

The importance of Integrative Capital's management to obtain the expected results in terms of investment in Human Capital

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ABSTRACT:

This article has as goal to discuss the importance of Integrative Capital's management to obtain positive results from the investments of Human Capital from the sector of Human Resources of institutions of a private administrative nature and check what generates more positive results in Integrative Capital: the investment in human resources for titration or new ways of management of Integrative Capital. From the reach of these goals, the problem will be answered: How to obtain more results in terms of Integrative Capital from the Human Capital? The hypothesis that guides this article are: the management of Integrative Capital generates results so positive or more than the investments in human resources to obtaining the titration; Integrative Capital's management does not generate such positive results as the investments in human resources for titration. Inferences, deductions and inductions were built from a qualitative analysis of data in congruence to the theorized aspects and presented data. The results presented the need of having a management of Integrative Capital for obtaining satisfactory results from human resources and that only the investment for obtaining titration does not provide the enlargement of Integrative Capital.

Key words: Integrative Capital; Management; Human Resources; Titration.

INTRODUCTION

The universities produce goods and intangible assets with difficulty of measurement and quantification in terms of economic and social impacts around it. The human capital is an example with the teaching, the events, the extension, the forums; another one is the intellectual capital with scientific productions; and the integrative capital with participations in academic and scientific activities such as evaluator, participants and others. There is a difficulty in measuring such capitals in terms of economical values and making the results public of this intangible production of goods and services (Bezerra; De-Bortoli, 2020).

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According to Prahalad and Hamel (1990), the results from the titration increase in the HEI implies the management to act directly in the faculty because they are directly acting in the final formation of the product. The used concept for analysis of human capital’s management in the HEI is called core competence which definition is to have the capacity of presenting differentials regarding the competitors being accessible and visible to all.

Consequently, it is expected that, after increasing the titration, the level of teaching participation in the most diverse academic activities will be expanded, in addition to teaching, creating differentials of the teaching staff in terms of internal relationship: students, colleagues, sectors, courses and management; and external, community. To know in fact if the increase occurred, it is necessary to manage the Integrative Capital so that decisions can be made from these results. Therefore, is problematized with the questioning: How to obtain more results in terms of Integrative Capital from the Human Capital?

In the context of this question, two are the goals of this article: discuss the importance of Integrative Capital’s management to obtain positive results from the investments of Human Capital by the Human Resources sector of institutions of a private administrative nature; to check what generates more positive results in the Integrative Capital: the investment in human resources for titration or new ways of Integrative Capital management. Regarding the hypotheses, they are:

- H₀: The Integrative Capital management does not generate positive results such as the investments in human resources for titration.
- H₁: The integrative Capital management does generate such positive results or even more than the investment in human resources to obtain titration.

METHODOLOGY

For the data, it was worked with a population of 120 teachers of whom 16 comprised the sample for having changed their titration in the studied HEI that is in the Northeast of Bahia and the South Center of Sergipe (Brazil). The choice of the 16 teachers related to the change of titration from specialist to master, 11 teachers; from master to doctor, 5 teachers. The board bellow with the sample characterization of 16 teachers related to the titration in the hiring date, year of titration change and time after titration until 2019.1.

Board I: Sample’s characterization

Teacher	Titration	Hiring year	Titration year	Titration time
Tchr. 1	Master	2013	2016	3
Tchr. 2	Doctor	2015	2017	2
Tchr. 3	Master	2003	2014	5
Tchr. 4	Doctor	2015	2017	2
Tchr. 5	Master	2014	2016	3
Tchr. 6	Master	2013	2015	4
Tchr. 7	Master	2009	2017	2

Tchr. 8	Doctor	2014	2015	4
Tchr. 9	Doctor	2014	2017	2
Tchr. 10	Master	2013	2017	2
Tchr. 11	Master	2012	2013	6
Tchr. 12	Master	2013	2016	3
Tchr. 13	Doctor	2004	2012/2015	7/4
Tchr. 14	Master	2005	2014	5
Tchr. 15	Master	2010	2015	4
Tchr. 16	Master	2009	2015	4

Source: author's elaboration produced in 2020.

Were analyzed the *lattes* curriculums of 16 teachers in the Integrative Capital category comparing to the present data in the teachers' curriculums before and after titration, assigning quantitative and qualitative value to the capital produced by them with statistical analysis of repeated-measure t-test.

Regarding the data analysis, it was worked with a qualitative approach with inferences, deductions and inductions in congruence with the theory which results are concept constructions for the hypothesis formulation from the data analysis. (Silva *et al*, 2010).

RESULTS

The results are presented in a table. It contains the variations of Integrative Capital with t-student test application that showed there were no differences between the slopes of the lines before and after the titration.

Table I: Comparison of Integrative Capital's Production Before and After Titration

Teacher	Titration	Index before titration	Index after titration	Variation
Tchr. 1	Master	2,00	-8,00	-10,0
Tchr. 2	Doctor	0,17	0,00	-0,17
Tchr. 3	Master	-0,40	0,80	12,0
Tchr. 4	Doctor	-0,80	0,50	13,0
Tchr. 5	Master	0,50	-2,50	-3,00
Tchr. 6	Master	1,25	-1,25	-2,50
Tchr. 7	Master	-0,18	0,00	0,18
Tchr. 8	Doctor	1,20	1,00	-0,20
Tchr. 9	Doctor	2,00	-12,0	-14,0
Tchr. 10	Master	1,60	0,00	-1,60
Tchr. 11	Master	0,70	-0,40	-11,0
Tchr. 12	Master	1,30	0,00	-1,30
Tchr. 13	Doctor	-0,70	-0,20	0,50
Tchr. 14	Master	-2,00	-3,00	-1,00

Tchr. 15	Master	-1,50	-4,00	-2,50
Tchr. 16	Master	-0,50	0,00	0,50

Source: author's elaboration produced in 2020.

According to table 1 data, that compares the variations after titration of Integrative Capital, of the 16 teachers, 11 had a negative variation corresponding to 68,75%. Thereby, only 5 teachers presented a positive variation, corresponding to 31,25%. It should also be noted that the positive variation of the 5, only two had an expressive variation that was 12 to 13, while the positive one reached the maximum of 0.5. The negative variations were very expressive because from 11 teachers, only two had a negative variation less than 1 and we had variations that draw attention as -14 and -10.

From the 5 teachers' positive variations, 2 were doctors and 3 masters. Therefore, from 11 negatives, 3 doctors and 8 masters, which shows that the negative variation does not depend on the titration. The teachers that presented a positive variation were 3, 4, 7, 13 and 16. Those with negative variation were 1, 2, 5, 6, 8, 9, 10, 11, 12, 14 and 15. Consequently, the Integrative Capital presented, according to data, a significant drop after titration.

DISCUSSION

In order to facilitate the reading process of the elaboration and presentation of the results discussion, the given scheme and / or information will be followed in an enumerated and didactic way, followed by the elaborated inference, with further discussion.

- Data 1- HC, IC AND INC stagnant with equal logic from specialist to master and master to doctor.
- Inference 1- The investment in HC by HR was not followed by the INC increase.

For Vaz, Viegas and Maldonado (2017), the success of an organization is related to the way in which HEI is invested in order to be able to evolve the three Human, Intellectual and Integrative Capitals and there should not be a disparity of resources in the capitals, but a synchrony so that the results of one exercise influence in the others.

According to research carried out by Romero, Gaspar, Costa and Morais (2016), with 1704 administration courses all over Brazil in 2012 to know the existing relation between the number of masters and doctors in the teaching staff with the results of Evaluation of the National Higher Education System, the results showed that the state courses did not have a direct influence in the teachers titration it presented other most impacting factors to explain the success or failure in the evaluation.

Moura, Ferreira, Sousa and Pontes (2005), affirms that the environment of the Higher Education Institutes (HEI) is a place for those who value IC growth to understand that it can return in a positive way, including in financial terms, and management identifies them as resources to give positioning, although they are not clear indicators to know if these positive values are occurring and to evaluate whether the results justify the investments.

Many companies still do not realize this issue regarding the Human Capital. Is necessary to comprehend that the earth got smaller in terms of world boundaries consequence of quick technology and, with this, the companies need to present maximum quality content in its productivity with differential express in relation to the competition (Spinelli, 2015).

In the case of the HEI under study, there was no evolution of the INC, it presented equal changes of titration from specialist to master and master to doctor. Therefore, after titration, there was no improvement in terms of INC to HEI's results. The Human Resources are equal before and after titration because there are no differences between the Intangible Assets produced by Human Resources (HR) before and after its academic titration, which creates the need of dialog of the HR sector with the HEI management to decision making from this information.

- Data - HC higher than INC.
- Inference 2- The INC demands more participation of the subject for HEI had a significant decrease after.

According to Vaz, Viegas and Maldonado (2017), individual investment does not produce the expected results, example, provides HC evolution but it is not worked with metrics to IC and the INC, will not improve the relationships nor use intellectual wealth for production, which can generate losses; on the contrary, when there is equality in the three capitals evolution, there are many more possibilities for facing the market and a lot of evolution for the company.

To Stefano and Filho (2018), the Knowledge Management KM is important to manage the best practices in order to create collaborative environments and to encourage the use of Intangible Assets IA with the systematization of techniques to organize the information generated in order to produce knowledge that should be incorporated into the management and dynamics processes of the company in how it treats, makes available and transforms knowledge.

According to Silva, Damian and Segundo (2016), with time, it becomes possible the construction of an organizational memory with the ability to make data and information knowledgeable that can be quantified, transformed and put in service of all to desired improvements but, for that, it is need well defined politics with clear actions and tools of management monitoring and IA's organization in order to promote the incentive to all contributors to active and effective participation in construction of this learning environment, but also be able to keep up in terms of results.

In research fulfilled by Torres *et. al.* (2016), it does not justify the MEC to continue comparing the performance of the courses using a minimum percentage of masters and doctors to be able to affirm that one course has more quality than the other because it does not have this minimum percentage, disregarding other important criteria in relation to the teaching staff.

The three capitals must be fully in tune and worked together to the organization performance. When this happens, there is an increase in each one of these company's dimensions adding to other. If the contrary occurs, may happen the opposite, also, a subtraction instead of a sum. Investing in one without dialogue with another does not generate results, for example, I invest in the human, but the relational is not worked,

the question remains for those who sell, then, even with all the quality of human capital (Vaz; Viegas; Maldonado, 2017).

With a coherent intellectual capital to expand and work with human capital, a relational (Integrative Capital) with the main actors of society and, finally, a capable human, the HEIs always were the base to society development and growth for being the key to production of knowledge and people's graduation with actions in the innovation process, as well as being agents of this same process, whose interaction with society ranges from recognition to the solution of problems based on knowledge. (Bezerra; De-Bortole, 2020).

- Data 3- The HEI invests in titration.
- Inference 3- The HEI needs a management that follows and evaluates the HC production to the increase of INC.

To Silva *et al.* (2014), the HEIs must perceive and disseminate its results of intangible capital with good knowledge management combined with the accounting sector to issue reports that show how IC is developed in their HEI associated with the organization's objectives and mission.

According Budovich and Nadtochiv (2019), the university management, when looking at evaluation data of IA and analyzing it will be able to define more safely the activities improvements from HEI in competitiveness dimensions of the educational institution in the market education; educational institution prestige in general, facilitating the attraction and retention of a greater number of students with high potential; efficiency of higher education teaching staff; institution's innovation; scientific development; successful development of educational activities; formation of the brand of the educational institution and of it in the education market, as well as the expansion of external relations and international cooperation.

According to Tachizawa and Andrade (2006), the graduates of the HEI are the final result that will indicate his values because they take the intangibles of the Intellectual, Human and Integrative Capital of the HEI, therefore, the academic management processes need to accompany, during the course of these students, the work of the teaching staff, the pedagogical project, the teacher/student relations, the extension activities and research associated with teaching so that the final result is converted in values to HEI, which requires the management of intangible assets for decision making.

The organizations need in fact to have an efficient and effective management so the IA with method applications, techniques and consistent evaluations to evolve the learning process of the company from instruments that makes it realize the organizational climate. A quality management is characterized as the one that works with synchrony and constant dialog of Human, Intellectual and Integrative Capital. All of this must occur because the productive systems have as foundation, nowadays, the goods and services (Fraga; Graef; Santos, 2017).

In the case of HEIs, the articulation of administrative processes with academics is part of a good management process so that they are the intangible assets that add value when well managed. This includes management that are part of academic meetings, dialogues with course coordinators, builds metrics and goals to the teaching staff and make decisions from this debate (Silva *et al.* 2019).

The HEI egress is the final result that will indicate the values of HEI. They take the intangibles of intellectual, human and integrative capital of HEI. The process of academic management needs to keep up, during these students' courses, the teaching staff's work, the pedagogical project, the student/teacher relation, extension activities and associated research to teaching in order that the final result can be reverted in values to HEI. This requires the management of intangible assets to decision making (Tachizawa; Andrade, 2006).

HEI management, in study, should not only invest in titration and believe there already are expected results, unless that their only goal is to attend to one of the criteria of MEC's evaluation, that is the percentage of masters and doctors, which does not guarantee to reach the evaluation's total goal because there are others associated criteria to HC, IC and INC regarding to a set of academical activities. (Bezerra, De-Bortole, 2020).

They must, besides titration, invest in other institutional interests, look to the titration results, trace goals and show expected objectives of their titled teachers in order that it does not only fit to reach documental patterns of quality and increase of the salary value (increased expenses) because the difference before and after titration almost all negatives does not point to increase of Intangible Assets production, specially, the integrative.

- Data 4 – Result of Integrative Capital.
- Inference 4 - Integrative Capital Management Policy.

To Moura *et al.* (2005), is necessary that the HEI's management have parameters to follow their intangible assets such as the relations teacher and student; produced knowledge; the contributors management; and, also, the incentive to research and academic production because all of these IA generates competitive benefits. For this, according Romeiro *et al.* (2016), HEI's management of Brazilian privates must analyze more carefully and think of better indicators to realize the impacts of teacher titration in quality of courses.

To Botari and Santos (2009), it is not questioned anymore the IA values for the company's sustainability and, in special, of IC for allowing to consolidate, build and develop others IA such as HC and the INC, although still shows difficulties to measure, for being subjective and located in human complexity, being necessary an interdisciplinary approach to quantification improvement and results analysis.

According to Fresno, Savolainen and Miranda (2018), in global economy, it became crucial the negotiation processes and sharing strategies and information in all of society fields and, in special, in business, that depends on trust, a relational intangible asset (INC) and intellectual (IC), increasingly important in organizations, developed and sustained in interactions between people.

Oliveira and Goldoni (2006), for IA measurement, the KM must elaborate a set of indicators that should be distributed along steps of HR's knowledge production until the use balancing financial indicators and not financial with perception relevancies of what is quantitative for dialog with qualitative approaches.

Anyway, is necessary a coherent evaluation system with incentive politics, a countable system that shows the relation between these intangibles and an effective management and policy that facilitates the

decision making based on values of intangibles assets, in this case, intellectual, human and integrative capital.

- Data 5 – Academic Managers and Results.
- Inference 5 – Choices and decisions based on results.

Trindade, Barbosa and Bouzada (2017), the university management, owner of IA's positive relations with HEI aspects, can use to improve its ranking, its decision making, investment monitoring made regarding the teacher's quality indicators and acknowledge the positive or negative impacts of these relations with the HEI's financial performance.

Thus, the academic managers need to make choices and make decisions based on IA management. So, if the HEIs has a policy of management and intangible assets monitoring that allows a short, medium and long term feedback, can see the positive results of this investment and incentive on academical titrations so that priority remains being this one; or, if it does not have, what strategies need to be pursued for attending the market, demands from regulatory bodies and quality of services; or, how to manage all these variables of intangible assets in favor of positive results for the HEI.

FINAL CONSIDERATIONS

The data analysis showed that there was not an enlargement of human resources, in terms of Integrative Capital after titration, but a significant independent drop happened from specialist to master to doctor. This confirms that simple investment in human resources, in terms of titration, does not guarantee the Integrative Capital enlargement.

Besides that, it confirms the need of INC management to obtain good results, which does not necessary relate with titration, but how the teachers work for a good relationship with all involved in HEI both internal and externally. Is necessary, yet a coherent evaluation system with incentive policy, an accounting system that demonstrates the relationship of these intangibles and an effective management and policy that facilitates decision making based on the values of intangible assets, in this case, integrative capital.

Thereby, the academic managers need to make choices and make decisions based on IA's management. Thus, if the HEIs has a management policy and intangible assets follow-up that enables a shot, medium and long term feedback, can see the positive results of this investment and academic titration incentive so that the priority remains this one; or, if it does not have, what strategies need to be pursued for attending the market, demands from regulatory bodies and quality of services; or, how to manage all these variables of intangible assets in favor of positive results for the HEI.

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