. ECLAC, 2005.
2. Skills for improved productivity, employment growth and development. ILO, 2008.
3. The Roles of Evaluation for Vocational Education and Training. ILO, 1999.
4. Vocational education and training is good for you. CEDEFOP, 2011.
5. Manual para la evaluación de impacto de programas de jóvenes. E. Abdala, 2004.
6. Evaluación del impacto de la formación en las organizaciones. P. Pineda, 2000.

Experiences and applications

1. Diseño de la evaluación de impacto de las políticas de formación continua, MTEySS, Argentina, 2010.
2. Evaluación de políticas públicas en México. R. Canto, 2010.
3. Evaluación de impacto de la formación profesional: modalidad, habilitación, complementación y formación continua en centros. INFOTEP, 2006.

²⁶ Grubb, Norton and Ryan, Paul. *Op. cit.*

²⁷ *Ibid.*

²⁸ *Ibid.*

Theme 3

Participation of the social partners in the evaluation

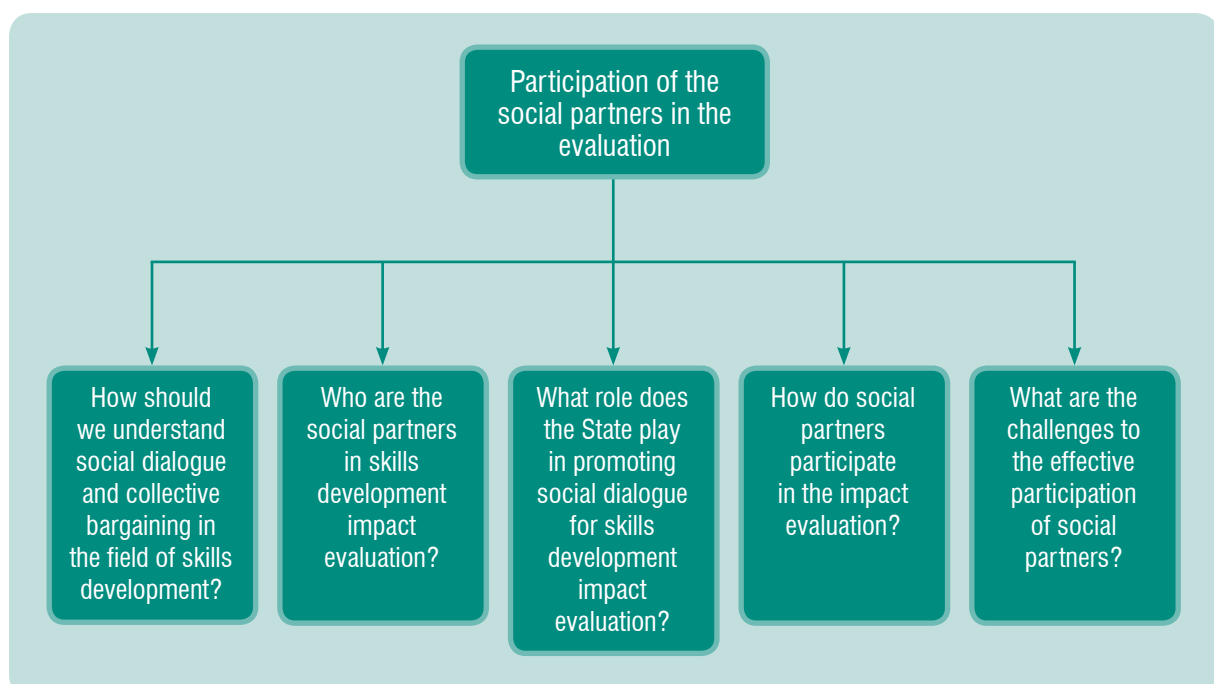
In a democratic environment, the involvement of the social partners in the definition, follow-up and evaluation of the policies and strategies for education and skills development is crucial.

This theme aims to present the key aspects of the participation of the social partners in evaluating the impact of skills development, particularly the importance of promoting institutional frameworks that facilitate social dialogue on the policies and strategies for skills development for the labour market in order to advance the interests of individuals, enterprises, the economy and society as a whole.

Objectives:

By the end of this theme, the reader will be able to:

- Identify the concepts of social dialogue and collective bargaining.
- Appreciate the importance of the social partners' contribution to skills development impact evaluation.
- Identify the State's role as facilitator of participation.
- Analyse the forms of participation in the impact evaluation processes.
- Recognise the challenges to participation.



3.1. How should we understand social dialogue and collective bargaining in the field of skills development?

The ILO has a broad definition of social dialogue which encompasses the large variety of processes and practices that can be found in different countries. According to this definition, social dialogue comprises all types of negotiations and consultations or simply exchanges of information between the representatives of governments, employers and workers on matters of common interest relating to economic and social policies²⁹.

Social dialogue is precisely one of the most important institutions of the labour market and it is associated with the broader concept of citizen participation which, in itself, consolidates and strengthens democracy. Social dialogue is crucial for drawing up adequate employment policies and obtaining the widespread social support which is necessary for their effective application.

Regarding education and training, the social partners should intensify this dialogue, share policy-making responsibilities and make partnerships, among themselves or with governments, to invest, plan and implement training programmes.

In this respect, the ILO has stated in its Recommendation concerning Human Resources Development: *“Members should, based on social dialogue, formulate, apply and review national human resources development, education, training and lifelong learning policies which are consistent with economic, fiscal and social policies.”*³⁰ The improvement and continued employability of human resources, and their quality, are key aspects of social dialogue, as is the way training is provided on- or off-the-job by training providers.

In a broad sense, collective bargaining is one of the most widely used forms of social dialogue which takes place between an employer and a group of employees or between the representatives of each of these groups, to define topics regarding working conditions.

Collective bargaining plays an important role with respect to investments in lifelong training, the identification of the qualifications needed to maintain internal or external employability and the creation of qualifications frameworks, including recognition and certification of skills. Impact evaluations are a valuable input for collective bargaining because they provide reliable information about the effectiveness and outcomes of training activities as a basis for discussion and negotiation.

Particularly at the sector and enterprise levels, collective bargaining provides conditions for organising and providing training and it may include matters such as³¹:

- qualifications needed by the enterprise and the economy;
- training needed by the workers;
- evaluation of basic qualifications and others acquired at the workplace or during the performance of collective or individual activities;

²⁹ Key Features of National Social Dialogue: a Social Dialogue Resource Book - InFocus Programme on Social Dialogue, Labour Law and Labour Administration – ILO 2004

³⁰ ILO – Recommendation 195/2004 concerning Human Resources Development

³¹ Resolution concerning human resources training and development – ILO. 88th session of the ILC, Geneva, 2000.

- establishment of career guidelines for workers;
- definition of development and vocational training programmes for workers;
- structures needed for the training to produce the most advantageous results;
- recognition and reward mechanisms, including a system of compensations.

The social partners face the challenge of creating an adequate framework for negotiating and reaching agreements that are consistent with the need for systematic and sustained promotion of increased productivity and improved working conditions and income for workers.

Promoting disadvantaged and underrepresented groups in collective bargaining

For social dialogue on the design of public policies for addressing social problems to be effective, it does not suffice to strengthen workers' and employers' organisations. The challenge is to include those people who lack organisation and, in some cases, a way of expressing their opinions. In some settings, disadvantaged groups are scarcely represented in collective bargaining. This includes workers in the informal economy, youth, women, people with disabilities, workers with little education, rural workers, indigenous peoples and migrants³².

These people make up an important percentage of the working population and it would be very important to design inclusive systems in order to increase their participation in collective bargaining and in training programmes. Active labour market policies, mainly adopted by government authorities, usually provide these specific groups with access to skills development. The targeted groups should be able to participate in evaluating the impact of the skills development, particularly in the discussion of its structure. Government authorities should therefore foster social dialogue in its different forms, including the most appropriate ones for the target groups, thus enabling active participation of the social partners in the evaluation.

This way, the dialogue becomes a mechanism for the participation of organisations representing the directly or indirectly involved social actors. It is a key means of verifying the scope of public policies aimed at social and economic equity and integration. Their participation must be promoted in fields such as:

- designing and formulating the evaluation, defining the questions to be solved by the evaluation;
- the stages of the skills development programmes;
- the most desirable outcomes; and
- the quality of the intervention.

This does not mean the evaluation can be completely drawn up and implemented through a tripartite political process since its validity and reliability depend on technical requirements which should be free of political connotations.³³

³² Decent Work in the Americas. *Op. cit.*

³³ Grubb, W. Norton; Ryan, Paul. *Op. cit.*

The inclusion of the social partners and other stakeholders should take into account:

- the socioeconomic and political context;
- the agreements on the aims of the evaluation and its process;
- the collection of adequate, relevant and current information to be used as background and reference material.

3.2. Who are the social partners in skills development impact evaluation?

In general terms, they are the actors who participate and have a stake in the matters discussed in the social dialogue. This means mainly workers' and employers' organisations but, in the case of broader social issues, other groups of stakeholders may be included, as indicated in the previous section.

For the purposes of skills development, cooperation networks also include: regional and local authorities, different government ministries or departments, sectoral and professional agencies, enterprises, trade unions, training institutions and providers, non governmental organisations, professional associations, community organisations, indigenous peoples, migrants' organisations and others.

Partnerships for the provision of training are becoming more frequent in view of the need for updated programmes which are geared to the requirements of productive sectors and individuals. The private sector has often taken the initiative of seeking partnerships with training institutions, local governments, development agencies and other actors. Trade unions have recognised the importance of improving qualifications in order to maintain employability and have become involved in the process of change management. Suppliers of technical assistance, including the ILO, have become aware of the need to consider skills development and lifelong learning as part of a broader and more comprehensive approach to the development of sustainable enterprises and the promotion of equality in employment and decent work.

Decentralization and the development of a broad range of social actors contribute to the establishment of bi-, tri- or multiparty organisms for fostering dialogue about training of workers, focussing programmes to better suit specific needs and facilitating the development of competencies among disadvantaged groups. Institutionalisation of these instances is not immediate: it is dynamic process of analysis and review which, through the study of outcomes and according to each context, will open the path to greater levels of development and consolidation.

Most vocational training institutions in the region allow the participation of the social partners in different stages of the process. Although the most frequent system is the inclusion of employers' and workers' representatives in the Boards of Directors, there has been an increasing development of mechanisms for consultation with the social actors, including not only employers and workers but also representatives of the communities involved in the training, local authorities and delegates from other educational or outreach institutions and government agencies participating in the training programmes.

This diverse representation includes those who are protagonists or beneficiaries of the training interventions, whether to improve their competencies, to increase their company's productivity or promote the creation of productive jobs in their communities.

3.3. What role does the State play in promoting social dialogue for skills development impact evaluation?

It is generally accepted that the State (at the national, regional and local levels), after consultation with the social partners, is responsible for creating an adequate framework for meeting the current and future needs of individuals, enterprises and the whole society with regard to competencies, coordinating these with productivity, employment, development and decent work, and promoting a connection between current and future labour market demand and the qualifications required.³⁴

Government authorities should therefore foster social dialogue in its different forms, striving to make it appropriate for the groups targeted by public policies.

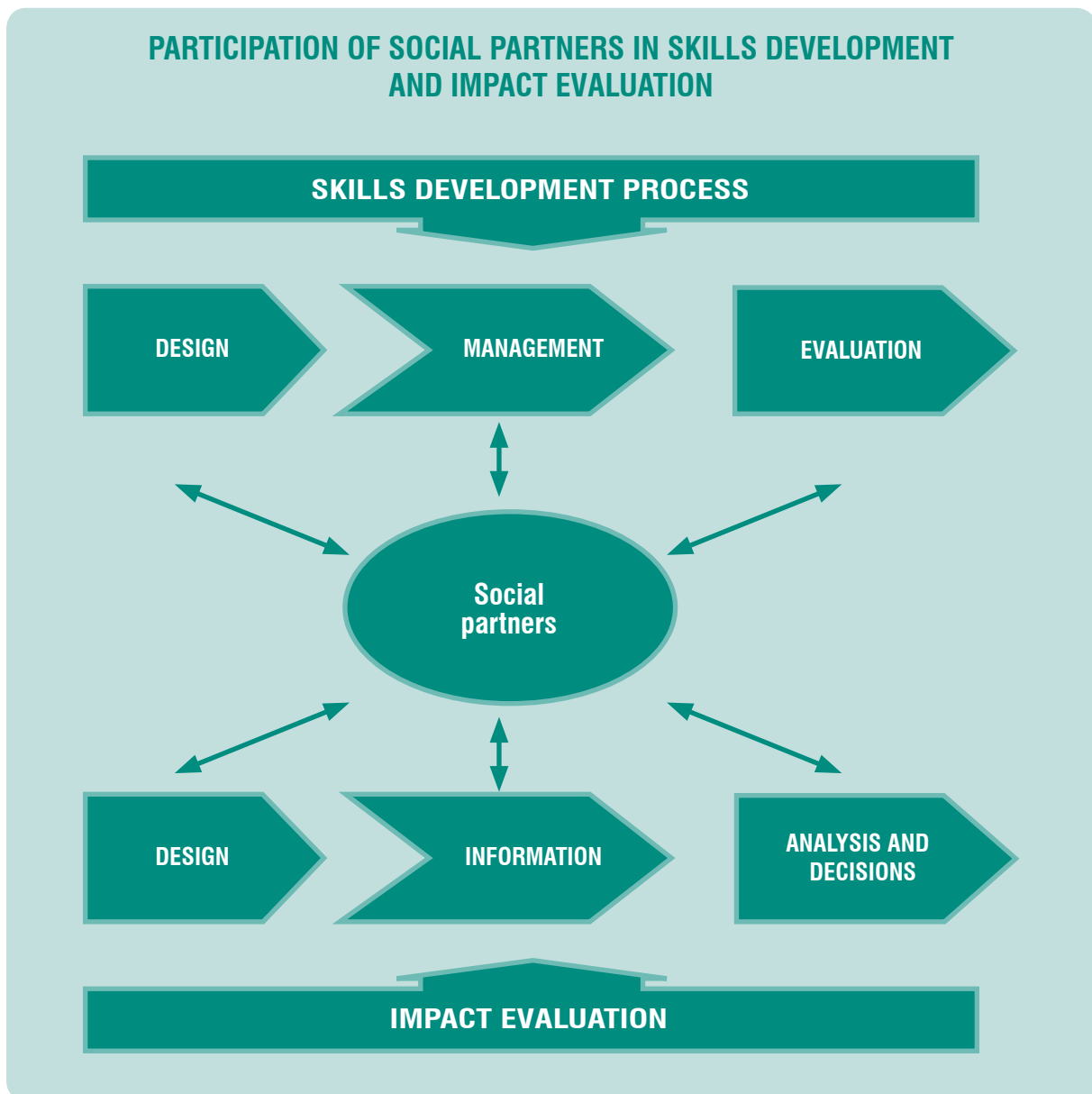
Governments should include the evaluation in tripartite discussions and other political fora. Evaluation is only one of the elements that will have an effect on political decisions; therefore evaluators should recognise that debates about training need information that is valid, reliable and understandable by all.

Governments should also strengthen, promote and provide technical assistance to the social partners so they can participate fully and carry out their own evaluation of the implemented activities.

3.4. How do social partners participate in the impact evaluation?

Participation by the social partners is crucial as evaluation fosters public debate about the outcomes of skills development. Their participation, both in the training itself and in the evaluation, is necessary to establish if people's needs are being taken into account and vulnerable groups are being included.

³⁴ Conclusions on skills for improved productivity, employment growth and development. *Op. cit.*



The evaluation processes must be made transparent: this requires the establishment of mechanisms which enable social partners to access statistical and qualitative information about the different training programmes and, above all, the results of the evaluation. Mechanisms for the dissemination of information must also be implemented and training of the actors should be enhanced in order to increase the technical quality of proposals and debates about the results of the evaluation and its effects on future programmes.

Furthermore, it is essential that evaluation should be transparent and without rigid ideological stances or the use of excessively technical or obscure terminology. Additionally, the results need to be impartial and not aimed at justifying political positions or pleasing the sponsors of the training.³⁵

³⁵ Grubb, W. Norton; Ryan, Paul. *Op. cit.*

3.5. What are the challenges to the effective participation of social partners?

Active participation by the social partners in the institutionalised instances of social dialogue on the impact evaluation of skills development poses a series of challenges, such as:

- increasing awareness of the importance of vocational training;
- transmitting the advisability of evaluating the impact of training;
- broadening the study of indicators of the effects of training on society, enterprises and workers;
- increasing the resources set aside for the impact evaluation of skills development; and
- implementing training action on the need for training and its evaluation for all the people who participate in the dialogue.

The competencies that need to be enhanced by this active participation include:

- the ability to interpret the social and economic context,
- team work,
- effective communication,
- decision-making based on analysis,
- impartiality, the quest for objectivity in assessments,
- ethical handling of information.

REFERENCE MATERIALS FOR THIS THEME

www.oitcenterfor.org

Related knowledge

1. Decent work in the Americas: An agenda for the Hemisphere, 2006-2015. ILO.
2. Key Features of National Social Dialogue: a Social Dialogue Resource Book - InFocus Programme on Social Dialogue, Labour Law and Labour Administration. ILO, 2004.
3. Conclusions concerning human resources training and development. ILO, 88th session, 2000.
4. Recommendation 195 concerning human resources development. ILO, 2004.

Experiences and applications

1. Caso: Consejo Sectorial Tripartito de Certificación de Competencias y Formación Continua de la Industria de la Construcción. Argentina, 1993-2011.
2. Resumen de la Evaluación. Modernización laboral de la industria del azúcar en México. 2010.

Theme 4

How to evaluate skills development impact?

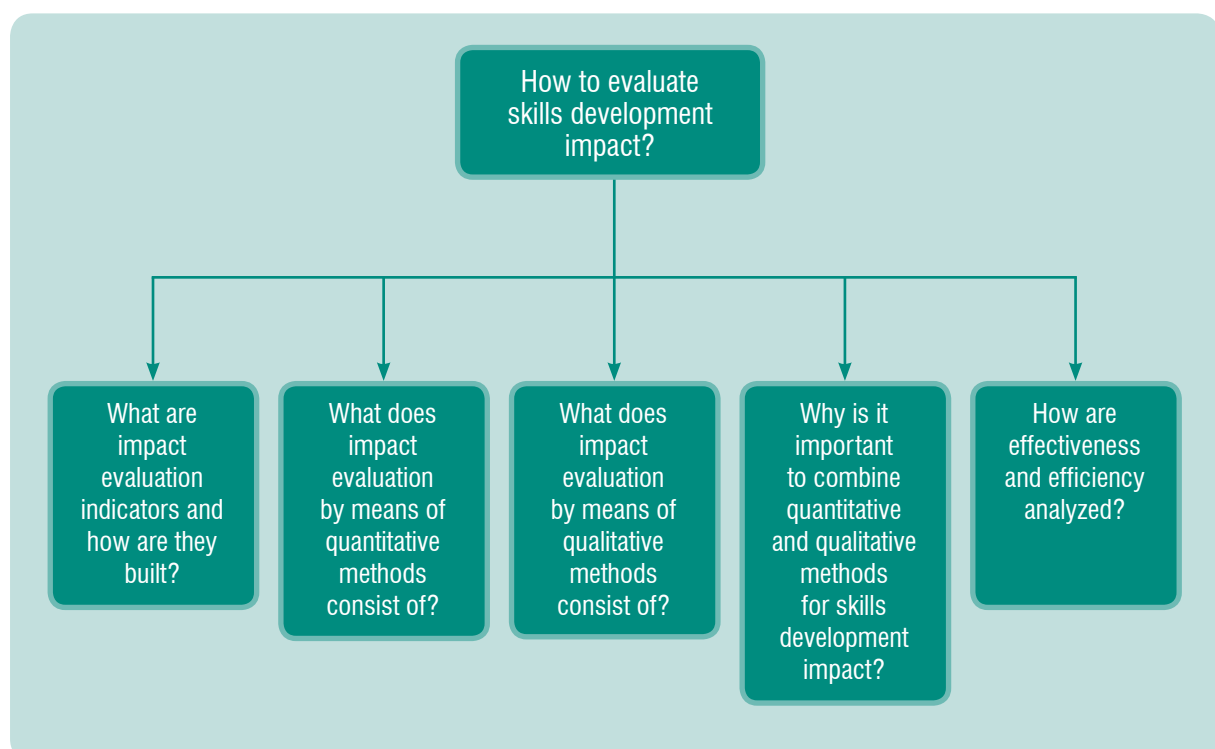
This theme addresses the technical aspects of impact evaluation; it discusses what impact indicators are and how they are built, and describes quantitative and qualitative evaluation methods, including their respective characteristics, stages and technical requirements.

This document is intended as a knowledge-access tool for those interested in measuring the impact of skills development.

Objectives:

By the end of this theme, the reader will be able to:

- Identify the importance of using indicators in evaluation and the mechanism involved.
- Distinguish the different methods of evaluation.
- Understand the importance of using indicators according to the characteristics of the programme to be evaluated.
- Handle the characteristics of the effectiveness and efficiency analysis.



4.1. What are impact evaluation indicators and how are they built?

An indicator is built by comparing two or more types of data, in order to perform a quantitative appraisal or a qualitative assessment. Such comparison yields a value, a dimension or a criterion that is meaningful for the person analyzing it.

Indicators are used in a wide range of environments. A basic example of an indicator is percentage. Other common indicators include, but are not limited to, the employment rate, the unemployment rate, the activity rate, the non-formality rate.

EXAMPLE OF A TYPICAL INDICATOR

$$\text{Unemployment rate} = \frac{\text{Unemployed population}}{\text{Economically active population}} \times 100$$

One of the advantages of using indicators is their objectivity and comparability; they provide a common language for standardizing measurement. They are useful tools for assessing different parameters such as, by way of example, the degree of attainment of a goal or the degree of satisfaction of a participant in a skills development activity.

While indicators are generally built on the basis of quantitative data, qualitative indicators are also being increasingly used.

An indicator should be built strictly focusing on what it will be used for, in order to ensure the availability of data and key results in the shortest possible time, at the lowest cost. It is also necessary to build indicators for all the dimensions the programme or the skills development activities are intended to involve. In line with what was suggested in Theme 2 – “Conceptualization”, indicators could describe the results, outcomes and impacts on individuals, enterprises and society.

4.1.1. What types of indicators are used and what for?

As discussed in Theme 2 - “Conceptualization”, investing in a skills development activity yields a series of outputs, outcomes and impacts. Indicators can be defined for each stage in the chain of results.

Management indicators

They are used for monitoring the processes, input and activities performed in order to attain the specific goals of a policy or programme³⁶.

Examples of management indicators:

What does it measure?	How is it made?
Cost per hour of training	$\frac{\text{Executed budget value}}{\text{Hours of training applied}}$
Cost per student trained	$\frac{\text{Executed budget value}}{\text{Number of participants trained}}$
Number of participants per teacher	$\frac{\text{Total number of participants}}{\text{Number of teachers}}$
Administrative/teaching staff ratio	$\frac{\text{Number of administrative employees}}{\text{Number of teaching staff members}}$
Number of participants per area of training	$\frac{\text{Total number of participants}}{\text{Number of training areas}}$
Number of computers available per participant	$\frac{\text{Total number of computers}}{\text{Number of participants}}$

Outputs indicators

They describe the goods and services generated by the training activity; they result from the input transformation activities and in turn increase the number of products that can be applied to training.

Examples of result indicators:

What does it measure?	How is it built?
Variation in training openings	$\frac{\text{Openings after} - \text{openings before}}{\text{Openings before}} \times 100$
Variation in curricular designs	$\frac{\text{Number of designs after} - \text{number of designs before}}{\text{Number of designs before}} \times 100$
Variation in the standards of competence drawn up	$\frac{\text{Number of standards after} - \text{number of standards before}}{\text{Number of standards before}} \times 100$
Variation in the number of teachers available	$\frac{\text{Number of teachers after} - \text{number of teachers before}}{\text{Number of teachers before}} \times 100$
Variation in the number of hours devoted to training	$\frac{\text{Number of hours after} - \text{number of hours before}}{\text{Number of hours before}} \times 100$

³⁶ The data compared in quantitative indicators are called "variables"

Outcome indicators

They refer to the immediate consequences of training and capacity building on individuals, enterprises or society. They describe to what extent the training activities meet participants' demands.

Some effect indicators:

What does it measure?	How is it made?
Rate of participants enrolled	$\frac{\text{Number of enrolments}}{\text{Number of openings offered}}$
Rate of participants certified	$\frac{\text{Number of certified participants}}{\text{Total number of participants}}$
Rate of participants who perform internships in enterprises	$\frac{\text{Number of participants in internships}}{\text{Total number of participants}}$
Training drop out rate	$\frac{\text{Number of drop outs}}{\text{Total number of participants}}$
Rate of enterprise creation projects	$\frac{\text{Number of enterprise creation projects}}{\text{Total number of projects}}$

Impact indicators

They describe the expected change in participants' status once they have completed their training activity. These can be usually measured over the medium or long term, because, in order to be able to measure the improvement in income, working conditions, employability and other impacts mentioned in Theme 1 – "Context", a reference time period is needed.

Some impact indicators:

What does it measure?	How is it made?
Income variation	$\frac{\text{Income after} - \text{income before}}{\text{Income before}} \times 100$
Employment status variation	Unemployment rate after – unemployment rate before
Rise in productivity	Productivity rate after – productivity rate before
Decrease in accidents at the workplace	Accident rate after – Accident rate before
Health condition improvement	Health care after – health care before
Personal ROI per unit invested	$\frac{\text{New income generated}}{\text{Cost of learning}} \times 100$
Overall ROI per unit invested	$\frac{\text{Total new income generated}}{\text{Cost of learning}} \times 100$

Impact indicators:

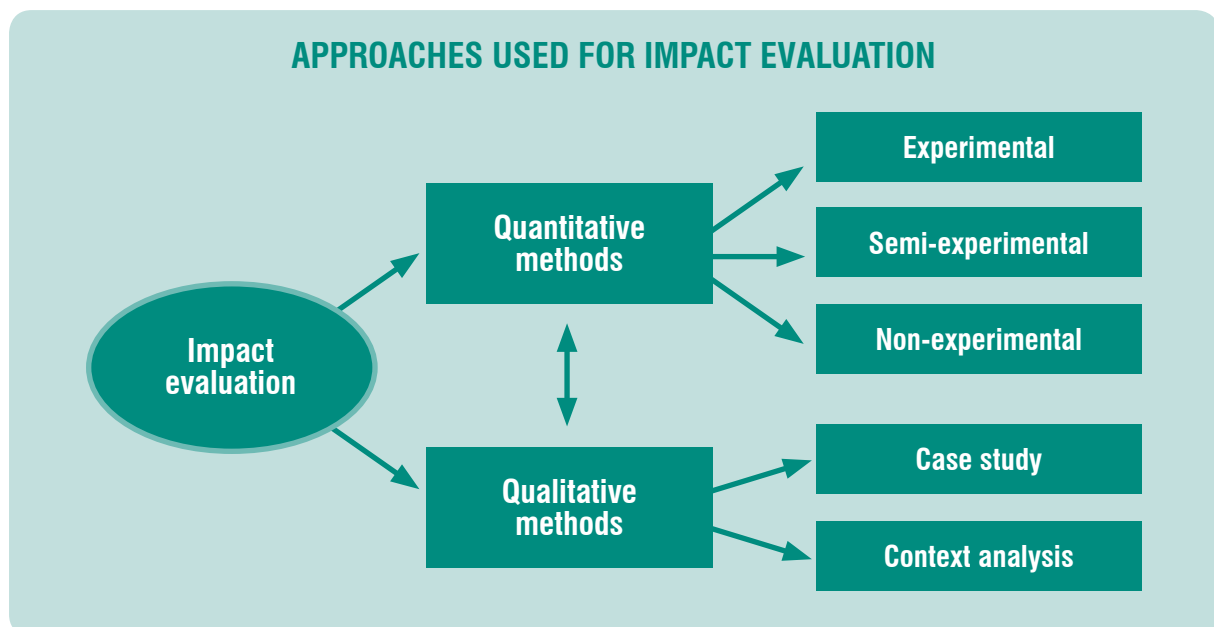
- Describe the changes brought about by the training activities. They call for comparing current conditions with those prior to the implementation of the programme and at each of the evaluation milestones scheduled. To that end,

it is necessary to have the so-called “baseline” and intermediate, final and impact assessment milestones.

- Reflect the changes recorded in the target population (salaries, employment, welfare), as well as qualitative situations (satisfaction, health condition, well-being).
- Are defined on the basis of the design of the training activities³⁷, thereby ensuring soundness and reliability.
- Should target economic return on training, so as to prove that it was worth the effort.
- Should be sound, that is, effectively prove what is intended to be measured.
- Should be reliable. Irrespective of who performs the measurement, the variations recorded are actually confirmed in real life.
- Can be quantitative and qualitative, the latter being based on the participant's perception or degree of certainty with regard to a given situation.

Annex 2 includes criteria for building indicators; annexes 3, 4 and 5 include examples of application.

Quantitative and qualitative methods are used for assessing impact. Such methods are not exclusive and are often combined, depending on the characteristics of the programme to be evaluated, the type of participants and the evaluation approach adopted.



4.2 What does impact evaluation by means of quantitative methods consist of?

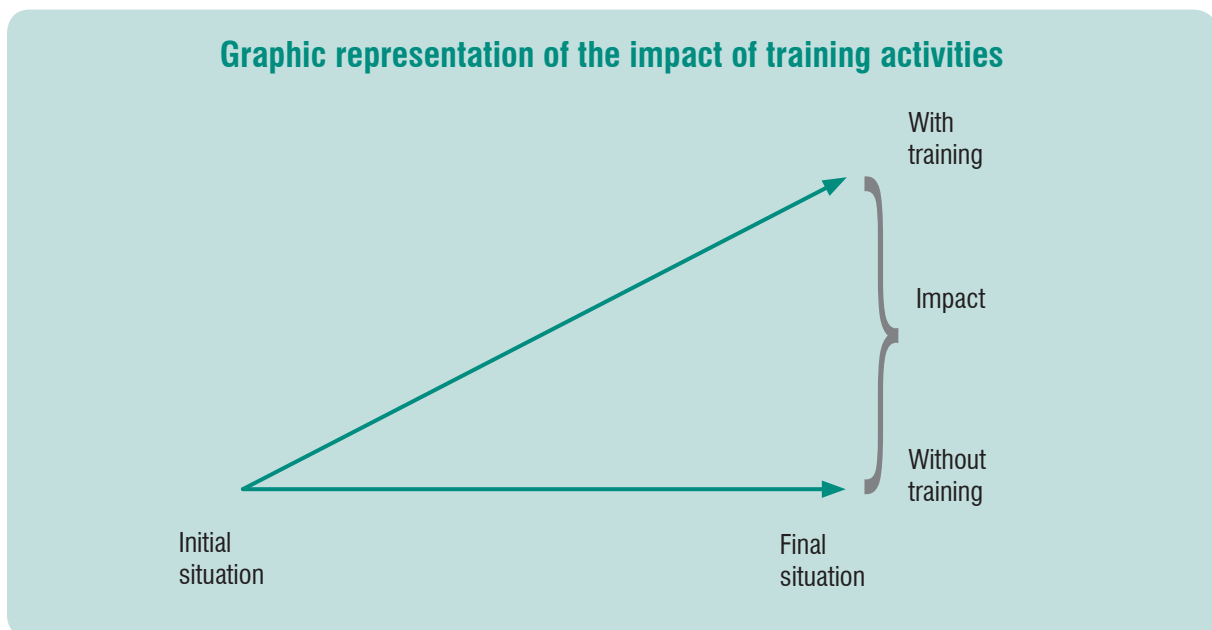
The quantitative method seeks to verify the cause-effect relation between training and its impact. To that end, it uses information contained in the goals of the programme, and on the basis of the information gathered, establishes the degree of attainment of such goals by means of an indicator.

³⁷ Indicators are usually defined in planning tools as the “logical framework” often used in project design.

For instance, among the goals of a youth training programme, we could mention: improve participants' employability; shorten the unemployment period upon training completion; facilitate participant's ongoing training.

The measurement of impact should verify that, as a result of the training activities carried out, programme participants actually experienced the changes in the conditions set as targets.

The graph below describes the logic implied in impact evaluation; participants' situation changes between the beginning and the end of the training activity implementation. The impact is the difference between the situation "with training" and "without training". The key question that exemplifies this approach is: What would have been the participants' situation if they had not received training?



There are three types of design available for evaluating impact by means of quantitative methods. Such types of design can be combined according to the characteristics of each case, thereby making evaluation more efficient. The most usual types include experimental, semi-experimental and non-experimental design. Below each of them will be described.

4.2.1. Experimental design

As implied by its name, these models make use of "experiment-type"³⁸ conditions to form the group of participants and the control group. Experimental conditions call for selecting the members of both groups by means of a draw, i.e. a random procedure. Such selection implies that control group members are not invited to participate in the programme. After the groups have been formed, the situations "before" and "after" are compared using indicators. The impact is determined on the basis of the changes recorded in the group of participants as compared with the control group.

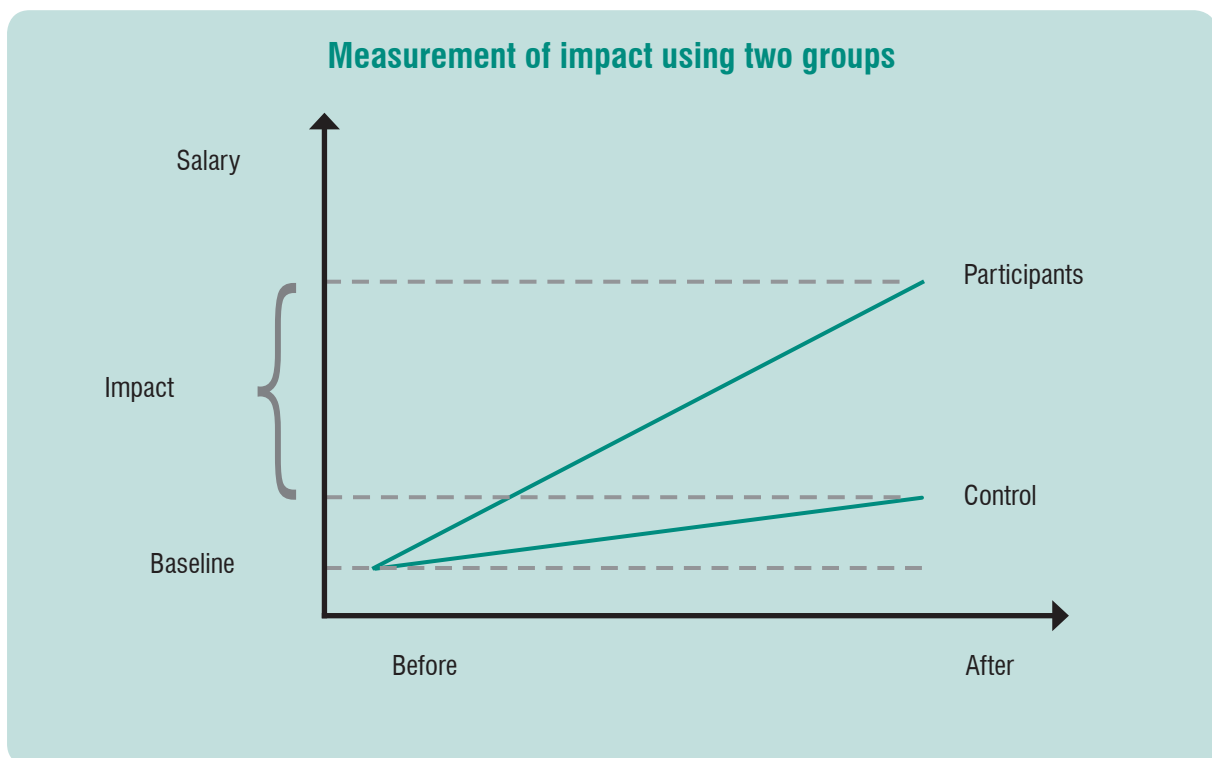
³⁸ In Social Sciences, an experiment involves comparing certain groups systematically with other substantially similar groups, or otherwise with the same group at different points in time, for the purpose of determining the effect or influence of an event or intervention. Navarro, H., 2005.

This approach uses statistical comparison techniques to establish the cause-and-effect (causal) relationship between the training activity and participants' changes. An essential characteristic is that impact is measured comparing participants with non-participants. To that end, the model makes use of a similar group (the control group) who has not taken part in the activities, so as to isolate the effects of exogenous factors³⁹. Indeed, for the purpose of evaluation it is necessary to ensure that the impact under study arises from the training activities themselves and not from any unrelated circumstances.

What are control groups used for? Because it is necessary to compare populations belonging to the same universe (for instance, youth) in order to identify the impact of the activities developed, measurement is made in both the group of participants⁴⁰ and a control group⁴¹.

Both groups have the same essential characteristics –or at least those considered critical for the purpose of the impact expected. By definition, the control group members can in no case have taken part in the training activities under evaluation. A control group is selected in order to establish the so-called counterfactual scenario⁴². This term is used to convey the idea that the impact can actually be attributed to the training activity and that it would not have occurred if the action did not take place.

Both groups should be formed prior to the start of the activities and, in order to ensure consistency, their members should be selected using statistical procedures⁴³.



³⁹ Commonly referred to as the "counterfactual" in impact evaluation.

⁴⁰ Also called experimental, treatment or beneficiary group.

⁴¹ Occasionally referred to as comparison group.

⁴² An anglicism based on the term "counterfact", taken from English literature.

⁴³ This means that, statistically, there are no differences that may favour certain participants over others when it comes to benefitting from the activity.

In this design, impact variables (e.g. salary or employment) are measured in both groups, once participants have received the benefits of the skills development programme. The evaluation “baseline” is established by measuring impact variable prior to the implementation of the project. In some cases, because the baseline is difficult to define, measurements are performed in both groups after the interventions, and impact is determined on the basis of the difference found between one and the other.

These models call for sustaining the experimental conditions throughout the entire evaluation. The fact that the control group members are not allowed to take part in the training activity gives rise to criticism on ethical and political grounds.

While this method theoretically guarantees “chemically pure” conditions and is intended to reproduce a laboratory environment, in practice it renders impact evaluation too scientific, difficult to apply and not very convenient, thus deterring many actors from using this type of design.⁴⁴

4.2.2. Semi-experimental design

This type of design, also known as quasi-experimental, calls for a group of participants and a control group, but, rather than being excluded from the programme, the latter is allowed to participate in it.

Under this approach, participants are not selected at random; they voluntarily join in. Then the control group is created, trying to select people as similar as possible to those in the group of participants. This means that the groups are formed considering the key variables or those expected to cause or influence results.

With these designs, it is possible to perform before-after measurements and, in some cases, compare the group of participants with a “generic control group”, in which case the comparison group can be the overall population or a specific sector thereof.

The table below describes how the groups of participants and the control groups were formed in several impact evaluations of institutions or training programmes in the region.

44 Grubb, W. Norton; Ryan, Paul. *Op. cit*

Criteria and methods used for making up the comparison group in four impact evaluations of vocational training programmes in Latin America

	Treatment Group	Comparison Group
SENA Colombia	Criterion: Employed individuals who took a SENA training course in the year 1996 and had never taken a training course before. Source: 1997 Quality-of-Life Survey (follow-up).	Criterion: Employed individuals who had never been given a training course. Source: 1997 Quality-of-Life Survey. (follow-up).
Probecat Mexico	Criterion: Individuals who were admitted and completed their Probecat training. Source: Probecat's retrospective survey of a sample group of 1990 graduates. The survey was conducted in 1992 (follow-up), using the National Employment Survey form (ENEU).	Criterion: Individuals who were unemployed in the third quarter of 1990 and met Probecat's selection requirements. Source: ENEU, third quarter of 1990 – third quarter of 1991 (follow-up).
Programa Joven Argentina	Criterion: Individuals who were admitted and completed the 1996/1997 Programa Joven programme training courses. Source: Survey conducted by Programa Joven in the years 1996/1997 (baseline) and 1998 (follow-up).	Criterion: Individuals who were admitted but never started the 1996/1997 Programa Joven training courses. Source: Survey conducted by Programa Joven in the years 1996/1997 (baseline) and 1998 (follow-up).
PROJoven Peru	Criterion: Individuals who were admitted and completed PROJoven training courses. Source: Survey conducted by PROJoven in the years 2000 (baseline) and in 2001 (follow-up).	Criterion: Individuals living in the same area (i.e. street, block, etc.) as the beneficiaries of PROJoven and met the eligibility requirements, but did not enrol in the programme. Source: Survey conducted by PROJoven in the years 2000 (baseline) and 2001 (follow-up).

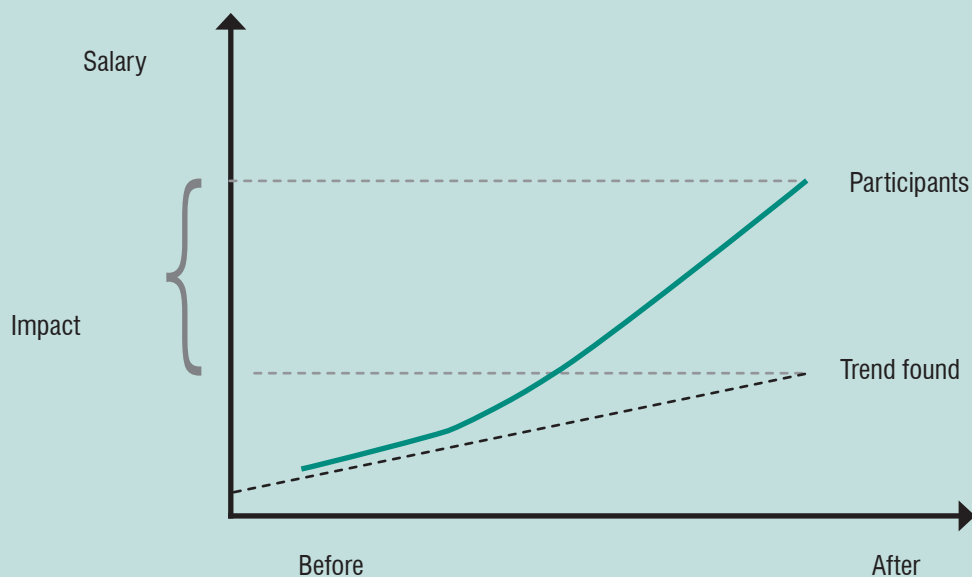
ENEU uses a quarterly rotation system, thus ensuring that each rotation group (homes) stays in the survey for five consecutive quarters and then ceases to belong to the group sample.
Source: Navarro, H. *Op. cit.*

4.2.3. Non-experimental design

This approach does not include control groups, but only the population that has actually taken part in the project. This can be simply because a control group was not considered when the impact evaluation was planned, or, in some cases, because it is not possible to form both groups for technical reasons. One such case is the evaluation of the impact of a national public policy covering the entire population or a major sector thereof. Forming control groups by means of experimental methods would entail depriving important portions of the population from the benefits of such policies.

Under this approach comparison are made along time with so-called "serial designs" covering before-after or only after. They are called serial because they cover series of times and are known as longitudinal studies. Their characteristics will depend upon the variables to be measured, the type of follow-up required and the availability of reliable data prior to the development of the activities.

Measurement of impact in a non-experimental serial design



Serial are among the most accurate non-experimental designs. Indeed, even though there are no control groups, it is possible to estimate the impact trend had the activities implemented not taken place. They call for recording a sufficient number of findings prior to the development of the activities, so as to be able to identify the trend before the intervention. In this case, a “before-after” design is applied, evaluating impact by means of a statistical analysis of the change observed in the variables.

While it is not possible to isolate the effects of exogenous factors, it can be asserted that the activities developed have led to the results together with other undetermined factors.

Serial designs are more useful when a project targets an entire population, e.g. all the young workers who enrol in a training activity.

Selecting an evaluation method involves political, methodological, funding and HR considerations. As noted above, the easier and more convenient to apply, the less reliable the results from a statistical perspective are.

4.2.4. Data collection under the quantitative approach

This is a critical part of evaluation as it may affect the quality of the data obtained. The size of the sample and the collection method may strongly influence costs.

It is necessary to obtain information from both the group of participants and the control group, and also to design clear, standardized categories for the information collected. For public, population-wide interventions where it is not possible to obtain data from each participant – which would be tantamount to a census – sampling techniques should be applied instead.

Sampling is the procedure whereby a sub-group is selected which faithfully represents the entire group of participants. There are statistical techniques for estimating the size and characteristics of a sample; the golden rule is that every programme participant should have the same chance of being selected for the sample⁴⁵.

The information collected in the sample comprises a set of variables that will be analyzed in order to evaluate impact. Such variables are intended to capture the desired impact features, and differ depending on whether the beneficiaries of the training activity are individuals, enterprises or society as a whole.

Some of the skills development programme impact variables include:

Variables of impact on individuals

Variable	Type of measurement
Salary	Variation in legal tender
Income	Variation in legal tender
Time it takes to find a job	Weeks, months
Job	Change in the likelihood of finding a job
Time at a job	Weeks, months, years
Self-employment generation	Enterprise creation
Number of hours of work	Variation, before-after
Employment rate	Variation
Work-share rate	Variation
Change in employment status	Employment, unemployment, active, inactive
Change in job type	Formal, non-formal, self-employment
Total consumption	Variation in legal tender
Rise in work productivity	Performance at work
Welfare	Variation in contributions made

⁴⁵ There are different sampling methods such as random sampling, cluster sampling involving the creation of affinity groups within the population, and specific-feature sampling according to such variables as age, gender, financial condition, etc.

Variables of impact on enterprises

Variable	Type of measurement
Time off work – absenteeism	Variation – hours, days
Time off work – other reasons	Variation – hours, days
Stop on line time	Variation – hours, days
Quality of end products	Number of flawed products rejected
Accidentability at the workplace	Number of accidents at the workplace
Rise in productivity	Final product/input applied
Innovations applied	Number of innovations in practice
Sales	Variation in legal tender
Exports	Variation in legal tender
Work-related unrest	Variation – days, hours
Social dialogue	Participation, harmonization time

Variables of impact on society

Variable	Type of measurement
Physical well-being	Health and nourishment conditions
Citizenship	Exercise of civic rights, memberships
Learning achievement	Entrance and permanence in school
Education	Rise in education level
Emotional well-being	Family, social integration and networking

Variables that describe the social impact of skills development are more difficult to obtain and quantify. That is why the evaluations of social impact are rather scarce. Annex 8 includes an example of the variables used by SENAI.

4.2.5. Data analysis in quantitative methods

Data on variables and indicators for quantitative evaluation are analyzed using statistical methods. The most widely-used tools are average (or arithmetic mean), regression analysis and panel analysis.

The arithmetic mean or average measures the central trend of several findings. It is calculated on the basis of the values of the indicators for all the findings in the participants' and control groups. The average is usually estimated for each group (participants' and control); the difference between both averages reflects the impact of the programme.

The example below shows an evaluation for the income variable using control groups⁴⁶ with the data for both groups and the average estimate for each.

⁴⁶ Data are generally obtained from a representative sample of each group.

Skills development impact evaluation

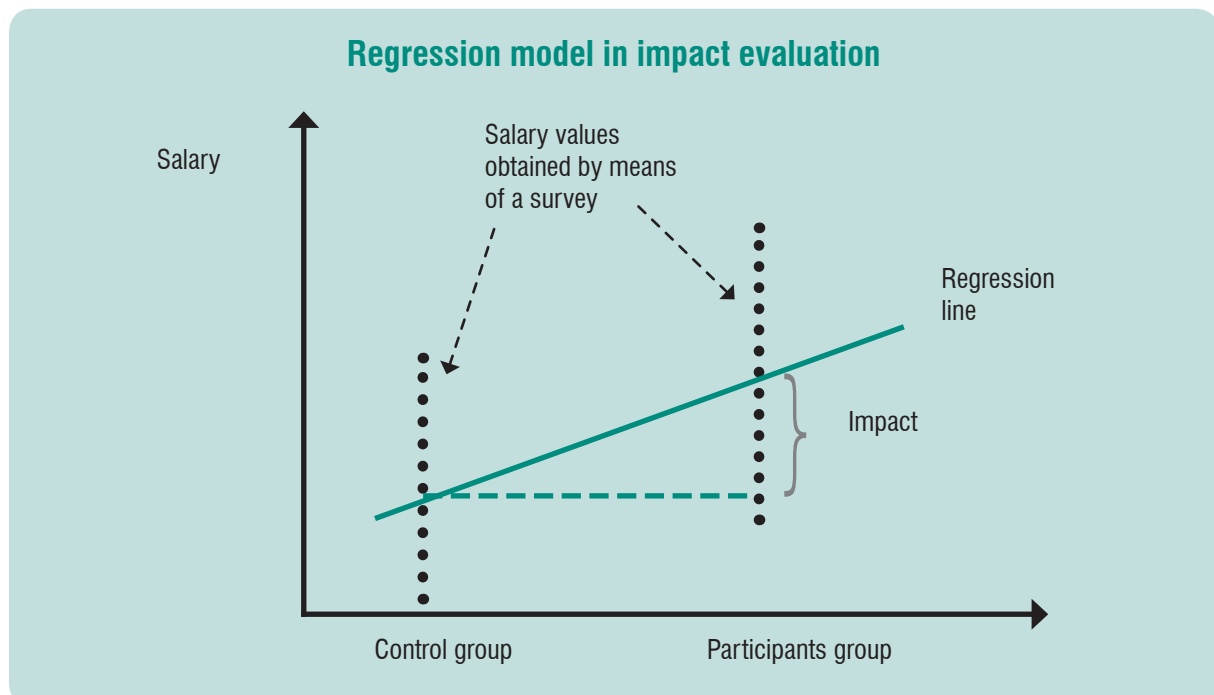
SALARIES EARNED AFTER TRAINING			
	PARTICIPANTS GROUP	CONTROL GROUP	
	1000	1200	
	1200	890	
	1500	950	
	1150	1000	
	1300	750	
Total	6150	4790	Impact
Average	1230	958	272

The mean or average is obtained by adding up the data observed and dividing the result by the number of findings in this case, 5. The difference between both figures is the impact in absolute terms: \$272, a positive impact. In order to render it meaningful, it is turned into a percentage indicator. Thus:

$$\% \text{ of impact} = \frac{1230 - 958}{958} \times 100 = 28.39 \%$$

The impact consists of a 28.39% rise in the salaries of those who took part in the training as compared to those who did not.

Regression analysis is a technique where the average value of a dependant variable (e.g. salary or employment) is estimated on the basis of certain known values of the explanatory or independent variable (training). By way of example, in a professional training activity, the independent variable is the training, while the dependent variable is the change in participants' job or salary.



Panel analysis uses time series, incorporating information on variables and study units over a certain period of time. It includes a sample of information on relevant agents (individuals, enterprises) over a time period.

By way of example, in order to apply the model, we could resort to data obtained on a monthly or annual basis about the revenue of a group of training programme graduates over a 24-month period. This is referred to as "panel" data layout.

The aim of this model is to detect changes in individuals over time, which can be attributed to their participation in a training activity. With this technique, it is possible to perform a dynamic analysis by incorporating the time dimension to the data obtained, thereby enriching the study, especially in times of significant changes⁴⁷.

After calculating the average, performing the regression analysis or applying the panel technique, the data obtained have to go through a statistical significance test⁴⁸. This test indicates whether the value of a given impact indicator is statistically significant to explain the impact obtained. Statistical significance tests are useful for identifying exogenous factors that should not be considered in the design of future interventions.

As mentioned above, effects not necessarily associated with the training activity may play a role in the variation of a certain indicator. For example, a young person who has received training in a favourable economic scenario will tend to find a job as easily as one who has not. The effect not ascribable to training is due to enterprises' high demand in times of growth, when the unemployment rate goes down.

Conversely, youth who has received good training in times of economic recession will have more difficulty in finding a job, which does not necessarily entail an adverse impact of the training programme he has participated in.

4.3 What does impact evaluation by means of qualitative methods consist of?

In this type of evaluation, the sources of information include non-numerical data. Besides, the causal relationship is verified without resorting to a control group, i.e. a counterfactual scenario. Consequently, the activity under evaluation is not subject to experimental controls.

Other characteristics of the qualitative method include the following⁴⁹:

- It does not use pre-established variables; therefore, the results are not restricted to such variables.
- It does not incorporate evidence on individuals who have not received the benefits of the programme.
- It identifies a series of events or activities leading to a particular result, and establishes their causal relationship.
- It describes the beneficiaries' initial conditions and then identifies a series of events occurring at different points in time and leading to the impact.

⁴⁷ For further information: <http://www.bccr.fi.cr/ndie/Documentos/NT-05-2000.pdf>

⁴⁸ A result is statistically significant if it is unlikely to have occurred by chance.

⁴⁹ Based on: Navarro, Hugo. Manual para la evaluación de impacto de proyectos y programas de lucha contra la pobreza. ECLAC-ILPES. 2005

- It assumes a “physical” conception of causality which is the relationship between two events in real life (e.g. “youth participated in the training programme and, as a result, has improved his income”) as opposed to the definition of causality used by the quantitative method (“Hyouth improved his income because he participated in the programme; otherwise, he wouldn't have done so”).
- Instead of seeking to isolate the exogenous factors, this method integrates them in order to observe the interactions between participants and training in their geographic, cultural, organizational and historical context.
- It offers the opportunity to obtain evidence of those impacts, whether positive or negative, that could not be anticipated at the start of the programme or the evaluation.
- Instead of using an experiment (comparison) to determine causality, the qualitative method uses the field work technique, which enables the person responsible for the evaluation to observe and/or interact with the trainees on site.

Some of the questions asked in this evaluation are⁵⁰:

- What were the impacts of the programme?
- What do these impacts mean for the beneficiaries?
- What mechanisms have generated these impacts?
- What is the context or environment in which these impacts were generated?

Qualitative methods are being used more and more, and are also combined with quantitative methods.

Case study⁵¹ is one of the most widely-used qualitative methods in training programmes aimed at non-formal economy and rural populations⁵². Annex 6 describes an experience in which the IDRC applied this methodology.⁵³

The purpose of case study is to analyze the effect of the programme on its beneficiaries. It describes and defines the beneficiaries of the programme, examines their needs and determines to what extent such needs have been effectively met by the activity (Stufflebeam, 2000).

The evaluator should know what the beneficiaries think and how they perceive their own needs and the impact of the programme⁵⁴. To that end, a case study uses multiple data collection techniques, including observation and analysis of the documents prepared on the basis of such observations.

50 Navarro, H., *Op. cit.*

51 A case study is an intensive study on a specific event. Such even may be the execution of a programme or training activity. Based on Navarro, H. *Op.cit.*

52 SDC evaluations such as that of the ILO/Cinterfor *Formujer* Project, the IDRC for the TIC Project for MIPYME in ILO/Cinterfor or the Rural Challenge in Ecuador were made with this approach.

53 International Development Research Center-IDRC-, 2008

54 Evaluator-beneficiary interaction is essential to achieve a deep insight into a programme. IDRC. Evaluation Unit, 2003.

Another technique used is that of the **most significant change**, a participatory follow-up and evaluation method where the key players engage in the activity by analyzing the changes and the data collected.

It is applied throughout the programme cycle and provides information to help people handle it. The data on the impact and the outcomes can be used to help assess the overall performance of the programme.

The process entails recording significant changes arising from the on-site experiences and systematically selecting the most important ones, a task entrusted to sub-groups of key players. The evaluating team staff and the key players selected work together to determine the impact of the activity.

After identifying the changes, some groups of people discuss in depth the value of such changes and select the most significant ones. When the technique is successfully implemented, the entire team may agree and focus on the most significant impact of the programme⁵⁵.

4.3.1. Qualitative data collection

Qualitative information is obtained at the place where the project or training activity has taken place, by means of direct observation, interviews, document review or a combination of these, with a wide coverage or using sampling techniques. The role of the person responsible for the evaluation changes from focusing on the analysis of pre-established variables to studying the behaviour of the participants in the skills development programme.

This approach is particularly suitable for assessing the impact of social and anti-poverty projects such as the training and capacity building programmes where beneficiaries' behaviour, expectations and motivation are key factors to be analyzed. Here it is possible to gain an insight into the economic, political and cultural circumstances that affect the execution of the project and have an impact on participants' well-being.

4.3.2. Qualitative data analysis

It is primarily based on the content analysis technique, which consists of describing, interpreting and analyzing the qualitative data patterns found, as well as the mechanisms and causal relationships that can be identified by means of this type of information⁵⁶.

Content analysis can be performed adopting a thematic approach. A certain concept is selected for the purpose of studying it and checking how often it appears in the text.

One of the mechanisms for treating information obtained on site consists of making use of some sort of coding for processing qualitative data, and then applying quantitative tools. The codes are usually words chosen for the purpose of representing an opinion, feeling or behaviour. Selecting a suitable list of words is essential for maintaining data representativity.

⁵⁵ www.iodparc.com International Organization Development Ltd., 2011.

⁵⁶ Navarro H., *Op. cit.*

4.4 Why is it important to combine quantitative and qualitative methods for skills development impact evaluation?

Skills development have a social impact; because they are conducted on a regular, on-going basis, evaluation should become a usual practice, and qualitative and quantitative methods should be combined without jeopardizing the applicability and convenience of the tools.

The main characteristics of such methods are summarized below:

Characteristics of the evaluation methods	
Quantitative	Qualitative
They make use of statistics to guarantee valid results throughout the process.	They guarantee valid results through field work and interaction with participants.
They compare two groups, relying on a “counterfactual” scenario, that is, the causal effect of the activity.	They focus on beneficiaries and adapt to the specific needs of the evaluation.
They assess both impacts - economic and social.	They can be carried out using simple, easy-to-apply data collection and analysis techniques.
They form work teams with a great deal of technical and statistical “expertise”.	They form work teams who are sensitive and familiar with the social and cultural practices in the context under evaluation.
They are more accurate and strict when it comes to interpreting results.	They are more flexible when it comes to gathering information.
They are used in activities or programmes that are implemented within a limited framework of time and space. Not commonly used for national training systems.	Deeper insight into participants’ perceptions and priorities, as well as into those conditions and processes that may have affected the impact of an activity.

4.5. How are effectiveness and efficiency analyzed?

This analysis completes the evaluation of impact, as it helps determine:

- Whether the impact was achieved (effectiveness).
- Whether the impact generated justifies the cost of the activity (efficiency).
- Whether there may be more effective and efficient alternatives to achieve the same impact.

The effectiveness of an activity is to what extent the goals set in its design have been achieved. Those responsible for the evaluation usually resort to a planning strategy such as the logical framework, where goals are classified hierarchically into general, immediate, specific, targets and activities⁵⁸.

For each one of the goals set, they analyze the effectiveness of the activity under evaluation and obtain a general effectiveness index by weighting⁵⁹ each individual index by goal evaluated.

The example below shows in a simplified manner the effectiveness analysis of a sector training programme by skills. The goal set was to develop skills during a 4-year period, thereby facilitating access to expert welding jobs, given the remarkable growth of the industrial sector in the country.

Impacts of a job access training programme

Years of execution of the activity	Welding-related job access rate		Impact
	Participants Group	Control group	
1	75	60	15
2	80	55	25
3	85	65	20
4	70	70	0
Mean employment rate	77.5	62.5	15
Target set	90.0	90.0	
Effectiveness	86.1	69.4	16.7

Impact varies along the four-year implementation period, falling to zero in the fourth year. Perhaps there have been other training activities and other individuals have developed skills, achieving the same job integration rate as the group of participants.

Meanwhile, the employment rate⁶⁰ gradually decreases along time, which conveys a message about the programme and the skills it is developing, or about the fact that the sector cannot generate any more jobs. These situations typically arise during the evaluation processes and call for the use of a combination of methods.

⁵⁸ There are numerous manuals for preparing a logical framework for project design. A well-designed training activity should anticipate its effects using the logical framework.

⁵⁹ Weighting is the average of different data found, in which each datum, depending on its specific weight, represents a share of the total. For example, in a training activity, 60% can be assigned to the job access goal and 40% to the salary improvement goal.

⁶⁰ This is an indicator defined by the number of employed individuals out of the total number of people in the group. It is expressed as a percentage.

The effectiveness indicator is obtained by dividing the value achieved by the job access target set –90% for both the group of participants and the control group–; the impact is the difference between the indicators in both groups. In the example above there is a positive 16.7% impact as regards the effectiveness of this training activity.

In the above case, those responsible for the evaluation only reviewed the impact and effectiveness for one specific goal: access to jobs. Normally, however, training activities have other goals as well, such as increasing income or on-going education. The effectiveness analysis is carried out in a similar way, with the possibility to make one comparison per goal, as exemplified below:

Different impacts and levels of effectiveness of a training programme

Goals of the training activity	Welding-related job access rate		Impact
	Participants group	Control group	
Access to jobs	77.5	62.5	15.0
Rise in income	35.0	15.5	19.5
Reduction in accidents	85.0	60.0	25.0
Goal - jobs	90.0	90.0	
Goal - income	45.0	45.0	
Goal - accidents	80.0	80.0	
Effectiveness - jobs	86.1	69.4	16.7
Effectiveness - income	77.7	34.4	43.3
Effectiveness - accidents	106.2	75.0	31.2

Efficiency measures the amount of resources spent to achieve the goals. An efficient activity makes optimal use of resources and thus has the lowest possible cost.

While the effectiveness indicator usually consists of a percentage rate, cost-benefit or cost-efficiency indicators are used when assessing efficiency.

The efficiency analysis is used for comparing different training alternatives and can be performed *ex ante* or *ex post*. In general, whenever it is necessary to review investment options to undertake or redirect activities, cost-efficiency is sought and this type of analysis helps achieve this goal.

Example: Analyze which of two alternatives options for developing a training programme in a remote rural community is more efficient. One consists of building a training centre, equip its facilities, hire and train personnel; the other consists of using mobile units as “itinerant centres” with easy-to-transport equipment. This is a typical case where, by estimating costs, the alternatives can be evaluated *ex ante*, so as to implement the most efficient one.

There are two types of analysis for evaluating efficiency: cost-benefit and cost-effectiveness.

Cost-benefit analysis: It expresses the relation between the benefits obtained and the costs incurred, and uses money as the unit of measure. In general, this type of analysis seeks to obtain a benefit-cost ratio above 1, where benefits exceed costs⁶¹.

$$\text{Benefit-cost ratio} = \frac{\text{Present value of benefits}}{\text{Present value of costs}} \times 100$$

Within the cost-benefit analysis an indicator known as **Return on Investment (ROI)**⁶² is used for measuring the return on the investments made by training by enterprises.

Costs include: teachers' salaries, salaries of those workers not performing their usual duties while attending the course, the cost of using facilities and other supplies identified. Benefits include: fewer flawed products, fewer accidents at the workplace, improved productivity.

$$\text{ROI} = \frac{\text{Value of the benefits of training}}{\text{Value of the costs of training}} \times 100$$

Those interested in measuring the benefits and costs of training translate them into monetary values. Normally, such values are easy to calculate. In some cases, however, it is necessary to reach an agreement on, for instance, how to measure the variation in productivity and what to base its assessment on.

Once benefit and cost values have been added up, you can choose to compare them directly or calculate their current net value as appropriate.

ROI has been used to measure the impact of training in experiences involving the application of the Integral System for the Measurement and Improvement of Productivity (SIMAPRO). Annex 7 in this Theme includes the description of one case.

Another often used indicator is the Internal Return Rate (IRR), which defines a benchmark value above which the programme is considered profitable. This rate renders the present value of a flow of benefits and costs equal to zero. The IRR is compared with the interest rates of other alternative investments; it is normally used to choose the one that offers a higher return rate.

⁶¹ Because the value of money through time does not remain the same due to changes in prices and interest rates, the Current Value calculation is used, which consists of converting into current currency a future flow of money (benefits or costs).

⁶² Taken from the English expression "Return on Investment". Phillips, J. Handbook of training evaluation and measurement methods. Houston: Kogan Page. 1990.

Cost-effectiveness analysis: It is the relation between the impacts obtained (valued in money) and the present value of the costs incurred in the activity developed (also in money).

Cost-effectiveness includes the possibility to translate certain social impacts into values expressed in legal tender.

$$\text{Cost-effectiveness ratio} = \frac{\text{Impacts}}{\text{Present value of costs}} \times 100$$

It is also possible to compare impacts obtained with different programme alternatives. The decisions taken on the basis of this ratio favour the most cost-effective programmes, which can be implemented again or taken as reference models for other training programmes.

Cost-impact analysis

It is very useful to compare the present value of the costs with the value of the impact obtained, thus giving an idea of the value of each impact unit generated. This ratio is adequate for comparing completed projects (*ex post*) or investment alternatives under study (*ex ante*).

$$\text{Cost-impact ratio} = \frac{\text{Present value of the costs}}{\text{Impact}} \times 100$$

For instance, you can calculate that, if the reduction of the unemployment rate caused by a training activity was 12% at a total present cost of \$150,000, then the cost for each percentage point of unemployment reduction was \$12,500. Again, this figure is valuable to the extent it can be compared with other activity options or alternative use of funds invested in the programme.

In practice, some evaluations use a combination of effectiveness and efficiency indicators. Finally, it should be borne in mind that impact evaluation is useful for determining whether:

- the goals set have been achieved;
- participants' well-being (income, employability, social integration) has improved;
- enterprises' productivity, work environment and competitiveness has improved;
- the goals of the public policies driven by governments have been achieved in the target population;

- the use of the funds invested has been the best in terms of efficiency;
- there are other less costly alternatives for achieving the same impacts.

SUPPORT MATERIAL FOR THIS THEME

www.oitcinterfor.org

Experiences and applications

1. Grado de ocupación de los egresados de aprendizaje dual. SENATI. Perú, 2001.
2. Evaluación del impacto de la formación profesional industrial SENATI. Perú. 2009.
3. Informe de Evaluación de Impacto para el Programa Nacional de Formación Continua Área Técnica. INSAFORP. El Salvador, 2011.
4. Informe de evaluación. Sistema Nacional de Formación para el Trabajo. SENA. Colombia, 2009.
5. Evaluación de impacto del programa jóvenes en acción. DNP-SENA. Colombia, 2008.
6. Evaluación de impacto del programa jóvenes rurales emprendedores. SENA. Colombia, 2010.
7. Evaluación de impacto de la formación profesional modalidades: habilitación, complementación y formación continua en centros. INFOTEP. República Dominicana, 2006.
8. Evaluación de impacto del proyecto piloto jóvenes emprendedores rurales. Argentina, 2007.
9. Programa de acompañamiento de egresos. Evaluación 2008-2010. SENAI. Brasil.
10. Evaluación de medio término. Programa educación técnica productiva. FAUTAPO. Bolivia, 2010.

Tools

1. Plan anual de evaluación de la calidad, impacto, eficacia y eficiencia del conjunto del subsistema de formación profesional para el empleo. FTFE. España, 2011.
2. Evaluación de contexto. Estructura temática y de contenidos. FTFE. España, 2011.
3. Encuesta a participantes en acciones de formación en el ámbito de la empresa. FTFE. España, 2011.
4. Las TIC en Educación: Una metodología para valorar impacto social y condiciones de equidad. Fundación Omar Dengo. Costa Rica, 2002.
5. Documento aportes metodológicos a la comunidad virtual. MTEySS. Argentina, 2011.
6. Instrumentos diseñados para la evaluación de la política de formación continua. MTEySS. Argentina, 2011.
7. Documento metodológico contribución de SENAI. Brasil, 2011.
8. Formulario para evaluación de impacto de asistencia técnica en empresas. INTECAP. Guatemala, 2011.
9. Formulario para evaluación de impacto de la formación profesional. INTECAP. Guatemala, 2011.

Theme 5

How to implement impact evaluation?

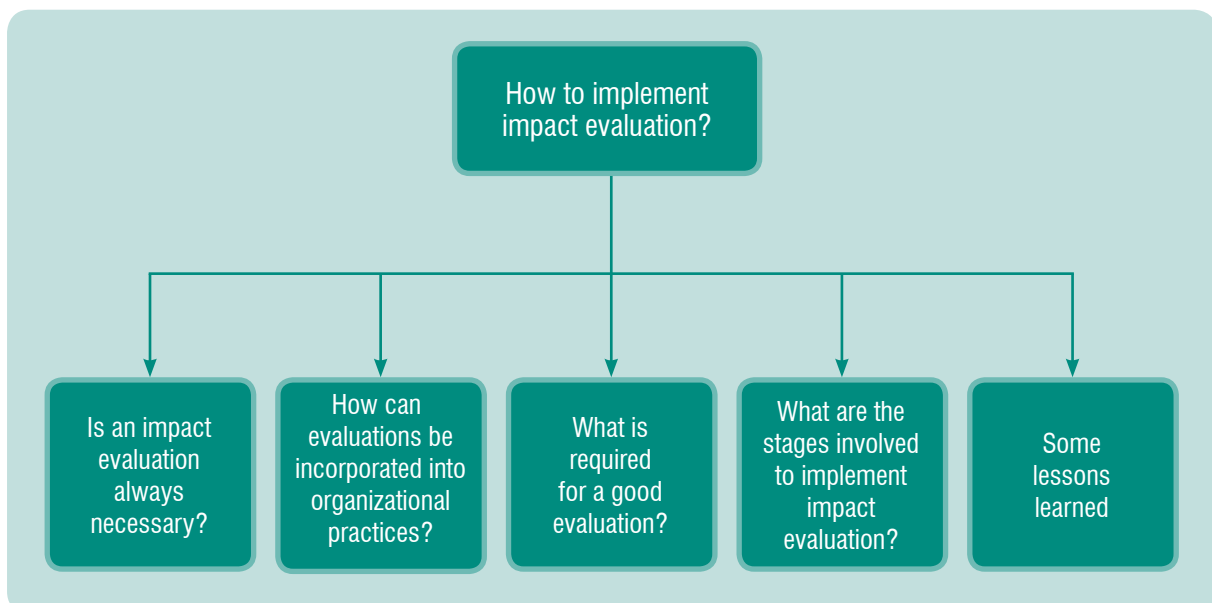
This section looks at some of the practical issues of implementing an impact evaluation. These issues are aspects that must be taken into account and they are interconnected with each other and with other issues discussed in the previous themes.

The content of this theme is dynamic and it is expected that, as the various stakeholders involved in training conduct more and more impact evaluations and more lessons are learned, additional knowledge will be provided and the content will be expanded.

Objectives:

At the end of this theme, the reader should be able to:

- Take into account requirements and practical aspects involved in implementing and institutionalizing impact evaluations.
- Identify the implementation stages of the skills development impact evaluation.
- Consider critical aspects and incorporate lessons learned in implementing skills development impact evaluations.



5.1. Is an impact evaluation always necessary?

As pointed out in theme 2, opinions on the need to evaluate the impact of every skills development programme, intervention or policy vary.

This Guide acknowledges that it is critical to verify whether the interventions that are being conducted are meeting their intended objectives. It is also of the view that training and continuing education goals must not only aim to develop the skills of participants, they must also enhance the employability and quality of life of individuals, increase the productivity and competitiveness of enterprises and promote sustainable economic growth, foster job generation and further social development.

Evaluations are always useful, especially if practical, simple and effective methods are applied.

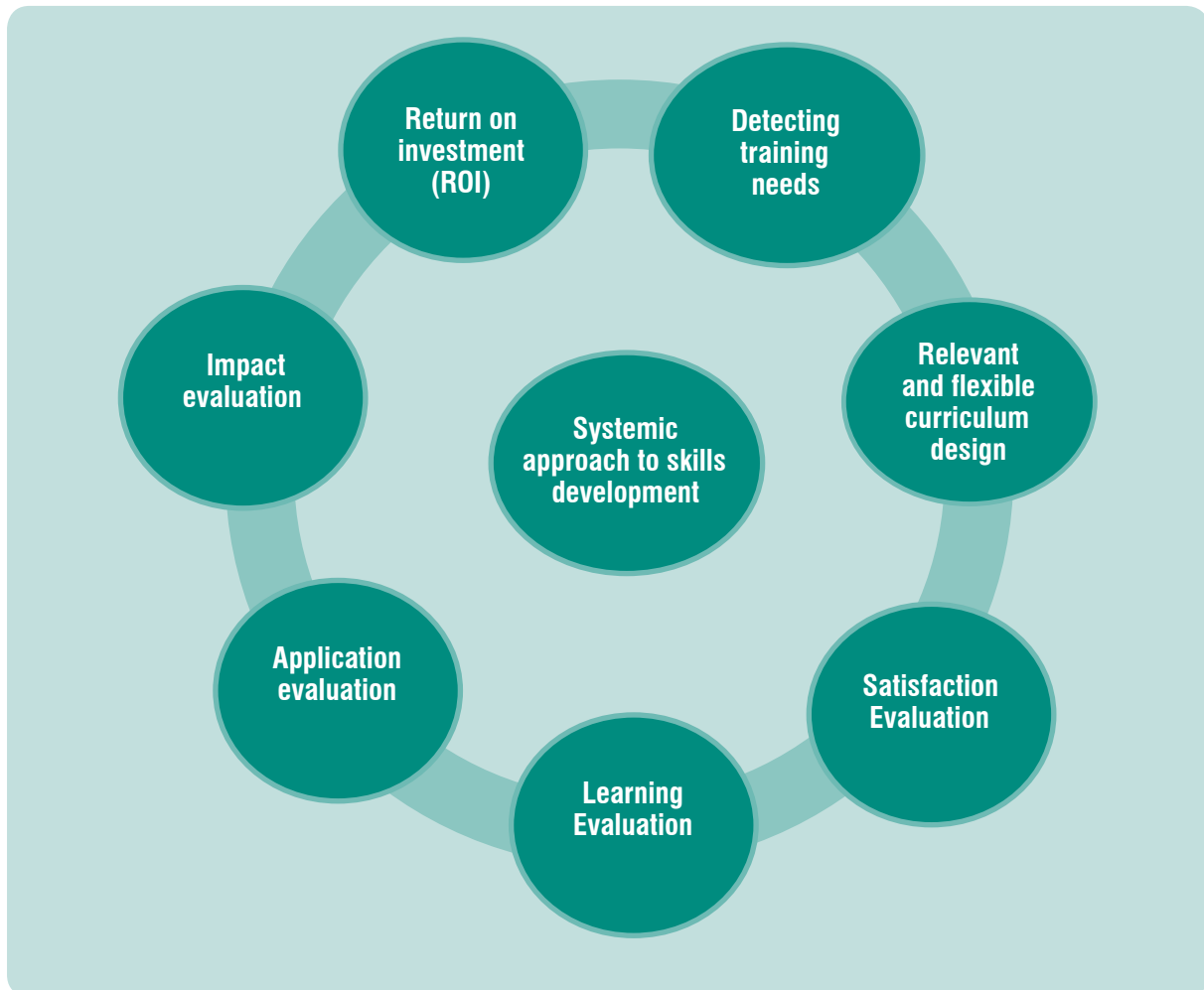
In order for an impact evaluation to become a tool for making effective decisions, key variables need to be identified and followed up and monitored (participants, budget, costs, programmes), thus matching programme objectives with outputs, outcomes and impact indicators. Along with management information systems, monitoring methods are a basic and essential support for results based management.

5.2. How can evaluations be incorporated into organizational practices?

Outlined below are a few aspects to bear in mind when incorporating impact evaluations as a regular practice of training interventions:

- Start from the premise that all interventions must be evaluated and that having information on the outputs, outcomes and impacts of these interventions is necessary for decision-making;
- Consider impact evaluation as a practice that is a regular part of an organization's work and not as a one-off event or an isolated intervention;
- Ensure that the impact evaluations is part of the skills development programme design, by including actions necessary to carry it out and making financial provisions;
- View impact evaluations as part of a system that includes:
 - Detecting skills development needs;
 - Designing a relevant and flexible curriculum that is focused on developing the required skills;
 - Implementing every level of evaluation (satisfaction, learning, application, impact and return on investment).

If skills development is not demand-oriented, if there is no commitment to quality or if there is no way of verifying whether participants have reacted favorably to the training, if they have effectively learned the skills imparted and if they have been able to apply what they have learned, any changes that the individuals, enterprise or society may have undergone will not be able to be attributed to the training intervention.



5.3. What is required for a good evaluation?

Impact evaluation need to be planned from the outset of the training intervention, when it is in the design stage, whether it is a programme, a public training policy or skills development actions carried out by training institutions or enterprises of any size. In this sense, the following table presents a set of prerequisites:

Requirement for a good evaluation

Identify expected change from the training design stage

- Determine the general and specific objectives of the training actions.
- Based on those objectives, identify a set of indicators that express the expected changes and make it possible to measure the meaning and extent of such changes.
- Define the universe of work, that is, the population and social, political or institutional stakeholders who will be affected by the impacts.
- Link the developed activities and products to the expected impacts.

Select and define impact indicators

- Define the indicators both at the conceptual and the operational level, in order to determine exactly how they will be developed.
- Describe the initial situation of the indicators to determine the changes that have occurred and measure them. This process is known as the development of a baseline.

Determine the period necessary to evaluate expected impacts

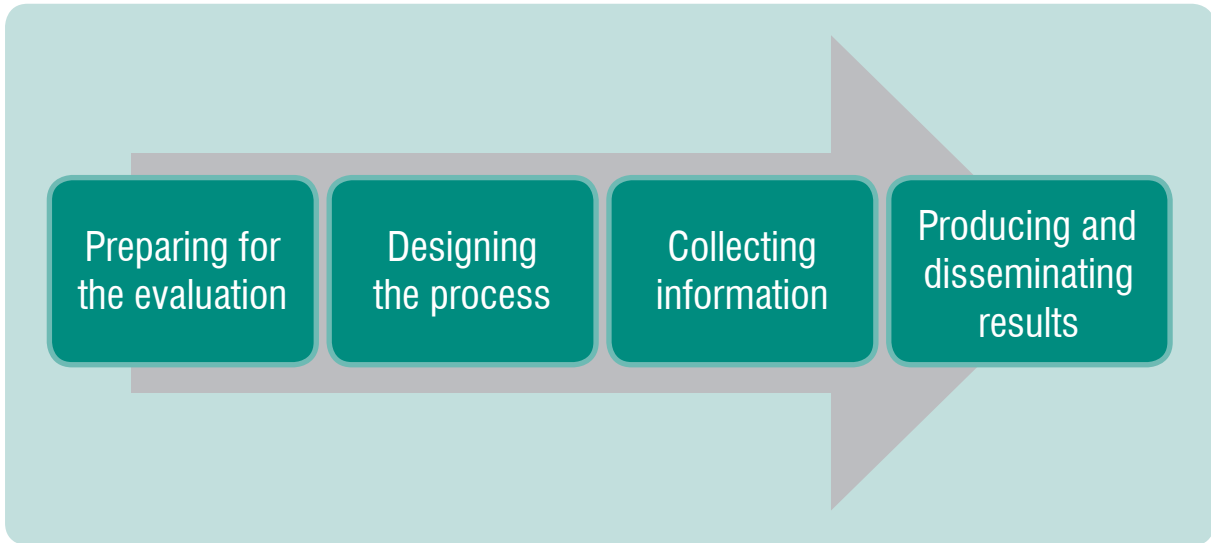
- Define the time required for the expected changes to “mature” and be evaluated.
- Define the evaluation “moments” or cuts based on the areas in which the impact will be measured and the characteristics of the variables considered.

Implement a strategy for social partners involvement

- Define actions and modes of participation to incorporate the perspective of the social partners involved, both in the implementation of the training intervention and in its effects.

5.4. What are the stages involved to implement impact evaluation?

The impact evaluation process comprises the stages of preparing for the evaluation, designing the evaluation, collecting the data and producing and disseminating the results. The aspects to be taken into account in each stage are outlined below.



5.4.1 Preparing for the Evaluation

This is the stage in which the impact evaluation is planned, and, as noted above, it must be done when the training intervention is designed. At this point, the basic questions for the impact evaluation need to be defined, along with the chain of results and the indicators that are going to be used.

What needs to be defined	What needs to be taken into account
<i>The basic questions</i> that the evaluation must answer. These questions are derived from the objectives of the intervention that is to be evaluated. (See Theme 2)	<ul style="list-style-type: none"> This process must be participatory and inclusive to allow stakeholders to give their input on objectives and basic questions. When preparing the questions, it is best to prioritize and concentrate on a limited number of basic and key questions.
<i>The chain of results</i> of the training action, which will make it possible to define the indicators. (See Theme 2)	<ul style="list-style-type: none"> The outputs, outcomes and impacts must be relevant and useful for decision-making.
<i>The indicators</i> that will make it possible to monitor and measure the impacts connected with the questions posed. (See Theme 2)	<ul style="list-style-type: none"> The indicators selected must be specific, measurable, achievable, relevant and time-bound. The selection of indicators must make the most of the information available in institutions, companies and the state. Identification of the sources of information for developing the impact indicators. In the case of primary sources, bear in mind that data must be systematized throughout implementation, relevant tools for recording the data must be designed and the way the sample will be constructed must be defined. If secondary sources are used, you must consider whether quality data is available.⁶³

5.4.2 Designing and preparing the implementation of an evaluation process

Before launching the impact evaluation, you need to define a design that clearly establishes the different stages of the evaluation and specifies the activities that will be carried out, a timetable for each of these activities, the resources needed and the budget for implementation.

⁶³ A primary source is information obtained directly where it originates (for example, from trainees). A secondary source is information previously gathered and processed by others.

There is no one single design for conducting impact evaluations and different alternatives must be considered depending on the characteristics of the population, the impacts to be evaluated and any ethical and political considerations.

It is advisable to incorporate qualitative and quantitative evaluation strategies. A mixed approach increases the possibilities of identifying priorities and difficulties based on the opinions and experiences of the stakeholders. Qualitative strategies involve the use of more flexible and focused methods for gathering opinions, representations and behaviors, which are difficult to access through quantitative perspectives.

What needs to be defined	What needs to be taken into account
<i>The design</i> or how impacts will be evaluated. (See Theme 4)	<ul style="list-style-type: none"> • Consider and analyze the feasibility of a wide range of methodological and design options for conducting the evaluation. • Assess design alternatives based on the object of the evaluation (training action, strategy or programme, public policy), the subjects of the evaluation (individuals, micro or small enterprises, medium or big sized enterprises, society in general, others) and the resources available. • Include methodologies that will enable you to explore qualitative and quantitative impacts. • Use the simplest design possible. The more complex a methodology, the more costly it is, and the greater the chances of jeopardizing the viability of the impact evaluation. • Ensure the rigorosity of the technical processes while avoiding methodological orthodoxy.
<i>Technical and financial resources</i> , time and information available	<ul style="list-style-type: none"> • Decide between an internal and an external evaluation (see Theme 2), based on the resources available. • Appoint a team for the evaluation, combining technical skills, unbiased criteria and objectivity, methodological guidelines (ensuring that the process is in line with the objectives), communicational skills and operating capacity to manage the implementation. • Develop strategies to build or strengthen internal capacities as a condition for creating an impact evaluation culture in the organization. • Set aside financial resources for the training intervention, at the design stage, as the availability of such resources is an unavoidable conditioning factor.
<i>Timetable</i> : you need to define when the impact evaluation will take place, once the training intervention to be evaluated is concluded. ⁶⁴	<ul style="list-style-type: none"> • Define the timeframe based on the type of training and how long it will take for impacts to be seen. • The evaluation should not be conducted too soon after the intervention, as some time is necessary for the impacts to be verifiable. It should not be conducted too long after the intervention, either, as information may be contaminated by other variables and any results and recommendations that may emerge may come too late for decision-making. • Impact evaluations are usually conducted six to twelve months after the intervention, in the case of evaluations that measure employability, although new information may be collected some time later (two years, for example) or even with panel methodology on a yearly basis, to see how employment conditions evolve over time. • Shorter interventions, such as those conducted by enterprises, may require shorter timeframes (even as short as a few weeks or a month) to evaluate impacts.

⁶⁴ Although some have pointed out that the most efficient ex post evaluations are designed and initiated ex ante (Ravallion, 2006), regardless of the evaluation's design, the best moment to collect relevant information is after the action or plan to be evaluated is concluded.

5.4.3 Collecting the Information

This is primarily a practical stage and it involves a number of decisions and activities, including:

- Defining what kind of information will be collected;
- Appointing the evaluation team;
- Developing tools and building the sample;
- Conducting field work;
- Processing and validating information.

How these activities are carried out is directly conditioned by the methodological design. (See Theme 4)

It is advisable to establish quality controls for all phases of data collection, so as to detect and correct any possible errors. At the same time, to ensure reliability of data and data analysis, all the information must be backed by thorough documentation.

5.4.4 Producing and disseminating results

This stage involves the following activities: analyzing data, preparing reports and presentations with the results and disseminating them.

Activity	Considerations
<i>Analyzing data</i>	<ul style="list-style-type: none"> • Ensure that information is handled impartially and ethically. • Bear in mind that the results of the evaluation must be valid, reliable, easy to understand and useful for decision-making.
<i>Reporting</i>	<ul style="list-style-type: none"> • Avoid technical jargon that is understood only by experts. The people who will be using the information are not necessarily impact evaluation specialists. • Make sure that solid and well-grounded reasons are given for decision-making. • Demonstrate that the evaluation is based on accurate information.
<i>Disseminating results</i>	<ul style="list-style-type: none"> • Implement a plan to communicate the results to social stakeholders. • The information provided by the evaluation is vital for decision-making. An evaluation that is not used is a senseless expense.

5.5. Some lessons learned:

Evaluations are built on information

Think of the implementation of an evaluation as a pyramid: the base of the pyramid is formed by data and information; the next tier is formed by indicators and monitoring and follow-up systems; and the impact evaluation itself is at the apex. The key question is how to make evaluations feasibly while gradually creating a culture of evaluation that covers the entire pyramid.

Evaluations as a way of improving skills development systems

Evaluations play an important role in contributing to generate and improve skills development systems and policies. If a country is trying to develop a coherent policy for human resource development, evaluations should be able to generate input to contribute to that goal.

Evaluation results should be applied to adjust or revise programmes, reformulate policies, and design innovative solutions to respond to and anticipate training needs. This can be summarized in a coherent evaluation policy guided by a public policy approach skills development.

Using practical and flexible methods to evaluate

The preparation of the evaluation must follow clear practical guidelines. A good evaluation is not necessarily lengthy, complex or costly. There is no need to resort to orthodox or sophisticated approaches that may prove to be of no use and are usually resource-intensive.

A range of methods should be used to evaluate impacts, methods that can be adapted to the context, the type of programme, the goals set and the target populations. The use of tools such as questionnaires and interviews facilitates and streamlines evaluations.

Evaluations as a way of responding to skills demands

Impact evaluations are useful in guiding skills development as a response to demands.

If the evaluation seeks to measure insertion into the labour market, one way to do so is to determine what portion of trainees has found a job or is engaged in an associated productive activity. If the answer is that only a small fraction of trainees is employed in a job connected with the training they received, that is a sign that the intervention was more supply-oriented than demand-oriented and that training is not in line with what the productive sector requires.

Another form of evaluation is to consider employer preferences when it comes to hiring and employer attitude towards training services.

Impact evaluation: A flexible approach for the informal economy

Evaluation methods for the informal economy must be flexible and make the most out of qualitative approaches. The informal economy is an area that requires the broadest range of evaluation methods available. It is difficult to imagine that an orthodox impact analysis, the comparison of untrained and trained groups in an experimental or semi-experimental design, would be effective here. Case studies and a good set of evaluation questions are, instead, a valid approach to learn what aspects of training are successful in the informal economy. Annex 9 describes the design of evaluation elements for MSME training.

Various sources and methods of collecting information must be considered, including community leaders. The intervention can also be monitored over time. In these cases, the existence of records, testimonies and tools managed by the participants themselves play a key role.

SUPPORT MATERIAL FOR THIS THEME

www.oitcinterfor.org

Related knowledge

1. Diseño de la evaluación de impacto de las políticas de formación continua. MTEySS. Argentina, 2010.
2. Evaluación para el desarrollo social: aportes para un debate abierto en América Latina. INDES-IADB, 2006
3. Impact Evaluation in Practice. World Bank, 2011.
4. Guía para la capacitación basada en TIC para MIPYME. OIT/Cinterfor, 2011.
5. Efectos e impactos de los programas intensivos en el empleo. OIT, 2003.

Experiences and applications

1. Sistematización de la experiencia SIMAPRO del sector frutícola. Interfases. Chile, 2010
2. Strategic Evaluation of Capacity Development. IDRC, 2008.
3. Evaluaciones de Impacto de los Programas de Capacitación Laboral: la experiencia internacional y de Chile, 2007.
4. Informe de evaluación. Modernización de la industria azucarera en México. Aplicación SIMAPRO, 2010.

Annexes

Annex 1

A case of Application of Types and Levels of Evaluation

Typology and Levels of Evaluation			
Effects on individuals			
The evaluation of this level of impact basically applies to vocational training providers or skills certification centers.			
Level	Area	Goal	Methodology / Tool
REACTION	Satisfaction	To learn how trainees assess the training process	Questionnaire put to trainees
LEARNING	Acquisition of new knowledge and skills		Performance tests Knowledge tests
	Qualification improvement	To evaluate the impact of training on the increase in the level of qualification accredited through degrees or certificates	Degrees or qualification certificates
BEHAVIOR	Motivation towards change	To evaluate the impact of training on behavior, identifying if there is willingness to change, an enabling environment, or compensations.	Group dynamic methods Questionnaire put to trainees
EMPLOYABILITY	Job take-up	To evaluate the impact of training on job access	Questionnaire to trainees
	Job retention	To evaluate the impact of training on job retention, mobility, promotion and vocational retraining.	Questionnaire put to trainees

Skills development impact evaluation

Effects on enterprises/organizations			
The evaluation of this level of impact applies basically to enterprises.			
Level	Area	Goal	Methodology / Tool
TRANSFER OF LEARNING	Transference of new skills to the job	Application of acquired knowledge/ skills to work activities.	Questionnaire put to trainees Observations and reports from superiors, peers or subordinates.
RESULTS OBTAINED	Task performance improvement	Consequences in the results yielded by the position: quantity, quality, regulatory compliance, better use of procedures.	Questionnaire put to trainees Observations and reports from superiors, peers or subordinates.
PRODUCTIVITY	Economic results of the enterprise or organization	Consequences in the results yielded by the enterprises' activities in general: increase in benefits, greater number of clients, fewer occupational accidents.	Statistics, balance sheets, cost-benefit analysis.
WORK ENVIRONMENT	Social and labor results of the enterprise or organization	To identify effects in worker-management relations, generation of a training culture in the enterprise, conflict levels, fair policies.	Questionnaires put to management, workers and representatives.
Effects on society			
The evaluation of this type of impact applies basically to government agencies in charge of designing public policies.			
Level	Area	Goal	Methodology / Tool
ECONOMIC AND SOCIAL DEVELOPMENT	State productivity & competitiveness	Gross Domestic Product/Balance of Payment, level of indebtedness	National statistics
LABOUR MARKET	Labour market structure	Characteristics of the working population: active, employed, unemployed	National statistics
	Adjustment level	Adjustment of qualifications to employment demand	Employment and occupation observatories.
SOCIAL COHESION	Level of qualification of the population and access to education	Development of national human capital	National statistics
	Democratization and citizen participation	Assess the impact of training in terms of empowerment of citizenship, solidarity and social integration processes.	Questionnaires and national statistics

Source: Fundación Tripartita para la Formación en el Empleo.

Criteria for developing indicators

A well-known set of criteria for developing effective indicators is the “SMART” approach⁶⁵ for which there is a Spanish adaptation, CREMA⁶⁶:

- **C**lear: precise and unambiguous
- **R**elevant: appropriate for the issue in question
- **E**conomical: available at a reasonable cost
- **M**easurable: open to independent validation
- **A**dequate: offers a large enough base to assess the performance of the programme or project.

The development of a system of indicators should usually include the following:

Type of indicator: management, output, income or impact.

Measurement unit: the reference parameter used to express the value of the variable used (e.g.: currency, days, months, years).

Calculation formula: the relationship between variables that yields the value of the indicator.

Frequency: the timeframe the indicator refers to and also the period in which the information it contains must be updated.

Responsible: for generating the indicator.

Source: where the information of the variables contained in the indicator is obtained.

In addition to the above characteristics, you should take the following aspects into account when defining indicators:

- Select a manageable but adequate number. The best way to proceed is to have a system of indicators and evaluate impacts based on relations among them and not individually.

⁶⁵ Acronym formed by the first letters of the concepts that define the characteristics of an effective indicator: Specific, Measurable, Attainable, Relevant, and Time-bound.

⁶⁶ Version coined in Colombia by the National Planning Department.

- The magnitude or characteristic of the change that each indicator will measure must be defined when the evaluation is designed.
- Whether the indicator can in fact be easily be developed for the proposed universe of work.
- Indicators must refer or allude to the different levels of expected impact.
- They must be capable of capturing a key characteristic of a product, service or process. This entails considering selectivity or importance.
- They must be easy to understand and apply in the various levels of the organization, and they must be simple and clear.
- They have to be sufficiently representative of the product or process they refer to, including in statistical terms.
- It must be possible to record data, results and calculation histories, including persons in charge, and properly maintain such records and make them available.
- They must be easily comparable against appropriate references, such as competition, the average for the sector or the standard of excellence.
- They must be long lasting, generated based on standardized procedures and incorporated into the activities. They must facilitate the forecasting of results when the process is under control.
- It is important that they be generated at a low cost, using non-dimensionalized units or units with simple dimensions, such as percentages, units of time, volume and currencies.

Guiding areas and variables for impact evaluation

A recent impact evaluation used a methodological strategy that combined quantitative and qualitative methods, which were applied to six sources of analysis: beneficiary companies, beneficiary workers, control group companies, control group workers, workers included in the 2009 Survey of Households, and Training Centres.

The following table shows the variables selected to conduct the evaluation along the chain of results. In each stage different values or units of measure will be used according to the variable:

Areas	Variables
Impact	Application of skills
	Benefits in profitability and competitiveness
	Labour and wage promotion
Process	Pro-active training centers
	Accessibility of training centers
	Suitability of training for enterprise demands
	Correspondence of team and materials with enterprise resources
	Correspondence of team and materials with enterprise needs
Outcomes	Acquired knowledge, skills and capabilities
	Suitability of capabilities for enterprise standards
	Motivation to engage in training
	Profile of trainees

Source: Programa Nacional de Formación Continua Área Técnica. INSAFORP 2011
The technical report is available in Spanish in the database created for this Guide at:
<http://www.oitcinterfor.org/public/english/region/ampro/cinterfor/index.htm>

Basic indicators used in SENA for impact evaluation of technician and technologist courses⁶⁷

Based on SENA strategies and programmes, the indicators presented refer to the training mode outlined below:

Technical Training

The degree of technician is awarded to all those who have successfully completed a training programme that seeks to teach trainees the skills necessary to perform certain activities and solve problems with predictable responses within a defined range of work areas, understand and implement the production process, use specific instruments and techniques, carry out operations to obtain concrete results and be accountable for their own work.

Technological Training

The degree of technologist is awarded to all those who have successfully completed a training programme in which participants develop the skills necessary to apply technical and technological knowledge to solve strategic problems in the field in question, coordinate and supervise interdisciplinary activities in technical and technological fields, organize and administrate resources, manage production projects, communicate ideas, respond to the results of their own work or that of others under their supervision, and ethically assume relevant social and organizational roles. The programme also aims to develop the skills necessary to guarantee an interaction between scientific and instrumental levels and operational know-how and technological knowledge.

It should be noted that SENA's technical and technological training programmes have the longest duration and also that they seek to have widespread effects in the target population. Therefore, impact evaluations have a greater frequency than follow-up evaluations, when their results are used to improve or introduce structural changes to the programmes.

⁶⁷ Based on: "Propuesta de un Sistema de Seguimiento y Evaluación de Cuatro Programas del Servicio Nacional de Aprendizaje – SENA." Fedesarrollo. 2008.

Basic indicators

No.	Indicator Name	Measurement Unit	Formula	Frequency	Justification	Observations
1	Employability associated with joining labour force	Percentage (probability)	The likelihood of being hired is estimated through econometric methods	A frequency of no less than 2 years is recommended.	After completing the training programme beneficiaries are expected to have greater chances of finding a job as the intervention is geared towards improving the trainees' skills in the labour market.	In impact evaluations the results are usually presented in terms of additional percentage points for trainees who completed the programme compared to a control group
2	Duration of unemployment	Weeks / percentage, (probability)	The likelihood of being unemployed and the duration of unemployment are estimated through econometric methods	A frequency of no less than 2 years is recommended	After completing the training programme beneficiaries are expected to have shorter periods of unemployment as compared to those who do not participate in the programme or who drop out.	In impact evaluations the results are usually presented in terms of additional percentage points for trainees who completed the programme compared to a control group
3	Quality of employment	Index / percentage	The index is estimated based on a group of variables and using econometric methods	A frequency of no less than 2 years is recommended	After completing the training programme beneficiaries are expected to find better-quality jobs than those found by the control group. Therefore variables like access to social security, degree of formality of the job, duration of employment, type of contract, labour and non-labour benefits, occupational position and size of the enterprise can be taken into account.	In impact evaluations the results are usually presented in terms of additional percentage points for trainees who completed the programme compared to a control group.
4	Labour income	Currency (pesos, dollars, etc.)	The labour income of trainees is estimated through econometric methods	A frequency of no less than 2 years is recommended	After completing the training programme trainees are expected to earn more labour income compared to individuals in the control group.	In impact evaluations the results are usually presented in terms of additional percentage points for the trainee who completed the programme compared to a control group.

Complementary indicators

No.	Indicator Name	Measurement Unit	Formula	Frequency	Justification	Observations
1	Employability associated with self-employment	Percentage (probability)	The probability of entrepreneurship is measured through econometric methods	A frequency of no less than 2 years is recommended	After completing a training programme that fosters entrepreneurship, trainees are expected to have increased their chances of generating undertakings because the intervention is better geared to skills and capabilities for developing these kinds of projects.	In impact evaluations the results are usually presented in terms of additional percentage points for the trainee who completed the programme compared to results in the control group.
2	Labour mobility	Percentage (probability)	The probability of job promotion is estimated through econometric methods	A frequency of no less than 2 years is recommended	After completing a training programme, beneficiaries are expected to have greater probabilities of obtaining a promotion or a raise in their enterprise or by changing jobs.	In impact evaluations the results are usually presented in terms of additional percentage points for trainees who completed the programme compared to a control group.
3	Continuity in academic and vocational training	Percentage (probability)	The probability of continuing in training processes is estimated through econometric methods.	A frequency of no less than 2 years is recommended	One of the desired impacts of the training programme is to promote continuing training, which should lead to a higher rate of training in higher education levels.	In impact evaluations the results are usually presented in terms of additional percentage points for the trainee who completed the programme compared to a control group.
4	Living conditions	Index / percentage	Econometric methods are used to estimate the index, based on a group of variables	A frequency of no less than 2 years is recommended	After completing the training programme trainees are expected to improve their quality of life and that of the members of their household.	In impact evaluations the results are usually presented in terms of additional percentage points for trainees who completed the programme compared to a control group.
5	Changes originated in vocational training process	Percentage (probability)	The probability of changes is estimated through econometric methods.	A frequency of no less than 2 years is recommended	Specific methodologies like use of ICT, labs, net works, etc. affect the outputs that need to be evaluated to better execution of programmes	the effects can be presented as differentials from the results in impact variables. It must isolate the effect of many variables so that the result is unbiased.
6	Behavioral changes	Percentage (probability)	Econometric methods are used to estimate the probability fo differences	A frequency of no less than 2 years is recommended	Among the factors that could improve the employability of trainees there are cualitatives variables like behavioral changes that includes self-steem, creativity and project oriented behavior.	In impact evaluations the results are usually presented in terms of additional percentage points for the trainee who completed the programme compared to results in the control group.

Basic indicators suggested for the evaluation of occupational training policies and actions⁶⁸

As mentioned above, indicators provide observable measures for expected impacts. An element to be taken into account here is that the effects of public policies, which are far-reaching and usually national in scope, differ from those expected for something more specific like attending an occupational training course or the implementation of training actions by a vocational training institute (VTI). In the first case, the group of target beneficiaries is broad and the objectives often have to do not only with economic aspects but also with the improvement of social conditions.

In the case of training programmes, target participants are a much narrower group; their benefits can be translated into economic and non-economic; and activities such as collecting data for the indicators will be less costly. In this sense, indicators need to be relevant, that is, they must refer to the object or subject on which the expected impact will be evaluated.

To illustrate, the following table lists some examples of indicators used in various cases:

Indicators for public policies in vocational training
Labour market insertion in the period considered.
Variation in income as a result of active employment policies.
Strengthened VTIs, channeling sectorial training demands from local entrepreneurships.
Improvement of working conditions as a result of certification of occupational skills.
Changes in household consumption.
Changes in the poverty index.
Achievement of MDGs.
Implementation of decent work goal.
Reduction of the informal economy.
Social security coverage.
Companies that have gone from the informal to the formal economy.
Workers attending continuous on the job training programmes
Workers with certified skills.
Time spent job hunting.
Social security contributions.

⁶⁸ Based on contributions from the Ministry of Labour, Employment and Social Security of Argentina, SENAI, SENAR, SENAT of Brazil.

Indicators for specific vocational training actions

Accident rate (variation in the number of occupational accidents).

Performance on the job (determining changes in work habits).

Percentage of workers who continue their occupational training.

Labour market insertion rate.

Employment rate for trainees who completed the course.

Unemployment level for trainees who completed the course.

Rate of trainees who completed the course and are working in the field they were trained for.

Employment rate in formal economy.

Average monthly income.

Average monthly income increase rate for trainees who completed the course.

Average satisfaction score given by trainees who completed the course.

Level of satisfaction of enterprise with workers.

Adaptation of occupational profile to the labour market.

Rate of "loyalty" to training.

Enterprise hiring preferences.

An example of IDRC case studies

Capacity building for research is the principal focus of the work and mission of the International Development Research Centre (IDRC). It was also included as one of the goals of its Corporate Strategy and Program Framework 2005-2010. In the year 2005, IDRC began a strategic evaluation, headed by its Evaluation Unit, to examine how the centre had contributed to strengthen the capacities of the groups and organizations it works with. The evaluation process sought to describe and analyze the processes and results obtained with the support of IDRC in capacity building with the aim of generating a conceptual framework and a common language, as well as to systematize experiences and findings in this field.

The evaluation has been conducted in different stages. The first three stages worked on the following aspects:

- Working towards a definition of capacity “building” or “strengthening” and an identification of how and with whom this work is done in the context of IDRC.
- Developing a set of typologies that can help IDRC staff and its partners with the conceptualization, planning, monitoring and evaluation of capacity-building, and
- Preparing a list of “good practices” that combines these key elements of the support provided by IDRC for the development of research systems and organizations.

A fourth stage of the process of evaluation involves case studies from social organizations. The document that presents the case study of the Economic and Social Research Consortium (Consortio de Investigación Económica y Social - CIES) in Peru has been made available on the web site created as a complement to this Guide: <http://evc.oitcinterfor.org>

SIMAPRO and a case of impact evaluation implementation

The aim of the System for Integrated Measurement and Advancement of Productivity (Sistema Integral de Medición y Avance de la Productividad) is to improve working conditions, efficiency and quality by involving and engaging workers, middle management and senior management, through a participatory, integrated and inclusive methodology.

There are currently implementation experiences in Mexico, Chile, Dominican Republic and Cuba, in different productive sectors, including the sugar, tourism and auto parts industries.

In Chile's case, an impact evaluation in enterprises from the fruit export industry revealed a 30.6% reduction in total work hours, while mean productivity and quality for SIMAPRO groups was found to be 28% above average, in contrast to non-SIMAPRO groups, where it stood at only 1% above average. The enterprises that applied SIMAPRO reported a very low turnover in the participating group, in two of them as low as 0%. In one of the enterprises accidents diminished by 49% and the number of days not worked dropped by 35.5%. According to an ROI financial analysis, one of the pilot enterprises had a return on investment of 182.6% with this management methodology.

Overall, the experience of fresh fruit exporting enterprises revealed a ROI ranging from 82% to 279% from the implementation of the system.

More information is available at: http://www.oitcinterfor.org/public/spanish/region/ampro/cinterfor/temas/prod/simapro/aplica/chile/exp_expo.pdf

Annex 8

Variables used in trainee follow-up SENAI

In SENAI impact evaluations involve a number of phases that are outlined in the table below.

The table also includes suggested variables for each stage of the evaluation.

Phase 0 Before course/ programme start	Phase 1 At course/ programme end	Phase 2 After course/ programme conclusion	Phase 3 Evaluation of contracting enterprise
Respondent: Registered trainees	Respondent: Participants who complete the course or programme	Respondent: Trainees who pass the course or programme	Respondent: Direct supervisor of trainees who pass the course or programme
Gender	Gender		
Age group	Age group		
Ethnic group	Ethnic group		
Socioeconomic situation	Benefits provided by the course		
Educational situation	Educational situation	Educational situation	
Work situation	Work situation	Work situation	
Family income	Monthly income	Monthly income	
Socioeconomic situation			
Persons with disabilities		Hiring conditions for persons with disabilities	
Causes of unemployment	Causes of unemployment	Causes of unemployment	
	Economic sector of the enterprise the person works at	Economic sector of the enterprise the person works at	
	Level of satisfaction with course/ programme	Level of satisfaction of trainees who have passed the course	Level of satisfaction of the enterprise with trainees who passed the course
		Degree of difficulty of machine / tool / equipment operation	
		Loyalty building	
		Reasons for lack of loyalty	
			Adaptation of the profile of successful trainees to the labour market
			Enterprises choosing to hire trainees who passed the course over other candidates
			Promotion within the enterprise after completing the course

ICT for MSME Project

Evaluation of training in the informal economy

During 2009 and 2010, ILO/Cinterfor, in cooperation with several vocational training institutions from Argentina, Brazil, Colombia, Guatemala and the Dominican Republic, produced a Guide for Applying ICTs in Training for MSMEs.

A training methodology was developed taking into account pedagogical, technological and socioeconomic aspects, as well as regional and international best practices. This methodology was applied in six clusters, to identify strategies that enhance MSME productivity and competitiveness based on their training needs.

The methodological guide developed provides tools for MSME training impact evaluation towards managing capacity building, diagnosing needs, developing relevant training proposals, evaluating impact and calculating the ROI of training actions.

The following prerequisites for conducting a training evaluation were identified:

- A consensus among everyone involved in the strategy, to facilitate the evaluation process and maximize the use of any information generated;
- Establishing criteria to determine the usefulness of the information;
- A common language regarding the objectives of the evaluation;
- Encouraging favorable attitudes towards transparency, so that the evaluation is perceived as a learning and development process;
- Establishing conditions for cooperation and participation to maximize the effectiveness of the evaluation;
- Communicating the evaluation objectives and plan among all the stakeholders involved in the training action;
- Incorporating the different stakeholders according to their level of involvement and their area of work, as they will be the sources of information during the data collection phase and will be the users of the systematized data.

With respect to the evaluation methodology, the following is required for the collection of information:

- Practical evaluation procedures to minimize any disruptions that may be caused by data collection;
- Simple tools covering the essential data that needs to be collected.

Glossary

Comparison group

Also known as a “control group”. A valid comparison group will have the same characteristics as the group of beneficiaries of the programme (treatment group), except that the units in the comparison group do not benefit from the program. Comparison groups are used to estimate the counterfactual. (World Bank, 2011)

http://siteresources.worldbank.org/EXTHDOFFICE/Resources/5485726-1295455628620/Impact_Evaluation_in_Practice.pdf

Competencies

This term “covers the knowledge, skills and know-how applied and mastered in a specific context.” (ILO. Recommendation 195)

<http://www.ilo.org/ilolex/cgi-lex/convde.pl?R195>

Cost-benefit analysis

An evaluation indicator which compares the costs and benefits, expressed in monetary terms, of investment alternatives (*ex ante*) or of activities already performed (*ex post*) with the aim of analyzing the economic profitability of each alternative or of the results obtained. (IABD, 2009)

<http://idbdocs.iadb.org/wsdocs/getdocument.aspx?docnum=2131580>

Cost-effectiveness analysis

This method is used when the benefits or results of the alternatives that are being evaluated can be measured in physical units. Basically, what it does is compare the mean costs of such alternatives. It can be applied both *ex ante* and *ex post*. (IADB, 2009)

<http://idbdocs.iadb.org/wsdocs/getdocument.aspx?docnum=2131580>

Counterfactual

An estimate of what the outcome (Y) would have been for programme participants in the variables of interest if they had not participated in the programme (P). By definition, the counterfactual cannot be observed. Therefore, it must be estimated using comparison or control groups. (World Bank, 2011)

http://siteresources.worldbank.org/EXTHDOFFICE/Resources/5485726-1295455628620/Impact_Evaluation_in_Practice.pdf

Decent work

Productive work in which rights are protected, which generates an adequate income, with adequate social protection. Also means sufficient work, in the sense that all should have full access to income-earning opportunities. (ILO Thesaurus)

<http://www.ilo.org//thesaurus/defaulten.asp>

It is a *goal* that reflects in clear language a universal aspiration of people everywhere and it connects with their hopes to obtain productive work in conditions of freedom, equity, security and human dignity. It is both a personal goal for individuals and a development goal for countries. (Report of the Director-General, 2001)

<http://www.ilo.org/public/english/standards/relm/ilc/ilc89/rep-i-a.htm>

Effect

Intended or unintended change due directly or indirectly to an intervention. (OECD, 2010)

<http://www.oecd.org/dataoecd/29/21/2754804.pdf>

Effectiveness

The capability of producing a decided, decisive, or desired effect. (Merriam-Webster's 11th Collegiate Dictionary)

The relationship between the outcome and the expectation or standard (Pritchard, R.D.)

Efficiency

Efficiency is a concept used to describe the relationship between the work that was planned and the work that is actually performed, taking into account the time, economic investment, personnel assigned and material resources involved. It refers to our capacity to get the job done. (Rodríguez, Giuselle; Meléndez, Narda; Velásquez, Emma; Fuentes, María Cecilia. Tomándole el pulso al género. Sistemas de monitoreo y evaluación sensibles a género.)

http://www.oitcinterfor.org/public/spanish/region/ampro/cinterfor/temas/gender/em_ca_eq/mod/mat/pulso_gen.pdf

Employability

The term employability relates to portable competencies and qualifications that enhance an individual's capacity to make use of the education and training opportunities available in order to secure and retain decent work, to progress within the enterprise and between jobs, and to cope with changing technology and labour market conditions.

(ILO. Recommendation 195)

<http://www.ilo.org/ilolex/cgi-lex/convde.pl?R195>

Evaluation

A systematic process for determining the value or amount of fulfillment of preset objectives. Evaluations thus require setting objectives, identifying the criteria that will be used to measure the attainment of the objectives, determining the degree of success achieved and the recommendations for conducting future activities in a specific programme.

http://www.ilo.org/public/libdoc/ilo/1993/93B09_215_span.pdf

Impact

Positive and negative, primary and secondary long-term effects produced by a development intervention, directly or indirectly, intended or unintended. (OECD, 2010)

<http://www.oecd.org/dataoecd/29/21/2754804.pdf>

Impact evaluation

An impact evaluation is an evaluation that tries to make a causal link between a programme or intervention and a set of outcomes. An impact evaluation tries to answer the question of whether a programme is responsible for changes in the outcomes of interest.

http://siteresources.worldbank.org/EXTHDOFFICE/Resources/5485726-1295455628620/Impact_Evaluation_in_Practice.pdf

An evaluation process aimed at measuring the outcome of an intervention, in terms of quantity, quality and extension, according to preset rules. (Abdala)

http://www.oitcinterfor.org/public/spanish/region/ampro/cinterfor/publ/man_eva/pdf/man_eva.pdf

Knowledge-based economy

Knowledge-based economies (KBE) are economies in which knowledge production, distribution and use are the main engine of economic growth and wealth creation and employment generation in every sector. (OECD 1996)

<http://www.ucema.edu.ar/publicaciones/download/documentos/204.pdf>

<http://www.oecd.org/dataoecd/51/8/1913021.pdf>

Lifelong learning

This term “encompasses all learning activities undertaken throughout life for the development of competencies and qualifications.”

<http://www.ilo.org/ilolex/cgi-lex/convde.pl?R195>

Mid-term evaluation

Analysis that determine if the expected results have been or will be accomplished and, if not, whether the statement of objectives should be modified. (ILO. Guidelines for the Preparation of Independent Evaluations of ILO Programmes and Projects)

http://www.ilo.org/public/libdoc/ilo/1997/97B09_133_engl.pdf

Millennium Development Goals

A roadmap setting out eight time-bound and measurable goals to be reached by 2015. These goals are: eradicate extreme poverty and hunger; achieve universal education; promote gender equality; reduce child mortality; improve maternal health; combat HIV/AIDS; ensure environmental sustainability; and develop a global partnership. (ILO Website)

<http://www.ilo.org/global/topics/millennium-development-goals/lang--en/index.htm>

Monitoring

An ongoing and systematic process that measures the progress and changes brought on by the implementation of a set of activities over a given period of time, based on pre-established indicators (Guijt, 1998). It is a mechanism used to follow up actions and verify the extent to which goals are met. This evaluation tool not only measures implementations, it also revises and alerts about specific situations or problematic activities that are not turning out according to plan or design. (Rodríguez, Giuselle; Meléndez, Narda; Velásquez, Emma; Fuentes, María Cecilia. Tomándole el pulso al género. Sistemas de monitoreo y evaluación sensibles a género.)

http://www.oitcinterfor.org/public/spanish/region/ampro/cinterfor/temas/gender/em_ca_eq/mod/mat/pulso_gen.pdf

Primary source

Primary sources are sources that contain original information, which is not summarized or translated: books, theses, monographs, articles, etc. (Buonocore, Domingo. Diccionario de bibliotecología)

Panel analysis

An econometric method that uses time series, incorporating data from variables and units of study over a given time span. It combines two dimensions of analysis: a temporal dimension, and data on characteristics of the agents of study (individuals, companies). It enables the detection of changes in such characteristics during the period studied, towards drawing conclusions regarding the variables that influenced those changes.

<http://www.bccr.fi.cr/ndie/Documentos/NT-05-2000.PDF>

Participant (in a training policy, programme or action)

A young or adult individual who participates in a training or technical education activity with the aim of obtaining an occupational qualification. (ILO Glossary)

http://www.ilo.org/public/libdoc/ilo/1986/86B09_420_span.pdf

Process evaluation

A process evaluation is an evaluation that tries to establish the level of quality or success of a programme's processes; for example, adequacy of the administrative processes, acceptability of the programme benefits, clarity of the information campaign, internal dynamics of implementing organizations, their policy instruments, their service delivery mechanisms, their management practices, and the linkages among these. (World Bank, 2011)

http://siteresources.worldbank.org/EXTHDOFFICE/Resources/5485726-1295455628620/Impact_Evaluation_in_Practice.pdf

Public policy

A quality public policy refers to courses of action and information flows associated with a democratically defined political objective, which are carried out by the public sector and, often, with the involvement of the community and the private sector. A quality public policy includes guidelines or contents, instruments or mechanisms, institutional definitions or changes and prediction of results. (ECLAC, 2004)

http://www.eclac.org/publicaciones/xml/5/19485/sps95_lcl2176p.pdf

Productivity

The ratio of output to the effort and capital invested. (ILO Thesaurus)

<http://www.ilo.org//thesaurus/defaulten.asp>

Qualifications

"The term qualifications means a formal expression of the vocational or professional abilities of a worker, recognized at international, national or sectoral levels". (ILO. Recommendation 195)

<http://www.ilo.org/ilolex/cgi-lex/convde.pl?R195>

Results

The output, outcome or impact (intended or unintended, positive and/or negative) of a development intervention. (OECD, 2010)

<http://www.oecd.org/dataoecd/29/21/2754804.pdf>

Results chain

Sequence of actions and situations that make it possible to achieve the expected results. (Varela. ILO/ACTRAV; ITC)

<http://actrav.itcilo.org/courses/manuales09/cooperacion-sindical/disenio-proyectos-coop-sindical.pdf>

The causal sequence for a development intervention that stipulates the necessary sequence to achieve desired objectives –beginning with inputs, moving through activities and outputs, and culminating in outcomes, impacts and feedback. (OECD, 2010)

<http://www.oecd.org/dataoecd/29/21/2754804.pdf>

Results-based management

A management strategy focusing on performance and achievement of outputs, outcomes and impacts. (OECD, 2010)

<http://www.oecd.org/dataoecd/29/21/2754804.pdf>

Return on investment (ROI)

An economic indicator that is used to answer the question of whether investing in a performance improvement programme, process, initiative or solution yields an economic profit.

<http://www.kirkpatrickpartners.com/OurPhilosophy/tabid/66/Default.aspx>

Sample

A sample is a subset of a population. Typically, the population is very large, making a census or a complete enumeration of all the values in the population impractical or impossible. Instead, researchers can select a representative subset of the population (using a sampling frame) and collect statistics on the sample. This process is referred to as sampling. (World Bank, 2011)

http://siteresources.worldbank.org/EXTHDOFFICE/Resources/5485726-1295455628620/Impact_Evaluation_in_Practice.pdf

Secondary source

Secondary sources are sources that contain summarized or reformulated data or information. (Buonocore, Domingo. Diccionario de bibliotecología)

Social dialogue

Includes all types of negotiation, consultation or exchange of information between or among representatives of governments, employers and workers on issues of common interest relating to economic and social policy. (ILO Thesaurus)

<http://www.ilo.org//thesaurus/defaulten.asp>

Social inclusion

Social integration: Assimilation of new elements into the social sphere of a community. (ILO Thesaurus)

<http://www.ilo.org//thesaurus/defaulten.asp>

Summative evaluation

An assessment performed at the end of one or several of the activities or units of a specific programme, to determine the level of knowledge and skills with the aim of concluding the learning process (Alexim, João Carlos; Brígido, Raimundo; Freire, Lucienne. Certificación de competencias profesionales. Glosario de términos técnicos. Brasília, ILO)

http://www.oei.es/etp/certificacion_competencias_profesionales_glosario.pdf

Sustainability

The continuation of benefits from a development intervention after major development assistance has been completed. The probability of continued long-term benefits. The resilience to risk of the net benefit flows over time. (OECD, 2010)

<http://www.oecd.org/dataoecd/29/21/2754804.pdf>

Time series analysis

A method that studies data for variables and/or individual units over a given period. A time series analysis has two basic goals. The first is to obtain a systematic description of the key characteristics of the series observed. The second is to gather information on probable future values for the time series, based on the characterization of the properties of the series. (ECLAC, 2005)

<http://www.eclac.org/publicaciones/xml/9/24099/lcl2457e.pdf>

Treatment group

Also known as the treated group or the intervention group. The treatment group is the group of units that benefits from an intervention, versus the comparison group that does not. (World Bank, 2011). In the case of vocational training it is formed by the participants in the training intervention.

Vocational training

Training and capacity building: the process of acquisition and improvement of work and life skills, as a result of a training intervention.

Activities aimed at providing the skills, knowledge and attitudes required for employment in a particular occupation, or group of related occupations, in any field of economic activity. (ILO Thesaurus)

<http://www.ilo.org//thesaurus/defaulten.asp>

Vocational training programmes / actions

Training programme: Training activities defined in terms of objectives, target population, contents and results. (ILO Thesaurus)

<http://www.ilo.org//thesaurus/defaulten.asp>

Vulnerable groups / population

Groups particularly threatened by social, economic, political and other pressures. (ILO Thesaurus)

<http://www.ilo.org//thesaurus/defaulten.asp>

Acronyms and Abbreviations

ACTRAV	Bureau for Workers' Activities, ILO
CEDEFOP	European Centre for the Development of Vocational Training
CIES	Social and Economical Research Consortium
CINTERFOR	Inter-American Centre for Knowledge Development in Vocational Training, ILO
DNP	National Planning Department, Colombia
ECLAC	Economic Commission for Latin America and the Caribbean
FAUTAPO	Fautapo Foundation - Education for Development, Bolivia
FTFE	Tripartite Foundation for On-the-job Training, Spain
GDP	Gross Domestic Product
IADB	Inter-American Development Bank
ICT	Information and Communication Technology
IDRC	International Development Research Centre, Canada
ILC	International Labour Conference
ILO	International Labour Organization
ILPES	Latin American and Caribbean Institute for Economic and Social Planning
INDES	Inter-American Institute for Economic and Social Development
INFOTEP	National Institute of Technical Vocational Training, Dominican Republic
INSAFORP	Salvadorian Vocational Training Institute, El Salvador
INTECAP	Technical Institute for Training and Productivity, Guatemala
IRR	Internal Rate of Return
ITC	ILO International Training Centre, Italy
MSME	Micro, small and medium-sized enterprises
MTEySS	Ministry of Labour, Employment and Social Security, Argentina
OECD	Organization for Economic Co-operation and Development
OEI	Organization of Iberian-American States for Education, Science and Culture
PROBECAT	Programas de Becas de Capacitación para el Trabajo
RAE	Royal Spanish Language Academy
ROI	Return of Investment
SDC	Swiss Agency for Development and Cooperation
SENA	National Apprenticeship Service, Colombia
SENAI	National Industrial Apprenticeship Service, Brazil
SENAR	National Rural Apprenticeship Service, Brazil
SENAT	National Transportation Training Service, Brazil
SENATI	National Service of Industrial Labour Apprenticeship, Peru
SYMAPRO	Integral System for Measurement and Improvement of Productivity
VTI	Vocational training institution

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