An Assessment of Critical Reflection in Management Education for Sustainability: A Proposal on Content and Form of Shared Value Rationality

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Abstract: This article describes and analyzes a proposal for the teaching-learning of strategic management for business students, from the angle of critical reflection (CR) presuppositions. The proposal was designed to broaden the dominant rationality in teaching strategies at business schools and has been in progress since 2011 in a Brazilian business school. We argued that changes in the organizational environment and in competition demand not only a review of strategy theoretical content, but also of the way that strategy is taught with more critical and reflective teaching-learning approaches. We conducted a survey to analyze the results of this educational experience from students' points of view. Considering a sample of 165 undergraduate students who have taken the course since its implementation, we evaluated the students' CR levels. The results present implications for professors, business schools, and researchers, revealing challenging aspects and also CR enhancers in the context of the undergraduate strategy initiative. We expect that the described experience can be replicated and improved in comparative studies in different geographical and disciplinary contexts, encouraging the evaluation and promotion of CR in the teaching of strategic management in business education.

Keywords: critical reflection; shared value; sustainability; strategic management education

1. Introduction

This study discusses the development of the rationality of shared values in the teaching of strategic management in business education. The article describes and analyzes a proposal for the teaching-learning of strategic management for business students, from the angle of critical reflection (CR) presuppositions. For this purpose, we adapted the Kember et al. questionnaire [1] to evaluate the students' CR levels. We argue that strategy teaching demands a review of not only theoretical approaches, but also how we teach students to think about strategic management. Regarding theoretical review, undergraduate strategic teaching is broadly supported by classical approaches based on Industrial Organization, Chamberlin and Schumpeterian [2]. These approaches require complements to better develop organizations' competitive capacity, meeting changes, and complexities seen in the organizational environment, such as the restriction of ecological resources, social problems, and risk increase in many ways [3,4]. Concerning teaching, professors commonly teach these classical approaches from an instrumental perspective as models and concepts [5–7]. Classical ways of teaching strategy do not meet the need [8] to foster a new intellectual agenda that incorporates objectives beyond economic-financial ones in academia. Thence comes the need to make strategy teaching-learning more critical and reflective. Many authors have widely considered critical reflection (CR) in studies involving

sustainability themes, as these demand epistemic and paradigmatic changes [9–11]. Nevertheless, pedagogical experience evaluation in higher education has proven a great challenge [12–14]. In addition, there are few researches that discuss sustainability education in business schools that are dedicated to assessing the results of ongoing learning experiences from the student learning point of view [15]. To fill this gap, this study aims to describe and analyze the levels of reflection achieved by the business students from a proposal of a teaching-learning experience in sustainability strategic management.

The theoretical orientation of sustainability strategic management is based on shared value rationality, which promotes a change of design in the purpose of business, going beyond exclusive economic-financial objectives [16,17], and how to attain them [18]. From the pedagogical point of view, it implies fostering an education that stimulates critical reflection [9] and also leveraging social transformative learning [19], which would put more collectivist goals into practice, as proposed by stakeholder's approaches [20].

Some presuppositions sustain the intention of nurturing shared value rationality in the classroom, based on critical reflection (CR) theories. First, CR generates a positive agenda. It not only opens spaces for criticism, but also for new beginnings [21] and projects. Organizing reflection in the classroom of business schools [22] allows the creation of a strategic imagination directed at progressive management [23,24], instigating the belief in the development of human capacity to act differently. Second, CR demands the practice of problem-posing [25] that not only focus on problem-solving, but questioning the problems themselves. In this study, questioning problems means reflect critically on strategic administration and strategic business objectives. Third, CR relates to the development of a vision that is less narcissistic and more directed at ethical concerns for our presence in the world [26]. As Ghoshal stated [8] (p. 75): "Our theories and ideas have done much to strengthen the management practices that we are all now so loudly condemning", and "by propagating ideologically inspired amoral theories, business schools have actively freed their students from any sense of moral responsibility" [8] (p. 76).

With this purpose in mind, a group of Brazilian professors began to work in the classroom with a strategic approach directed at sustainability, aiming to promote shared value rationality. The experience has been conducted at a Brazilian business school, which deployed the Strategic Sustainability Management (SSM) initiative, focusing on the construction and consolidation of the idea of shared value as strategic rationality.

To analyze this proposal, we applied a survey to former students of the SSM discipline. This survey intended to evaluate the levels of reflection these students achieved. We intended the following contributions: (a) Adapting and introducing an instrument to evaluate critical reflection for shared value rationality among business administration students that could be replicated and adapted for different educational institutions and curriculum subjects; (b) describing the implications of pedagogical experiences during the course for the teaching and learning of shared values as a source of inspiration for other professors and researchers; and (c) expanding the theoretical discussion for the development of shared values on strategy teaching-learning by encouraging the promotion of CR.

2. Fostering Sustainability Strategic Management: A Matter of Content and Form

This section discusses why it is important to review strategic management in business management undergraduate course, and how to engage students in critical reflection to think about sustainability strategic management.

2.1. A Matter of Content: Why It Is Important to Review Strategic Management?

The Academy of Management has been concerned with discussions on alternative economic futures and progressive studies of alternative approaches to management [24,27,28], as well as with how to integrate sustainability in strategic management education [29]. Adler [24] (p. 123) stated that "(a) the socioeconomic structures that dominate the world today can and should be replaced by ones that better support human flourishing; and (b) the contours of more appropriate structures

are already emerging." The Academy of Management's vision statement says that we aim " . . . to inspire and enable a better world through our scholarship and teaching about management and organizations" [24] (p. 123). Following this line of reasoning, how do we inspire students? Is it by stimulating a new economic system different from capitalism as we know it? Or, is it a sociopolitical management problem and the fact that some nations have incompetent governments [27]?

In a context of social dilemmas, a new spirit of scholarship is emerging [24]. Henisz [23] has defended the need for progressive management through the occurrence of financial crises and discussions about liberalism and economic regulation. For this purpose, he advocated the potential for the development of a research and pedagogy more sociological, psychological, and politically conscious as part of a progressive reform of neoliberalism [23]. His argument is based on two lines of criticism applied in education in recent years. The first centers on the view, which underlies large parts of modern management theory and education [8], of human behavior as functional, amoral, and selfish. This view contrasts with broader social sciences or humanities-based education, which have mostly been emptied from business school curricula. The second line of the criticism centers on the growing difference between the global context as faced by managers and the education they receive, and also highlight the necessity for looking beyond narrow shareholders at a broader stakeholder set [28].

When Phan, Siegel, and Wright [27] commented on alternative forms of economic organization, they drew attention to strategies that are not market-oriented but motivated by an ideology whose interests, opposed to the nature of firms and with the absence of competition, may create an uncertain environment that could influence investment decisions at firm level. This fact could also generate serious consequences for innovation, employability, and managerial longevity. To the authors, engaging companies in ideological motivations and guiding them towards corporate social responsibility could be used to avoid regulation. Thus, exploring alternative forms of capitalism is valid, but there should be a consideration of its limits.

The objective of this article is not to develop a progressive management approach or to discuss alternative forms of capitalism, but rather to present an initiative for engaging students in reflective thought about strategic administration in broader sociopolitical and socioeconomic contexts. Taking the example of the Brazilian management environment, where we conducted the study, the practice of management does not occur as theoretical ideals prescribe it; in recent years, young people and experienced adults have seen their confidence in public and private institutions fade due to a web of irresponsible, dishonest, and greedy relations which have launched society into a grave socioeconomic crisis, putting at risk the great diversity of this nation's ecosystem. For instance, see Watts [30].

For this reason, we cannot simply replicate theories created in developed societies and economic environments as more stable and less corrupt when educating young people who will face great technical and moral challenges. Thus, we chose the stimulation of critical reflection in manager education, in this study, through what we call shared value rationality, seeking in this way to deliver to society better prepared and ethical managers, capable of contributing to an economically healthier, socially fairer, and ecologically more preserved Brazilian society.

The Shared Value Rationality

Shared value rationality concerns strategic sustainability management, guided by the macro-environmental principles of sustainable development and the organizational principles of corporate social responsibility [16,17,31]. It emerged mainly in the 1990s and has been gaining strength in Scientific Management literature, both in theoretical discussions [3,20,32–34] and empirical verifications [35–39].

Porter and Kramer [17] began to defend shared value as a strategic goal from the premise that companies remain stuck in an obsolete value generation approach, which aims at maximizing resources and optimization of short-term financial performance, ignoring customer needs and influences that determine their long-term results. The authors conceive of shared value as "operational policies and practices that increase a company's competitiveness and at the same time advance the economic and

social conditions of the communities in which they act" [17] (p. 6). This belief is resting on the idea that companies can create economic value by creating societal value [16].

According to Porter and Kramer [17], there are three ways to do this: (a) Redefining products and markets; (b) redefining productivity in the value chain; and (c) building support for the industry through the regional cluster. The profit that involves a societal purpose is a tool that will allow the society to move forward more quickly and companies to have long-term survival.

However, authors, such as Crane et al. [40], questioned the usage of the term 'shared value', claiming it was nothing new and was being presented in a seductive and naïve manner. The authors criticize the concept of shared value regarding business legitimacy, business purpose redefinition, and also capitalism redesign. Strand, Freeman, and Hockerts [41] mentioned that the shared value theory does not add much, since in a way, it reaffirms Strand's and Freeman's stakeholder theory.

Despite the disagreement among authors, a consensus is developing among academics and philosophers that business administration curriculums do not reflect modern business practices in terms of moral engagement [42]. Shared value offers the possibility of strengthening this discussion, among others. This study chose to use the 'shared value rationality' as a result of strategic goals due to its coherence with stakeholder-directed management [43,44], added to socially-responsible activity [20,45,46] in search of economic, social, and ecological business performance [3,32,47–49].

In order to develop "shared value rationality," not only did Porter and Kramer's work [17] become part of the process, but the investigation of themes that lead to reflection on managers' unconscious and repetitive strategic habits relative to business rationality became important [42]. In addition to the theory of competitive advantage [50], the Natural Resource Based View [32] and innovation for sustainability [51], inclusive approaches become the aim of expanding the strategic management notion in business students.

Hart [32] and Emerson [3], Hart and Dowell [48], and Porter and Kramer [17] have recognized that company management, investment direction, and strategic goals have been led from a narrow capitalist viewpoint which exclusively sought economic-financial interests. Hart [32] recognized the contributions of the Resource Based View—RBV—and sought to complement this approach with the restrictions imposed by the natural environment. Hart [32] raised a debate about the relationship between a firm's internal capabilities versus environmental factors in sustaining a competitive advantage, recognizing that both internal and external factors are important, as RBV demonstrates [52]. However, the omissions of strategic theories when dealing with the magnitude of ecological and social problems render them inadequate for identifying the resources that generate competitive advantage. With this argument, Hart [32] (p. 991) has proposed Natural RBV (NRBV), since " . . . it seems inevitable that business and markets will be limited by and dependent on ecosystems".

Verbeke, Bowen, and Sellers [53] complemented the natural RBV model, arguing that it should be used to incorporate the organizational and environmental aspect in investment decisions, showing that investment in specific resource domains instead of environmental strategies themselves is what determines performance. In this sense, Emerson [3] centered his argument on the company investment plane. He explained that on the one hand, there are investments which seek entirely social returns, without considering financial performance. On the other hand, there are investments that do not consider social value and look exclusively at economic and financial performance, which is the logic of economic rationality. The author's proposal considers the search for investments should be blended ROI and SROI (return on investment and social return on investment). Therefore, Emerson [3] argued in favor of attaining blended value, where " . . . the central nature of investment and return is not a tradeoff between social and financial interests, rather the search for the harmonized value proposal encompasses both" [3] (p. 37).

Efforts also exist to integrate to innovation management. The official name is Evolutionary Policy and its main focus is sustainable innovation. Nill and Kemp [51] explained that three approaches to evolutionary sustainable innovation policy are relatively well-developed: strategic niche management, transition management, and time strategies. Strategic niche management highlights the importance

of setting new standards capable of replacing non-sustainable technologies. Transition management has a broader scope and covers system change, innovation, and adaptive portfolio evolution. Time strategies focus on policy preparation and on using windows of opportunity in unstable phases of technological competition.

From Porter's point of view [54] (p. 423), innovation in business lies in " . . . better ways of doing things, and creating value where it has not existed before," which he believes requires a movement based on social entrepreneurship and shared value: "I think, it is about bringing a whole new sensibility and a whole new set of tools and attitudes to addressing social issues, which I think is a good thing." When Driver [54] questioned Porter about how to integrate the notions of shared value and social entrepreneurship in business schools, he replied that the first step is through the manager training curriculum.

2.2. A Matter of Form of Teaching: How to Engage Students in Critical Reflection to Think about Strategic Management Rationality?

Why is the way we teach important?

- First, because we have not been successful in our pedagogy when addressing ethics, corporate governance, corporate social responsibility [5], and other concerns of this nature, which encompass shared value. Themes of this order are generally part of elective disciplines in management schools and not of mainstream courses such as finance, marketing, and international business.

There is a need to devote more time to critical analysis, addressing value, power, ethics, and hierarchy in such disciplines [6]. Strategic education approaches better integrated to non-economic environments are the exception, meaning we have few reference models and experiences being tested around the world. In addition, when these approaches do appear in courses, professors teach them with a technical and functional emphasis, which is insufficient as it only reinforces pragmatism in business students [5]. There is a need for pedagogy capable of engaging students in moral reflective practice, which is indeed transformative, breaking the disconnection between knowledge of corporate social responsibility principles and their practice [55]. This allows the transition from awareness to behavior change [56]. Ingols and Shapiro [14] show one of the consequences of the difficulties mentioned above, based on a study involving more than 1800 MBA students from different business schools around the world. Although the students expect to find dilemmas and conflicts in the workplace involving questions such as ethics, values and corporate social responsibility, they do not feel prepared to face them. The same can be said about the shared value idea.

- Second, it is not limited to a debate specifically about teaching methods or techniques; it includes the way we think about the strategy teaching-learning process, that is, how we organize it institutionally.

It is what Vince and Reynolds [22] (p. 101) called 'organizing reflection'. "Our responsibility is to research and develop the practice of organizing reflection, to find examples of it at work, and be able to see these processes reflected in our pedagogy". A more critical and reflective strategy of teaching expresses the political and ideological positioning of management schools themselves [18]. It is a way of putting up academic resistance and seeking to overcome management models that are no longer adequate [57].

In the case of this research, it means promoting the development of shared value rationality as a business course goal (as part of its political-pedagogical project). It means creating the organizational conditions for reflective thought and deep, tangible, and lasting learning, incorporating multidimensional values, reviewing company goals and ways to attain them, and changing presuppositions about the meaning of value. All this requires opening space in the classroom for another organizational imagination and new projects and projections [22]. And, the challenge increases

twofold, to help students not take for granted strategic management models [18], and to induce them to construct a new meaning and new practice in strategic management.

The development of this other rationality presupposes reaching a sphere of epistemic reflection [9] distinct from functional reflection, because it does not simply aim to improve course practices nor produce generalizations and knowledge application in new contexts [58], but formulates new questions and address new answers.

Critical reflection is a trigger for transformative learning, which manifests itself in visible change in people's conceptions and actions [19]. As Rigg and Trehan [59] (p. 374) explained, "Critical reflection engages participants in a process of drawing from critical perspectives to make connections between their learning and work experiences, to understand and change interpersonal and organizational practices." It is an exercise that involves identifying and challenging our suppositions and which demands self-criticism, questioning the truth of things, and understanding the intentions behind the actions, values, and questions that surround us [25]. It stems from the prudent and practical judgment (phronesis) of the values that guide our actions in search of different results [60].

In studies about the professional environment, CR has been understood as an important starting point for professionals to gain new perspectives in their daily routine [61]. For this reason, researchers have strongly considered it in the education area targeting concerns of an ethical, political, moral, and socio-environmental nature [10,42]. Sustainability questions demand profound changes, going beyond the search to do things better, or better things; it is about doing things differently [9]. Critical reflection is a forerunner to critical action [21] and a fundamental competency for working within organizations' complex and mutable dynamics [62]. From this perspective, CR assumes a strong ideological and political component, challenging the dominant view [22,26,63] in an attempt to break with the mainstream, and instigating a less functional and pragmatic view of organizations [21].

CR requires analyzing hypotheses, being aware of context, imaginatively speculating about alternatives, and maintaining a reflective skepticism. This nature of reflection aims, in Mezirow's [25] view, at a transformation of presuppositions that occurs on reflective levels: Reflection on content (which examines the way we perceive, feel, think, and act in relation to a problem), process (involving a review of strategies and procedures for problem solving), and presuppositions (referring to the search for similarities and differences between what we experience and our prior learning). It occurs when the problem itself comes under scrutiny: Why am I reflecting on this? Is it important? Should I be concerned about this?

However, a change in conception is neither easy to stimulate nor reach. That is because we create mental habits that crystallize. These habits that constitute our frame of reference and become mental structures shaping the way we think and interpret our experiences influences what we perceive, or do not perceive. The problem presented here is how we access, recognize, and transform our mental habits and reference schemes [25]. Kember et al. [1,64] have developed tools to evaluate critical reflection levels among students in the classroom. The basis for this research revolves around these tools. To the authors, there are four crucial reflection levels relevant for observation:

- The first is non-reflective, what researchers call *habitual action* or *habitual knowledge*. It refers to routine actions, learned through frequent use and performed automatically, or with little awareness, such as riding a bicycle or typing on the computer.
- The second level is *understanding*. It refers to a thought action that makes use of existing knowledge but evaluating it. Pre-existing schemes and perspectives support the learning. It is a cognitive process that does not necessarily lead students to reflect on the meaning of content or a phenomenon, establishing correspondence with particular and personal situations.
- On the third level, *reflective*, there is intense intellectual activity triggered by the experience of the subject, who then validates it. It involves new understanding and appreciations. It provokes, creates, or clarifies meanings and may set in motion a change in conceptual perspective and even in presuppositions.

- The fourth level, *critical reflection*, is the hardest to reach. It corresponds to a high level of reflective thought capable of transforming our meaning schemes. It is what Mezirow [25] has called premise reflection, involving awareness of why we perceive, think, feel, and act. To experience a transformation perspective, it is necessary to recognize that a group of beliefs and values that are almost unconsciously assimilated from a particular environment govern many of our actions. Premise reflection requires critical a review of presuppositions.

This last reflective level, the critical level, is what propels transformative learning [19], leading to a clear change in the student, who will then develop new competencies and explore new forms of acting. As a result, the individuals will be able to plan another course of action and how to implement it. In this case, they will assume new roles in society. Hence, returning to the question at the start of this section, 'Why do we engage students in critical reflections to think differently about Strategic Management?' It is because we need active and reflexive methodologies [18] that make room for the stimulation of this reflective movement (reflection, criticism and engagement) in the strategy classroom.

This theoretical discussion reinforces our argument that changes in the organizational environment and in competition demand not only a review of strategic theoretical content, but also of the way professors teach that strategy with more critical and reflective teaching-learning approaches. Building upon this argument, the following section presents the pedagogical proposal for the teaching-learning of Strategic Sustainability Management.

3. The Pedagogical Proposal for the Teaching-Learning of SSM: Programmatic Content and Teaching Methodology

After the 2000s, introducing the sustainability theme into Presbyterian Mackenzie University's business syllabus has occupied the efforts of the Center for Social and Applied Sciences board. Since then, the coordination of the undergraduate business administration course has reviewed all disciplines in its curriculum. In 2009, a group of researchers developed a project with federal public funding to promote sustainability teaching in business schools, including Mackenzie. This project led to the implementation of Strategic Sustainability Management (SSM) discipline.

The SSM discipline became compulsory in 2012 and is taught in the 7th semester of the undergraduate business administration course. The discipline teaching and learning goals are divided in three dimensions, as shown in Table 1.

Table 1. Strategic Sustainability Management (SSM) Objectives.

SSM Teaching-Learning Goals in Three Dimensions		
Facts and Concepts	**Procedures and Skills**	**Attitudes, Norms and Values**
- To Know, Distinguish, and Compare the strategic dynamics of organizations and their markets in current times and future trends. - To situate the current capitalist model from the Industrial Revolution up to the setting formed by Sustainable Development discourse. - To learn about the theoretical approaches to Strategic Business Administration and their goals in the search for shared value.	- To observe and experience the sustainability logic and cooperative dynamics via the Sustainable Business Game. - To construct and exercise reflective and critical analysis capacity in relation to organizational and strategic theories and their influence on business management, focusing on sustainability. - To plan and reconstruct ways of doing business and relating within the organizational and competitive environment.	- To be sensitive and aware of the current and future needs of organizations for a balanced management of the socioeconomic and ecological systems. - To cultivate attitudes directed at self-transcendence, which are fundamentally capable of meeting more universalist and collectivist interests rather than exclusively satisfying individual interests merely directed at self-promotion.

Source: Research Data.

The programmatic content starts with a review of the classical strategic approaches, passing through an interdisciplinary discussion, and finally reaching a critical reflection on the managerial forms of action and the intended business goals. The main goal is the attainment of a rationality directed at shared value generation that make-meaning for future managers.

To achieve this goal, the discipline is structured in six blocks. The first one reviews competitiveness theories, and the subsequent blocks aim to review the established economic logic, explain the tensions and complexities of business management, and then, propose a reconstruction of thought and strategic vision based on cooperation, stakeholder approach, corporate social responsibility, and shared value.

The SSM discipline resort to various teaching-learning strategies to encourage students to develop business skills that consider the interests of a diverse business-related public, as well as starting from the premise that resource scarcity demands a new business posture. Teaching-learning techniques alternate depending on the subject. The professors' role in classroom is to act as a student advisor and discussion stimulator. Professors require students to do research and prior reading of contents, out-of-classroom research, group discussions, and experiential dynamics using a board game about entrepreneurship and sustainable business.

When is possible, specialized guests are invited to debate different themes related to strategic management with students. At the end of each block, the assignment is to produce reflective text describing what students learned and think of that exercise. Additional didactic techniques are also part of the learning process, such as films, case analyses, and others.

Among these resources, one of the most important is a game called "Sustainable Business", which stimulates sustainable entrepreneurship in company management. The aim of the Sustainable Business board game is entrepreneurial practice directed at sustainable development principles and shared value generation. It is made up of twelve territories of the globe and allows from three to six players, called entrepreneurs, to play simultaneously. Their purpose is to close business deals with positive results in five value dimensions: Talent ($ capital), knowledge, people, and natural and technology resources. In order to have satisfactory results for their individual businesses, entrepreneurs need to seek individual and global goals.

A differential of the game is that it works with various types of goals: An individual goal (for the player or entrepreneur), a shared goal (shared by all entrepreneurs—global), and a long-term challenge. The player wins if he successfully reaches his individual goal of closing business deals and profiting from them; the global goal is to leave all the territories of the globe with a minimum amount of resources in the five dimensions. The long-term challenge involves the course of moves. To reach these goals it is fundamental for there to be interaction among entrepreneurs and, although they are competing amongst themselves, they must be united to meet the global goal and other restrictive or opportunity challenges.

The game is useful as a fun teaching-learning strategy for the exercise of managerial rationality, focusing mainly on business relations, cooperation, social responsibility, and shared value perspective. It is possible to see the application of theoretical concepts related to co-opetition, stakeholder approach, and shared value. Finally, the game allows the teacher to intervene with new rules, according to his teaching-learning goal. Students realize that resources, even if they do not appear to have an owner, cannot be used in an exploratory and extractivist manner. Table 2 presents a summary of the blocks that compose SSM and the teaching methodologies.

At the end of business game, students revisit the traditional strategy approaches reviewed in Block A, reflecting on them from the point of view of shared value rationality. One primarily expects the SSM discipline to teach students to become aware of ecological rationality in the conception and conduction of business. They should know that company goals no longer have the narrow focus of economic-financial gain and understand that the entrepreneur and/or manager's role is to pursue individual and collective goals, considering the stakeholder approach. In the short term, the aim is stimulation and experience for understanding the paradigm shift that business, the entrepreneurial profile, and management practice have undergone recently towards more balanced and shared business

results. In the medium term, one hopes that, as qualified managers, they will develop the capacity to create and innovate in products and service projects, which have sustainability principles as a strategic focus, being able to take decisions and influence management practice. Finally, in the long term, they should realize that it is possible to conduct business and manage companies in a way that contributes to improving society with development that is sustainable over time, and that quality indicators are necessary and valid for the fulfillment of the individual, organizations, and the market.

Table 2. The Content and the Methodology of the SSM proposal.

SSM Content Goals	SSM Teaching Methodology
Block A (named Remember?)	
To review traditional concepts in business strategy and competitiveness. Barney [2] presented the three main competition concepts that reflect different research approaches: Industrial Organization, Chamberlinian Competition, and Schumpeterian Competition. The discussion of the implications of each strategy theory presents an integrated model describing the types of competitive forces that a company is exposed to over time.	Students test the traditional business game without the guidance of sustainability-based rules. Naturally, students use competition and resource exhaustion to reach their individual goals. The professor has the opportunity to perceive the competition logic active in the students' minds. Students read the theoretical references and answer questions about traditional strategic approaches [2].
Block B (named It's not that simple . . .)	
To discuss strategic goals according to economic and ecological rationality, in accordance with Amartya Sen's thesis of development as freedom. Layrargues [65] discussed the beginning of "green" transformation in organizations, contrasting elements of economic and ecological rationality from the 1980s. Sen's [66] thesis of development as freedom seeks to broaden the notion of development, traditionally held as the generation of wealth in countries regardless of whether or not individuals' capabilities are substantially increased.	The professor introduces the "Sustainable Business" game rules. The players' goal is to close individual business deals. Students cannot take resources from territories without entrepreneurs; the conquest of needed resources must be negotiated with monetary value, non-monetary resources or agreements about profit distribution. Students must innovate in negotiations and act cooperatively to reach their goals, and notice that without cooperation and innovation, they cannot advance. These discussions relate to the theoretical references block [65,66].
Block C (named Is this chaos?)	
The students become aware of and reflect on the contradictions, paradoxes, and the logic of the hidden third associated with complexity and organizational tensions. The main references are Nicolescu [67] and Smith and Lewis [68]. Theoretical physicist Nicolescu's [67] work brings provocations based on thought models that can bring back to culture and society a more complete human being, capable of confronting the challenges of complexity—the tangled web of relations among knowledge, disciplines, and systems (natural, cultural, and economic). In the company context, with the paradox theory, Smith and Lewis [68] suggested a strategic model for companies to better deal with the paradoxes inherent to organizational processes.	In the second round, students work in the same groups adding the exchange rule throwing a die for each round. Transactions must adhere the number as an exchange. This makes it even more difficult to obtain the resources needed to conduct business, and students must expand the possibilities of managing the values that business consists of, which are: money, people, technology, natural resources, and knowledge. Based on the theoretical references, students answer questions relating to economic and ecological rationalities, development as freedom, and organizational tensions and complexities [65–68].

Table 2. *Cont.*

SSM Content Goals	SSM Teaching Methodology
Block D (named What now?)	
The notion of Co-opetition and Natural Step are presented. The co-existence of competition and cooperation is a way of reaching individual, common, and shared goals. The Natural Step is a mean of generating changes based on the principles of non-exhaustion and/or renovation of natural resources, and social value generation, which can be applied to any environment. Once one perceives the tensions and complexities of management, cooperation [69] and the method proposed by Natural Step [70] can be a path towards ecological and integrating rationality.	Players receive a card informing them to fulfill a task that goes beyond their business. The challenges seek to present students with tensions and complexities so that they exercise their ability to deal with unexpected situations which depend on other participants for their resolution. These discussions relate to the theoretical references block [69,70].
Block E (named What to consider?)	
Theoretical and practical aspects of strategic management are tackled from the perspective of Corporate Social Responsibility (CSR) theory and the Stakeholder approach. The main references are Carroll and Shabana [71] and Mitchell, Agle, and Wood [72]. The professor presents CSR in favor of, as well as against the idea of business, assuming any responsibility towards society beyond profit and financial maximization. To complement this, stakeholder theory presents the importance of considering other actors related to companies, directly or indirectly, and identifying their degree of influence based on the attributes of power, legitimacy, and urgency. By combining these attributes, the generation of typology of interested parties and the implications for strategic management occur.	Professor announces the "Sustainable Business" game global goal. This goal has more points than the personal goal, which aims to close individual business. The global aim is to leave all twelve territories with, at least, ten resources from each of the five value dimensions the players have contemplated. In total, the players must reach 60 resources, including monetary value, people, knowledge, natural resources, and technology. Students will have two rounds to meet the global goal. Here lies the activity's main didactic objective, as it makes them realize the difficulty of recovering used resources, and now they must create a joint strategy for attaining shared value. At first, students put up resistance during this stage, but later they begin to realize that there are alternatives if each player shares some of his or her resources and uses strategies to generate economic and societal value. These discussions relate to the D and E theoretical references block [69–72].
Block F (named There is a way!)	
Professor led students to reflect on the change that the strategic theories have been presenting to deal with the current and future context of business. It makes possible a relationship between sustainability and competitive advantage, from the viewpoint of innovation for sustainability, natural resource-based view, as well as blended and shared value. The main references are Nill and Kemp [51]; Hart [32]; Emerson [3], and Porter and Kramer [17].	The completion of individual and global goals are crucial. While students are striving to meet the global aim of a "sustainable world," balanced in terms of economic and socio-environmental resources, they study the theoretical approaches that present arguments for shared value generation as a strategic goal [3,17,32,51]. In the final activity, as a group, students analyze a real company, to evaluate how much its strategy moves towards sustainability, proposing alternatives for the points that have not yet been developed and are vulnerable for shared value generation.

Source: authors based on research data.

4. Research Hypotheses

Considering the discussions on strategic theoretical approaches and the instrumentalization of teaching-learning proposals based on competitive models, the SSM discipline proposes an education based on shared value rationality for the stimulation of critical reflection. Thus, the following main hypothesis for this study can be formulated:

Hypothesis 1 (H1). *Change in the form and content of strategy teaching-learning stimulates critical reflection towards sustainability strategic management.*

The levels of reflection are evaluated based on the scale adapted from Kember et al. [1], considering the following dimensions: (a) Habitual action of value generated by organizations—a reflection of managers' education up to that point; (b) understanding of other types of rationality, organizational complexity, co-opetition, stakeholder theory, organizational sustainability, and multidimensional value (economic, ecological and social) as a result of strategic management; (c) reflections on company goals and the ways to attain them. Finally, (d) the verification of shared value rationality as a means toward deeper and more critical reflections, which can lead to changes in presuppositions about the meaning of value.

In view of the above, four intermediate hypotheses are tested based on Kember et al. [1], which are:

Hypothesis 1a (H1a). *Strategic Sustainability Management (SSM) discipline promotes content other than habitual action.*

Hypothesis 1b (H1b). *Strategic Sustainability Management (SSM) discipline promotes content understanding.*

Hypothesis 1c (H1c). *Strategic Sustainability Management (SSM) discipline promotes reflection on the content studied.*

Hypothesis 1d (H1d). *Strategic Sustainability Management (SSM) discipline promotes critical reflection on the content studied.*

5. Methodological Procedures

Considering the purpose of capturing the levels of reflection of a group of students that finished the SSM discipline, we chose a quantitative approach. For this, we adapted the proposal of measuring reflection levels from Kember et al. [1], bearing in mind the objectives of the SSM discipline. The research subjects were undergraduate students who had undergone study in the SSM discipline, as well as those who held a bachelor's degree in business administration at Mackenzie Presbyterian University.

The translation of the Kember et al. [1] questionnaire includes semantic validation regarding content and translation by three peers, as suggested by Weidmer [73]. After that, we conducted a pre-test with twelve subjects of the research. The four constructs (Habitual Action; Understanding; Reflection and Critical Reflection) included four items each, totaling 16 items, which were adapted to the shared value rationality in the SSM course. There was a random arrangement of the items in the questionnaire. See Appendix A.

The perceptual measurement of the scales accords with the Likert 5-point scale. A text field was available for additional comments for each item, which gave support to the quantitative analysis. We drafted the questionnaire using the Survey Monkey software and emailed it to the students.

Jõreskog [74] suggests using Confirmatory Factor Analysis (CFA) to validate adapted scales, when it is based on substantive theory and/or previous knowledge. In CFA, the number of factors is known and equal to the number of latent variables. The CFA is a model that should be estimated and tested. This study use the four dimensions of critical reflection suggested by Kember et al. [1] because "in particular, confirmatory factor analysis allows a statistical test of how well an a priori specified factor model explains the observed pattern of sample correlations or covariances, commonly referred to as 'model fit'" [75] (p. 181). We also presented a suggestion of a reduced and adjusted critical reflection measurement model.

We accessed approximately 500 students from the undergraduate business student database. We received a total of 224 responses (about 45% as the return rate) from which 165 (33%) answered all

questions and made up the final valid sample for data treatment. Edwards et al. [76] addresses that a return rate of 33% for non-nominal surveys is considered adequate.

For data treatment, we used descriptive statistics and CFA, using Excel 2010, SPSS v. 20, and EQS 6.1 software.

6. Results

6.1. Characteristics of Business School 'Students and Research's Respondents

The Mackenzie Presbyterian University is a confessional organization with a humanist orientation based on the philosophy of John Calvin.

> The history of Mackenzie Presbyterian University (MPU) dates from the 19th century, when Presbyterian missionaries founded, in Sao Paulo, the "American School". The foundation of the new school represented a turning point in Brazil. The school introduced a series of pioneering and innovative pedagogical and social practices. Among them, the end of racial discrimination in admissions (legally authorized by the government until then), the creation of mixed gender classes and the abolition of physical punishments [77].

The 500 students contacted had a typical profile of the students' population of the University, with a diversified profile concerning the socioeconomic condition. The majority of students were between 18 and 27 years old and were well-divided by gender: females (55%) and males (45%). According to university database, the employability rate of students who attended classes during the night was 76% while the students who study during daytime was 35%.

The final sample was similar to the description of the initial 500. Regarding the 165 students who composed the final sample, we characterized them as follows: (a) gender—four did not declare their gender, and the remaining were evenly divided between male (49.1%) and female (48.5%); (b) age—ranged between 21 and 26 (72.1%), followed by 27 to 32 with 18.8%, a small portion aged between 33 and 39 (5.5%), and one respondent aged over 40; five respondents (3.5%) did not state their age; (c) employability—a vast majority of the students were working, totalizing 82.4%; 23 respondents were not working (13.9%), and 3.6% did not answer.

The questionnaire measured whether students remembered the SSM discipline. Most of them (81.2%) said yes, while 18.8% did not. This information, added to the good return rate of valid responses (33%), reveals the formation of a bond between the pedagogical proposal and the students. The text fields contained voluntary manifestations such as 'the course was the most interesting one in the semester, in my opinion', 'I always tried to reflect on the subject discussed in class, the professor made us think by holding debates', 'I think I wasn't mature enough for the course content', 'nowadays I give much more importance to the subject and I would definitely dedicate myself more', and 'I was extremely interested in the content of each class'. However, a smaller number of negative manifestations appeared, from students who could not remember the discipline or had found the texts difficult and complicated, both because of their theoretical content and the language.

6.2. Evaluating Levels of Reflection

We drafted the Kember et al. [1] questionnaire based on a field literature review and published empirical studies. After three stages of questionnaire application and statistical analysis, we examined the Cronbach alpha values for each scale to determine reliability (Table 3). We did the same with the scales translated and adapted in this questionnaire; the values proved acceptable, higher than the original with the exception of daily, habitual action. The Habitual Action dimension aims to analyze how much the students know the content and teaching-learning strategy of the SSM discipline; it is a dimension of validation contrary to critical reflection. The Cronbach Alpha (0.531) shows that one must review these items in a future application.

Table 3. Cronbach alpha values for Critical Reflection Scales.

Scale	Cronbach Alpha	Kember et al. [1]
Habitual Action (HA)	0.31	0.621
Understanding (UN)	0.792	0.757
Reflection (RE)	0.790	0.631
Critical Reflection (CR)	0.813	0.675

Source: Research Data (2015).

Table 4 presents the statistic described by this item with means and standard deviations. The closer the average is to 1, the more the respondents agreed with the statement, that is, the more contributive it is for measuring the scale degree. The closer the average is to 5, the less the respondents agreed with the statement, that is, the lower the level reached by the construct. The Skewness and Kurtosis values are within the parameters.

Table 4. Mean per item for the four scales.

Item	Mean	Std. Deviation	Median	Kurtosis	Skewness
HabitualAction_1	3.57	1.22	4.00	−1.09	−0.38
HabitualAction_3	3.5	1.11	4.00	−0.84	−0.31
HabitualAction_2	3.05	1.24	3.00	−0.95	0.01
Critical Reflection_2	2.89	1.05	3.00	−0.52	0.41
HabitualAction_4	2.85	1.23	3.00	−0.92	0.23
Critical Reflection_3	2.84	1.15	3.00	−0.82	0.31
Critical Reflection_1	2.45	1.07	2.0	−0.25	0.62
Critical Reflection_4	2.44	1.15	2.0	−0.88	0.61
Understading_3	2.17	1.04	2.0	0.80	1.04
Reflection_4	2.17	0.95	2.0	0.60	0.84
Understading_4	2.15	0.98	2.0	−0.15	0.67
Reflection_3	2.14	1.02	2.0	0.08	0.80
Understading_2	2.10	1.04	2.0	0.65	1.05
Reflection_1	1.98	0.91	2.0	0.50	0.93
Understading_1	1.82	0.89	2.0	2.17	1.35
Reflection_2	1.77	0.87	2.0	2.09	1.30

Std. error of Kurtosis = 0.376 and Std. error of Skewness = 0.189. Source: Research Data (2015).

The fact that the higher means related to the items of the Habitual Action scale of the Critical Reflection construct demonstrates that the content and teaching-learning strategies of the SSM discipline are not habitual nor created by students in an automated manner. The statement with the highest concordance percentage was HA_4 (44.2% concordance)—description 'If I simply agreed with what the SSM professor said, I wouldn't have to think much about the course and its content,' showing that not becoming involved and using the work of colleagues led students to pass a course without incorporating its content. However, the other statements in the Habitual Action dimension demonstrate it was not quite that simple. The statements HA_1 (59.4% discordance), 'When I performed activities during the SSM course, I performed them without thinking about them', HA_2 (55.2% discordance), 'During the SSM course I participated in the Sustainable Business game so many times that I played it without thinking about the game's shared value proposal', and HA_3 (36.4% discordance), 'From what I recall, the theoretical content, for reading and analysis, of the SSM course did not make me think much', had a higher discordance than concordance percentage and even indifference percentage in the case of items 1 and 2. See Table 5. These results therefore confirm hypothesis Ha: Strategic Sustainability Management (SSM) discipline promotes content other than habitual action.

Table 5. Response distribution in the Habitual Action dimension.

Habitual Action	Concordance % (1 e 2)	Indifferent % (3)	Discodance % (4 e 5)
HabitualAction_1	26.7	13.9	59.4
HabitualAction_2	34.5	29.1	36.4
HabitualAction_3	22.4	22.4	55.2
HabitualAction_4	44.2	24.8	31

Source: Research Data (2015).

After that, the highest means belonged to the Critical Reflection scale, expressed by the items: CR_1 (60.6% concordance), 'The SSM course led me to change the way I understand the notion of value as a business result', CR_2 (41.2% concordance), 'The SSM course challenged some of my most solid ideas', CR_3 (46.1% concordance), 'As a result of the SSM course I changed my conventional (non-sustainable) way of doing things', and CR_4 (59.4% concordance), 'During the SSM course I discovered flaws in things I believed to be right regarding business performance'. See Table 6. These results therefore confirm hypothesis Hd: Strategic Sustainability Management (SSM) discipline promotes critical reflection on the content studied.

Table 6. Response distribution in the Critical Reflection dimension.

Critical Reflection	Concordance % (1 e 2)	Indifferent % (3)	Discordance % (4 e 5)
Critical Reflection_1	60.6	21.2	18.2
Critical Reflection_2	41.2	32.1	26.7
Critical Reflection_3	46.1	23.6	30.3
Critical Reflection_4	59.4	21.8	18.8

Source: Research Data (2015).

The four Critical Reflection statements presented a higher percentage of concordance than discordance. The fact that the percentage of neutral or indifferent responses occurred at a considerable volume of the responses is understandable. These results reinforce the challenge of promoting this level of reflection in a classroom context to attain TL. If this is difficult individually, it is even more challenging collectively as a social transformation learning goal. The means for the Understanding and Reflection dimensions alternate among the lowest, as presented in Table 4. This happens because the response percentage in the concordance levels (1 and 2) was higher than for the other degrees of the Likert scale. Students' perception of the Understanding and Reflection provided by the SSM course proved very satisfactory.

In the Understanding scale, the concordance percentage was very high, surpassing 70% for all four statements, which are: UN_1 (85.5% concordance)—'When I took the SSM course I had to understand some of the concepts the professor taught', UN_2 (76.4% concordance)—'To pass the SSM course it is necessary to understand the content taught', UN_3 (73.3% concordance)—'I had to understand the content the professor taught to perform course tasks; such as the sustainable business game, theoretical questions, and business case analysis', and UN_4 (70.3% concordance)—'During the SSM course, I had to continuously think about the taught content (e.g., economic x ecological rationality, organizational paradoxes and tensions; co-opetition, stakeholder, shared value and others)'. See Table 7. These results therefore confirm hypothesis Hb: Strategic Sustainability Management (SSM) discipline promotes content understanding.

Table 7. Response distribution in the Understanding dimension.

Understanding	Concordance % (1 e 2)	Indifferent % (3)	Discordance % (4 e 5)
Understading_1	85.5	8.5	6
Understading_2	76.4	10.9	12.7
Understading_3	73.3	15.2	11.5
Understading_4	70.3	18.2	11.5

Source: Research Data (2015).

In the Reflection scale, the most relevant items are: R_2 (83.7% concordance)—'I like thinking about my work and considering alternatives that can provide shared value', and R_1 (80% concordance)—'Sometimes I question the way in which my work colleagues do something, and I try to do it in a way that generates shared value', reaching over 80% of student concordance. The other items, R_3 (70.9% concordance)—'I often reflect on the way in which I am practicing my manager profession, thinking about whether I could provide more shared value'; and R_4 (71.5% concordance)—'I always reassess my experience as a manager, which helps me to learn better ways of generating shared value,' also had a high concordance percentage, 70% range. The low percentage of students who disagreed with these statements caused this dimension's mean to be one of the lowest, along with the Understanding dimension. See Table 8. These results therefore confirm hypothesis Hc: Strategic Sustainability Management (SSM) discipline promotes reflection on the content studied.

Table 8. Response distribution in the Reflection dimension.

Reflection	Concordance % (1 e 2)	Indifferent % (3)	Discordance % (4 e 5)
Reflection_1	80	10.9	9.1
Reflection_2	83.7	12.7	3.6
Reflection_3	70.9	17	12.1
Reflection_4	71.5	18.8	9.7

Source: Research Data (2015).

The SSM discipline contributed to the understanding of and reflection on rationality based on shared value in the education of these future managers.

We can observe that an important advance made by the SSM discipline in the shared value teaching-learning has provided understanding of concepts not seen or not incorporated by the future managers and, especially, providing resources for reflection on business goals and the ways of teaching them. Contact with unfamiliar themes in the SSM discipline provides a review of presuppositions about business management and its aims, leading students to a more critical reflection through meaningful learning. Table 9 synthetizes the means of the four scales.

The means results were coherent with the work of Kember et al. [1], i.e., the means and average deviations for HA (3.24) and CR (2.66) are greater than the means of UN (2.06) and R (2.01). Carifio and Perla [78], and Norman [79] shed light on the debate over the treatment of Likert scales data on the type of variable, whether ordinal or interval character, and whether it is more appropriate to use non-parametric or parametric statistics for data analysis. Carifio and Perla [78] (p. 1151) conclude that:

> The debate on Likert scales and how they should be analysed, therefore, clearly and strongly goes to the intervalist position, if one is analysing more than a single Likert item. Analysing a single Likert item, it should also be noted, is a practice that should only occur very rarely. It is, therefore, as the intervalists contend, perfectly appropriate to summarise the ratings generated from Likert scales using means and standard deviations.

The reflection dimensions displayed contributions to the learning of strategy for sustainability. In other words, the shared value rationality mobilized students, also giving them a predisposition for replacing their presuppositions with transformational learning. Some exceptions were observable, both by the indicators marked as '1'—completely agree, and by text reports such as: 'I began negotiating with win-win results in mind, avoiding zero-sum negotiations such as are so common nowadays', which demonstrates that the students have been applying the concept in a manager's professional environment.

Table 9. Average per Critical Reflection Scale.

Mean			
Habitual Action	Understanding	Reflection	Critical Reflection
3.24 (1.07)	2.06 (0.71)	2.01 (0.67)	2.66 (0.95)

Source: Research Data (2015).

The pedagogical shared value experience highlights aspects of the understanding and reflection dimensions; written reports illustrate the way in which this happens: 'HR work and thinking about shared value is very helpful', 'I already had these concerns and the course intensified it', 'I would check the importance of information and its possible consequences', and 'I have always tried to reflect on the subject discussed in class, the professor made us think by holding debates'. The students described their difficulties in applying what they had comprehended and reflected on regarding shared value, such as: 'My scope of activity does not always allow me to tackle the three pillars', 'It is possible to think about [shared value], but it is much more complex putting it into practice than in theory; and this is a complex content, and there will always be trade-offs'.

This result shows that, even when there is an effort to educate managers for sustainability and make students aware of the need to think about management from other perspectives, people consider the application in the business universe to be difficult. This fact may limit the efforts by disciplines such as SSM and other teaching-learning strategies for sustainability at universities.

6.3. Structural Analysis

We used Confirmatory Factor Analysis (CFA) to verify if the items of the four scales (Habitual Action, Understanding, Reflection, and Critical Reflection) measured the critical reflection construct. We used this technique to confirm a prior structure. We also tested a single factor model to verify if there was a single dimension for the items used.

The use of the EQS Program [80] was necessary. The construction of the scales involved a four-factor model, so it was appropriate to test the fit to the Kember et al. [1] model. The testing of a single factor model was necessary to check if there was only one dimension for the relevant items, which has not been confirmed. The model chi-squares statistic X^2 with an associated degree of freedom (df) and Bentler's comparative fit index (CFI), whose parameters are shown in Table 10 measured the extent to which the model was a good fit for the data.

Table 10. Critical Reflection—Confirmatory Factor Analysis.

	Our Results	Kember et al. [1]	Expected
X^2 *chi-square*	146.16	179.3	*Minimum*
df	98	100	*Minimum*
Model Fit Summary			
CFI	0.943	0.903	>0.90
RMR	0.066		<0.01
GFI	0.903		>0.90
AGFI	0.892		>0.90
RMSEA	0.055		<0.080

Source: Research Data (2015).

We tested the standardized solution for the model (See Figure 1). The average variance explained (AVE) tested the convergent validity for each scale, showing that three latent variables (Understanding—UN, Reflection—R, and Critical Reflection—CR) almost exceeded the recommended value of 0.5 or 50% [81]. The negative signals and low explained variance could represent that Habitual Action is not compatible with the CR.
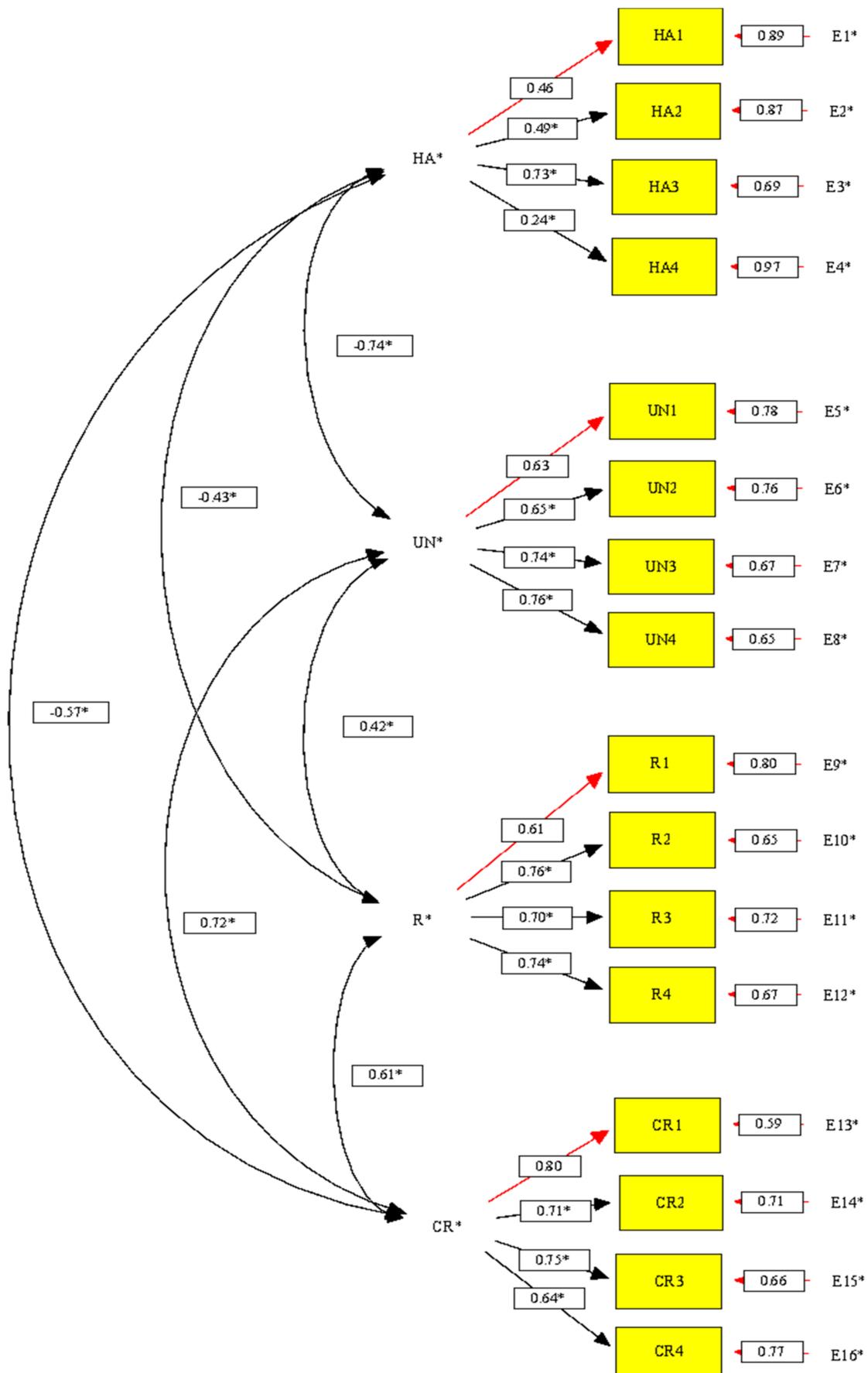
Figure 1. Standardized parameter estimates of the structural model of Critical Reflection. Source: Research Data (2015). (*) Results from EQS Report for CFA. Available by request.

The difference between the composite construct reliability and a measure of variance extracted is that the standard loads are squared before they are summed. The appropriate values for this search and Kember et al. [1] are in Table 11. These show that some adjustments could turn the critical reflection survey more reliable, such as a review of the scale of habitual action, especially HA4 item with a value of 0.24. We chose not to maximize the Critical Reflection scale with item cleaning because, in this study, CR was not used as a variable in relation—dependent variable or independent, for example. Besides, one of the objectives of the research was to replicate the critical reflection measurement proposed by Kember et al. [1].

Table 11. Average Variance Explained and Composite Reliability.

	Our Results		**Kember et al. [1]**	
	AVE *	**CR ****	**AVE ***	**CR ****
Habitual Action	26%	0.49	31%	0.54
Understanding	48.6%	0.70	44%	0.66
Reflection	50%	0.70	31%	0.55
Critical Reflection	53%	0.73	34%	0.59

* Average Variance Explained; ** Composite Reliability. Source: Research Data (2015).

Table 11 shows that the Average Variance Explained and Composition Reliability of the Habitual Action dimension was below acceptable, at least 50%. For this reason, we presented the reduced structural model without Habitual Action Scale.

Reduced Structural Analysis

The results of the reduced structural analysis, without Habitual Action, show small variation and a better fit model in all indicators (see Table 12) when compared to the complete model presented with the four dimensions of critical reflection.

Table 12. Critical Reflection—Confirmatory Factor Analysis Reduced.

	Our Results	**CFA Complete**	**Expected**
X^2 *chi-square*	82.841	146.16	*Minimum*
df	51	98	*Minimum*
Model Fit Summary			
CFI	0.956	0.943	>0.90
RMR	0.057	0.066	<0.01
GFI	0.922	0.903	>0.90
AGFI	0.881	0.892	>0.90
RMSEA	0.062	0.055	<0.080

Source: Research Data (2015).

The average variance explained (AVE) tested the convergent validity for each scale, showing that the three latent variables (Understanding—UN, Reflection—R, and Critical Reflection—CR) had a somewhat better mode fit, see Table 13.

Table 13. Average Variance Explained and Composite Reliability.

	CFA Reduced Model		**CFA Complete Model**	
	AVE *	**CR ****	**AVE ***	**CR ****
Understanding	49%	0.70	48.6%	0.70
Reflection	49.3%	0.70	50%	0.70
Critical Reflection	53%	0.73	53%	0.73

* Average Variance Explained; ** Composite Reliability. Source: Research Data (2015).

In this study, we chose not to remove items in the questionnaire because the goal was replicating and validating the scale of Kember et al. [1]. For future studies, we suggest that one make the adjustments before the data collection, as well as after.

7. Discussion

In the less promising results, there were considerable oscillations in belief in the shared value idea, with a strong presence of textual narratives that expressed the usual action, indicating that students did not always see applicability of content or establish relationships with their personal experiences. From the most positive point of view, the contents of the SSM initiative were not usual for a large number of students, since they did not consider it to be something processed without thinking. A high percentage of concordance with the possibility of thinking about development in a way other than through growth, or imagining a company providing other types of value other than economic, was also clear. Thus, the discipline was able to create an opening for change—a change that is fundamental for transformative learning to become possible [19]. These analyses point to the following behavior: if, there is no doubt that it is difficult to promote CR within a single discipline in the classroom, the results show that a considerable part of students displayed flexibility and predisposition for new content and form. We highlight here the students' memory of the discipline years after its completion, when they entered the job market, and their recognition of its importance to their current professional activity.

This affirmation leads to the conclusion that SSM instigated shared value rationality through CR, which is a trigger for transformative learning [19]. Thus, the main hypothesis can be confirmed: H—Change in the form and content of strategy teaching-learning stimulates critical reflection towards sustainability strategic management. Both the textual comments in the questionnaire and the number of probes in favor of shared value logic substantiate the result. This cannot be considered a small thing, considering it is a single discipline among so many others that did not support the idea of shared value.

Despite criticism that sustainability themes should not be confined to the occasional discipline [10], efforts in this direction are not as shallow as one might think a priori. The discipline has placed the discussion of shared value in the context of strategy, one of the pillars of business, and it has raised preventive a question: how does one ask businessmen to contain the size of their company, or even direct time and money towards goals other than profit? We must not forget that the debate on the idea of shared value as part of strategic thinking is not only recent but also controversial [40]. It is necessary to think about broader forms of management that inspire organizations to participate in favor of less unbalanced society. Also, it is important to consider less functional theoretical approaches and a management education more directed at the humanities and long-term results [8,23,24].

For greater adherence to these assumptions and new actions, individuals should share this idea out of conviction, or such convictions must form. To sum up, although they have their limits, pedagogical experiences in this direction have their value and should not be so quickly disdained or minimized.

8. Implications for Teaching-Learning in Strategic Management

The implications of these findings follow three axes: (a) implications for professors; (b) implications for researchers; and (c) implications for business schools. In relation to axis (a), implications for professors, this study can inspire professors in two aspects: content and ways of teaching. In terms of *content*, strategy studies incorporated other areas such as philosophy [67] and macroeconomics [66] in order to broaden the discussion about managers' visions and strategic goals, for example. Regarding the way of teaching, the discipline adopted a block structure, including a deconstruction effort, based on a disorienting dilemma that promotes CR and TL [25] towards developing another form of rationality. Deconstruction was relevant because it shows the students that there are different ways of conceiving strategy, it discusses the existing rationales behind every strategic model, it emphasizes the consequences

of corporate actions and the long-term perspective, it questions the tensions and contradictions of the shared value rationality, the external impacts of company management, and questions them about the world we are living today. Reconstruction was relevant because it emphasizes the insertion of new business goals, the idea of coopetition, the construction of a stakeholder-oriented management with social responsibility, the application of methodologies such as *Natural Step* and *backcasting*, the imagination of a new future, and the operationalization of the shared value idea. This trajectory of deconstruction to reconstruction on new bases causes the teaching strategy to be confined to exploitation management, focused on cost and growth. It connects the thought and action of companies to a macro discussion, which involves the common good.

Finally, the third aspect of implications for professors refers to didactic strategy. In order to create an environment that fosters critical reflection, the course used distinct didactic tools such as games, research activity, personal reflections written at the end of each block, and debates. However, there are some reservations about this aspect that deserve discussion. On the one hand, SSM contributes on some level to the promotion of CR, as the results showed. But, on the other hand, it fails to make this experience more concrete and tangible to students. Therefore, to promote a continuous cycle that starts in reflection and criticism, and to arrive at the stage where business students are active and engaged [18], it is necessary that the shared value assumptions meet results. The students' textual comments in the questionnaire frequently revealed difficulties in observing and applying the notion of shared value in their professional practice. Even if the practice of strategic management still does not favor the pursuit of multidimensional outcomes, which can cause students to not give enough importance to the shared value idea, pedagogical experiences must continue to improve in this direction in order to break with the current business behavior. It is, therefore, necessary to think of stimuli that help students to feed this type of cycle by numerous pedagogical paths, a didactic process that combines recognition of assumptions, reflection, engagement, and action [18,25].

From the point of view of implications for researchers, axis (b), two points deserve highlighting. The measurement of critical reflection, based on tools, such as Kember et al. [1], adapted for this study, can be replicated in the strategy area in other cultural and educational contexts. However, an observation must be made about the Kember et al. [1] scale. It proved very useful for capturing critical reflection at the end of a learning process, a discipline, or course, which led it to be applied to former students in this research. Nonetheless, the Kember et al. [1] questionnaire cannot be used to compare reflection levels reached during the discipline, or even at the beginning and end of the course. Thus, in the case of our experience, including a space for comments in the questionnaire was fundamental for a better understanding of results.

Finally, when it comes to implications for business schools, axis (c), the main aspect to highlight refers to the directors' and coordinators' decision to create two strategy disciplines. When they chose this model, on the one hand, they opened opportunities for a strategy teaching proposal that is reflective and incorporates themes and theories not previously included in the strategy education agenda, and this can be considered a step forward. On the other hand, this format can also be interpreted as resistance to accept that sustainability is now part of a central strategy discussion. It is deemed unnecessary to offer a business strategy education with classical approaches to then question and discuss it from other perspectives, as SSM does. The most appropriate indication for undergraduate business studies is a discipline covering the classical models with discussions concerning ethics and social responsibility, considering the results reached for companies and society. Currently, it is possible to find Strategic Management textbooks, such as those by Dyer, Godfrey, Jensen, and Brycee [82], for example, which propose more integrated sustainability content, including Cooperative Strategies, Corporate Governance, Ethics and Strategy, and Social Value Organizations. The same reasoning can be applied to MBAs and specializations that offer management courses directed at sustainability, but which reinforce the message that they are an alternative path—in other words, a possibility and not a condition for business in this century.

9. Conclusions

This article has argued changes in the organizational environment and in competition demand, not only as a review of strategy theoretical content, but also of the way professors teach strategy, with more critical and reflective teaching-learning approaches. Based on an experience occurring in a higher education institution in Brazil, the conduction of research analyzed a proposal for shared value rationality teaching-learning [17] from a critical reflection perspective [25]. The institutional and historical context of the discipline's implementation and its format underwent discussion, and the levels of reflection underwent evaluation by adapting Kember's et al. [1] questionnaire. As a result, the discipline experience was able to create an environment that predisposed students to attain critical reflection toward strategic management for sustainability. This led to transformative learning [19], one that is capable of developing a shared value rationality in business administration.

Despite the contribution, the studied proposal also presented clear limits. From the didactic point of view, there is a need to make the pedagogical experience more focused on practice; from the political point of view, it is worth applying pressure for this school to increasingly adopt a position favorable to strategy teaching learning discussions, converging to integrated approaches. In this case, the SSM would no longer be merely a strategy discipline, but rather strengthen progressive management in business education [24]. Whether for the development of progressive management, or as a result of the complex conditions of the socioeconomic environment [28], discussions, and revisions of the way of teaching and content of strategic management is necessary.

We concluded that although a pedagogical experience like this one does not guarantee changes in beliefs about management and strategic objectives, it certainly creates an environment that favors adherence to new beliefs based on a deep reflective process that asks why managers should be concerned about it. That is why it is important to understand CR in strategy teaching from a more collective and not merely individual perspective, as part of the construction of a political-pedagogical project within management schools which will impact generations of students and managers. The experience studied resembles an organizing reflection process [22] in the strategic management classroom, no longer taking ideas for granted [18], opening space for new imaginative projects and projections [22]. And, teaching is not limited to solving problems. It also incorporates problem-posing, where the very nature of the problem is under debate [25]. Finally, when we look at the way of teaching and content of strategy teaching, we are dealing with an epistemic discussion [9], as shared value rationality demands. We hope that the findings and didactic-methodological procedures presented contribute to comparative studies and improvement efforts in this direction. In the future, we suggest carrying out studies that allow comparing different teaching-learning methodologies in strategy for sustainability and their results regarding the student's levels of reflection.

Appendix   Critical Reflection Questionnaire; According to Kember et al. [1]

Dear former undergraduate business student at Mackenzie University, I request your collaboration in answering this questionnaire about the Strategic Sustainability Management discipline (SSM), which you took during the 7th semester. There are 20 tests, and you will take about 5 min to answer them well. Your good will is essential for us to gain a better knowledge of the course and thus improve it.

SSM—Student Agreement

*1. Did you remember the SSM course? ( ) yes ( ) no

*2. Do you agree to answer this questionnaire spontaneously, being aware that the information will be treated globally and never individually? ( ) yes ( ) no

SSM—Former Student Questionnaire

Everyday Dimension—**Habitual Actions** (HA)

(1) When I performed activities during the SSM course, I did them without thinking.

(2) During the SSM course, I participated in the Sustainable Business game so often that I played it without thinking about the game's shared value proposal.

(3) From what I recall, the theoretical content, for reading and analysis, of the SSM course did not make me think very much.

(4) If I simply agreed with what the SSM professor said, I wouldn't have to think very much about the course and its contents (e.g., economic × ecological rationality; organizational paradoxes and tensions; co-opetition; stakeholder; shared value, and others).

Understanding Dimension (UN)

(1) When I took the SSM course I had to understand some of the concepts the professor taught.

(2) To pass the SSM course, it is necessary to understand the content taught.

(3) I had to understand the content the professor taught to perform course tasks; such as the sustainable business game, theoretical questions, and business case analysis.

(4) During the SSM course, I had to continuously think about the taught content (e.g., economic × ecological rationality; organizational paradoxes and tensions; co-opetition; stakeholder; shared value and others).

Reflection Dimension (R)

(1) Sometimes I question the way in which my work colleagues do something, and I try to do it in a way that generates shared value (economic, social and ecological results).

(2) I like thinking about my work and considering alternatives that can provide shared value.

(3) I often reflect on the way in which I am practicing my manager profession, thinking about whether I could provide more shared value.

(4) I always reassess my experience as a manager, which helps me to learn better ways of generating shared value.

Critical Reflection Dimension (CR)

(1) The SSM course led me to change the way I understand the notion of value as a business result.

(2) The SSM course challenged some of my most solid ideas.

(3) As a result of the SSM course I changed the way that I see the notion of value as a business result.

(4) During the SSM course, I discovered flaws (errors) in things I believed to be right regarding business performance.

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