

## **A Program of Hope:**

Finnish in-service teacher training impact in the  
Brazilian education system

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## ABSTRACT

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This study's main objective was to find out what impact results arise from the in-service teacher trainings offered by TAMK Edu, the department for extension courses of TAMK (Tampere University of Applied Sciences). The case studied was the Giramundo project, a training ordered by the Education Secretary of Paraiba State, in Brazil.

TAMK Edu as a service provider aims to assure a competitive position in the Finnish education export industry by validating the applicability of its business offering. Aligned with this, the study's theoretical background describes the following concepts: education as a product, educational paradigm shift, customer definition and satisfaction in education and the impact of teacher training in student learning. Despite the increased number of post-graduate teacher formations, there is a lack of academic research on their impact in the particular context of the Brazilian education system (Bauer, 2012; Moriconi et. al, 2017).

In order to obtain a comprehensive picture of the impact results, and due to a lack of literature, a mixed methods approach by triangulation was the most suitable for this case. The design was parallel, given that both data collection and analysis occurred concurrently, being mixed during the discussion sections. SERVQUAL was the methodology used to create a questionnaire on customer satisfaction that surveyed all the 40 Giramundo 2018 student-teachers, serving the research's quantitative data. Meanwhile, the qualitative methods chosen were individual interviews, observation and diary, to create a more detail-rich view about the program's main developments. Their population were 3 teachers and 3 management personnel, including the secretary of education Mr. Aléssio Trindade.

This study concludes that several projects created during Giramundo, or shortly after as a direct result, have indeed become large-scale public policies. Two of them particularly are described in detail (namely, *Dare to Create* and *Collaborate and Innovate*), which revolve around student entrepreneurship and student as a protagonist. The research shows that the in-service training given by TAMK Edu has as first offer values to increase teacher motivation and engagement levels, which is closely associated with a remarkably high customer satisfaction rate.

Key words: Finnish education, education exporting, Brazil, paradigm shift in education, in-service teacher training, TAMK, TAMK Edu, Giramundo

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*for my father*

**ABBREVIATIONS**

TAMK	Tampere University of Applied Sciences
PB	Paraiba
GE	Global Education
USA	United States of America
UK	United Kingdom
QA	Quality Assurance
HAMK	Hämeenlinna University of Applied Sciences
VET	Teachers for the future program
OECD	Organization for Economic Cooperation and Development
PISA	Programme for International Student Assessment
KIBS	Knowledge Intensive Business Services
HEI	High Education Institution
UAS	University of Applied Sciences

## 1 INTRODUCTION

The broad topic for this bachelor's thesis is Finnish education export, an industry that has been growing considerably as a result of the educational exporting strategies from Finnish educational agencies. The continuous success in OECD's PISA results, where Finland has ranked amongst the top performers since 2000, has made the country identify its educational system as a valuable product for exporting. According to the Finnish National Agency for Education (2017), the government had set as goal to obtain a turnover of 350 million euros by the end of 2018 (as of October 2019 no statistics were published on whether this figure was reached).

Many educational institutions are benefiting from the fact that Finnish education is recognized as high-quality, as they are exporting different levels of education worldwide. One of these institutions is TAMK (Tampere University of Applied Sciences), which has a department of international extension training and certifications for teachers and educational leaders: TAMK Edu. Various programs have been sold to and completed by teachers of many countries, such as Brazil, China, Russia and Egypt, to name a few.

The thesis' specific niche explores the '*Giramundo*' project, a teacher-training program ordered by Paraiba's Public State Education Secretary, a state from Brazil. Since 2016, a total of 176 teachers from the state of Paraiba in Brazil have come to Finland to be trained in different topics pertaining to 21st century educator's skills (the first cohort went to HAMK and starting from 2017 also to TAMK). In periods of one to two months, Brazilian basic education teachers and principals have the opportunity to get acquainted with the Finnish education and society's core values. The main objective of the program is to improve the participants' professional trajectories and communities affected by their work.

The topic is relevant for the commissioner (TAMK Edu), because the department needs to evaluate the dimension in which the *Giramundo* program has been impacting socially and what value it really is bringing to the customer (i.e. Paraiba's Secretary of Education). There is very little literature about this topic, and this is mostly in Portuguese. TAMK Edu will benefit from a study on this subject, in order to not only market its operations with factual data, but also to improve them based on realistic needs.

The training is provided in TAMK's premises in Tampere, which amounts for a substantial monetary investment from the customer institution side, in terms of bringing all these teachers to Finland - a country where the currency is at least 4 times more expensive than the one in their home country (i.e. Brazilian reais, or BRL). As a matter of fact, the definition of customer in the context of education is not straight forward, because the paying party almost always is not the consuming one (as in students and their parents, for example). Customers are often defined as someone who pays to receive some kind of products or services. Frain (1999) identifies that there is a difference between 'customer', the person or institution who buys the product or service, and 'consumer', the group who uses the product or service. Within education, one could still argue that, instead of customers and consumers, there could be customers and stakeholders. The latter, defined as an "individual, group, or organization who is affected by the outcome of a product or service and possibly involved in doing the work" (Douglas, 2011). In Giramundo program's case, the customer, that is, the buying party is the Paraiba Secretary of Education. According to the above definition, the consumers are the teachers who actually come to receive training in TAMK and as for stakeholders, that would be these teachers' students and school communities (e.g. parents, extended families, social workers, etc.).

Table 1. *Giramundo's stakeholders defined*

<b>Customer</b>	<b>Consumer</b>	<b>Other stakeholders</b>
Secretary of Education of Paraiba	Trained teachers	Students, parents, local community

Identifying these actors is important because each of their point of view is extremely relevant in building a global perspective of TAMK Edu's product and service value. Consequently, the use of triangulation in the research will be an appropriate method for achieving this goal, making use of different mixed methods within qualitative and quantitative paradigms.



## 1.1 Thesis problem and its background

The problem to be unraveled and solved in this thesis is to assess in what capacity the commissioner's business offering is creating value for the customer, in other words, whether it is generating positive impact to the educational field in Brazil. To examine it better, the program's other stakeholders are identified as following: TAMK Edu is the service provider, the Giramundo project is the service being provided, in addition to previously mentioned Paraiba's State Educational Secretary as the service buyer or *customer* and the trained teachers are the *primary consumers*.

The definition of impact in the Cambridge dictionary is "to have a strong effect or influence on a situation or person" (n.d.), as a force or action that causes changes in a certain environment. In the context studied by this thesis, whenever the word '*impact*' is being used, it refers to transformations in the current educational setting of public education in Paraiba, that resulted directly from a teacher or school director being trained in Giramundo. These transformations can be on a massive scale, such as the creation of a new discipline in the curricula or policy changes, as well as being possibly observed in teachers who implemented new techniques in their day-to-day classes following the training. Value can also be seen from the point of view of social changes; when discussed about '*social*', it is accepted the definition of changes in the community surrounding the school, that affects not only the activities within the classroom itself, but also brings developments in infrastructure (e.g. an irrigation project from Giramundo 2018 December) or creates revenue for a school, its students and their families (e.g. a tourism business project from Giramundo 2017).

Finding evidence of TAMK Edu's service quality and market impact will aid the thesis objective, which is to make TAMK Edu's business offer stronger when validated by evidence. If the findings are positive, TAMK Edu can use the analyzed data for internal quality assurance and procedures, new product design, improvement of Giramundo training and/or any marketing purposes.

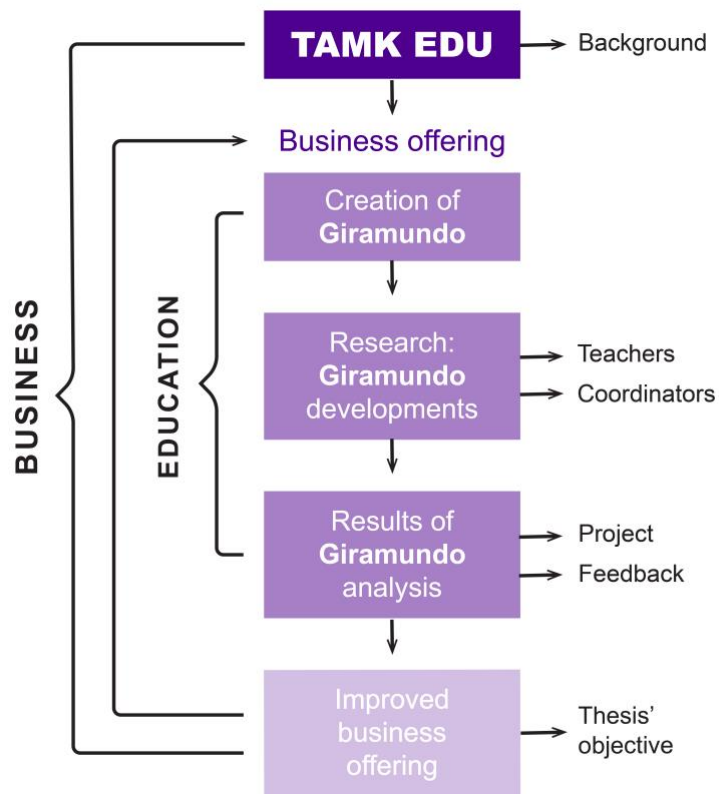


Figure 1. Thesis purpose breakdown

The cooperation between Paraiba Secretary of Education and TAMK is secured for the year 2019, as there has been placed a new order concerning the training of 30 teachers. This fact in itself can be seen as evidence that the training is valuable for the customer, taking in consideration the business relationship with TAMK exists since 2017, on a yearly basis. However, in order to assure the continuation of business, TAMK Edu needs to adapt the service to the new improvement needs of the project, which can be achieved through feedback, quality assurance and, more in depth, through a substantial study of the offering impact in the customer's local market.

### 1.1.1 The commissioner: TAMK Edu's Global Education

TAMK Edu is the extension studies department in TAMK, Tampere University of Applied Sciences. The department is structured between domestic (*kotimaa*) and global teams. Its functions consist of courses in the following areas: Open University (*Avoim AMK*), Specializations (*Erikoistumiskoulutukset*), Continuation

studies (*Täydennyskoulutukset*) and, finally, Global Education, the latter this thesis' study focus.

The department is led by Dr. Carita Prokki, a visionary leader with an extensive career in leadership and education. Her belief can be summarized that by providing visiting teachers with time and tools to reflect upon their own teaching trajectories, it will consequently create positive changes in their own school environments. TAMK Edu's Global Education subdivision was officially created in February 2013, with the goal of answering the growing demand in courses and workshops for international customers. TAMK had already previously been doing a certain level of sales to Russia and Middle-East countries since 2011, but creating a structured business unit was an essential step in advancing TAMK's vision about internationalization, which is currently one of the pillars of TAMK's growth strategy (TAMK, 2019). Also, it was important in making a footprint in the competitive market of Finnish education export, populated by private companies and other Finnish universities of applied sciences. For example, HAMK (Hämeenlinna University of Applied Sciences, in Finnish *Hämeenlinnan ammattikorkeakoulu*), also provides a program for Giramundo, although with a different focus than TAMK. Other relevant Finnish competitors are TUAS (Turku) and JAMK (Jyväskylä), which also sell courses for international markets. According to Dr. Prokki in her interview in TAMK's international blog, TAMK's differential is in its solid vocational teacher education and the uniqueness of 'Proakatemia' model in business education, unlike any other in the world (Ilie, 2017).

Internationalization is one of the three TAMK's strategic imperatives, whether on expanding the offer of courses in English or building a sustainable financial structure like the business from TAMK Edu. The amount of external revenue, i.e. capital that is not from the Finnish state, increased by 12% in 2018, having the educational export respond for 4 million euros in sales during that year (TAMK, 2019). With the further decrease in state funding – expected to be around 30% in the close future - it is safe to assume that paid services and education export will take a larger role in securing operating capital to the university, therefore it is crucial that this business unit would be expanded exponentially.

TAMK, as a Finnish public institution, is a non-profit organization in general terms. It is financed with public funds to cover the biggest part of its operational costs

and investments in Research & Development projects, but it also relies on service deals made by various of its departments, not to mention donations. TAMK Edu belongs to TAMK as one of its cells and is administered by TAMK employees, yet, it operates as an independent business unit financially speaking. This means that all products (i.e. courses, workshops, trainings, conferences, key speakers) need external funding, and that is especially significant when it comes to Global Education as it receives no Finnish funding whatsoever. All trainings and conferences, whether given in Finland or abroad, are paid by the institutions ordering them. Come the end of the fiscal year, the profit does not remain in TAMK Edu, but rather it is passed along to TAMK (it is important to notice that this profit would be significantly minimized if TAMK Edu was operating outside TAMK premises and would have to pay for rent and utilities).

Main focus markets in 2018 were the Chinese, Latin American and Egyptian markets. Almost 2,300 persons participated in courses by Global Education (TAMK, 2019).

Customer satisfaction assessment is part of TAMK's mission in quality assurance; in TAMK Edu's case, as a paid education service provider, customer feedback is a fundamental tool in continuous operation improvement. One could argue that liability is more explicit for governmental funds than for private funds (Hall, 2010), especially in terms of following state rules and requirements. That is also true for TAMK Edu given it is under TAMK administration, however, being within a public organization but privately and/or internationally funded means that TAMK Edu has a compounded level of accountability; it has to follow state rules while guaranteeing return of investment for private institutions or individuals that may not share the same criteria for quality assurance. This fact, together with being a Finnish education brand representative, means that its activities are under a substantial amount of scrutiny.

When it comes to Global education, it goes a step further due to it receiving *international* funding (from both international private and public sector educational institutions), especially taking into light that its foreign customers might have stricter standards in understanding value for the money. Moreover, another weight is that Euro is a stronger currency than most of the countries in the focus markets, thus for these international customers placing an order with a

Finnish provider often means a significant expenditure, causing a higher need for results validation.

In view of this, acquiring factual results from its business offering, e.g. Giramundo, is an important thesis topic for the commissioner. It sees that a study done on this subject would create data that can put Global Education in a stronger position to compete with the industries' other competitors, whether internationally or among the other Finnish polytechnic universities.

### **1.1.2 The case study: Giramundo - 21<sup>st</sup> century educator skills and entrepreneurship teacher training**

The Giramundo project is an extension training for teachers from the public educational system of Paraíba State. It was created by an initiative of the Education Secretary Aléssio Trindade, in line with the mission of creating an education paradigm that is student-centered in Paraíba (Alves, n.d.). Secretary Aléssio had met Dr. Carita Prokki during a graduation event for federal teachers from the 'VET – Teachers for the Future' program (a collaboration project between Brazilian federal institutes, HAMK and TAMK), and had expressed the desire to create a teacher training program at state level. Three persons who participated in the VET program became then the coordinators of Giramundo, first Alexandre D'andrea, joined later by Janylle Ouverney-King and Petrônio Medeiros. The program's mission is to train teachers for new competences being taught in the public state network, like self-leadership, student entrepreneurship and other practical skills that bring school closer to work life.

The first group sent was in 2016 only to HAMK, but on the following year two cohorts were simultaneously sent to HAMK and TAMK. Although the programs between the two universities are generally on the same topic (new teaching methodologies), they are not entirely similar since they have different areas of focus. While in HAMK the training is more about pedagogical skills, in TAMK the focus is on modern educators and entrepreneurship in education.

During 2018 there were two cohorts of 20 teachers each and in 2019 there will be another two cohorts, with the difference that one of these will have 10 teachers only - returning teachers who participated in previous versions of Giramundo Finland.

The program has expanded enormously between its first edition in 2016 and 2019. What started with only one partner institution (HAMK), now they are sending groups to two universities of applied sciences in Finland (HAMK and TAMK) and to institutions in Israel, Spain and United Kingdom. It is noticeable that with the program's consolidation, the Brazilian coordinators started to design new areas of interest that could no longer be accommodated by TAMK. For example, many of the projects developed from Giramundo Israel were about irrigation of arid zones. It is expected development that the Brazilian administration would look into expanding to other countries, as for them it is a positive thing to have diversity of destinations. In any case, TAMK needs to dedicate work for identifying how its own program structure can be adapted, in order to meet the different needs that naturally arrive from the somewhat large number of teachers that have been trained in Paraíba's public education system (about 176 currently) and/or consequent new policies that have been created. A step in this direction was taken when the new program for returning teachers was designed.

The selection process for Giramundo Finland begins when applicants submit their development project plans on improving their teaching environment. The best 40 suitable projects are chosen and split into the two groups that goes to TAMK. Each of the 40 teachers costs to the Secretary of Education a grant in the total sum of 4.200 euros, plus the cost of the program paid to TAMK, which is around 30 thousand euros (plus administrations costs). In total, the investment for the grants alone is of 1.437 million reais or 327 thousand euros, as stated in the public notice published by the government fund FAPESQ, responsible for financing the Secretary of Education's operations.

To be eligible for the program, the applicants must be in active duty in the public education network, by either being a teacher or school principal. In the very beginning, the program was meant to include teachers only, in fact high school teachers only, however between the following editions the coordinators progressively started to realize that they needed to include other change agent groups, if they were to cause a more solid and sustainable change in the educational system. In other words, they included teachers from basic education, with the thought of changing the learning culture since early age, and also school principals, aiming to have management involved in the changes and aid the teachers who were coming back with new ways of thinking (Ouverney-King,

personal interview, May 8, 2019). For the sake of writing, so forth the program's participants might be referred to generally as "teachers" even if there are also school principals among them, because all participating principals have been teachers previous to their management role.

During the stay in Finland, these educators get acquainted with 21<sup>st</sup> century skills and methodologies related to many subjects, but with emphasis on technology inside the classroom, project and problem-based learning, collaborative work and student entrepreneurship. They form groups based on their interests for a development project, so in a sense the individual project plan that landed the participants in the program gets changed for group projects that will be put in practice once they go back to Brazil. After the period in Finland, TAMK continues to provide a service for the program by means of having these development projects aided online by Finnish teacher-mentors (coaches).

This development work is almost always a project that advances education in the public system or that has a broader community impacting purpose. For example, one of the projects in December 2018's last cohort was about water irrigation and school food self-sustainability. Others have focused on the advancement of technology in the classrooms, by creating educational applications or disseminating the use of popular applications for the students (like skype or zoom), since Giramundo is focused on 21<sup>st</sup> century skills. There are projects dedicated also to the social aspect of education, especially important in the large urban areas in Brazil where extreme poverty is an issue. In summary, there are projects being developed in almost any field related to education, and more are yet to come as a result of spin-off programs.

In fact, these development works are the main focus of this thesis research, as they are real-life evidence of Giramundo's goals unfolding, or, in other words, the impact results of this teacher training program. The thesis commissioner wishes for practical and objective examples in which these impacts can be easily observed, on any mid-to-long term program that can be directly associated to Giramundo TAMK.

## 1.2 Characteristics and differences between Finnish and Brazilian Education Systems

Brazil and Finland are two deeply different countries. Brazil, a giant in numbers, is the biggest country of its continent. Finland, although significant in territory considering European countries' sizes, has less than 3% of Brazil's population (5,5 million people in Finland against 212 million in Brazil). Brazilians often describe their people as extrovert, creative and innovative, but paradoxically it has a very traditionalist, largely religious and patriarchal society. On the other hand, Finland is one of the most modern countries in the world, birthplace of the text message feature present in any cell phone nowadays and home of Nokia telecommunications; paradoxically, Finnish people tend to describe themselves as introverts who value their own space. They are also one of the nations that is most committed to up keeping human rights to its citizens, such as gender equality and access to free education, to name a few. In the latest Human Development Indices statistical report, Finland ranks 15 while Brazil ranks 79 (United Nations, 2018).

There are many variants that could weight in explaining the differences between these two countries (one of the obvious ones, nature), however, perhaps the most affecting one is the difference in how these countries were founded. Brazil, founded as a Portuguese colony, has a history of slavery of both African populations and indigenous people. Following the slavery abolition, this segment of society became impoverished - its decedents represent still nowadays the biggest part of the poor spheres in Brazilian society. Brazil is, therefore, a country with deep social inequality, home to one of the richest individuals in the world but also to poorest populations (Medeiros, M. for Unesco, 2016).

Finland is a very homogenous country racially and economically, which can be easily observed in its society. This homogeneity is reflected in the educational system in terms of equality and population, which has been used as a valid argument in criticism of how the Finnish educational reform prerogatives may be unsuccessful in countries with more heterogeneous social backgrounds (Sahlberg, 2015). This opinion is also shared among the Giramundo teachers, as 77% affirmed they see as problematic contextualizing what they see in Finland to the Brazilian system (data obtained from the research for this thesis).



In summary, the most well-regarded values in one country seem to be directly opposite to the other one, as following:

Table 2. *Key point differences between Brazil and Finland*

<b>Brazil</b>	<b>Finland</b>
Vertical hierarchy	Horizontal value
Education is test-based	Few standardized tests
Heterogeneous racially	Homogenous racially
School peers are from same socioeconomic class	School peers are from same neighborhood
Teaching to test	Teaching to learn

One thing that brings Finland and Brazil to somewhat of a similar point, is the fact that Finnish education reform started happening when the country was in a deep post-war economic crisis. Brazil has been going through a chronic, long-term economic crisis, sustained by the profound discrepancies in social classes within the country.

Much like the post-war Finland, the comprehensive educational system in Brazil consists of public and private schools, being the latter one perceived as the one with unquestionable better quality. When observing higher education, the opposite is true: public universities provide better education, while private ones are seen as less prestigious. This creates a system that is based on unfairness, not to mention illogical essentially, where children from wealthier families get the best education during their forming years only to study for free when obtaining a profession. As an obvious result, social inequality is a discrepancy still growing on.

Table 3. *Finnish and Brazilian reaction to crisis in the context of Education*

<b>Finland in crisis</b>		
<ul style="list-style-type: none"> <li>- Massive investment in Education</li> <li>- Unification of public and private systems</li> <li>- Social focus on equality for all</li> </ul>	30 years later	Benchmark in Education
<b>Brazil in crisis</b>		
<ul style="list-style-type: none"> <li>- State effort in privatization of schools</li> <li>- Decrease in public funding for Education</li> </ul>	30 years later	?

Below there is a comparison between some of the most accepted international comparative analyses. Data used for making Table 4 was retrieved from the latest published results for these analyses. Both the Teaching and Learning International Survey (TALIS) and the Programme for International Student Assessment (PISA) are instruments from the Organization for Economic Cooperation and Development (OECD), being PISA currently the most accepted one when ranking education worldwide, possibly due to the higher amount of participating countries. Other analyses listed as relevant in the Finnish National Agency's website are the Progress in International Reading Literacy Study (PIRLS), Trends in International Mathematics and Science Study (TIMSS) and the Programme for the International Assessment of Adult Competencies (PIAAC), but these were not included in the table because Brazil has not participated in them so far.

Table 4. Comparison of standardized test results between Brazil and Finland

	<b>TALIS (2013)</b>	<b>PISA (2015)</b>	<b>MATH Olympiad (2018)</b>
<b>Brazil</b>	75% of teachers completed teacher education	68th	28th
<b>Finland</b>	93% completed teacher education	5th	59th

There is a fair amount of discussion about whether using international education rankings as a source is a valid method for policy making. One of the main arguments is that there are too many socio-economic variants that cannot be directly accounted for in an international standardized examination, as summarized by Pasi Sahlberg in *Finnish Lessons 2.0* (2015):

“There is, indeed, an increasing debate about what these international tests really measure and whether PISA alone can be used to judge the quality of education systems. Earlier critics’ and defending proponents’ arguments are available in the educational literature (Adams, 2003; Bautier & Rayon, 2007; Bracey, 2005; Dohn, 2007; Goldstein, 2004; Kreiner & Christensen, 2013; Mortimore, 2009; Prais, 2003, 2004; Riley & Torrance, 2003; Schleicher, 2007). More recently, commentators on PISA, most of whom are internationally recognized scholars, have insisted that politicians and the public at large (including media) must understand better what PISA can and cannot do. Among them is David Spieghalter (2013) of the University of Cambridge, who wrote in the *Guardian*, ‘If PISA measures anything, it is the ability to do PISA tests. Aligning policy along a single performance indicator can be damaging. We need to look at the whole picture.’” (p. 83)

Nonetheless and despite the critics, it is due to PISA results that Finland achieved a global reputation as an educational leader, which in consequence sparked the interest by Giramundo coordinators for TAMK as a service provider.

The current Brazilian "National Curriculum Guidelines" (in Portuguese *Diretrizes Curriculares Nacionais*) are united in a legally binding document that all schools (private or public) must follow when making their teaching plans. Its ideological content is quite similar to those that govern education in Finland too, as they share similar values in children rights, namely equality and socio-psychological development. In both guidelines sets, there is a requirement for the use of modern and active teaching practices, more specifically and importantly in what regards to teachers' and school's autonomy to design their very own pedagogical plans suited to the needs of a particular region and its students (Brasil, 2013). According to Pasi Sahlberg (2015), also in Finland teachers "have professional autonomy to create their own school-based work plan and curriculum" (p.100), but not only that, he identifies this characteristic as one of the essential reasons why the Finnish educational system is so successful, and teaching itself to be such an attractive profession in Finland.

It would be logical to assume that if the very base of the Brazilian system follows the same guidelines, that it would lead to a similar outcome for the teachers and school governance. However, it is a general opinion among the Giramundo teachers (observed in feedback) that these guidelines are more intensively taught to Finnish teachers in their initial teacher training than done to their peers in Brazil, as corroborated by the TALIS results shown in table 4. Also, it was brought to attention that teachers don't have autonomy in their works, especially when they are teaching in the private education network.

The Finnish system is based on equality, autonomy and lack of standardized tests. Linked with the last one, teachers are not directly held accountable for student learning assessment, nor therefore receive rewards or penalties accordingly. There are no private schools in basic education and results difference between schools is below OECD average (OECD, 2012), which proves the large-scale equality in education received. This guarantees the right for every child to access good quality education regardless of its family's socio-economic background, as foreseen in the education guidelines.

Finland has one of the most unified teacher training systems in the world, as there are no fast tracks to the teaching profession; currently, the way to have a license to teach in Finland is by having a master's degree in educational studies, most commonly achieved through a minimum 5-year program which englobes both a bachelor and master's degree. This program has one of with highest competitions to get accepted to, since in Finland the teaching profession is as attractive as medicine or law. In the whole country only 8 universities offer the program, all from public sphere. Therefore, it's safe to assume that the teaching profession is highly regarded in Finland, as opposed to Brazil, where only 2,4% of 15-year olds would choose teaching as a career (OCDE, 2017).

The material resources scarceness is a problem in Brazil that a lot of teachers identify as an obstacle in their practice. Many schools, especially in the rural area, do not have internet access even for the teachers to prepare their classes, let alone for the students; many teachers end up paying for school internet from their own salaries. This is unthinkable of in Finland. The poverty, lack of transportation and shortage of school food are all elements that affect school attendance and slow down educational and general development in Brazil in poorer areas. Simultaneously, a strong presence of corruption in schools' governance and how much the political scenario affects the appointment of directors and educational leaders, are other relevant factors in explaining why the Brazilian educational system is precarious.

Most importantly, there is not a universal educational system such as the one in Finland. Just like the society is extremely stratified in different levels of poor and wealthy classes, so is the system divided between public and private schools. Most of the characteristics described in the previous paragraph are not difficulties in the private sphere. On the other hand, teachers have less autonomy to plan their classes or make use of alternative methodologies than their peers in the public sphere.

Understanding the differences between Brazil and Finland in the educational aspect is paramount in understanding the value of the Giramundo program, which is before anything a program to better equip Brazilian educators and/or policy makers into designing structural, long-term changes for a very complex and problematic educational system. It is widely accepted that better education is potentially one of the solutions, if not the main solution, for shifting from an

underdeveloped economy onto a more prosperous one. This is something the Giramundo teachers can witness for themselves when visiting Finland, how the country went from a post-war scenario to one of the best working economies in Europe. As a matter of fact, Dr. Carita Prokki states that the program's goal is not that they will mimic locally at their school communities exactly what they see in Finland, but rather that they will see it is possible to make changes, and that these changes ultimately have impact no matter how small (personal communication, August 2019).

### **1.3 Research questions**

The thesis research investigates two different paths, the first one being a quantitative study about customer satisfaction in education, populated by the 40 teachers that have been trained during 2018. It is vital for TAMK Edu to assure that these teachers are, in fact, having their expectations met about their experience in Finland. Also, there is a certain level of personal expectations too, given that for many of these teachers this is the first trip overseas. This factor is taken into account by TAMK Edu staff, as extra-curricular activities are always planned for the evening hours with the objective that the participants could get better acquainted with Finnish culture, an important factor in understanding the bases of the Finnish educational system and its success. The business offering is, thus, a holistic experience with both professional and personal aspects. The commissioner has identified as necessary to have a study that examines whether this is happening in reality and to what degree.

The second path is observing the so-called spin-off programs that happened as a result of Giramundo. A spin-off program, in this context, is defined as a program that was created by Giramundo participants after their participation as a result of it, and that share the same values in education as the ones discussed or taught in the Finnish program. So, in a sense, they are helping to spread TAMK's ideologies and teaching methodologies locally in the state of Paraíba. When these values are spread, TAMK in consequence becomes more renowned as a strong educational institution and exporter. The more these programs exist, the better TAMK's internationalization strategy is moved forward, bringing new possible business leads. Accordingly, it is important to have academic text that

registers these programs, so that TAMK can use evidence-based results in future venues.

### **1.3.1 Main research question**

*What are the impact results of TAMK's teacher training program Giramundo?*

### **1.3.2 Sub-questions**

Are the trained teachers satisfied as customers?

Have their expectations been met?

What are the areas of improvement?

What areas are perceived as relevant for the customer and consumers in their satisfaction about this program?

Is the program, in general, relevant?

What are the impacts for the school community in Brazil?

What are the direct or indirect propagations of the program?

Does the program have ethical problems?

What are the program's social impact?

What are the main projects that resulted from Giramundo?

How can the business continue to exist?

What are the new venues needed?

What are new possibilities in offering?

How can the program evolve?

## 2 PRODUCTIZING EDUCATION: THEORETICAL FRAMEWORK

The theoretical framework for this thesis puts together concepts within education and business, resulting in an observation of education as a product. Productizing education is not always a straight-forward process; putting a price tag to something that has as many layers as the teaching-learning exchange can become really challenging. This is especially true when teachers distance themselves from the business aspects that make training possible. Also, the notion of selling education is not only a new concept in Finland (the private sector virtually inexistent and degree fees were introduced to non-EU nationals only in 2017), but against the very core of Finnish education as a public and same-value right for everyone. Thus, putting the two pillars (business and education) together in order to create a national brand, is somewhat seen with reluctance by Finnish teachers, even if the educational export market is growing exponentially.

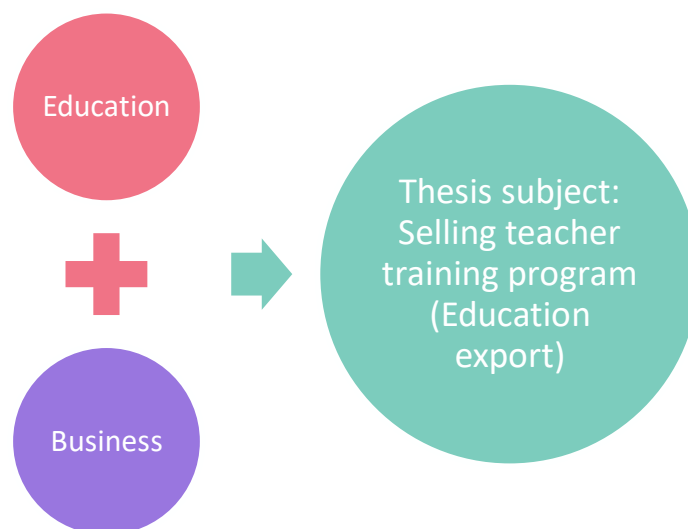


Figure 2. *Thesis main topics combined*

The notion of education in itself being universally a constitutional right (Unesco, 1948), brings some ethical issues about whether it should or how it should be commercialized. The imminent large-scale privatization of public services in Brazil, following USA as a model, is a complex problem. Therefore, the efforts by the public system policy makers are vital for the development of poorer segments of the society, which is aided partially - arguably in a small scale - by these teacher trainings given by more egalitarian societies, as seen in Finland. The



Giramundo program is an example of these efforts, and like a product as such, also has a life cycle as productization, implementation and customer satisfaction/feedback, the latter one of the focus areas of this thesis' research.

Below is the logic followed for the reader to better understand the Giramundo program's relevance as an offering:

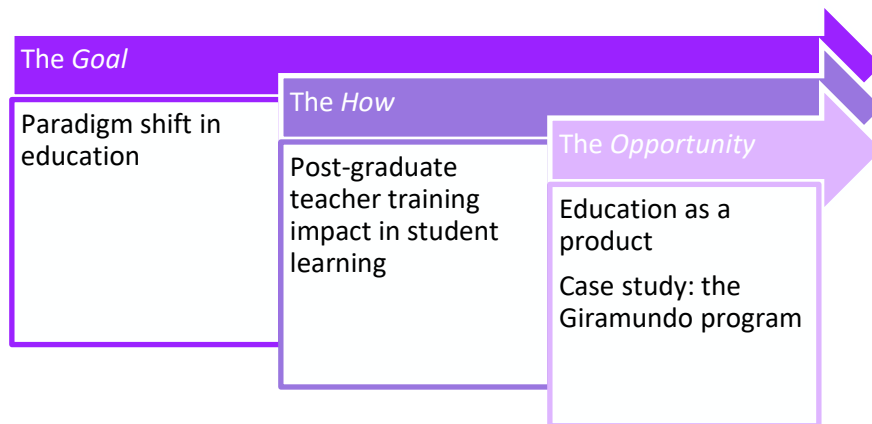


Figure 3. Thesis' theoretical concepts progression

As seen in the previous chapter, the educational system in Brazil has a lot of areas that could be improved, more specifically in what refers to the 21<sup>st</sup> century competences. This is a need identified by many educators and policy makers, like for example the education secretary of Paraíba Aléssio Trindade. Finland has a world renowned educational system that is quite extensively based on real-life competences and preparation for work-life, which presents a significant business opportunity for educational service providers in Finland. In line with this are the proposals made by the Finnish National Agency of Education, with their internationalization strategy on strengthening the national brand of excellence in education, in order to achieve the goal of bringing more paying degree students to Finland (the goal is 150 thousand students by 2020). All in all, there is a favorable scenario for service providers like TAMK Edu to sell educational products or services internationally.

## 2.1 Education as a product

Education can be categorized to be professional services. Professional services have the following characteristics: their primary assets are intangible, the delivered service is intangible, and the service providers are highly skilled people (DeLong & Nanda, 2003). Professional services are often most difficult to define because they are plans, ideas or instructions (Immaisi, 2014), although den Hertog (2000) provides a definition for professional knowledge "(...) i.e. knowledge or expertise related to a specific (technical) discipline or (technical) functional-domain to supply intermediate products and services that are knowledge based" (p. 505).

As the world sees the so-called "developed countries" shifting from product-based economies to service-based ones, selling educational services can also be identified as "product", even if they are not a physical good. "Productize" refers to the process of developing or altering a process, idea, skill or service to make it marketable for sale to the public (Kenton, 2018). As of 2019 there is not yet a vast literature in productizing education specifically, although the concept of turning an intangible asset (in this thesis's subject, learning) to a service offering (teaching/training) is fairly explored in modern marketing and selling strategies literature.

Essentially, the dynamics of making an intangible asset into a *saleable* product work for virtually all industries, including education. The process of productizing englobes much more than just the service or idea itself, but rather the whole progression of how this service or idea can aggregate value to a certain clientele. Service-based business models do also make use of value chain, just like businesses that have as product a physical good. In education, a product journey begins with *what knowledge* can be offered followed by *who* (which educators) can offer them.

In fact, the use of extensive human capital and time used in educational services is the very foundation of a knowledge-based service's definition. The Giramundo project (among other projects from TAMK Edu) can be considered a product within a knowledge intensive business service (more commonly known by the acronym KIBS), since one of its goals is in line with the description of a KIBS, i.e.

“(to) produce and diffuse knowledge, which is crucial for innovation processes” like defined by Muller and Zenker (2001).

As economies become more knowledge intensive, it has been made evident to most organizations that knowledge is a valuable resource. This is particularly true in academic organizations, which have generating and disseminating knowledge as their principal mission (Howell & Annansingh, 2013), such as TAMK does. In a knowledge-based service, provided by a KIBS like TAMK, the product’s value chain core element is “undertaking complex operations of an intellectual nature, where human capital is the dominant factor” (Alvesson, 1995, as cited in Muller & Doloreux, 2007, p. 11).

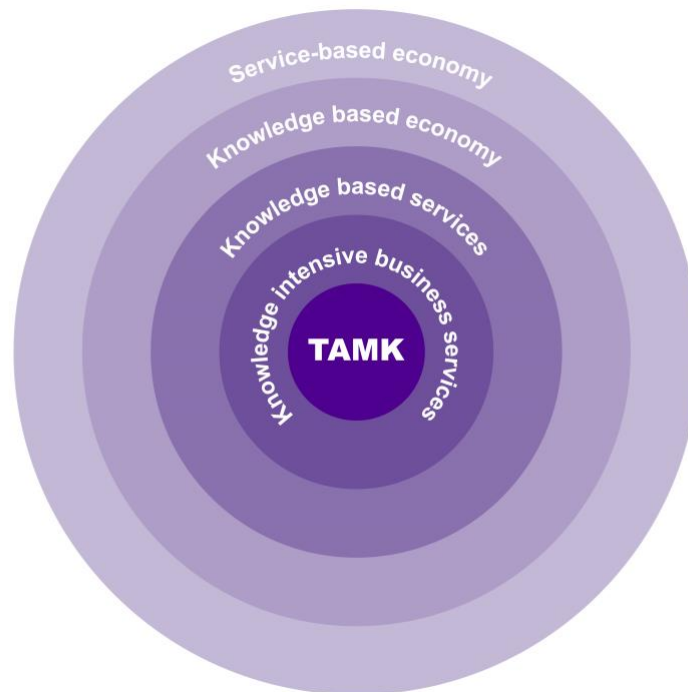


Figure 4. TAMK in relation to KIBS

The following table summarizes KIBS definitions, all of which apply to TAMK:

Table 5. *Definitions of knowledge-based businesses / knowledge-intensive business services.*

Authors	Definitions
<b>Davis and Borkin, 1994</b>	Businesses that provide 'smart' products
<b>Miles et al., 1995</b>	Businesses that provide services that involve economic activities which are intended to result in the creation, accumulation or dissemination of knowledge
<b>Alvesson, 1995</b>	Refers to firms that are undertaking complex operations of an intellectual nature where human capital is the dominant factor
<b>Bettencourt et al., 2002</b>	Enterprises whose primary value-added activities consist of the accumulation, creation, or dissemination of knowledge for the purpose of developing a customized service or product solution to satisfy the client's needs
<b>Smedlund and Toivonen, 2007</b>	Are expert companies that provide services to other companies and organizations

*Note.* Reprinted from Building Prosperous Knowledge Cities: Policies, Plans and Metrics, edited by Yigitcanlar, Metaxiotis and Carrillo, 2012, p. 232.

For the leaders in TAMK Edu one very relevant step in productizing a course or training should be what *new* can be offered for the client, taking in consideration that TAMK Edu's clients are also academic organizations capable of and agents in producing knowledge themselves. In other words, what the client needs that cannot be found from their own competences. This is an element that is quite particular to the selling of educational services, as the client belongs to the same industry as the service provider.

For this reason, a differential aspect in selling education to foreign customers, is by providing an experience component to it. In the case of education and Finland, experience economy principles support the knowledge-based services, in order to create a holistic value that attracts customers from elsewhere. They visit Finland not only for the subject itself being taught, which can be in many cases already familiar to them given they are themselves educators, but to see how this subject is applied in the Finnish society and culture. As a matter of fact, such is the importance of experience in educational services provided by TAMK Edu and to modern education in general, that the 4Es described by Pine and Gilmore (1999) as the four realms of experience (namely Education, Esthetics, Escapism

and Entertainment), are used as base for Giramundo development projects presentations, as well as the construction of the project program as a whole.

As the reader can notice, many business terms and even practices are incorporated in modern education, making it to be intertwined with marketization. That can be seen as a consequence of either the increasing monetization of anything that brings value or the demand for education paradigm shifts that is happening as a result of growing international competition, promoted by the results of standardized tests such as PISA (Altbach & Knight, 2007; Ball, 2008; Burde 2004; Jones, 2004; Sahlerg, 2011b; Spring 2009; as cited in Schaltz, 2016, p. 49).

In some instances, another term used as a synonym of *productization* or *productizing* is *commoditization*. However, when using *commoditization* in referring to education, it is easily created an ethical dimension in relation to this concept. The simplest definition of commodity is something (either a product, service, ready good, idea, etc.) that can be marketed. Many education philosophers (Winch 1996, Bridges 2017, Rikowski 2017) argue that education should not be bought and sold, and as such not a commodity, but should rather be a public service. Many argue that education, ultimately being an important step in advancing an individual's career and employment prospects, can be "cashed in" and therefore accrues monetary value, becoming thus a commodity.

In an increasingly knowledge-based global economy, naturally knowledge is a resource and human a capital. Seeing education as a commodity is, anyway, largely linked to the context in which it is being observed. In the USA, the debate is more towards the costly higher education fees and student debt. In U.K., it seems like the growing privatization of higher education is also becoming an issue (Rikowsky, 2017), just like in Brazil with the current wave of large-scale privatization of public services and a deeply unequal basic school system. In Finland, when thinking within the domestic context, this discussion has not reached a public affair status, as virtually all education is free for Finns and foreign residents.

In the context of education export, however, institutions like TAMK Edu depend on monetizing their services to sustain the intense human-capital they need. Besides, following the definition of a KIBS, their customers are also companies or organizations (Smedlung and Toivonen, 2007), which usually detain a

considerable economic power to purchase educational services from Finnish providers. Moreover, international customers are an important revenue stream for covering the deficits of HEI's budget cuts from the government (Chaikl, 2015), set as a significant cut of 30% as of 2019.

### **2.1.1 Finnish education export**

Education export's plainest definition is the selling of educational products paid by a foreigner customer (Stroomberge, 2009). It is a relatively new industry in Finland, only having its potential identified in approximately the past decade; the first set of strategic lines and measures was released by the Finnish Ministry of Education and Culture in April 24, 2010. Compared to countries with a long tradition in education as a product, such as USA or Canada, competition awareness is still in its infancy in Finland.

The aforementioned Ministry defines education export as all business activities based on education, the education system and the transfer of knowledge that creates products or services that a foreign party pays for (2016a). This broad definition allows for englobing many different products offered by education export providers; in truth, the diversity of products and services that could fall under that category is so large, that new terms need to be conceptualized in order to fully express the characteristics of a particular market. That is the case with Finland.

The biggest dichotomy in education export, when taking into consideration the Finnish case, is that traditionally and worldwide this refers more to student mobility in terms of foreign students going to the service providers' countries to carry out a (paying) degree program; while in Finland, charging tuition fees for a degree program has only recently been allowed, as from 2017 onwards non-EU and non-EEA nationals are no longer eligible for free education. In the example of New Zealand, inbound students represent roughly 95% of all education export, in a total of 106,000 international students enrolled by August 2017 (ICEF, 2018). In the same period in Finland, there were only 20,362 international students enrolled to HEIs (Finnish National Agency for Education, 2018).

The legislation that restrained Finnish HEIs from charging fees used to be considered by education exporters as a barrier in increasing the industries' revenue (Cheikh, 2015), however, two years after the effective change took place, Finland has not yet managed to establish a remarkable growth in revenue in this area specifically. It is safe to assume that many of the obstacles for making Finland a competitor globally might still be of relevance, resulting in Finnish institutions not exploring all the potential they could have in exporting education (Cheikh 2015, Schatz et al. 2015, Schatz 2016). The reasons are many, but perhaps their source is due to the fact that selling education goes against the very core of Finnish education principles, in its praise of equality and good education for all, independent of economic background. Finnish educators are still debating on whether there should be a price tag in degree programs, with many universities going against this resolution by allocating funds from their scholarship programs for assuring that foreign students have a study place. Understandably, this regulation change resulted in a decrease of foreign students in HEIs (Finnish National Agency for Education, 2019) and less diversity among students in degree programs taught in English.

In this sense, education export in Finland is more tied to the exporting of other education products or services, e.g. consulting services, technological solutions for facilitating learning processes, trainings, know-how deals, etc. (Cheikh 2015, Juntunen 2014). Through these methods, Finnish education experts have effectively been instrumental in developing new policies in other countries (Vanhanen, 2016). Juntunen addresses in his "Report on the export of Finnish education expertise – Thoughts for export promotion based on experiences of Future Learning Finland network" (2010) that the term "export of education expertise" would be a more accurate one to describe the activities of Finnish education exporters, because it expresses the idea of more services than just education products which offering relies mostly on lectures. That is the biggest part of exports in English-speaking countries, which differs greatly from the Finnish offering. The report commissioner concurred with the new term found to grasp the phenomenon studied, nevertheless, it was established to use "education export" in the State export strategies guidelines, for it is the most recognizable term internationally (Juntunen, 2014).

The use of the word "expertise" in the term "Export of education expertise" is very important in categorizing the Finnish offering. The Finnish education system's

uniqueness is the factor that sparks interest in other educators globally and its biggest strength lies in their teacher training and innovation in pedagogics. Because the main product Finland has to offer is its expertise in teaching, the target customers are educators and policy makers, rather than students themselves. It is clear that the curiosity for Finland as a result of recognition in education after OECD's PISA results, has turned the country into an attractive destination for the so-called "educational tourism", with thousands of educational leaders and teachers touring the country and its schools (Sahlberg, 2015).

PISA and other international standardized examinations have been a consistent validation for Finnish education since the early 2000s. This resulted in education in Finland turning from being means to achieve exporting products to the product to be exported in itself, especially as an innovative solution to coping with Nokia's downfall in late 2000s that affected Finnish economy substantially.

However, it is important to notice that the level of education that got notoriety is basic education, with elementary grades and high school. In other strong education export countries like the US and UK, which concentrate their offering in world renowned universities, that have the highest student mobility. The goal of their offerings contrasts so greatly from that of Finland, it almost should not be considered in the same category. The education export in terms of selling degree courses will always be, in practice, greater in volume (and therefore revenue) than selling trainings, conventions and know-how consultancy. The current focus of Finnish education export should not be primarily revenue growth, but the building of a brand that can provide innovation through collaboration to a knowledge-dependent economy such as Finland has.

It does not mean that degree programs should not be sold concurrently - they should and can become a strong revenue stream in the future – but the teacher training expertise is the differential Finland has as an asset in the market. It follows the movements for a more humanized and student-centred approach to education that is surfacing from a silent, but resilient universal education revolution. It is what will put Finland in the map among education exporters, foundation for bringing more incoming students in the future.

Universities, whether academic or of applied sciences, are currently the main institutions involved in education export, but they are both impacted by being non-profit organizations. The Finnish legislation, although having had a lot of progress



in the past few years (e.g. charging of fees and possibilities of giving an offshore degree, albeit both for non-EU nationals only), will still hold back a lot of the potential that these institutions could be making financially speaking. On the other hand, they make use of the reputation a state education institution has in Finland to advance the value of their offering internationally.

Tampere is recognized to be a student city, home to the second most difficult university of applied sciences to get to: TAMK. This university is also very well known for its teacher-training programs, along with UTA (University of Tampere), which have combined forces and became legally one united institution from the beginning of 2019. The grand majority of courses offered by TAMK Edu in its international front 'Global Edu' consists of post-graduate trainings for education professionals. TAMK being a publically funded university and non-profit, its TAMK Edu as a department within this organization sells products (whether courses, trainings, key note speakers, etc.) only at slightly above cost-price. Their value lies thus not in generating revenue, but in sharing worldwide the principles by which Finland has achieved educational excellence through educational policy reforms in creating educational paradigm change, as evidenced in the study by Virpi Heinonen, "*Snowball Effect - In-service Teacher Training in Finland to Action Change*" (2019).

### **2.1.2 Customer satisfaction in education and teachers training**

Customer service is the central aspect of TAMK Edu's activities, representing both the main offering's delivery method as well as one form of quality assurance measurement tool. Customer satisfaction in the specific context of education can be considered a field that has not yet been largely explored (Virtanen & Runtti, 2015), especially correlated to the Finnish background and let alone TAMK's.

Assuming education is a product, providing service to customer segments and personas in the case of education export is highly demanding, due to the complexity of selling an intangible and multidimensional product such as education in an international setting. By multidimensional is understood that the service given by TAMK Edu customer managers will make use of principles from various different business subjects in different areas, mainly customer care, intercultural(ism), understanding and knowledge of Finnish education and global

education development, not to mention hospitality and experience economy from tourism field. In other terms, education export managers need to be skilled in a large area of expertise.

TAMK's current vision is to be the leading Finnish UAS (university of applied sciences) in global education by 2020 (TAMK, n.d.). It includes outgoing students, incoming degree students, teacher exchange and education export services traded by Global Edu, in summary, global mobility of both student body and staff. This is part of TAMK's internationalization strategy for growth.

According to TAMK's website, it is applied the PDSA cycle (Plan, Do, Study, Act) as framework for development of operations and quality management (n.d.). TAMK Edu also complies with this system, which relies heavily in feedback from the quality management actors, which TAMK identifies to be its staff and students' united community. Below is an image taken from TAMK's Quality Management's website:

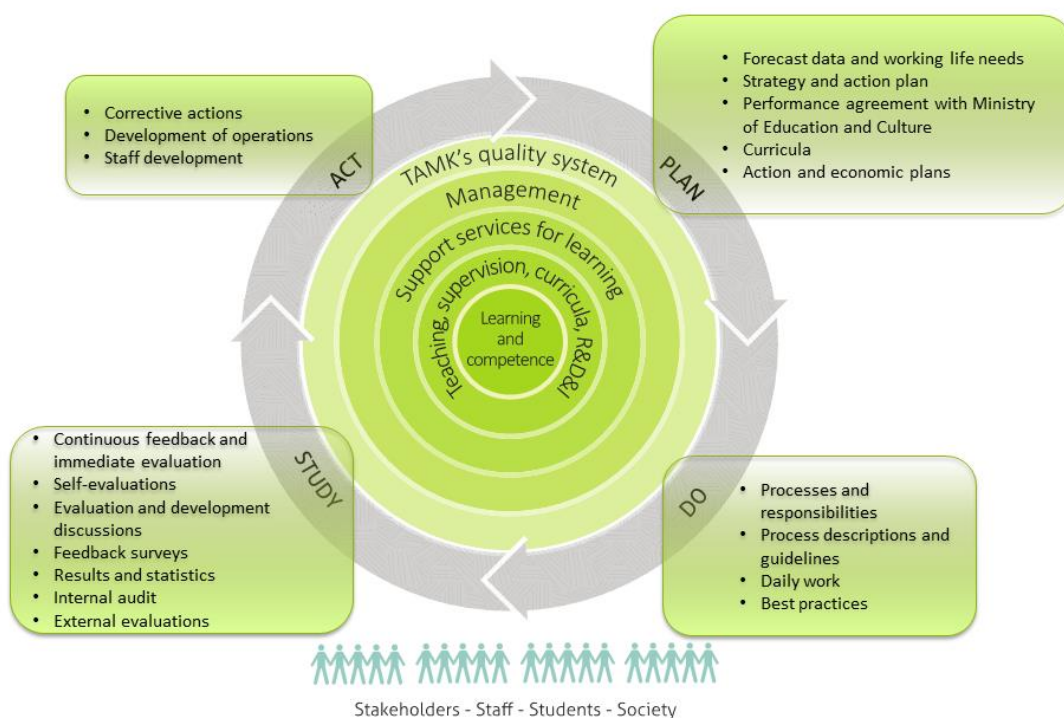


Figure 5. PDSA cycle. Note. Reprinted from *Quality Management: PDSA cycle* by TAMK, retrieved from <https://www.tamk.fi/web/tamken/quality-management>.

In practical terms, Global Edu collects feedback from the Giramundo trained teachers by having a feedback session at the final "class" of the training. In

addition to a traditional online feedback, agile feedback methods are applied. In the first edition of 2018, feedback was collected using the *fishbowl* technique, simply put, where participants are interacting with each other four at a time. For the second group, collection mode was by having participants choose subjective pictures that best illustrated their experience in Finland and TAMK.

These techniques are not arbitrarily chosen, rather the teachers/trainers who were most in contact with the group decide what method will be most dynamic. They take these techniques from agile methods in entrepreneurship and team building, hinting at self-evaluation, group and service evaluation, which is in fact taught during the course to the Giramundo trainees as a 21<sup>st</sup> century educator skill. Global Edu managers are present during these feedback sessions and make adjustments to next groups accordingly.

Finland is one of the Bologna Declaration's signing countries, participating in the European High Education Area (EHEA). As such, TAMK complies with the Bologna guidelines not only in terms of counting ECTS (European Credit Transfer System), but also by following the Bologna quality assurance requirements. Another relevant certification applied to TAMK is the external audit by the Finnish Education Evaluation Centre (FINEEC), which awards HEIs with a quality label valid for 6 years. TAMK's current label is valid until 2022.

Disassociating quality assurance from customer satisfaction for the sake of theorization is challenging, as one process feeds the other in a cyclical manner. It is important to highlight that quality assurance, ultimately the quality of the product or service, does not equal to customer satisfaction, as many other factors contribute to an overall customer satisfaction.

Quality customer satisfaction is the result between customer's expectations and delivered service, according to the satisfaction research model SERVQUAL (Parasuraman, Zeithaml & Berry, 1985). This model was used partially as base for this thesis' research in regard to the quantitative part, and it will be explained in depth in the Research methodology section.

The definitions of satisfaction vary grandly according to an individual's perspective, to his/her background, time when the research was made during the customer journey and even within related literature (Giese & Cote, 2000):

“While the literature contains significant differences in the definition of satisfaction, all the definitions share some common elements. When examined as a whole, three general components can be identified: 1) consumer satisfaction is a response (emotional or cognitive); 2) the response pertains to a particular focus (expectations, product, consumption experience, etc.); and 3) the response occurs at a particular time (after consumption, after choice, based on accumulated experience, etc) (...) Satisfaction was comprised of three basic components, a response pertaining to a particular focus determined at a particular time” (p. 2)

Biesok and Wyród-Wróbel identify in their study *Customer satisfaction – Meaning and Methods of Measuring* (2011) at least 21 different attributes by which customer satisfaction can be described, of which relevant to Giramundo case study are the non-economical ones related to feelings, such as ‘affirmation of the product’, ‘perception of the good’s value’, ‘perception of the good’s quality’ and ‘customer’s experience’. They also affirm that at the basis of customer satisfaction definitions is the concept of needs and their fulfilling.

In the case of Giramundo and Global Edu’s customers, who go to Finland to receive trainings, satisfaction towards needs and expectation fulfilling is highly associated with travelling and experiencing a new culture, unlike the customers from TAMK Edu’s domestic team. For the former group, their experience in travelling abroad, new activities and even new weather, all of these aspects that are not part of the education product per se, might amount for positive or negative satisfaction levels independent of the product.

Assessing customer satisfaction is particularly challenging within the education field, as “universities traditionally are recognized as owner of multiples customers and/or stakeholders” (Kotler & Fox, 1985; Reavill, 1997; Kanji & Tambi, 1999; Hwang & Teo, 2001; as cited in Pereira & Silva, 2003, p.1). Identifying the main customer is highly dependent on the context of the studied process, thus different methods need to be used for different customers /stakeholders when evaluating the level of satisfaction on a given product (Giese & Cote, 2000). They can also be further sub-sectioned, when taking into account that a same individual has different levels of satisfaction in response to different aspects of a same phenomenon (Biesok & Wyród-Wróbel, 2011).

Furthermore, a common point across the related literature is the concept of primary, secondary and tertiary consumer or customer (Kanji & Tambi, 1999; Robinson & Long, 1987), according to the degree of interaction with the main

product. Sometimes, this concept is hidden within different nomenclature, such as “primary participant”, as defined by Hewitt & Clayton (1999). *Consumers, customers and/or stakeholders* in this context are often terms that appear to be interchangeable, with slight differentiations from one author to another.

A simple example of this is the selling of a toy. The primary customer would be the children playing with it, while their parents are the secondary customer when they are the ones who pay for it. This would be an acceptable configuration of “primary vs. secondary customer”, if one was looking into researching a given toy’s usability, as the child in this case is the primary participant. On the other hand, if the research focus was “cost-benefit assessment”, it would be more suitable to put the parents as first customers. In an education service, the students could be the primary customers and their parents or employers, or anyone else who would pay for the service (even if own-paid), would be the secondary customer. Subsequently, in addition to these, other groups can be seen as stakeholders in this matter, such as school faculty (Ermer, 1993), society/government (Hewitt & Clayton, 1999; Hwang & Teo, 2001), families (Owlia & Aspinwall, 1996a), managers (Weaver, 1976) and all of these plus various other groups (Kotler & Fox, 1985; Karapetrovic & Willborn, 1997; Rowley, 1997; Owlia & Aspinwall, 1997; Reavill, 1998), as cited in the study ‘*A key question for higher education: who are the customers?*’ by Pereira & Silva (2003).

Regardless of the terminology used, the central idea conveyed by most studies is that identifying and selecting the customer or segment of customers to be researched is an important step, if not the first one, in achieving a valuable satisfaction measurement. These definitions are important to notice because one of the risks in productizing education (and its subsequent exporting) is knowing the customer fully (Parantainen, 2007) - an idea that can also be applied to satisfaction assessment.

In Giramundo’s case, it is possible to identify at least two immediate customer groups: the teachers that receive the training and the coordinators who place the order, including their boss the Education Secretary Aléssio Trindade, also in the role of payer as a representative of the state of Paraíba. By immediate customer is understood that these two groups are populated by the persons that TAMK Edu’s staff work directly with. Subsequently, these group’s own primary and secondary customers, for example the teachers’ pupils, their parents, society,

etc., could be considered TAMK Edu's tertiary consumers or "other stakeholders", generally speaking.

Table 6. *Giramundo's customers in accordance to the point of view assessed*

<b>Point of view when assessing customer satisfaction</b>	<b>Primary customer</b>	<b>Secondary customer</b>	<b>Stakeholders</b>
<b>Course quality</b>	Trained teachers	Coordinators	Pupils in Brazil, parents, faculty, Paraiba's education system
<b>Benefit-cost ratio</b>	Coordinators	Trained teachers	Same as above

All of TAMK Global Edu's customers are institutional organizations, such as universities, schools and governments. TAMK Edu in the Global front has not yet to this date sold services to natural individuals. Therefore, much of the trade can be reasonably perceived as B2B (business-to-business) in nature, for borrowing some characteristics from this kind of trade: all parties involved are not in the competence of natural persons, the business usually involves the exchange of larger sums of money, and, perhaps the most relevant one, the final consumer is not the buyer. Specifically, the value offer, i.e. education, will be passed along to the trained teacher's students, which are the final consumers. That is, if one accepts education as a product.

Accepting schools as businesses still falls onto a grey area morally. It is more applicable to perceive the services provided by an institution like TAMK as a B2G (Business to Government) or B2I (Business to Institution), as they are accurately that (in truth, entirely accurate would be I2I – Institution to Institution, as TAMK is a non-profit public organization). For instance, the Giramundo project is ultimately ordered by the State of Paraiba, needless to say a governmental cell and public institution. On the other hand, more often than not, GE's customers are private

schools or educational organizations. Be it as it may, the same principles and business logic are shared among B2B, B2G and B2I (Axelson & Vilgon, 2018). Small differences are in the intensity of needed lobbying and accountability sense, to name a few. In the particular context of education, it is also quite common to see collaborative work between the institutions.

Independent of how many layers of customers and their respective satisfaction requirements a certain product, service or solution may have, there is always a dominant value expectation that providers aim to be able to fulfill when marketing their services. This is often hand in hand with the paying customer's needs, irrespective of being on the primary or secondary consumer's role. In a B2G or B2I trade, the created value is to be shared with a public audience, for the improvement of society.

## **2.2 Post-graduate teacher training impact on student learning**

The main value mission in the Giramundo project is to create a paradigm shift in the public education provided by the state of Paraiba - and Brazil's in general, for that matter. One of the chosen means to achieve this paradigm shift is by training Paraiba's state in-service teachers in 21<sup>st</sup> century pedagogic skills, so that in turn they can teach their pupils to grow into more critical and engaging citizens, hopefully apt to improve society with innovative solutions.

Post-graduate training, continuation courses, open university and adult education are the pillars of the "lifetime learning" value in Finnish society. There is a vast range of post-graduate courses and specializations on offer. This value is also expressed in the Giramundo teacher training.

In Brazilian Portuguese these courses are dubbed as "recycling courses", when their purpose is to renew or add new skills to professionals after their graduation or long time in-service. As education is an organic topic, in the sense that new skills and competences are constantly being developed, the professionals in this field of work often seek this kind of courses. The correlation between student learning and teacher capacitation is not always clear in a straight path, because learning is an individual journey (Butcher, O'Connor Jr and Titus, 2018) and other variants affect it too, like socio-economic background (Sahlberg, 2015). However, there have been systems designed to create accountability and validate a

teacher's training level in relation to their pupils learning, like for example standardized tests among schools.

According to Adriana Bauer in her case study "*Is it possible to correlate student assessments to the training and education of teachers? The São Paulo experience*" (2012), it is clear that standardized tests like SARESP, the universal test for the state of São Paulo, have been instrumental in assessing the need and validity of post-graduate trainings for teachers from that state. At a national level, however, it is still rare to this day in Brazil to find substantial evidence that the participation of teachers in these experiences have indeed been able to contribute to the improvement of their practices or the academic performance of their students (Moriconi et al., 2017).

After intensive research and interview with educational coordinators from the state of Paraíba, it is safe to assume that there have not yet been created any standardized tests or other systems with the specific purpose of measuring Giramundo alumni and/or their students' learning capabilities. In the section "future research avenues", there is a recommendation to create a process that seeks this result; being the students a big factor in a long-term educational change, that this change would be documented and attested in objectively. Currently, other methods are in use (for example, observation by the coordinators), and they hold importance for bringing forward aspects that are not easily measurable or comparable and for showing them in an agile, modern approach (e.g. results publishing in social media by the students themselves). Yet, data obtained in a more systematic way could help to back up the desired educational reform, to those with power to make policy changes. Incidentally, administrative positions in Brazil in the public education system are tightly linked with politics.

Moriconi et al. in their literature review "*Teacher's post-graduate training: contributions from evidence-based literature*" (2017) state that "no texts were found that present reviews of empirical studies that have evaluated the efficiency of post-graduate teacher education programs produced in Brazil, nor in the context of Latin America as a whole" (p. 12). Gathered from studies produced in other countries, mostly from North America, they list the following characteristics to define an efficient post-graduate training: (1) focus on subject-related pedagogical knowledge, (2) active learning methods, (3) collective participation,



(4) prolonged duration and (5) consistency/coherence (Snow-Renner & Lauer, 2005; Yoon et al., 2007; Timperley et al., 2007; Blank & De Las Alas, 2009; as cited in Moriconi et al., 2017, p. 6). By 'efficient training' is also understood those trainings for which was found evidence of positive results, either on the participating teachers – changes in their work, knowledge or professional practices – or on their students (like in cognitive improvement, academic knowledge, etc.), which is one of the main questions to be investigated by this thesis in relation to the studied case.

All of the characteristics listed in the previous paragraph, as to how an *efficient training* is defined, are present in the Giramundo project to a greater or lesser degree. Two are particularly significant in creating the core of the program: 'active learning methods' and 'collective participation'. Participating teachers are strongly encouraged to be active learners, through the various methods taught during the course, and to replicate them in their own working environments with their students. In fact, "teachers as change agents are career-long learners, without which they would not be able to stimulate students to be continuous learners" (Fullan, 1993, p. 4).

Simultaneously, all work done during the duration of the training itself (1 month) and project cycle as a whole (8 – 11 months) is based on collective participation, in the form of group project design, coaching and close collaboration among trainees themselves and also between them and trainers. Fullan (1993) states that "the ability to collaborate on both a small- and large-scale is becoming one of the core requisites of postmodern society" (p. 5).

The program called *Vet – Teachers for the future*, for professors from the Federal Institutes in Brazil, preceded Giramundo. In fact, this is where the current Giramundo coordinators met. Each of the three cohorts of that program produced academic publications concerning the newly experienced learning of active methodologies and student-centered pedagogics, and their use on the Brazilian context. One of these articles, "*Student-centered learning: application and feedback from students at a Federal Institute of Education*" by Freitas (2016), states that 95,2% of students would like for classes to maintain student-centered approaches to learning.

While this data cannot be directly correlated to impacting student learning positively factually (or academic performance in itself), still, it was a positive

preview, although timid, that Brazilian students are open for learning methods that are more democratic; 97,8% of the students also stated that the developed activities helped the understanding of the subject in question and knowledge acquirement.

It is widely accepted that the skills needed in the contemporary world are not in line with the traditional way of teaching or subjects for that matter (Robinson & Aronica, 2015; Watson & Reigeluth, 2008). Technology has had a great impact not only in how people learn, but also in what kind of jobs are required now and will be in the future, what skills are nowadays needed for people to be effective at work, as citizens and in their leisure time (Ananiadou & Claro, 2009), not to mention the availability of information and easiness of diffusion. In this context, teachers need to adapt to other roles such as guide, coach, motivators, etc. (Perrenoud, 2001, 2005; Demo, 2007; as cited in Freitas, 2016).

Furthermore, unlike in Finland where teachers of any subject go through in-depth pedagogical training prior to starting work, in most countries (specially developing countries) post-graduate trainings are significant in reinforcing teaching methods; "pre-service training is essential to teach subject matter. In-service training is essential to teach teaching skills" (Farrell & Oliveira, 1993, p. 15). In a study from 2013 ordered by the non-profit organization *Todos Pela Educação* (All for Education), it was concluded that in Brazil 35,4% of teachers at elementary school level did not receive proper teaching education prior to work life, while in high school level this number reached 22,1% (Tinoco, 2014). In some cases, post-graduate trainings reveal to be the only opportunity for numerous in-service teachers to have contact with teaching education.

In this sense, teacher post-graduating trainings are a fundamental part of achieving a quality educational system. While there is some debate about whether and how these trainings effectively impact student learning (Angrist & Lavy, 2001; Jacob & Lefgren, 2004; Kane & Staiger, 2008), and that most of the literature searches for correlation with student achievement only in standardized tests, it is clear that they are important in keeping teachers up-to-date with the rapid ever-changing 21<sup>st</sup> century competences they need to pass on to their students. Teachers that work in a collaborative way, that learn together, are more apt to make meaningful school reforms in order to achieve a paradigm shift in education that will ultimately modernize it. They are important in enabling

teachers without formal training in pedagogics to take a time to learn and think the matter. This is ultimately the value that institutions like TAMK should aim to offer for their customers.

### 2.3 Paradigm shift in Education

One of the most watched TED talk of all times is the speech titled "[Do schools kill creativity?](#)" by Sir Ken Robinson (17 million views alone in the official TED YouTube channel), published in 7<sup>th</sup> January 2007. In it, the PhD best-seller author, one of the main voices for the need of a paradigm shift in education, goes on to explain how schools lack diverse stimuli that accommodates pupils' own individualities and how the system generally does not allow people to commit mistakes, which effectively diminishes the capability of coming up with original ideas - in his words, "if you're not prepared to be wrong, you'll never come up with anything original". The argument of schools killing creativity is also the base for his book "*Creative Schools: The Grassroots Revolution That's Transforming Education*" (2015), which explains in-depth how the skills needed in the contemporary world are not being taught, or rather stimulated, in a school system that was created over a century ago and suited for another era of development in human history.

There has passed 13 years since the speech (although it was published only in 2007, it was given on February 2006), but there has not been yet a fundamental change in mainstream schooling, on a global scale. Education reform is being actively discussed worldwide at all levels, from national policy makers to the students themselves, however the so-called revolution has been moving forward slowly, dragged through decades of heated discussion, confusion and misunderstanding among the many stakeholders in education (Schieber, 2018). One can notice the population's disaffection towards both the school system and the slow change, for example, as demonstrated in the following comments left on YouTube in the above-mentioned TED talk:

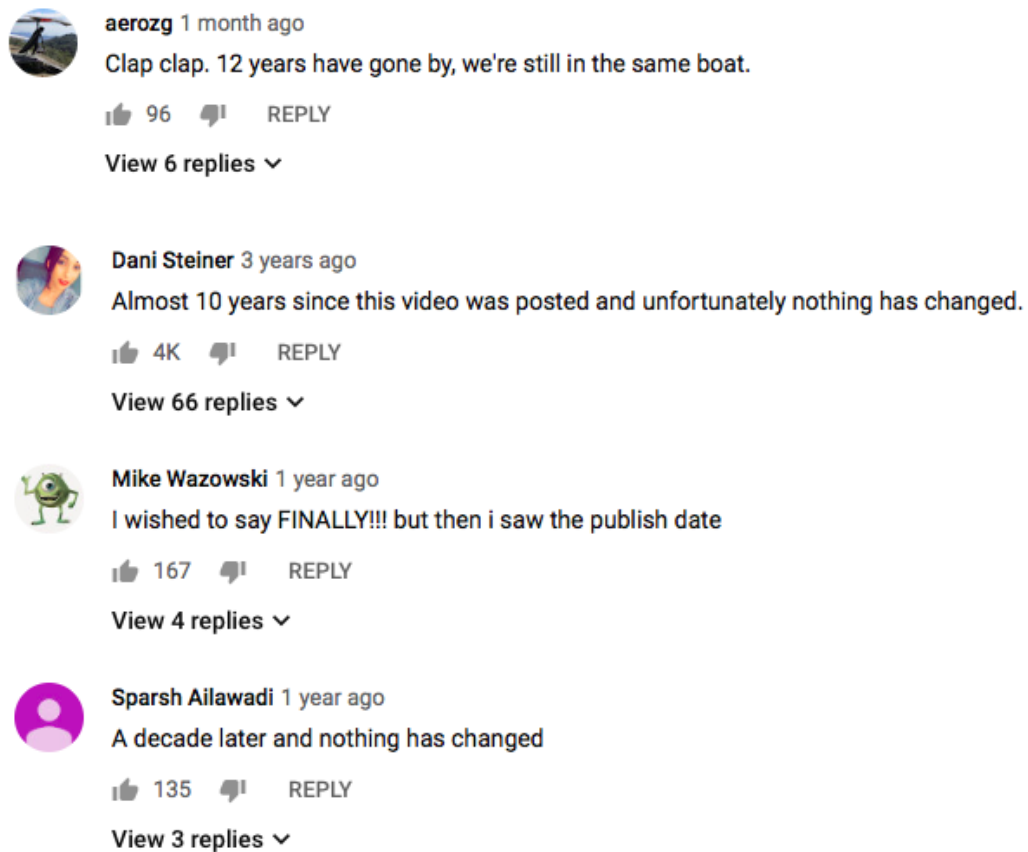


Figure 6. Screenshot of comments in the TED talk "Do schools kill creativity?", by Sir Ken Robinson. Published Jan 7, 2007. Retrieved from <https://www.youtube.com/watch?v=iG9CE55wbtY&t=33s>

According to the Merriam-Webster dictionary, a paradigm is "a philosophical and theoretical framework of a scientific school or discipline within which theories, laws, and generalizations and the experiments performed in support of them are formulated". Methodologies and practices that belong to a distinct pattern of thoughts.

The term *paradigm shift* was popularized by Thomas Kuhn, in his book *The Structure of Scientific Revolutions* (1962). In there, it is described the process by which this set of similar practices, concepts and beliefs is replaced by another one that is more applicable to a particular point in time, typically via revolution. He also states that "crisis simultaneously loosens the stereotypes and provides the incremental data necessary for a fundamental paradigm shift" (p. 89). The high dropout rates, low levels of literacy or numeracy upon graduating high school and the general lack of interest by children for traditional school (among innumerable other issues), constitutes an educational crisis worldwide. Above all, children are leaving school lacking the skills that jobs nowadays need,

unprepared for the challenges of the 21<sup>st</sup> century world, highly unmotivated and uncreative after years of “learning” information they will never use (Robinson & Aronica, 2015).

The central word when talking about the current paradigm shift in education is “learner-centered”. The outburst of information technology shifted the world from the Industrialization era to the Information era. For more than the past two decades, literature has been identifying that contemporary schools are still being established to serve the needs of an Industrial-age society (Toffler, 1984; Reigeluth, 1994; Senge, Cambron-McCabe, Lucas, Smith, Dutton, & Kleiner, 2000; as cited in Watson & Reigeluth, 2008), with their compartmentalized learning into subject areas and standardized age cohorts. In the Industrialization era, students had to adapt to schools, while in the learner-centered paradigm of Information era, the schools adapt to student’s learning individualities.

ASPECT	CURRENT PARADIGM	LEARNER-CENTERED PARADIGM
<b>World View</b>	<b>INDUSTRIAL AGE</b>	<b>NETWORKED AGE</b>
<b>Frame of Reference</b>	Factories and Assembly Lines	Networks and Lateral Connections
<b>Model</b>	<b>SCHOOL-CENTRIC</b> :All components of the system are designed for efficiency of education delivery in the context of standardized schools	<b>LEARNER-CENTRIC</b> : All components are designed for the education experience to be adaptable to the needs and potential of each learner and supports the highest possible outcomes for each and every learner
<b>Model Components</b>	Standardized age cohorts Linear curricula divided into subjects Education factories called “schools” Learning experiences designed to impart knowledge in long-established categories	Personalized learning that is competency-based and has a range of learning environments and adult roles Learning experiences enable learners to develop their knowledge, skills, and dispositions in a relevant and contextualized manner Learners are embedded in a network of stable and supportive relationships with adults and are encouraged to learn through self-directed discovery, with their peers, and with the guidance of adults

Figure 7. Note. Reprinted from Paradigm Shift: Learner-Centered Paradigm & Networked Age by Justin McKean, as appears in *We Are In The Midst of a Historic Paradigm Shift in Education*, by Craig Scheiber. Retrieved from <https://www.competencyworks.org/higher-education-2/we-are-in-the-midst-of-a-historic-paradigm-shift-in-education/>

A change in a whole era is the sum of mentality change across different subjects. The democratization of information permitted by the internet created new waves in human rights, such as the neo-feminism, racial awareness and body positivity,

to name a few. These all changed the way youngsters perceive themselves in the world, and how they acquire and treat information. The paradigm change in education is just a part of the paradigm change happening in all areas, that saw humanity go from the Industrialization to Information paradigms and must accommodate the growing mentality in 21<sup>st</sup> century of allowing people to be more their own selves, as much as it needs to accommodate the learning of the new skills 21<sup>st</sup> century jobs demand.

Finland is doing pretty well on both ends. The student's well-being is still more important than ranking in PISA tests, which Sahlberg (2015) attributes to professional strength and moral health of Finnish schools. Visitors to Finland have seen that teachers, who use child-centered practices that allow for their professional judgment to be activated, can produce higher results than their peers in other systems that are dominated by data-driven decision-making (Shirley, 2017). At same time, modern skills are being incorporated to curriculum like coding, starting early from 1<sup>st</sup> grade. Finland is the only country in Europe where coding is both mandatory and cross-curricular, "...as a new learning skill to complement reading, writing, drawing, and calculating" (Toikkanen, 2015, para. 11).

Another important aspect of education in Finland is that teachers are allowed to be leaders in their own contexts. In many ways, they have autonomy – and the moral purpose - to change or create new practices inside their own classrooms, as well as to collaborate with their colleagues on possible larger-scale changes. This is one of the capabilities that enable teachers to be change agents.

Michael Fullan is one of the main voices for empowering teachers to become change agents, as early as 1992 with the book *Change Forces: Probing the Depths of Educational Reform*. Since then, his numerous books and articles have been extensively cited in papers about change agency and its necessity for educational reform. He states that "new conceptions, once mobilized, become new paradigms. The new paradigm for teacher professionalism synthesizes the forces of moral purpose and change agency" (1993, p. 11).

"Those skilled in change appreciate its volatile character, and they explicitly seek ideas for coping with and influencing change toward some desired ends. I see four core capacities for building

greater change capacity: personal vision-building, inquiry, mastery, and collaboration (see Senge 1990 and Fullan 1993; [citation from original]). Each of these has its institutional counterpart: shared vision-building; organizational structures, norms, and practices of inquiry; the development of increased repertoires of skills and know-how among organizational members; and collaborative work cultures” (Fullan, 1993, p. 2)

A teacher as a change agent is “nothing more” than a teacher with high motivation levels, a moral purpose to *make a difference*, self-leadership and a career long learner, who creates change bottom-up and is supported by his managers and leaders top-down (Fullan, 1993; Beabout & Carr-Chellman, 2008; Heinonen, 2019). One by-product of Giramundo, a *hope* as it may, is that by taking the participating teachers from their day-to-day work for a month, giving them a time to just rethink their own professional activities, that the right environment for change agency could occur.

### 3 RESEARCH METHODOLOGY

A mixed methods approach to this research was the most suitable in solving its research question, i.e. what the impact results of Giramundo teacher training are. Because there hasn't yet been a study on Giramundo specifically, it was important that this first study brings out premises from different sources, or better, sections of the program. They have been identified in this thesis as different stakeholders, either as primary or secondary customers and consumers. This hopefully sets the ground for any further research later.

Given this scenario, choosing only one research paradigm, either quantitative or qualitative, would be detrimental in understanding the different perspectives in Giramundo's case. According to Shorten & Smith (2017), "a mixed methods design is appropriate for answering research questions that neither quantitative nor qualitative methods could answer alone" (p. 2). This is the case with the present thesis, because a quantitative method alone would not cover the different nuances in the perceived value of a teacher-training program. It would not provide a comprehensive testimonial of actual projects and changes with their implementations methods. This is an important information for the thesis commissioner, because TAMK Edu wishes to know *what* projects are active in Brazil and *how* they have been developing. Contrarily, a qualitative approach alone would not allow to quantify the levels of satisfaction and expectation meeting values, nor would cover the whole sample of 40 trained teachers in 2018 within the allocated research timeframe.

#### 3.1 Triangulation design, convergence model

The basic definition of triangulation is using more than one method to collect information on the same problem. This design is used when a researcher "wants to directly compare and contrast quantitative statistical results with qualitative findings or to validate or expand quantitative results with qualitative data" (Creswell & Clark, 2007, p.62).

For this research, the research model applied will be convergence or parallel: both qualitative and quantitative methods will occur concurrently, in collection and analysis. Although the two are independent from each other, their findings will



support together the same topics, fulfilling the criteria for a mixed methods approach. This model is used to confirm or corroborate quantitative results with qualitative findings, resulting in valid and well-substantiated conclusions about a single phenomenon (Creswell & Clark, 2007, p. 65). Both kinds of data are important parts in validating the concept behind the original hypothesis; that the Giramundo program is indeed a valuable tool in improving education quality in Brazil.

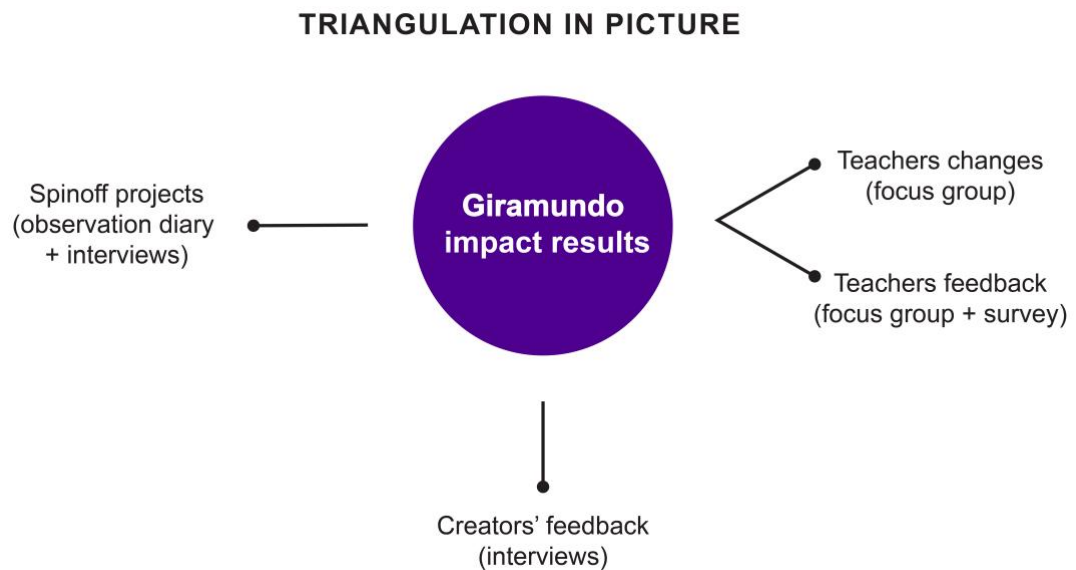


Figure 8. *This research's triangulation and methods*

The researcher does not believe in scaling the relevance of the perspectives of one research group over another for this particular research context, as in the qualitative data being sovereign to quantitative or otherwise. Instead, these equally significant perspectives will help build up a picture that is information-rich.

### **3.2 Research groups, their significance and instrument**

The total research population was divided accordingly:

#### **3.2.1 40 teachers trained in 2018**

They were asked to answer a questionnaire with close-ended questions, in scales of 1 to 5. In most questions, 1 represents the extreme negative and 5 extreme positive. This is the quantitative part of the research, created to obtain a broad level of satisfaction with the service by its consumers and to understand if there

were changes in their teaching methods after the course, which is basically the main objective of the training in itself after all.

The questionnaire had three main sections: *Giramundo follow-up*, *Response from local community in Brazil* and *Customer care*. For its creation, it was used the dimensions described in the customer satisfaction model SERVQUAL, as to how a customer evaluates service quality. Simply put, the dimensions are as following:

Table 7. Dimensions of SERVQUAL model

Dimension	Definition
<b>Reliability</b>	Ability to perform the promised service dependably and accurately.
<b>Assurance</b>	Employees' knowledge and courtesy and their ability to inspire trust and confidence
<b>Tangible</b>	Appearance of physical facilities, equipment, personnel and communication materials.
<b>Empathy</b>	Caring, individualized attention given to customers
<b>Responsiveness</b>	Willingness to help customers and provide prompt service

Note. Reprinted from *Delivering Quality Service* by Zeithmal et al. (1990, p. 26).

All of the questions asked in the questionnaire (a total of 22) had the SERVQUAL dimensions as a direction and method, although some used it in a more straightforward manner than others. The dimension 'Reliability' in particular was the dominating one in formulating the questions, especially in the *Giramundo follow-up* section, because its definition according to Zeithmal et al., that is, "ability to perform the promised service dependably and accurately", can be applied in general terms to the pedagogical questions too. By "pedagogical questions" is understood those ones that aim to identify what new teaching techniques the trained teachers have acquired during the course, which are important for the service givers to know what is relevant in continuing to offer in the sessions and what not. Since promoting changes in the teaching ways of these teachers is one of the course's desired outcomes, these questions can fall under the definition of a "promised service". Below are some examples with corresponding dimensions:

Table 8. Questionnaire's example questions and corresponding SERVQUAL dimensions

Dimension	Question (between parenthesis the answer range)
Reliability	<i>I came back from Finland motivated to make changes in my field of work</i> (1 not at all – 5 very much)
Assurance	<i>More specifically, my expectations about the quality of the classes and teachers...</i> (1 weren't met at all – 5 were completely overachieved)
Tangibles	<i>Day-to-day was well organized (e.g. timetable, transport, etc).</i> (1 disagree completely – 5 agree completely)
Empathy	<i>The care given by workers from TAMK Edu was...</i> (1 weak – 5 excellent)
Responsiveness	<i>I received all the support I needed during my stay in Finland</i> (1 disagree completely – 5 agree completely)

In terms of significance, it is important for the commissioner to have a comprehension of how satisfied the primary customers are feeling upon the service's completion. The trained teachers are both the first line in contact with the service as well as the possible change agents afterwards, thus in this sense they are the “thermometers” in customer satisfaction and offer value.

### 3.2.2 Giramundo management in Brazil

Personal interviews were conducted with two Giramundo coordinators, Alexandre D'Andrea and Janylle Ouverney-King, and the education secretary Aléssio Trindade. They are responsible for requesting the offer from TAMK, and thus their perspective is important in understanding the choice for TAMK as teacher-training provider, the recurrence of business and also its continuity, which is especially interesting at this moment for the commissioner to know.

Aléssio Trindade in the roles of State Education Secretary and Giramundo program creator, has a broader view of the impacts in the public education system (i.e. the “*big picture*”), whereas the teachers themselves have somewhat a closer, day-to-day perspective on their own localities. As head of Office, his vision for the state education is the steering force in terms of what direction the program should evolve to, thus an interview with him is important for the thesis because all development resulted from Giramundo should ideally be in line with the common vision for the future of Education in Paraíba.

### 3.2.3 Spin-off programs

There were two methods for this group:

a) Observation of training given by two Giramundo alumni, namely Giovania Lira and Iolanda Cortez, and personal interviews. After they came back from Giramundo in 2017, they created the ‘Dare to Create’ challenge as a result of Giramundo development project, much similar to Innoevent organized by TAMK. This project led to the creation of another one named “Collaborate and Innovate” (in Portuguese ‘Colabore e Inove’), culminating in a new school subject in 1st grade of high school, for which they have been training teachers with values taught in the Giramundo program. These values are active methodologies, student entrepreneurship and self-leadership, to name a few. Due to its massive change scale (the discipline is currently given in the whole Paraiba state across 90 schools), Colabore e Inove is the biggest development work related to Giramundo so far.

b) Interview with Carla Régis, another 2017 Giramundo alumni. Régis has been instrumental in diffusing the Finnish education ideals in the private sphere in Brazil, by giving trainings in active learning methodologies and youth entrepreneurship. She is also writing a dissertation based on her memoir about Giramundo.

These three former teachers will be defined in the thesis as ‘Change agents’. It is important to notice that they are not the only ones making changes as result of Giramundo, but because their changes can be observed in a larger scale than others, they were used as case study.

Table 9. *Research population, approach and method*

<b>Group</b>	<b>Approach</b>	<b>Method</b>
<b>Trained teachers</b>	Quantitative	Questionnaire
<b>Coordinators</b>	Qualitative	Interview
<b>Change agents</b>	Qualitative	Observation and interview

### 3.3 Data analysis methods

The central idea in analyzing a triangulation research method with different paradigms is finding convergent points in all the data, whether qualitative or quantitative. The researched data was coded regarding content, in terms of finding broad ideas that were recurring across all answers. The three most occurring were identified then as main themes by which the analysis would be sub-sectioned (naturally, remaining themes with less occurrence still made to the thesis discourse whenever needed to emphasize, corroborate or contrast other data).

Choosing a research design requires decisions in two areas: *when* the different sets of data will be mixed (during or after the analysis) and *how*. The *Triangulation convergence design* already states that data will be mixed after the analysis for each set is done, that is, in the interpretation phase. The next decision to be made within this design is about how these sets will be mixed in order to compose the multifaceted answer of the phenomena studied.

Creswell et al. (2007) describes that, “conceptually, there are three overall strategies for mixing quantitative and qualitative data. The two data types can be merged, one can be embedded within the other, or they can be connected.

Merging Data Sets: The data are merged when the researcher takes the two data sets and explicitly brings them together or integrates them. Researchers can merge the two data sets during the interpretation (by analyzing them separately in a results section and then merging the two sets of results together during the interpretation or discussion phase) or during the analysis of the data (by transforming one data type into the other type or consolidating the data into new variables)” (p. 83).

For this research, the two sets of data are merged in the ‘Conclusions’ section, similar to what Creswell et al. describes as “interpretation” above. Findings resulted from data analysis are presented contextually, instead of by nature of qualitative and quantitative. The two types of data support each other in demonstrating a facet of the phenomena.

### Qualitative data analysis specific method

The narrative analysis method is the one that most fits the current research. This method is used to analyze content from various sources, such as interviews of respondents, observations from the field, or surveys. It focuses on using the stories and experiences shared by people to answer the research questions (Bathia, 2018).

The experiences of Giramundo teachers and coordinators, their perceptions about the service received and possible results have been the central force in researching the main questions. The starting point for forming or proving the initially thought hypotheses is from these perceptions.

The researcher has conducted a research that is complex enough to construct a reliable narrative. The factors for this are the close contact with Giramundo participants and coordinators during their stay in Finland and the field work observation. Altogether, between pre-research and actual research, the process lasted one year.

### Quantitative data analysis specific method:

Descriptive analysis or statistics is a quantitative data analysis method that will produce absolute numbers. It is most helpful when the research is limited to the sample and does not need to be generalized to a larger population, like in the case of this research, as there is not a larger population than the 40 participant teachers in the Giramundo training. Use of percentage was the chosen route, to express how a value or group of respondents within the data relates to the total group of respondents in a given statement.

For the presentation, grades 4 and 5, the most positive values in the range (i.e. 1 extremely negative and 5 extremely positive) were combined. Reason for that is due to some respondents expressing that they were often inclined to give grade 5, but didn't feel confident in giving an "absolute positive". Some even stated that they would not give grade 5 only for the reason of pushing service givers to be innovative. In this sense, it seemed more fair and accurate to combine the two top positive values.

Also, only for purposes of presenting the analysis, some questions were slightly modified when listed in this document, in order to make more sense for a reader

who is not actually seeing all possible answers from the questionnaire. For example, in the questionnaire the question number 2 is “Now, months after the training, my level of motivation is...”, but in the thesis discourse it is presented as “Now, months after the training, my level of motivation is high”. That’s because saying “level of motivation is: 71,1%” does not make sense, meanwhile saying “level of motivation is high: 71,1%” does.

## 4 FINDINGS

The first main theme that kept being mentioned throughout all the research populations is *Entrepreneurship in Education*. Its footprint is very strong for Giramundo TAMK alumni, which is in line with the focus of TAMK's program (as in opposed to HAMK's focus on pedagogics). Over half of the interviewees affirmed they would go back for a deepening course in education entrepreneurship, and it is easily noticeable that Proakatemia as a school model leaves a big impression on the participants.

As matter of fact, all the new reform policies created are intrinsically connected to young age entrepreneurship or to facilitating connections of students with real-life working companies. Almost all of the development projects created by the last 40 Giramundos have nuances of entrepreneurship, on a smaller or bigger scale. Secretary Aléssio confirmed, in the interview for this research, that he has a concrete interest in replicating the Proakatemia model at university level in Paraiba, which is a great business expansion opportunity for TAMK Edu.

TAMK's expertise in entrepreneurship is certainly identified as TAMK's differential. This is one of the main points where all the parts (managers, teachers and TAMK Edu personnel) are in unison about, thus constituting proof that this is indeed the unique offer value by which TAMK stands out from competitors. There is a definite interest in subjects like 'teacher to coach', 'coaching skills' and 'team work', which are gradually making a bigger presence in the state educational network by means of development projects and new school subjects. The work done by all three of interviewed change agents (professors Giovania Lira, Iolanda Cortez and Carla Régis) orbit around core competences of entrepreneurship in schools and mentorship (individual coaching), which they identify as a direct result of their time in Finland during 2017 and, in the case of Giovania and Iolanda, also in 2018.

Another main offer value that was discovered throughout all researched populations was the concept of teacher motivation, which is in line with set goals by the service provider. This topic resurfaced often across both qualitative and quantitative researches, evidencing that teachers do come back to their work lives with highly increased levels of motivation after having participated in



Giramundo training, despite encountering difficulties such as precarious school infrastructure and/or reluctant management.

According to Thoonen et al. (2011), “motivational factors also mediate the effects of school organizational conditions and leadership practices on teacher learning and teaching practices” (p. 497). Much like in Thoonen’s study, conducted in the Netherlands with 502 teachers from elementary schools, the Giramundo alumni correspondingly identify this training as a significant and meaningful opportunity to reflect on their roles as teachers of Paraiba’s public education system. In many cases, this was manifested in a sense of self-efficacy, that empowered teachers not only to create projects in different scales within their community realities, but also to continue learning and sharing knowledge long after going back to Brazil.

Although the education secretary Aléssio Trindade points out that practically all of these development projects are important in their own contexts (personal interview, August 2019), a couple few have achieved more attention than others due to their scale in terms of school numbers and the fact that they became actual public policies. These, namely ‘Dare to Create’ and ‘Collaborate and Innovate’ will be described in detail throughout the upcoming sub-sections.

This thesis research shows that there is a clear cycle of modification for these participating teachers. The training in itself is a good platform for experimentation, self-reflection and seeing first-hand a stage of innovation in education, which directly correlates for motivation levels upon going back to work. This is the essential basis for these teachers to further their careers into becoming change agents, that in turn creates opportunities for reform policies - when balanced with top-down support from management.

Customer satisfaction is an essential part in this process, as the teachers need to have their expectations fulfilled and even overachieved, in order to set up the right environment where development planning may flourish. Customer satisfaction is an important meter because without satisfied, motivated teachers, there would be no impact results.

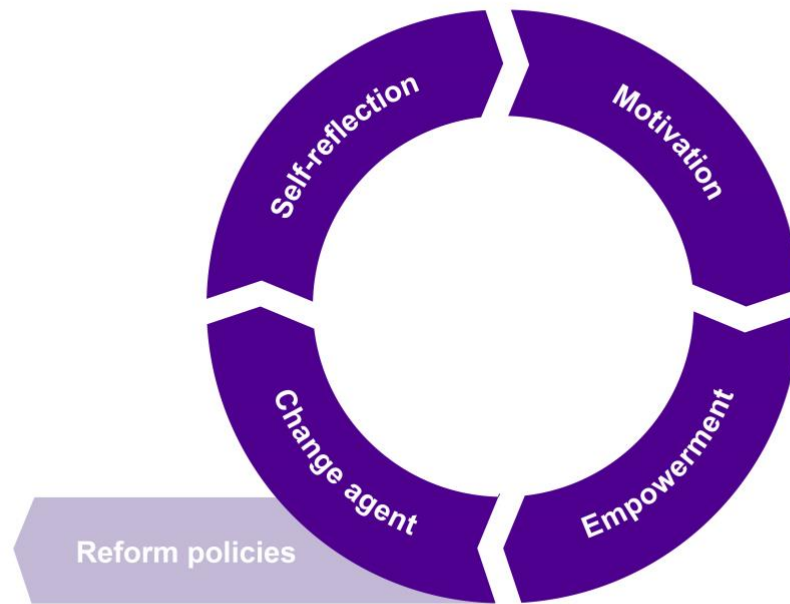


Figure 9. *Teacher cycle to change agency*

#### 4.1 Trained teachers' feedback

The very main question the quantitative research aimed to investigate was whether the teachers were leaving from the training satisfied with the service they had gotten. For this question, the answer is that 89.5% of the research population (in total, 38 people out of the 40 initially desired) gave either grade 4 (42.1%) or 5 (47.4%). Overall, an excellent rate in general customer satisfaction.

Furthermore, 94.8% of the respondents gave either grade 4 (21.1%) or 5 (73.7%) to the question "*I came back from Finland motivated to make changes in my work field*". Paying special attention to percentage of given grade 5, a stunning 73.7%, it is important to see that essentially 3 in 4 teachers believe their motivation levels changed radically after participating in the Giramundo course. The remaining 1 teacher in that group of 4 believes that their motivation level has changed at least significantly. As *teacher motivation* was already identified as the main propellant for changes in the work field, it is safe to conclude that TAMK Edu is being extremely successful in delivering its promised offer value for the state education

secretariat, by sending back motivated teachers into the public education system of Paraíba.

In respect to 'Customer care' section, the respondents are in their totality exceedingly happy with the customer care they got. Two out of the three questions got a 100% grade 5 satisfaction rate and the remaining one got 97,3%. It is proved that the teachers feel very welcomed and, not only that, but each individual's particular needs were well attended to.

In the sub-section of the questionnaire "open feedback", where respondents could give feedback in free form, it was often noted that the sense of attentiveness in the relationship management given by Mrs. Virpi Heinonen and Director Carita Prokki were important factors in giving the grade 5 in satisfaction with customer service.

*"In relation to the whole TAMK Edu team, I felt protected in a strange country"*

*"I had an excellent support by all from TAMK Edu, from the director to the lecturers. Very receptive people and ready to attend to my needs."*

*"Everyone was very lovely, kind, generous and fascinating. I do not have words to express the affection I felt by all from TAMK Edu (...)"*

For many of the respondents, it was especially important that there is a Brazilian national working in TAMK Edu, who could communicate in the trainees' own language, as most of them do not have very strong skills in English language. It was also often mentioned that having a Brazilian as host was helpful in seeking their needs not only as trainees or learners, but also as tourists, which contributed to their high satisfaction levels about the Finnish experience. This is another differential that gives TAMK Edu's offer an edge and uniqueness, in relation to other Finnish UAS doing education export.

Below there are the main questions from the questionnaire:

Table 10. Questions and answers from feedback research with Giramundo participants

	SERVQUAL Dimension	Question	Answer grade 4 and 5 combined
Giramundo follow-up	Reliability	I came back from Finland motivated to make changes in my field of work	94,8 %
		Now, months after the training, my level of motivation is high	71,1 %
		I'm satisfied with the number of organized visits to other education institutions (e.g. primary schools)	47,3 %
		I incorporated new teaching techniques after the training in TAMK	89,5 %
		In my opinion, the three biggest problems with the course are	Short duration of the course (84,2%), lack of contextualization to Brazilian public system (73,7%) and too little interaction with Finnish educators (39,5%)
		My expectations about my experience in Finland were overachieved	84,2 %
	Assurance	More specifically, my expectations about the quality of the classes and teachers were overachieved	81,6 %
		<b>In general, I'm satisfied with the Giramundo training from TAMK</b>	<b>89,5 %</b>
		I feel resistance by the teachers or managers in the sense of giving me autonomy to apply the newly learned techniques	52,6 %
		My students noticed differences in my way of teaching after the training in TAMK	60,5 %
	Empathy	The care given by workers from TAMK Edu was excellent	100 %
	Responsiveness	I received all the support I needed during my stay in Finland	97,3 %
	Tangibles	Day-to-day was well organized (e.g. timetable, transport, etc.)	100 %

The lowest grade rate of all questions was concerning the number of extra visits to other education institutions, which could be identified as the so-called “educational tourism”. This activity is booming in Finland following the results in PISA (Business Finland, April, 2018), but according to Dr. Carita Prokki (personal interview, August 2019), there is a clear difference between the educational tourism practiced by some Finnish and/or foreign agencies in Finland and the educational export done at TAMK: the Giramundo program does not have as one of its goals to just observe schools, but rather to propose a broader shift in the educators’ mindset. This is achieved by aligning some visits to schools with discussing and practicing modern techniques by means of lectures. In contrast, programs that qualify as educational tourism are typically built around school visits and have much shorter duration. The trained teachers have opportunities to meet with Finnish teachers and see schools, but most of their one-month course is dedicated to reviewing topics within the 21<sup>st</sup> century educator theme.

## 4.2 Change agents

From the interviews it is clear to gather that, both on management level and teacher level, there is a compound effort in changing the current educational paradigm in Paraiba state.

Like mentioned earlier, in order for this cultural change in education to happen, it is essential that teachers feel enabled from top leaders. It is indispensable that they receive genuine autonomy within their classrooms to build and implement innovative methodologies, as well as to foment the creation of projects in form of new disciplines and/or public policy.

Nonetheless, even with top-down support, only the *will* to change is not enough. These teachers need to learn how to grow into change agents: how to create change in a way that is systematic, sustainable and collaborative. For that, they need to interiorize the right tools and skills that change agency requires.

Michael Fullan states in his article “*Why teachers must become change agents*” (1993) that “teacher education programs must help teaching candidates to link the moral purpose that influences them with the tools that will prepare them to engage in productive change” (p. 1). The research shows that the Giramundo program works greatly as a provider of those tools, closing the gap mentioned in

Fullan's speech. Keeping in mind that Giramundo participants are already in-service teachers, they benefit from having immediate chances for implementing changes right after the training. This is one of the contributing factors for an active paradigm shift (Heinonen, 2019).

The moral purpose and passion for change are already there in most of the Paraiban teachers even before they go to Finland. Coming from a place of hardship, precarious school infrastructure and students that come from difficult socioeconomic scenarios, it is expected that the desire for improvement is well rooted in their practice.

Nonetheless, these attributes are amplified when a teacher passes through Giramundo, by receiving time for self-reflection and contact with a culture where teaching is one of the highest regarded professions. This is evidenced by the 63,1% who affirm their role as an educator has changed after going back to Brazil, a figure that might be bigger if more local school managers would also be aligned with change vision - as 52,6% say they feel resistance by colleagues and managers to apply the newly learned techniques.

For a great number of teachers, the Giramundo training and Finnish experience are divisors in their careers. Quite many teachers made a point throughout the interviews and open feedback to give testimonial about their self-change, few listed below:

*"No other professional experience has been so meaningful to me. I'm just so thankful to the local and Finnish coordination of Giramundo. To the teachers and all the coaches who helped us and participated with us in this experience."*

*"My experience in Finland was much more than I could imagine. It expanded my perspective on education, culture, and myself as a person. I am very grateful to the creators of this project and to life for giving me such a moment. I hope someday to be able to set foot on Finnish soil again."*

*"Everything has changed: teaching methodology, I came back happier and believing we can still do something for our students"*

It is extremely significant that Paraíba's education secretary is a former teacher with a long-term career, which has experience in administration at a federal level too. Together with his proactive manner of running office and modern educator profile, all the fundamental circumstances are set to support grass-root change; albeit, there is still a lot of work in changing some mindsets of the local school directors. The change vision needs to be better implemented throughout the hierarchy chain – or ideally this chain would rather be altered for a more horizontal one.

Factually, the interviewed teachers show a great degree of trust in the secretary's clear leader vision, a very important feature in collaborative work. Should there be no visionary, strong leader in a position that has political power to push forward public policies, even those teachers that excel in self-leadership would probably be at a loss to find outlets in which to execute their ideas.

One example of the modern-thinking characteristics in Secretary Aléssio's vision for Giramundo was the decision to keep minimum selection requirements to only the necessary basics. That allowed for teachers from various backgrounds (such as different ages, subjects, school level and in-service time) to apply for Giramundo, making the participants quite diverse and reaching many schools in the state's country side too. For instance, in 2018 there was a participant math teacher aged 24, with less than two years of in-service time (in HAMK, there was another math teacher aged only 21). In contrast, there was in the same cohort a director with 30 years of in-service time. The secretary is a firm believer that these two very different experience ranges and motivation levels may benefit from one another, which was indeed observed during the course's execution and later project development.

The only identified downside is that one of the minimum requirements is being proficient in English. Many of the applicant teachers have very good projects, but due to not speaking English they are left out of the selection process. This has been discussed and might change in the next cohorts, as TAMK Edu can provide for an interpreter.

Interviewed teacher Carla Régis can also be identified as an active change agent. Much like other Giramundo alumni, she states that the program was up to that

moment “one of the most disruptive experiences to which I have been exposed” (personal communication, April 2019).

Going back to Paraiba, Régis became involved in many projects in the subjects of active methodologies and school entrepreneurship. Her Giramundo development project was a local fair about recycling and sustainability, while at the same time doing the ‘Maker challenge’ (student entrepreneurship) in a private school. Shortly after, she went on a study leave from her contract with Paraiba State in order to dedicate her time to a MBA in Entrepreneurship and Innovation, with emphasis in the Education field, while still working in private schools.

The work in the private education system is in many ways different from the public one, like described earlier in the Theoretical Framework section of this thesis. Furthermore, Régis’ especially highlights that, in her view, teacher accountability is much stricter in private schools than in public ones, because paying parents are more assertive in demanding short-term results from school directors, which in turn are pressured into demanding results from teachers, often in the form of better results in standardized tests. For a modern methodology to be implemented, there needs to be a change of mentality on the parents too, a process that is often resisted to (personal interview, April 2019).

On the other hand, the bureaucracy to procure funding for post-graduate training might be smaller and other material resources are less scarce too. In addition to regular teacher position, currently Régis works as a trainer who implements new methodologies, tries them out and then goes on to sell trainings about the successful ones (in the interview, she wanted to make a point that she gives trainings for free for state schools, as a payback for the Giramundo opportunity).

Through her active experience in these multiple fronts, she gradually started to gain notoriety as a subject expert, receiving invitations to participate in panel discussions and immersion programs in Brazil and abroad. Some examples are the Silicon Valley, Portugal and China, always talking about her experience in Giramundo and Finnish education.

Carla believes the Giramundo experience helped her see that entrepreneurship has a different meaning in Brazil than it has in Finland; in the first country, it is seen more as straight-forward creating and selling of a product, while in Finland it is more the case of social welfare. She hopes to foment a change in the learning culture of her own country.



### **4.3 New public policies created as a direct result of Giramundo TAMK**

Each Giramundo participant is a potential change agent. Secretary Aléssio expresses in his interview that a group of 20 Giramundos means a group of 20 (change) seeds.

From the 40 participants in 2018's cohorts, 38 actually went on to execute the development projects they had planned while in Finland, not to mention workshops for their school colleagues. These have been in the grand majority experience sharing and collaborative work occasions, showing that the replication model envisioned by Giramundo creators is actually happening in practice. It is safe to say that a good number of teachers is indeed applying modern theories and techniques to the best of their abilities within their own contexts.

Still, some get more prominence than others due to a combination of different factor sets that may result in ideal circumstances to become large-scale policy makers. These factors may be finding like-minded team colleagues, personality, time availability, professional profiles, etc.

Teachers Giovania de Andrade Lacerda Lira and Luisa Iolanda Cortez met during their Giramundo cohort in 2017 (the first one to happen in TAMK). Giovania, a former chemistry teacher, and Iolanda, history teacher and school principal, found in TAMK's entrepreneurial education a culture that suited their identities as educators.

Giovania and Iolanda have really embraced the essence of Finnish education and TAMK teaching culture. Their element is coaching skills and entrepreneurship in schools as a learning practice, committed to employing an education that is humanized and student-centered. It is truly remarkable how faithfully they can reproduce the training given in TAMK locally in Paraíba, showing mastery in applying the techniques practiced in Finland to their state's needs. They too believe and concur that there is a need to change the concept of entrepreneurship in Brazil.

Their relentless work during 2018 and 2019 resulted in 4 public policies, 2 of which will be described in detail below. Giovania and Iolanda currently work exclusively on the coordination of these programs.



Figure 10. Diagram with the progression of main projects resulted of Giramundo TAMK

#### 4.3.1 'Dare to Create'

'Dare to Create' is a state program of innovation, entrepreneurship and creativity, aiming to form a critical mass of students and teachers, thus enabling educational, social and economic impacts. It covers the areas of educational technologies and sectoral development.

The program has four focal points of action: 1. Innovation, by encouraging innovation marathons; 2. Competences, through the initiation of applied scientific research and the development of prototypes, simulation and tests, through articulation with partner institutions and local productive arrangements; 3. Horizon Dare To Create, which aims at developing business plans, market analysis, launching new products, incubating and accelerating entrepreneurial groups in innovation poles; 4. Immersion, by promoting exchanges with partners, national and international institutions, in order to enable and expand an entrepreneurial network (Lira & Cortez, 2019a).

It aims to challenge learners from different school units to work collaboratively and innovatively, seeking interesting solutions to problems created by the productive sector which have not been successfully solved up to the moment; or project new options for newly developed products for the market (Ouverney-King, 2019).

### 4.3.2 'Collaborate and Innovate'

'Collaborate and Innovate' is, so to speak, the gem of Giramundo so far. It is the project that is doing in largest scale and most methodically a replication of the Finnish education culture. In the form of a discipline available for 1<sup>st</sup> graders of high school, the project aims to systematically establish the development of 21<sup>st</sup> century skills in teachers and students across the State.

Teachers Giovania and Iolanda came back from their Giramundo experience in December 2017 and started working immediately on a pilot for this project. With only 60 students and 10 teachers, they managed to prove the viability and importance of a project that aims to fulfil a demand for entrepreneurial education in Paraiba, through the creation of a learning environment that is, above all, collaborative and humanistic.

Then, it became a discipline in one school for 30 students, starting at the school year in March 2018. In November and December 2018 Giovania and Iolanda go back to Finland for another immersion in TAMK, this time exclusively in Proakatemia, under the mentorship of professor and coach Hanna Saraketo. Together, they built a program for escalating the discipline.

By the beginning of the next school year (March 2019), 'Collaborate and Innovate' is a discipline present in 90 schools with 120 teachers trained to "teach" it (between quote marks because the role of a teacher in this discipline is not traditional), reaching over 3000 students.

Needless to say, the impact on the public Education system is quite significant. The teachers who are trained for this discipline are selected based on their profile for advancing a paradigm shift, and the *will* to see change. Many are teachers who would make good participants in Giramundo, but for one reason or another cannot participate, and a few are Giramundo alumni too.

This is how the discipline is described in their own words:

"Collaborate and Innovate is a discipline that aims to build an entrepreneurial culture in schools and the development of 21<sup>st</sup> century skills in teachers and students. This course was conceived through a partnership between the State Department of Education, Science and Technology and the Tampere University of Applied Sciences (TAMK) (...) The training of the Collaborate and Innovate teachers consists of the following objectives: to understand what are active learning methodologies and how

to apply them; study the concept of entrepreneurship applied to education; reflect on strategies for the development of student autonomy; analyze the teacher's role, focusing on inter-disciplinarity and skills for the 21st century professional (communication, creativity, collaboration and critical thinking); understand the importance of the 2030 Agenda and the 17 UN Sustainable Development Goals applied in school actions; foster digital literacy and citizenship; understand and develop skills assessment methods. Thus, projects focusing on this proposal should address strategies that meet the objectives described in the formative arrangement for teachers” (Lira & Cortez, 2019a, p. 1).

A good part of the trainees states that there is a high level of satisfaction with the discipline by both teachers and students. The researcher could attest during observation that these teachers are very well engaged in the trainings. Many give feedback similar to what Giramundo participants do, in terms of motivation levels and mindset change. Even if the Finnish experience cannot be naturally reproduced in Paraiba, the training is still a valid replica of TAMK's and Finnish education's principles, in addition to those of Brazilian educators like Paulo Freire.

## 5 CONCLUSIONS

Like said in the sections above, teacher motivation to produce change is the base of the desired educational paradigm shift for the public educational system of Paraíba. Much like secretary Aléssio Trindade had envisioned in the beginning of Giramundo program, it is proved trough this research that once the teachers from the state network are exposed to a country leader in education such as Finland, that they can begin to envision how education could help shape the future for their own local communities. Finland and its education, displayed through school visits and lectures, works much in the manner of a lab for these teachers. In other words, the main value lies not in new, unheard of methodologies they could maybe learn while in Finland, but in seeing how theoretical pedagogical knowledge can be applied in practice, when there is a culture change that walks hand-in-hand with a modern, student-centered educational paradigm. Also, how an impoverished country that went through decades of war managed to change its reality by mean of investment in the educational system.

Passion for changing is observed in agents at all levels throughout the research population. As a reminder and to simply put, an agent in this context was defined earlier as any Giramundo alumni who pushes their development work further than the minimum required by the program's rules (i.e. mandatory colleague workshop and local project development). The quality of service provided by TAMK Edu, as well as the structure of the program idealized by TAMK professors Hanna Saraketo, Juha Lahtinen, Sisko Mällinen and Mark Curcher (among others), has shown to be a definite catalyst for the teachers who have the profile for change agency.

This research showed that there is a collective concern in modernizing Brazilian education by implementing new methodologies, which are in line with the current education paradigm present in Finnish basic education. This was observed in all directions, starting from the Secretary's vision to the trained teachers (top-down enablement), to bottom-up by the teachers' self, grass-root leadership, showing that currently in Paraíba there is a point of convergence occurring. Convergence is the joining of efforts between grassroots leaders and those in positions of authority (Heinonen, 2019).

In fact, the theories related to this topic raised in Heinonen's study are proven also in the case of Giramundo alumni, particularly Giovania Lira's and Iolanda Cortez', as their bottom-up leadership manifested in the creation and execution of successful pilot projects met with the top-down desire for change, resulting in the large-scale policies described earlier in this paper.

The interviews with these teachers and Giramundo coordinators show that there is an excellent opportunity for TAMK Edu to make an even stronger footprint in the Brazilian market, either continuing as a seller-to-buyer service provider, or as in a more collaborative manner. The customer satisfaction rates, for instance, and the efforts in customer relationship up-keeping after they go back to Brazil, may answer for a certain sense of collaboration work, as in alumni still feeling connected to TAMK even after completing the course cycle.

The ramifications and impacts of the Giramundo program are starting to become very clear for the local community in Paraiba. The state's education secretariat is gaining well-deserved attention to what are called locally "impulsion" projects. For TAMK, to play an important part on this vast education reform, it is exceptionally rewarding in terms of brand building.

The detailed impact for both sides is better explained below.

## **5.1 Educational system impact**

It is clear that the program is extremely important in promoting and advancing the shift to a modern education paradigm in various different ways, but especially in creating change agents, who come to be incubators of new ideas.

For Secretary Aléssio, creating self-leaders is the first reward from Giramundo. The research found evidence this is in fact happening as a result of the project. Also, by means of emphasizing collaborative work skills, it contributes tremendously to creating a stronger network of accredited professionals, who are committed to the vision of moving the educational paradigm to one where the student is autonomous and protagonist of its own learning process.

It is important to notice that the impact created is not necessarily in a straight forward or what could be called anticipated way, such as increases in students' grades. In order to evaluate that point specifically, standardized tests would have to be developed and applied with this particular goal in mind. Indeed, it was not

found throughout the research any systematic or objective data to back up that students' grades are improving, although based on teacher's testimonials, it is logical to assume they are.

The important point to realize is that the State is making a concrete effort in caring for the students as a whole, more so than the focus on grades as seen in conservative educational paradigms. The school attains a bigger role in the youngster's life, as an institution that provides holistic learning and a safe place for dialogue, which is more in line with the needs of Y generation. The mission is to be improving student's well-being and trust in their own life project, as well as the inclusion of students who are not typical learners – or like they are often called in Portuguese, “outside the curve”.

As the educational system gets progressively more democratic, the public policies created during 2018 and 2019 show a trend to offer, in addition to regular curricula, supporting projects and/or disciplines that bring students closer to professional education and work life. Teachers who participated in Giramundo believe they are perceived by their peers as achieving a level of accreditation or authority, which allows them to more easily push plans into action, since they are certified by a university of applied sciences expert on entrepreneurship such as TAMK.

It is also important to notice that while Giramundo is a policy of post-graduate training for teachers of the *public* education network, Carla Régis' case shows that ramifications may also happen in the private sector. This could be the start point of a path for homogenizing the whole education system towards a common paradigm. Unifying the public and private systems has been identified by Pasi Sahlberg (2015) as a turning point in Finnish education history, and one of the biggest factors to explain why the country excels in this and other fields.

## **5.2 Impact results for TAMK Edu**

The educational doctrines currently trending in Brazil match to those of TAMK's expertise. One change action creates solutions for problems, but also new demands to be addressed. Giovania and Iolanda's return to TAMK, especially within one year of their original Giramundo training, shows that there is a real

need and opportunity for TAMK Edu to offer specialization by-products for Paraíba's Education Secretariat.

These change actions also have the power to reverberate in the local industry through media coverage and awards, possibly bringing new business leads. The research shows that the Brazilian market is very favorable for the import of Finnish educational products. The gained experience from a long-term successful relationship with a Brazilian public office puts TAMK Edu in a position of advantage, and as Giramundo's results gain more recognition, so it sets the ground for TAMK Edu as a brand to be strengthened internationally.

On the other hand, increased recognition also means that it may raise further interest about the Brazilian market by other Finnish education providers. This research's quantitative part proves that TAMK Edu's staff is very knowledgeable in dealing with Brazilian customers, however, it also suggests that the moment asks for a more assertive strategy in offering new services, keeping in mind that the Brazilian business culture is a lot more competitive than Finnish.

In this sense, the concept of TAMK ambassador could be a valuable resource. Brand ambassadors have been used a lot recently in connection with social media, but the notion can also be applied for the line of business TAMK Edu is at. "Developing networks of communicators and development resources, such as ambassador networks, could with advantage be seen as an integrated, if not central, part of Place Brand Management" (Andersson & Ekman, 2009, p. 45). Just like each Giramundo participant is a potential change agent, also each Giramundo participant is a potential TAMK ambassador locally in Brazil.

As a matter of fact, TAMK already has a program of that nature in connection with the Tampere ambassadors network, targeted towards increasing brand awareness. TAMK Edu could use a network of ambassadors with this goal too, and furthermore as international local representatives. Carla Régis is a great example of how a Giramundo might eventually become an educational agent and bring in sales leads. The high satisfaction rates found in the research justify customer loyalty and ambassadorship, especially when they are having life changing experiences.

In addition, teachers who feel connected to TAMK after their trainings are more likely to return with solid collaborative projects, which benefit TAMK academically as well in research, development and innovation, as envisioned in its



development strategy (TAMK, 2019). The diversity of backgrounds and cultures is a positive force to help deepen TAMK's expertise, as can be inferred from the title of the book "*I'm not a professor, I'm an educator' – Finnish education meets Brazilian creativity*" (Mällinen & Prokki, 2016). By disseminating a culture of collaborative work, TAMK opens a channel by which students and staff may experience study or work exchange.

### **5.2.1 Continuation of business**

Taking into consideration all the points above presented across this paper's discourse, the following business continuation recommendations are sensible:

- Creation of a coaching and entrepreneurship training, tailored for the new policies developed
- Possible extension of regular Giramundo training, e.g. a pre-embarking or 5<sup>th</sup> week in Brazil as an acting response to the dissatisfaction with contextualization issues
- Creation of an officially established TAMK ambassadors network, with the goal of systemizing promotion and agency
- Creation of exchange programs for Prokatemia students to help with development projects' support and follow up
- Push further the idea of implementing an interpreter during Giramundo trainings, in order to elevate the quality of selected participants

### **5.3 Recommendations for future avenues in research**

The first and utmost recommendation is that a research is made with the students of the public education system to see the impact on their learning aptitudes or grades and possibly find correlation with the Giramundo teacher training. Although standardized tests are in many senses old fashioned, perhaps even counterintuitive given the movement to implement a new educational paradigm, still, it would be important to follow up and document this change. A study like this would be pioneer in the field in Brazil too. A change in culture and investment in education will most likely take decades to be evident, thus it may be valuable to create tangible data for the more conservative stakeholders as well.

A study like that would be imperative to “present student results in assessments of cognitive or non-cognitive aspects; or observations of teacher practices by third parties or teachers' perceptions of changes in their knowledge and practices, reported in questionnaires or interviews” (Moriconi et al., 2017, p. 13).

Recommended initial literature on the subject:

Angrist, J., Lavy, V. (2001). Does teacher training affect pupil learning? Evidence from matched comparisons in Jerusalem public schools. *Journal of labor economics*, 19(2), 343-369.

Bauer, A. (2006). *Usos dos Resultados do SARESP: o papel da avaliação nas políticas de formação docente* [Uses of SARESP Results: the role of evaluation in teacher education policies]. Doctoral thesis. Education Faculty, University of São Paulo, São Paulo.

Bauer, A. (2012). É possível relacionar avaliação discente e formação de professores? A experiência de São Paulo [Is it possible to relate student assessment and teacher education? The São Paulo Experience]. *Educação em Revista*, 28(2), 61-82.

Jacob, B., Lefgren, L. (2004). The impact of teacher training on student achievement - quasi-experimental evidence from school reform efforts in Chicago. *Journal of Human Resources*, 39(1), 50-79.

Kane, T., Staiger, D. (2008). Estimating teacher impacts on student achievement: An experimental evaluation. NBER Working Paper No. w14607. *National Bureau of Economic Research*.

Moriconi, G., Davis, C., Tartuce, G., Nunes, M., Esposito Y., Simielli, L., Teles, N. (2017). *Formação continuada de professores: contribuições da literatura baseada em evidências* [Teacher's post-graduate training: contributions from evidence-based literature]. São Paulo: Textos FCC.

Literature on the following specialized niche subjects is particularly scarce: ‘product and customer on education specifically’, and ‘customer satisfaction in education export’. As the education export industry is growing, in Finland exceptionally, studies in this area would increase the field’s knowledge base.

Preferably they would be in English language, so they could reach a bigger number of scholars who are having their attention turned to Finland and its education system.

## 6 REFERENCES

Alves, J., (n.d.). *Aléssio Trindade destaca avanços na educação da PB* [Aléssio Trindade highlights advances in Education in Paraíba]. Online newspaper. A União. Retrieved from [https://auniao.pb.gov.br/noticias/caderno\\_diversidade/201ca-escola-cidada-e-focada-no-projeto-de-vida-do-aluno201d](https://auniao.pb.gov.br/noticias/caderno_diversidade/201ca-escola-cidada-e-focada-no-projeto-de-vida-do-aluno201d)

Ananiadou, K., Claro, M. (2009). *21st Century Skills and Competences for New Millennium Learners in OECD Countries*. OECD Education Working Papers, No. 41, OECD Publishing. Retrieved from <http://dx.doi.org/10.1787/218525261154>

Andersson, M., Ekman, P. (2009). Ambassador networks and place branding. *Journal of Place Management and Development*, 2(1), 41-51. Retrieved from <https://doi.org/10.1108/17538330910942799>

Angrist, J., Lavy, V. (2001). Does teacher training affect pupil learning? Evidence from matched comparisons in Jerusalem public schools. *Journal of labor economics*, 19(2), 343-369.

Axelsson, B., Vilgon, M. (2018). Value-based Selling in the Service-dominated Business Landscape: Creating, Acting, and Organizing to Improve Customer's Profits. In Andersson, P., Axelsson, B., & Rosenqvist, C. (Eds.). *Organizing Marketing and Sales: Mastering Contemporary B2B Challenges* (77 – 94). Bingley, UK: Emerald Publishing Limited. Retrieved from <http://ebookcentral.proquest.com/lib/tampere/detail.action?docID=5264502>

Bauer, A. (2012). É possível relacionar avaliação discente e formação de professores? A experiência de São Paulo [Is it possible to relate student assessment and teacher education? The São Paulo Experience]. *Educação em Revista*, 28(2), 61-82.

Bhatia, M. (2018). Your guide to qualitative and quantitative data analysis methods. Website article. Retrieved from <https://humansofdata.atlan.com/2018/09/qualitative-quantitative-data-analysis-methods/>

Biesok, G., Wyród-Wróbel, J. (2011). Customer satisfaction — Meaning and methods of measuring. In Howaniec, H., Waszkielewicz, W. (Eds.). *Marketing and logistic problems in the management of organization* (23 - 41). Bielsko-Biała, Poland: Wydawnictwo Naukowe Akademii Techniczno-Humanistycznej w Bielsku-Białej.

Brasil (2013). *Diretrizes Curriculares Nacionais Gerais da Educação Básica*. [National General Curriculum Guidelines in Basic Education]. Ministry of Education. Brasília, Brasil.

Butcher, J., O'Connor Jr., J., Titus, F. (2018). *Overcoming Challenges and Creating Opportunity for African American Male Students*. Hershey, USA: IGI Global.

Business Finland (2018, April 04). *Lessons from Finland – educational travel is on the rise*. News article. Retrieved from <https://www.businessfinland.fi/en/whats-new/news/2018/educational-travel/>

Cheikh, W. O., (2015). *Productising Finnish Education for Export: The Barriers and Enablers of Internationalisation*. A Multiple Case Study: Fifteen Members of Future Learning Finland. Master's thesis. Aalto University. Helsinki, Finland.

Creswell, J. W., & Clark, V. L. P. (2017). *Designing and conducting mixed methods research*. Sage publications.

Delong T. & Nanda A. (2003). *Professional Services: Text & Cases*. 1st edition. McGrawHill/Irwin, New York.

Den Hertog, P. (2001). Knowledge-Intensive Business Services as Co-Producers of Innovation. *International Journal of Information Management* 4(4), 491-528. DOI: 10.1016/S1363-9196(00)00024-X

Douglas, E., (2011). *Customers vs. Stakeholders*. News article. Retrieved from [https://blogs.edweek.org/topschooljobs/k-12\\_talent\\_manager/2011/12/customers\\_vs\\_stakeholders\\_in\\_education.html](https://blogs.edweek.org/topschooljobs/k-12_talent_manager/2011/12/customers_vs_stakeholders_in_education.html)

Farrell, J., Oliveira, J. (1993). *Teachers in developing countries*. Washington, USA: EDI/World Bank. Retrieved from [http://www-wds.worldbank.org/external/default/WDSContentServer/IW3P/IB/1999/10/13/000178830\\_9810191119349/Rendered/PDF/multi\\_page.pdf](http://www-wds.worldbank.org/external/default/WDSContentServer/IW3P/IB/1999/10/13/000178830_9810191119349/Rendered/PDF/multi_page.pdf)

Finnish National Agency for Education - CIMO (2018). *Statistics on internationalization*. News article in their website. Retrieved from <http://www.cimo.fi/services/statistics>

Finnish National Agency for Education - CIMO (2019). *Tuition fees lowered the number of new foreign students*. News article in their website. Retrieved from [https://www.oph.fi/english/current\\_issues/101/0/tuition\\_fees\\_lowered\\_the\\_number\\_of\\_new\\_foreign\\_students](https://www.oph.fi/english/current_issues/101/0/tuition_fees_lowered_the_number_of_new_foreign_students)

Finnish National Agency for Education (n.d.). *International comparative analyses*. Article in their website. Retrieved from [https://www.oph.fi/english/education\\_system/international\\_perspectives/comparative\\_analyses](https://www.oph.fi/english/education_system/international_perspectives/comparative_analyses)

Frain, J. (1999). *Introduction to marketing*. London, UK: International Thomson Publishing.

Freitas, F. (2016). Student-centered learning: application and feedback from students at a Federal Institute of Education. In Mällinen, S., Prokki, C. (Eds.). *“I’m not a professor, I’m an educator” – Finnish education meets Brazilian creativity*. Tampere, Finland: Tampere University of Applied Sciences.

Fullan, M. (1993). Why teachers must become change agents. *Educational leadership*, 50(6), 12-17. Retrieved from <https://pdfs.semanticscholar.org/f564/79b5eaf7befc64b9af74b8ed870444fb515a.pdf>

Fullan, M. (2007). *The new meaning of educational change* (3rd ed.). New York, NY: Teachers College Press.

Giese, J., Cote, J. (2000). Defining consumer satisfaction. *Academy of marketing science review*, 1(1), 1-22. Retrieved from [https://www.researchgate.net/profile/Joan\\_Giese/publication/235357014\\_Defining\\_Consumer\\_Satisfaction/links/5419a5790cf203f155ae0afb/Defining-Consumer-Satisfaction.pdf](https://www.researchgate.net/profile/Joan_Giese/publication/235357014_Defining_Consumer_Satisfaction/links/5419a5790cf203f155ae0afb/Defining-Consumer-Satisfaction.pdf)

Hall, J. (2010). *Grant Management: Funding for Public and Nonprofit Programs*. Dallas, Texas: Jones and Bartlett Publishers.

Heinonen, V. (2019). *Snowball effect - in-service teacher training in Finland to action change*. Master’s thesis. Tampere, Finland: Tampere University of Applied Sciences.

Howell, K., Annansingh, F. (2013). Knowledge Generation and Sharing in UK Universities: A Tale of Two Cultures?. *International Journal of Information Management* 33(1), 32–39. DOI: 10.1016/j.ijinfomgt.2012.05.003

Ilie, A., (2017, August 28). *Carita Prokki: The strong transition from a great teacher to a great leader*. Web blog post. Retrieved from <http://tamk-international.tamk.fi/tag/tamk-edu/>

Immaisi, M. (2014). *Productizing and Marketing of Educational Services for Export - Case Turku University of Applied Sciences*. Master's thesis. Turku, Finland: Turku University of Applied Sciences.

IMO (2018). International Mathematics Olympiad. Results published in their website. Retrieved from [https://www.imo-official.org/year\\_country\\_r.aspx?year=2018](https://www.imo-official.org/year_country_r.aspx?year=2018)

Impact (n.d). In *Cambridge Dictionary*. Retrieved from <https://dictionary.cambridge.org/dictionary/english/impact>.

ISSC, IDS and UNESCO (2016). *World Social Science Report 2016, Challenging Inequalities: Pathways to a Just World*. Paris, France: UNESCO Publishing.

Jacob, B., Lefgren, L. (2004). The impact of teacher training on student achievement - quasi-experimental evidence from school reform efforts in Chicago. *Journal of Human Resources*, 39(1), 50-79.

Juntunen, T. (2014). Education export – what does it mean?. *Journal of Finnish Universities of Applied Sciences*. News article. Retrieved from <https://uasjournal.fi/tutkimus-innovaatiot/education-export-what-does-it-mean/#1458134585005-b3f22396-5506>

Kane, T., Staiger, D. (2008). Estimating teacher impacts on student achievement: An experimental evaluation (No. w14607). National Bureau of Economic Research. Retrieved from <http://www.nber.org/papers/w14607>

Kenton, W. (15th April, 2018). *Marketing essentials: Productize*. Investopedia website. Retrieved from <https://www.investopedia.com/terms/p/productize.asp>



Kuhn, T. (1962). *The structure of scientific revolutions* (2<sup>nd</sup> ed.). Chicago and London.

Lira, G., Cortez, I. (2019a). *Schedule TAMK GiraCoaching 2019*. Unpublished document.

Lira, G., Cortez, I. (2019b). *Aprendizagem centrada no aluno em uma educação empreendedora: colaboração e inovação* [Student-centered learning in an entrepreneurial education: collaboration and innovation]. Unpublished paper.

Medeiros, M. (2016). *Income inequality in Brazil: new evidence from combined tax and survey data*. Paris, France: UNESCO Publishing.

Ministry of Education and Culture (2016). *Marianne Huusko a trailblazer in education export*. News blog in their website. Retrieved from [https://minedu.fi/en/article/-/asset\\_publisher/marianne-huusko-koulutusviennin-ladunavaaja](https://minedu.fi/en/article/-/asset_publisher/marianne-huusko-koulutusviennin-ladunavaaja)

Moriconi, G., Davis, C., Tartuce, G., Nunes, M., Esposito Y., Simielli, L., Teles, N. (2017). *Formação continuada de professores: contribuições da literatura baseada em evidências* [Teacher's post-graduate training: contributions from evidence-based literature]. São Paulo: Textos FCC.

Muller, E., Doloreux, D. (2007). *The Key Dimensions of Knowledge-Intensive Business Services (KIBS) Analysis: A Decade of Evolution*. Fraunhofer Institute for Systems and Innovation Research. Karlsruhe, Germany. Retrieved from. <https://www.econstor.eu/obitstream/10419/29335/1/610017543.pdf>

Muller, E., Zenker, A. (2001). Business services as actors of knowledge transformation: the role of KIBS in regional and national innovation systems. *Research Policy* 30(9), 1501-1516. DOI: [https://doi.org/10.1016/S0048-7333\(01\)00164-0](https://doi.org/10.1016/S0048-7333(01)00164-0)

N.a. (2017). *Finnish National Agency for Education to boost export – Education Finland growth programme launched*. News article in their website. Retrieved from

[https://www.oph.fi/english/current\\_issues/101/0/finnish\\_national\\_agency\\_for\\_education\\_to\\_boost\\_education\\_export\\_education\\_finland\\_growth\\_programme\\_launched](https://www.oph.fi/english/current_issues/101/0/finnish_national_agency_for_education_to_boost_education_export_education_finland_growth_programme_launched)

Naukkarinen M., (2014). *KOULUTUSVIENTI KIVINET-verkosto 5.2.2014* [Education Export KIVINET-network 5.2.2014]. Tampere, Finland: Tampere University of Applied Sciences. Retrieved from <https://docplayer.fi/6572594-Koulutusvienti-kivinet-verkosto-5-2-2014-tampere.html>

OECD (2013). Key Findings from the Teaching and Learning International Survey (TALIS) – Brazil Country Note. Retrieved from <https://www.oecd.org/brazil/TALIS-2013-country-note-Brazil.pdf>

OECD (2013). Key Findings from the Teaching and Learning International Survey (TALIS) – Finland Country Note. Retrieved from <https://www.oecd.org/finland/TALIS-2013-country-note-Finland.pdf>

Ouverney-King, J. (2019). *Syllabus for teacher training program*. Unpublished document.

Paradigm (n.d.). In *Merriam-Webster's collegiate dictionary*. Retrieved from <https://www.merriam-webster.com/dictionary/paradigm>

Parantainen, J. (2007). *Tuotteistaminen: rakenna palvelusta tuote 10 päivässä* [Productization: building a product from a service in 10 days]. Helsinki: Talentum.

Parasuraman, A., Zeithaml, V. & Berry, L. (1985). A conceptual model of service quality and its implications for future research. *Journal of marketing*,

49(4), 41-50.

Pereira, M., Da Silva, M. (2003). A key question for higher education: Who are the customers?. In *Proceedings of the 31st Annual Conference of the Production and Operations* (pp. 1-16). Retrieved from <http://www.poms.org/archive/conferences/Meeting2003/2003A/Papers/SOM-19.3.pdf>

Rikowski, G. (2017). Misrepresentations: Critical Notes on Commodities and Education. Self-published online. Retrieved from [https://www.academia.edu/35799008/Misrepresentations\\_Critical\\_Notes\\_on\\_Commodities\\_and\\_Education](https://www.academia.edu/35799008/Misrepresentations_Critical_Notes_on_Commodities_and_Education)

Robinson, K., Aronica, L. (2015). *Creative schools: The grassroots revolution that's transforming education*. New York, USA: Penguin books.

Sahlberg, P. (2015). *Finnish Lessons 2.0: What can the world learn from educational change in Finland?*. New York, USA: Teachers College Press.

Schatz, M., (2016). *Education as Finland's hottest export? A Multi-Faceted Case Study on Finnish National Education Export Policies*. Helsinki, Finland: University of Helsinki.

Schatz, M., Popovic, A., & Dervin, F. (2017). From PISA to national branding: exploring Finnish education®. *Discourse: Studies in the Cultural Politics of Education*, 38(2), 172 - 184. Retrieved from [https://blogs.helsinki.fi/dervin/files/2015/08/CDIS\\_A\\_1066311\\_O.pdf](https://blogs.helsinki.fi/dervin/files/2015/08/CDIS_A_1066311_O.pdf)

Schieber, C. (2018, January 16). We are in the midst of a historic paradigm shift in education [Blog post]. Retrieved from <https://www.competencyworks.org/higher-education-2/we-are-in-the-midst-of-a->

[historic-paradigm-shift-in-education/](#)

Schmitz, A., Teza, P., Dandolini, G. A., & De Souza, J. A. (2014). Universities as knowledge intensive business services – a systematic literature review and a case study of a research group. *International Journal of Engineering and Innovative Technology*, 3(7), 40-47.

Shirley, D. (2017). *The New Imperatives of Educational Change: Achievement with Integrity*. New York: Routledge.

Shorten, A., Smith J. (2017). *Mixed methods research: expanding the evidence based*. Evid based Nurs. July 2017. Volume 20. Number 3. Retrieved from <https://ebn.bmj.com/content/ebnurs/20/3/74.full.pdf>

TAMK (2019). *Annual review 2018: Strategic imperatives*. Retrieved from <http://annualreview2018.tamk.fi/strategy/>

TAMK (n.d.). *Quality Management*. From institution's website. Retrieved from <https://www.tamk.fi/web/tamken/quality-management>

Tinoco, D. (2014, May 5th). Falta de licenciatura atinge 35% de professores do nível fundamental [Lack of teacher education reaches 35% of elementary level teachers]. Newspaper article. *O Globo*. Retrieved from <https://oglobo.globo.com/sociedade/educacao/falta-de-licenciatura-atinge-35-de-professores-do-nivel-fundamental-12402843>

Thoonen, E., Slegers, P., Oort, F., Peetsma, T. & Geijsel, F. (2011). How to improve teaching practices: The role of teacher motivation, organizational factors, and leadership practices. *Educational administration quarterly*, 47(3), 496-536. Retrieved from [https://www.researchgate.net/publication/254088298\\_How\\_to\\_Improve\\_Teaching\\_Practices\\_The\\_Role\\_of\\_Teacher\\_Motivation\\_Organizational\\_Factors\\_and\\_](https://www.researchgate.net/publication/254088298_How_to_Improve_Teaching_Practices_The_Role_of_Teacher_Motivation_Organizational_Factors_and_)

## [Leadership\\_Practices](#)

Toikkanen, T. (2015, November 26). Coding in school: Finland takes lead in Europe [Blog post]. Retrieved from <https://legroup.aalto.fi/2015/11/coding-in-school-finland-takes-lead-in-europe/>

United Nations (2018). *Human Development Indices and Indicators: 2018*. Retrieved from <http://hdr.undp.org/en/2018-update>

Vanhanen, R. (2016). *Export of education by Finnish universities of applied sciences: Reflections on best practices*. Jyväskylä, Finland: Jamk University of Applied Sciences.

Virtanen, A., Runtti, S. (2015). *Parents` satisfaction on the quality of education and care in Qatar-Finland International School*. Bachelor's thesis. University of Jyväskylä, Finland. Retrieved from <https://jyx.jyu.fi/bitstream/handle/123456789/45982/1/URN%3ANBN%3Afi%3Aju-201505211940.pdf>

Watson, S., Reigeluth, C. (2008). Learner-centered paradigm of education. *Education technology* (September – October). Retrieved from [http://cardinalscholar.bsu.edu/bitstream/handle/123456789/194512/LearnerCenteredParadigmofEducation\\_WatsonReigeluth.pdf;sequence=1](http://cardinalscholar.bsu.edu/bitstream/handle/123456789/194512/LearnerCenteredParadigmofEducation_WatsonReigeluth.pdf;sequence=1)

Zeithaml, V., Parasuraman, A., Berry, L. (1990). *Delivering quality service: Balancing customer perceptions and expectations*. New York: Simon and Schuster.