



SFIA skills framework, a communication bridge between Higher Education, Companies, and IT Professionals

Marco de habilidades SFIA, un puente de comunicación entre la Educación Superior, Empresas y Profesionales del área TI

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HIGHLIGHTS

- A communication bridge between Higher Education, Companies, and IT Professionals
- SFIA skills framework
- Strengths and weaknesses of training processes in Higher Education
- Use of tools based on international competency frameworks

TITULARES

- Un puente de comunicación entre la Educación Superior, Empresas y Profesionales del área TI
 - Marco de habilidades SFIA
 - Fortalezas y debilidades de los procesos formativos en Educación Superior
 - Empleo de instrumentos basados en marcos internacionales de competencias
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RESUMEN

En el sector productivo, así como en las instituciones de educación superior, es importante identificar las competencias de desempeño que sus profesionales poseen, reconociendo fortalezas y debilidades con el objetivo de movilizar procesos formativos que favorezcan el desarrollo de las competencias descendidas y el robustecimiento de aquellas que han sido mejor trabajadas, tributando a los procesos de detección de necesidades del sector empresarial, en tanto futuros espacios de desempeño profesional. Lo anterior, representa una oportunidad en la cual es indispensable el empleo de instrumentos basados en marcos internacionales de competencias que permitan trazar un camino progresivo del desarrollo de habilidades, así como la evidencia de su evolución. La aplicación de estos marcos permitiría asegurar el nivel de responsabilidad declarado para cada competencia según el tipo de profesional y sus características asociadas. Para el rubro de los profesionales de las Tecnologías de la Información, en la actualidad se dispone del marco SFIA, el cual responde como un modelo bidimensional y flexible, ajustable a las necesidades de instituciones y empresas. Este marco se organiza y distribuye en diferentes niveles de responsabilidad y competencias, los cuales describen responsabilidades y aptitudes empresariales requeridas por el mercado a nivel internacional, creando un puente de comunicación entre el sector laboral, Instituciones de Educación Superior y los profesionales. Comprender el nivel de desarrollo de las competencias constituye una ventaja, ya que permite, tanto a profesionales como estudiantes identificar sus propias brechas para resolverlas y potenciar sus capacidades, y de igual manera a las instituciones de educación superior para materializar estos diagnósticos en posibles mejoras reflejadas en sus indicadores, y finalmente en resultados perceptibles que apoyen a las empresas y al ecosistema formado entre empresas, instituciones y profesionales.

Palabras clave: *Empresas, Educación Superior, Competencias, Habilidades, SFIA.*

ABSTRACT

Identify competences of the professionals framing their strengths and weaknesses in order to address what skills improve or learn, and cover the needs of the business sector, represents the needs for the business sector and higher education institutes. This represents an opportunity to use instruments based on international skill frameworks that allow to understand a progressive path of the development of skills or competencies and their evolution. These frameworks and its use could ensure the responsibility level declared for each skill according their characteristics and the type of professional. For the Information Technology professional, we found the SFIA framework like a flexible and two-dimensional model, adaptable to the needs of the business sector and higher educational institutions. This framework consists of different skills distributed in varied levels of responsibility, which describe the needs of the area on an international level, setting a communication bridge between the professionals, business sector and educational institutions. It becomes an advantage to understand the level of development of the skills, because allows students and professionals to identify their own gaps and solve them. The same advantage applies to the educational institutes turning them into improvements in their own indicators, and finally in results that support the business sector and the ecosystem formed by the professionals, educational institutes, and the business sector.

Keywords: *Companies, Higher Education, Competences, Skills, SFIA*

1. INTRODUCTION.

The continuous training of the human capital is fundamental in order to answer successfully the speed of the social processes involving the production of knowledge and consequently, to the need of updating the competences that the professional world demands to the people in the XXI century [1]. As a consequence of this historical condition, the productive and business environments have not been oblivious to the implications of the dynamism that the information era has imprinted upon the processes of development. The necessity to adapt to change, and the place that formative processes take and the development of professional competences as means to face the challenges of the market, are important issues for the universities as much as for the professional world in general [2].

On the same line, experts in different disciplines express the importance of organizing and structuring the processes of identification of the

skills and competences aiming to trace the trajectories of professional development based on defined standard procedures, stablishing objectives and goals with clarity updating and improving their knowledge and competences according to the necessities of the society and the productive sector [3]. Self-perception and understanding of one's own professional strengths and weaknesses, in any case, contributes to the development of a disposition based on the autonomy which will be of great use to renew or enhance their knowledge and skills all life long, a behaviour that constitutes a key element in the symbiotic relationship produced between the professional and the productive environment [4].

The management structures in the business world have the responsibility of searching the constant improvement of their workers through planification, design and implementation of formative actions that will impact their performance. Through these procedures, the companies make professional profiles according

to the necessities and objectives of the organization, every time more flexible, where the ability to adapt to change is a relevant and transversal factor in the construction of the new model of worker. In this context, identifying and defining the essential knowledge, skills and competences for an expected and efficient performance becomes a relevant task when trying to elaborate professional profiles. To do so, the incorporation of procedures, tools or models of definition of competences related to the area facilitate the definition not only of the objectives of the productive environment, but also of the ideal profile for the development of their goals [5].

Higher Education Institutions (HEI), that is, technical education centers, professional institutes and universities try to unify the challenges of the productive and educative sector, providing training programs designed for the continuous professional development, and the updating of the necessary needs to face the challenge of their integration in the working world. In this line, the higher education institutions continuously check their formative offer after certain periods of time, depending on the demands and variations of the market and society, in order to adapt their curricular organizations and respond to the growing demand for professionals who are prepared and updated in their lines of work.

In the particular case of the Information technologies (IT) it is thought that, due to the dynamics of the market and the working lines connected to this condition, it will grow year after year due to the needs of the productive sector, either in the area of data management, software, devices, IT services, communications among others [6]. The professionals are immerse in a progressive, dynamic and volatile market, the one which in the year 2016 was valued in \$2.3 billion of dollars and with an expecting increment of a 2% [7]. During 2017 it was valued in \$3.5 billion, but with an estimated increment of a 2%

(Corporation, 2016). During 2017 it was valued in \$3.5 billion, but with an increment that shows an increment of a 1,4% respect of 2016 [8]. Revising periodically and more accurately the demands of the IT market has become a more relevant task since the demands and the tendency in this sector vary more frequently in contrast with other careers and sectors [9].

The fast growth of the IT sector during the last decade and the professional challenges that come with it, make it relevant to develop a system of organization of IT competences that support the higher education institutions contributing to detect the challenges of a prompt training. These organizing models of competences have a common language and transversal to business and colleges, using the knowledge produced in both fields and proposing a better projection and presenting better options of monitoring the development of competences [10].

The challenges of development and training demanded in the productive sector, to which the higher education institutions are related under a commitment of training and formation of professionals for the working market, shows how fundamental is producing a collaborative, synergic and constant relationship in permanent communication between the business world and universities, since both people organizations represent a social commitment that is declared through professional quality assurance procedures and the opening of field of employment [11].

The implementation of a qualifying frame (QF) could be a feasible alternative, since it is a tool to support the work training and monitors the competences of the professionals, stablishing a bridge of Communication for this ecosystem formed by companies and higher education

institutions [12]. The QF provide important benefits by leading the current and future formative processes based in evidence, providing alternatives of continuous training coherent with the new challenges detected by the QF, apart from vertical mobility, serving as a tool to line up the training programs (curriculum) with the learning results.

An instrument for verifying the professional skills, based on a specific model of reference IT would determine the level and development of competences in students and professionals of the area. Making this type of monitoring would be as beneficial for the professional as for the student and trainer, since it would make possible to analyze, exercise and apply the target skills.

The Objective of this report is to demonstrate the results of a systematic revision about the main contributions of SFIA (Skills Framework for the Information Age) to the higher education institutions, from a theoretical perspective as much as from a perspective based on experience, and to acknowledge the models that have served as a background for its implementation.

2. MATERIALS AND METHODS.

2.1 Methodology.

This research was developed thanks to the systematic revision of bibliographic sources. The procedure carried out facilitated a critical reference of different studies that analysis and describe the model in context of implementation, besides of some experiences applied to the system of measuring competences SFIA to local higher education institutions.

2.2 Data Base Referenced.

For this revision the following data base related to the description, explained analysis of applied studies and theoretical evaluations of the model SFIA: Dialnet, Scielo, BEIC, DOAJ, HAPI, Education line, Redalyc and PLOS.

The revision involved 18 matches. The total matches were integrated to this research.

2.3 Investigation Design.

The terms of research used for this investigation were the following: "SFIA", "skills of framework for the information age", "SFIA model", "Experiences with SFIA", "experiences of implementation of SFIA", "measuring SFIA" "analysis of SFIA" It is not pertinent to search beyond the term SFIA since the similar terms are not accurate enough for the aim of this study and they will have a negative impact in the Objective of this research.

The revision of these studies was performed between the months of March to December 2020.

2.4 Selection Criteria.

For the feasibility standard, only the reports written in Spanish and English were included.

For the accuracy standard, only the articles from index magazines were included, for that reason the data base is explained.

3. RESULTS AND DISCUSSION.

3.1 Context of the qualifications frame.

A qualifications frame is an instrument oriented to the development, classification and acknowledgement of skills, knowledge and competences along a process designed with

different levels [13]. Represents the route to structure existent qualifications and new ones, defined based on learning results, that is, clear evidences of what needs to be known or be able to do, learned in a classroom or through experience.

The qualifications frame (QF) indicates the “comparability” of different competences and how to progress from one level to another, though occupational sectors or industrials even from vocational and academic fields, only having designed the QF under a criterion of inclusion of vocational and academic qualifications in a single frame [14].

Thus, it is valid to consider the QF as standardization tools that critically support the monitoring of professional skills in the training processes and job performance, helping to create a common point between HEIs, society and the productive sector. Its articulation makes it possible to generate an ecosystem conducive to the interaction of these forms of organization. The QFs help establish this development by contributing to the paving of professional skills [15].

From a historical perspective, the use of QFs since the 1980s in several European countries, with the first QF Created and implemented in 1986, Scotland. Starting in the year 2000, the first national QF was implemented, similar to the Scottish framework, in the countries of England, Wales, and Northern Ireland, these being considered as the basis for the rest of the QF worldwide. [16].

The focus of the QF may vary depending on the context of implementation, the type of productive sector, national standard, type of qualification and scope. Its structure consists of different levels, which are defined based on certifications

that guarantee the level of qualification, and according to a knowledge measurement system associated with the certification obtained. Finally, these levels are articulated with the expected learning, which is defined based on a descriptor and linked to a certification to a level and to the dimensions or categories that are responsible for organizing the descriptors [17]. Depending on the country, and its particular competency-based professional development considerations, different QF descriptors are observed.

For example, the European QF accounts for a collaborative and advanced work that favors close Communication within the educational-working ecosystem of these countries. Such is the case of Ireland, where its QF presents its own approach considering only 3 aspects of the base of the European QF, highlighting the relationship knowing/knowing how to do as predominant factors when evaluating the progression and development of skills in their own QF [18].

The context described in previous lines about QFs offers a clear idea of their benefits and way of working. For example, in Chile, the work experience presented by the Ministry of Education together with other national entities such as SENCE, ChileValora and CORFO, use this type of tools and seek to provide a formal progression structure for the skills of professionals, from a sector and defined scope, in order to sustain and raise Evidence on the growth of higher level technicians for their better preparation, according to the productive needs of the country [19].

Additionally, different state universities join forces and resources to be able to manage the creation of a QF that allows the development and evolution of the higher education system based on the design of an instrument that provides a

framework of references for the systematization of competences at the national level. The most important objectives behind this project range from the transparency and legibility of titles and the registration of professional experience, the structuring of competencies that a professional must have according to the challenges of the sector in which it is inserted, the recognition of learning and previous experiences, the relevance of the curricular structures expressed in the programs and the articulation of the training process with the workplace, and finally the strengthening of the quality of the expected results in a QF [20].

Other HEIs in the country focus their efforts on creating a QF that covers specific objectives of each institution becomes a formal response to the challenges of framing an organizational structure of progression for the learning of the training cycles, from technical training to post graduate training. Based on the above there is the work developed by INACAP between 2011 and 2012, implementing its own QF called the INACAP Qualification framework, which is arranged in seven levels, defining its scope between knowledge, skills and performance, scopes very similar to those seen in the QFs employed in different European countries [21]. The aspects included in the MIC are graduated according to levels from lower to higher complexity, organizing the knowledge that is acquired and the way to apply it, as well as the development of their skills such as how to solve and approach problems, autonomy, communication and responsibility.

In addition to the QF, it is possible to find skill frameworks oriented to a more precise professional sector, and with very defined and specific parameters. An example is SFIA, which represents an internationally recognized competency framework for the information age, whose mission is to describe the skills required

to perform functions related to technology, information, and communication.

The advantage of incorporating SFIA in different contexts is based on its flexibility and adaptability to adjust to the particular needs of whoever adopts it. For example, in a company to be employed in a hiring process by the HR area; or in HEI for the curricular construction of a study program, among others. This is thanks to the fact that SFIA does not define a rigid framework, but rather provides clear definitions of skills and levels of responsibility, and who uses it defines its purpose [22].

a. Using SFIA at present.

The SFIA, or Skills Framework for the Information Age, is a two-dimensional framework or model, made up of skills drawn on an axis made up of seven levels of responsibility, and describes professional skills in various levels of competence required by the market for professionals in the IT area at an international level. These levels describe responsibility in relation to autonomy, complexity and entrepreneurial skills [23].

The chart below, corresponding to an extract from the SFIA Framework version 6, presents the categories and subcategories of the framework. Each subcategory has a certain amount of skills, which fluctuate between the levels of responsibility from the most basic (1) to the maximum (7). It is important to mention that the highest level is acquired based on work experience. Each skill has a general definition without being related to the levels of responsibility, in addition, each level of responsibility has a definition for each of the levels that will be put into practice, facilitating its use as a professional competence.

| Categories | Subcategories | Quantity of skills | Range Levels of Responsibility |
|--------------------------------|-------------------------------------|--------------------|--------------------------------|
| Strategy and Architecture | Information Strategy | 7 | 5-7 |
| | Guidance and Assistance | 2 | 4-7 |
| | Strategy and Technical Planning | 7 | 4-6 |
| | Planning and Business Strategy | 8 | 2-7 |
| Change and Transformation | Business Change Management | 8 | 2-6 |
| | Business Change Implementation | 4 | 2-7 |
| Development and Transformation | User Experience | 3 | 2-6 |
| | Installation and Integration | 4 | 1-6 |
| | Development of Systems | 11 | 1-7 |
| Skills and Quality | Quality and Satisfaction | 6 | 2-7 |
| | Skills Management | 5 | 3-7 |
| | Staff Management | 3 | 4-6 |
| Provision and Operation | Design of the service | 20 | 2-7 |
| | Operation of the Service | 13 | 1-6 |
| | Transition of the Service | 5 | 2-6 |
| Partnerships and Commitment | Management from the Interested Part | 4 | 1-7 |
| | Marketing and Sales | 4 | 1-6 |

Figure 1: Example, part of the SFIA framework, representation of its categories, subcategories, quantity of levels and fluctuation between levels of responsibility.

Its application in the productive sector provides transversal support, from the general management of human resources in the hiring process, to helping to establish improvement courses, creation of profiles and functions for a job position, among others [24].

For the benefit of internal management in HEIs, the SFIA can guide their academic offers [25]. For example, when implementing SFIA in a process of updating study programs (see figure 1), the learning resulting from the programs is aligned in relation to the skills that the framework implements, which enables students to acquire new skills or strengthen others to reach new

levels. Once the program is finished, students conclude their studies with a structured base of knowledge and skills that allow them to respond to the particular needs of the productive environment.

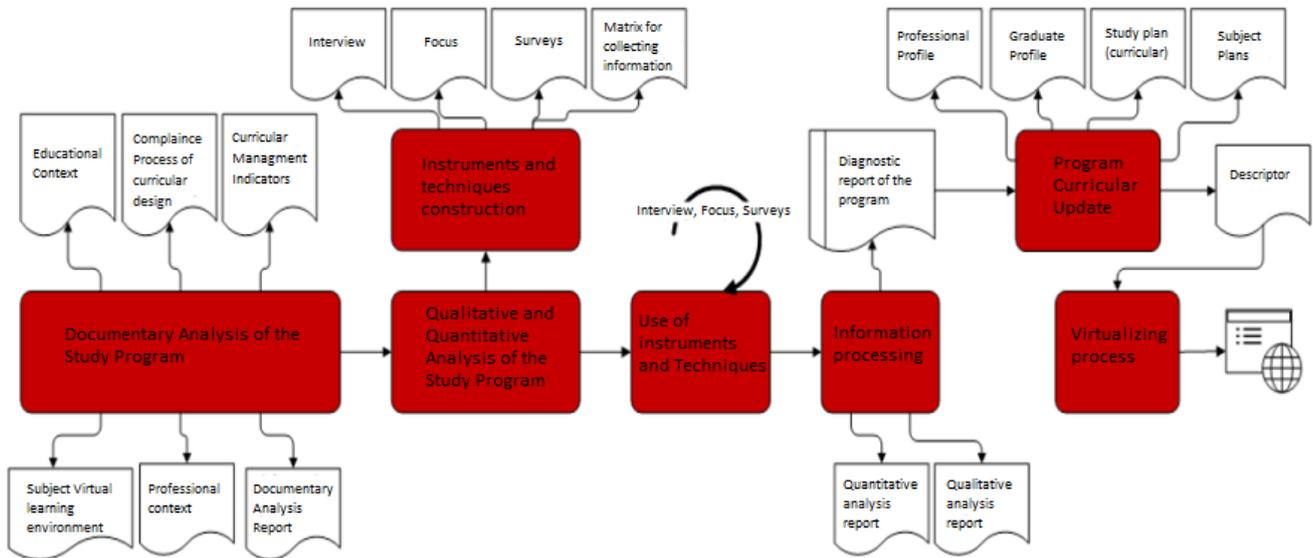


Fig. 1: Updating process of the program of study (Cockbaine, Soto, & Zambrano, 2016, p-178)

By analyzing subjects and contents in detail, we can observe the different skills and levels of responsibility of SFIA (see figure 2) associated with the study objective in each subject, which are acquired based on theoretical and practical study, materializing in partial evaluations that allow to show the competences developed progressively throughout the undergraduate curricula, obtaining as a result the progression of the expected competences and learning. In figure 2, the SFIA skills indicated by their name and desired level appear, where a skill can be upgraded from an undergraduate to postgraduate course, the undergraduate subject "IT Service Management and Governance", declares the ITCM skills in level 4 and RLMT at

level 5, but its continuity in the subject "Fundamentals of Governance", corresponding to the master's degree program, adds new skills, BURM at level 5 and ITPS at level 5. Likewise, the case of the subject is presented "Service Management", which scales the ITCM skill to level 5.

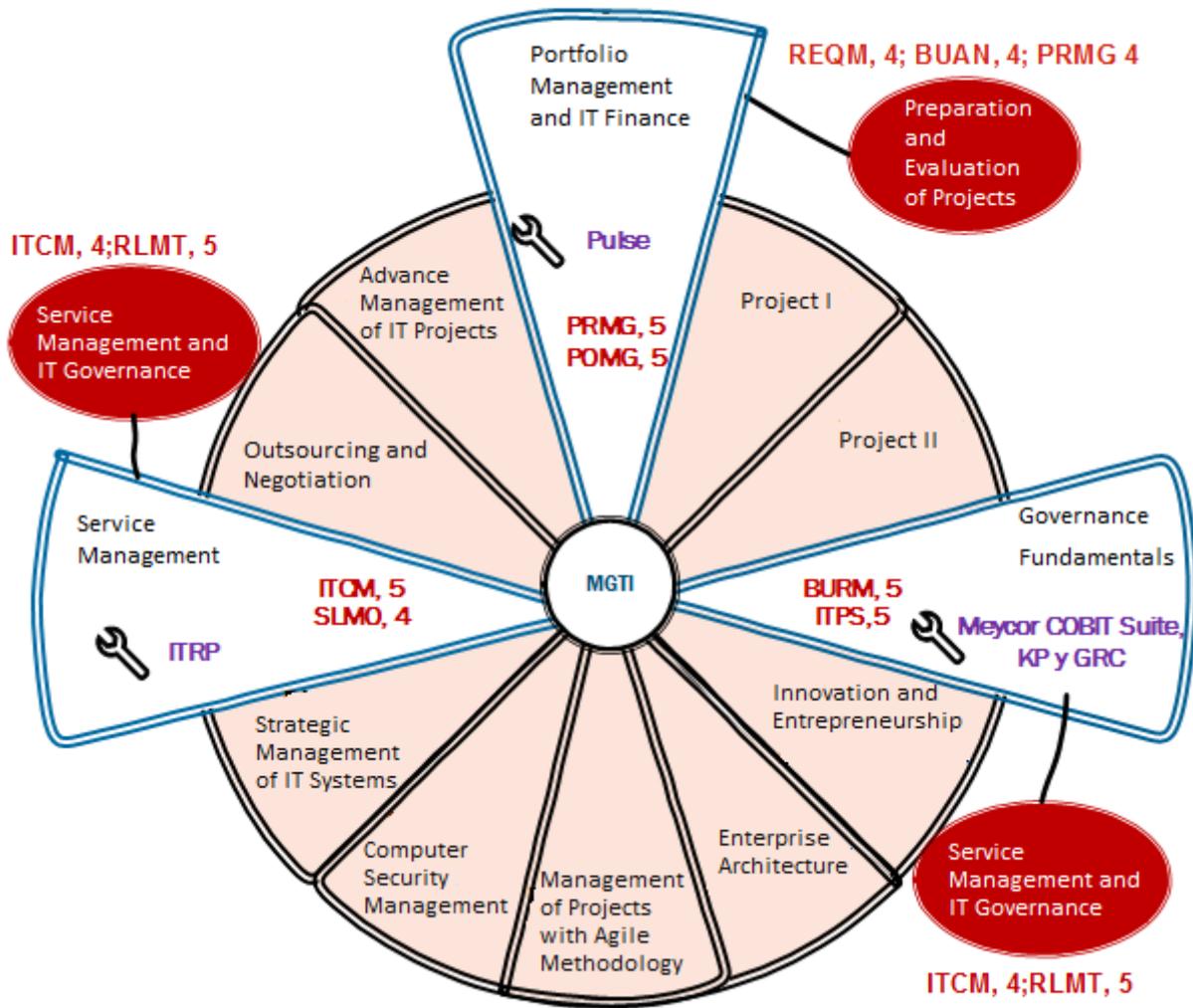


Fig. 2: Continuity of studies and SFIA skill levels.
 (Cockbaine, Soto, & Zambrano, 2016, p-180)

The search for communication under the same language between companies and HEIs is reflected in the results of the market as well as in the development of professionals in the area [26]. For this SFIA, the IT skills framework, helps professional profiles to present a single standard of skills [27]. The implementation of the SFIA framework by the actors involved allows the creation of an ecosystem in constant synergy, generating benefits for the entities included in the productive environment in the selection of professionals, contributing to the clarification of the required skills, cataloging them in levels, providing necessary information on the demand of the labor market and transversally

implementing a standard level for the programs of higher education entities, in short, the competitiveness of the Industry would be improved [28].

Universities and Institutions around the world, as well as companies, have realized the aforementioned and its various benefits, and have decided to apply this competency framework:

In the case of HEIs, in Chile there are different cases of application of the SFIA:

- The Technological University of Chile INACAP offers its degrees related to the IT area, particularly undergraduate, all framed under the SFIA model with the aim of

providing professionals with the tools the market needs [29].

- The Federico Santa María Technical University considered the implementation of the model very important and pertinent in order to update and improve its postgraduate program MTI, Master in Information Technology, seeking to respond to the need to contribute with the training of prepared professionals and with the necessary skills required by the markets at a national and international [30].
- Likewise, in addition to this improvement in their programs, institutions such as AIEP and Santo Tomás, which modified and improved the complete curriculum of their undergraduate programs to incorporate the skills model [31].
- The OTEC capTIC focused on the training of the ICT industry, its services are directed to courses oriented to the development of competences, for which they teach courses that comply with the competences defined by SFIA [32].

At the international level, there are also applications of the SFIA in different HEIs:

- At the Cenfotec University in Costa Rica, the framework was used for the definition and validation of the academic-professional profiles of the careers in the IT area [33].
- In Europe, the English university The Open University (OP), seeks to satisfy the need to train professionals for the European market with accredited and qualified courses for the IT industry, for this SFIA was implemented, in such a way as to make use of a method common communication under IT concepts and needs [34].
- The English University of Northampton uses this two-dimensional framework to define and apply this standard in the programs it offers in the area to frame the skills that

professionals need (Bailey & Morrel, The implementation of Skills Framework for the Information Age [35].

- In New Zealand, the Institute of IT Professionals, an institution with a long history and experience training in the IT area, works hard to improve education and professional development in the country. They base their development on various frameworks, among them is the SFIA model, which accredits them to offer services and programs based on an international standard [36].
- In Spain, the University of Castilla-La Mancha, in addition to presenting programs based on the SFIA model, they have pointed out the framework as a contracting model for the acquisition of services, establishing a standard that allows them to guarantee the quality of the services that are agreed [37].
- In Australia, through the Australian Computer Society (ACS), in their search to support professionals in the area in exploiting their knowledge and possibilities to the fullest, they generate courses that certify their skills as professionals in the area under the SFIA model. receiving international recognition [38].
- The BCS (British Computer Society) institution, an institute with the best qualifications and international standards, aimed at training IT professionals, which helps them grow in different areas and levels [39], uses SFIA as a framework to establish the skills of the professional market in their programs [40], they even offer a certification called SFIAPLUS, which allows the specific development of SFIA skills to be exercised according to the professional line to be developed [41].

In the case of the productive sector and labor market, as previously stated, it presents other areas of application of SFIA:

- In Chile, both nationally and internationally, ENTEL, ISBAN, CITI (Global Technology Services Center LA), among others, have decided to put into practice, in various aspects that benefit companies such as training and recruitment processes. the characteristics that SFIA brings with it for professionals in IT area departments. In particular, for example, the application of the framework in the Unilever company enabled employees in the IT area to identify their own skills and capabilities for any job profile that was required for a project inside or outside the company, thanks to the fact that the services of BCS [42] were contracted, based on the SFIAPLUS program aimed at raising and developing skills, so that they could certify and even advise external companies [43].
- The Kibernum company was able to obtain a standardized vision of the professional skills requested in the IT sector, assuming that not all computer scientists, who hold the same position, have the same skills or competencies, so implementing SFIA allows them to standardize the skills of professionals, obtaining a greater perception and understanding of their competencies, and about their future professional profile [44].
- The Chilean Association of Information Technology Companies (ACTI), as an entity that represents the community of the Information Technology and Telecommunications industry in Chile, in order to promote a trained workforce, with projections, capable of grow and improve their work horizon to compete with global standards, is that it has been, since 2013, promoting the incorporation of SFIA at a

national level both in companies and in Higher Education Institutions in order to contribute to the national ecosystem is enriched by trained experts who respond to the needs of the market and companies that contribute with a standardized structure of professional profiles for the job positions both communicated under the same development language [45].

The use of SFIA is wide considering its participation in more than 160 countries [46]. From entities with a worldwide extension, for example, the BSC [47], as well as companies or institutions that work locally in their country, for example in Chile, ACTI, such as SFIA partner [48].

At the international level, the inclusion of the framework is broad in various organizations and institutions, as well as its way of being used, for example, the site skillstx.com (SFIA accredited partner) [49], a company that uses SFIA and validates the skills through a platform, which can be hired by other companies to provide this service to other organizations in the productive sector. On the other hand, we find the company www.validateskills.com (SFIA accredited consultant) [50], they are also in charge of accrediting the skills through their own instrument. Just as there may also be other companies that are responsible for providing a similar service, the SFIA Foundation itself supports the different types of users through licenses depending on the approach and entity that requests to use the framework, whether for personal, professional, or corporate use. or accredited partner, among others.

From another angle, as well as its incorporation and use has been wide, in other sectors or countries it is not so much, in Latin America the lack of associates is high, only Chile is found

representing 12% of the associates worldwide, since Most of the associates, around 44%, are concentrated in Europe, in countries such as France, Germany, New Zealand, Switzerland and in particular the United Kingdom, which represents 33%, among others [51].

In the case of Chile, there are only 7 associates [52] of which only 3 are HEIs, representing only about 2% of a total of 156 institutions recognized by the state [53]. For its part, ACTI, an SFIA associate, through the Production Development Corporation (CORFO) offers scholarships to be certified under the SFIA standard in certain specialty profiles [54]. Finally, the company Segacy, another SFIA partner in Chile, provides the service of evaluating the skills to generate an SFIA profile.

A. CONCLUSIONS

The use of SFIA provides various benefits, as mentioned above, but it is necessary to consider the responsibility that falls on each entity or person that uses the model and verify that the skills were truly developed by the people, or incorporated by the companies for the purposes. individuals who might use the framework.

What has been mentioned above in the previous points allows us to appreciate how the different actors can use it, and depending on its use, the benefits it brings with it. It is correct to point out that the framework presents a series of skills, distributed in levels, areas and profiles, determining lines of specialty, which, when applied, as a regulatory and traceability framework, anywhere in the world should obtain the same result. but it is important to consider factors or variables that may affect or alter the expected results. In each country it is possible to perceive a different reality, which is related to the type of industry that makes up the productive sector, education, culture [55] as a country and

professionals [56], among others. If we consider these variables and previous data, they indicate that in Latin America the insertion and adoption of the framework is still at an early stage, an instrument that focuses on HEIs is necessary, taking into account that the same degree taught at one university differs in focus from another, and since both aim to satisfy the same market needs, this would give a greater transversality to the results of the professionals of each institution.

The productive sector does not present detailed information regarding how they use the SFIA framework, it is presumed based on its usefulness and flexibility, but it would be used to define skills and competences frameworks for the construction of the profiles that are requested for the published jobs. in the labor exchanges and internal movements of the companies, to establish the scope on the levels required to plan training courses for their professionals, and in relation to companies as consultants or Head-hunters, the use of SFIA allows them to carry out their work of recruitment on a structure defined by the market, internationally. Likewise, the HR areas would benefit from using this reference framework, their recruitment management would be facilitated, through the scope and definition provided by SFIA on the competencies for jobs, they could even deliver applicants to a post more feedback on his profile, in addition to a substantiated justification of why he did not adjust to what the company was looking for the vacancy offered, among others.

From the HEIs that have implemented SFIA in Chile, it is unknown about any method or instrument that allows the verification of the skills

developed by the students, it is only presumed about the results obtained from the qualifications based on the evaluations that are carried out, which are focused on the evaluation of the subjects and not the framework specifically. These types of assessments are used to determine a level of learning related to with the competences declared in the syllabus, which is represented by a grade according to a point scale oriented by a percentage of demand that produces range variations in the grade scale. The foregoing represents an opportunity to design an instrument that would allow the verification of SFIA skills, or support to improve the levels of developed skills, contributing to shorten the gaps detected in knowledge and skills, and also, assert the skills in front of companies and employers. of qualified professionals.

The use of an instrument that verifies the skills from their premature development is pertinent, since it is the moment in which the skills are inserted and developed in the work of future professionals, being in time to take preventive actions in the event of any problem in their comprehension.

Future results, the advantages come to light when considering the verification of SFIA skills, it would allow obtaining other benefits and results for educational institutions. For example, the selection and hiring of teachers for a course could be guided by a profile designed according to the skills framework, the area of graduates could give undergraduate students a profile indicating their skills and competencies as a professional, as indicated by SFIA, which would help them to apply for their first job knowing their strengths as a professional. On the other hand, the different events that are held, such as congresses, seminars, conferences, workshops, workshops, forums, panels or courses, could be

aimed at specific audiences in the IT area, based on what the framework indicates, which It would help to focus both the topics covered in the events and the expected results of this type of activity.

The information collected on competencies, acquiring new skills and the needs of updated professionals, allow us to glimpse and link the SFIA model in relation to its current use and its different possibilities, clarifying and bringing companies and higher education entities closer, resolving the gap between the skills, the performance as a professional and the real needs in the profiles of the IT area. It allows learning about the imposed and necessary skills of professionals in the area based on the new market requirements. This is reflected in the updates that the SFIA model releases every certain period of time, such as in the update from version 5 to 6, skills related to education and IT were added, and a readjustment to the order of some categories updating the framework [57]. SFIA, is a response to a particular labor sector, which is presented as a solid communication bridge for the national and international ecosystem, and generates a propitious environment to unite its objectives, and deliver dynamism in the results that are aimed as a country.

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