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Moral TechEducation:
The Role of Imagination to Humanize Technological Societies

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Abstract

The age of advanced technologies (industry 4.0, robots, sophisticated machines able to replace human workers) has already arrived. We cannot stop to debate on the ethical demands for a human sustainability of this technological progress, and for sure we must ask ourselves if education is already providing tools to manage this epochal transition. Education seems having been too contents-oriented over the last fifty years. Contents is what really matters and what we must achieve: form is considered a sort of plus, related to people's freedom. This slow and inexorable passage to contents centered institutional education, has had a visible consequence: the aesthetical question of the form has turned into the main requisite of a culture based only on consuming. So the argument is still relevant: will education be able to give an aesthetic perception of the self and of the world around? When we talk of aesthetic awareness we mean that particular consciousness linked to imagination. This proposal aims to use contemporary philosophical issues on aesthetic (theories by Herbert Marcuse, Arnold Gehlen, Peter Sloterdijk) to affirm the role of imagination as a necessary framework for any technological education.

Keywords: Aesthetics, Marcuse, Education, Ethics, Advanced Technologies

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Introduction

Aesthetics is still important in education today, in a changing world where technocracy and capitalistic beauty dominate. The philosophy of Aesthetics (perception, representation, art) keeps imagination alive helping people not be dominated by reality: would it be able to play a central humanistic role in the age of advanced technologies as well? And if yes, how could it be? We start reading some pages from Marcuse, which will be the basis for further analysis and debate.

Reshaping *obscenity*: a conceptual category in challenging scenarios

A small simple word has been used by Herbert Marcuse to introduce his *Essay on Liberation*: obscenity. What does this mean? In the Latin language, *obscenum* meant something that is beyond the stage. Theatre has been conducted for centuries. It includes a main stage for acting, in front of spectators, spaces behind the scenes and off stage assigned to actors, writers, directors, screenplay writers, staff and technicians and life around rehearsals. Therefore, what is called *obscenum,* born in an aesthetic context of drama and performance, could actually be meant as something hidden, unofficial, secretive, not public. However, only the modern meaning of the word *obscenum* is known in its present-day usage. It currently means indecent, awful, vile, also unfortunate and sad. Therefore, an investigation into Marcuse's use of the word is, is necessary, because obscenity plays a central role in the development of Marcuse critical theory, and in its unique aesthetic theory in particular.

«The category of *obscenity* will serve as an introduction. This society is *obscene* in producing and indecently exposing a stifling abundance of wares while depriving its victims abroad of the necessities of life; *obscene* in stuffing itself and its garbage cans while poisoning and burning the scarce foodstuffs in the field of its aggression; *obscene* in the words and smiles of its politicians and entertainers; in its prayers, in its ignorance, and in the wisdom of its kept intellectuals. *Obscenity* is a moral concept in the verbal arsenal of the Establishment, which abuses the term by applying it, not to expressions of its own morality but to those of another»[1].

«This society» of consumerism, we understand, is obscene: the way it produces and imposes goods, the way it is represented by its politicians, intellectuals and entertainers.

It seems we are facing an oxymoron. Society is a common representation of community, *societas* is the word used in Latin, indicating a particular kind of association, an inclusive, settled, harmonious being recognized and by all as a part of it. What we would like to assume is that claiming a society can be obscene, in some way, is like defining a symphony off key. In so much as it is quite impossible that a musical score is off key by itself, so it is difficult to think of a society in terms of obscenity, and this is what Marcuse has in mind. For this reason the inquiry on this concept follows.

«*Obscene* is not the picture of a naked woman who exposes her public hair but that of a fully clad general who exposes his medals rewarded in a war of aggression; *obscene* is not the ritual of the Hippies but the declaration of a high dignitary of the Church that

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[1] Marcuse, H.(1969), *A Biological Foundation for Socialism?*, in *An Essay on Liberation*, Beacon Press, Boston; e-book ISBN 978-08070-05958. It is my choice to highlight the word «obscene» in cursive.

war is necessary for peace. Linguistic therapy – that is, the effort to free words (and thereby concepts) from the all but total distortion of their meanings by the Establishment – demands the transfer of moral standards (and of their validation) from the Establishment to the revolt against it. Similarly the sociological and political vocabulary must be radically re-shaped: it must be stripped of its false neutrality; it must be methodically and provocatively "moralized" in terms of the Refusal»[2].

Marcuse links the idea of obscenity to his sexual theories in *Eros and Civilization*, writing that it belongs to the sexual sphere, "shame and the sense of guilt arise in the Oedipal situation", so that obscenity is not a materialistic concern, but a psychoanalytic concern. But the main point here is that obscenity is the Establishment's concept assimilated by a specific moral framework: *obscenum* is something that is behind or off stage, in a play where the dominant role has been played by the Establishment since the beginning. What if this category removed from the established framework? In opposition to the Establishment, we find *the great refusal*, as Marcuse writes. So what is the meaning of obscenity in the framework of refusal?

The surprising answer is that the same significance indicates the overturning of scenarios. If the Establishment is on stage, obviously obscene is what stands on the ground behind and off, but if we move the Establishment from the stage, it immediately takes up the space of obscenity.

«The so called consumer economy and the politics of corporate capitalism have created a second nature of man which ties him libidinally and aggressively to the *commodity form*. The need for possessing, consuming, handling, and constantly renewing the gadgets, devices, instruments, engines, offered to and imposed upon the people, for using these wares even at the danger of one's own destruction, as become a «biological» need in the sense just defined. The second nature of man thus militates against any change that would disrupt and perhaps even abolish this dependence of man on a market even more densely filled with merchandise – abolish his existence as a consumer consuming himself in buying and selling. The needs generated by this system are thus eminently stabilizing, conservative needs: the counterrevolution anchored in the instinctual structure»[3].

Form and Reification: *The Aesthetic Dimension*

A more subtle idea can be read when looked at more closely: Capitalism has generated a second nature in human beings, a second instinctual life that expresses itself in a specific biological need for goods. That is *obscene*, because this second nature has been artificially created to dominate the primary one and to reduce primary impulses to silence, and it is able to do all so due to *commodity form*. This expression should be underlined because the real *counterrevolution and revolt* will be revealed only in a conflict between *forms* of reality and needs: commodity form and the aesthetic form.

First of all, it is quite understandable that Marcuse is suggesting a deep connection between form and needs, in the sense that needs are produced by shapes of contents which force our capabilities of reasoning.

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[2] Marcuse, H., *Ibidem*.
[3] *Ibid*. It is my choice to highlight the words «commodity form» in cursive.

Returning to *One Dimensional Man*, and remembering what he wrote about «introjected» values and «false» needs. The distance between his analysis of consumer society and the traditional Marxist theory can be superficially explained by this speculative passage pertinent to the relation between workers and the system. Marcuse, contrary to Marx, understood that the workers are entirely integrated within modern society, in a way that makes current Capitalism absolutely unique. Workers could be victims of introjected values and false needs, however they work for and to an extent to achieve those needs. Even if a revolution happens under these conditions, and it is quite uncertain it will, because workers are too busy acquiring goods, the people, having assimilated artificial consumption-based values, would only reproduce the repressive structure that had conditioned and subjected them. Marcuse is truly assertive when he stresses this serious, alarming difference, that only if and when people have freed their minds, can they be affected by any material change; only if they are able to change their consciousness (meaning their form of reality, their imagination) will they be capable of a change in relations. While Marx maintained that only by changing men's economic relations could their consciousness be changed[4].

This emphasis on consciousness and its power of introjecting values linked to false needs, is precisely what allows Marcuse to go forward and overcome the Marxist conceptual acquisitions of *reification* and objectification. Reification is the objectification of social relations or of those involved in relations, and implies that objects are transformed into subjects and subjects are turned into objects, with the result that subjects are rendered passive, while objects are rendered as the active, determining factor. If alienation is the general condition of human estrangement in production processes, reification is a specific *form* of alienation.

The importance of the form is again reaffirmed, just as in George Lukacs' work, where he treats reification as a problem of capitalist society related to the prevalence of the commodity form, through a close reading of Marx's chapter on commodity fetishism in Capital. In more recent times philosopher Martha Nussbaum, in her analysis of objectification in *Sex and Social Justice*, interprets reification as an absence of autonomy, a deprivation of subjectivity awareness:

«Absence of true autonomy is absolute crucial to the analysis, as is also instrumentality and absence of concern for experiences and feelings (although Marx seems to grant that workers are still treated with some lingering awareness of their humanity and are not regarded altogether as tools or even animals). Workers are also treated as quite thoroughly fungible, both with other able-bodied workers at times with machines. They are not, however, treated as inert: their value to the capitalist producer consists precisely in their activity»[5].

On the other hand, the German philosopher Axel Honneth reformulates this key western Marxist concept in terms of intersubjective relations of recognition and power in his recent work *Reification*. Instead of having an effect of the structural character of

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[4] Marcuse, H.(1964), *One Dimensional Man: studies in the Ideology of Advanced Industrial Society* , Beacon Press, Boston; see Woods, R. (1989-1990), *A critical evaluation of Herbert Marcurse's An Essay of Liberation*, UC Davis University of California, http://prizedwriting.ucdavis.edu/past/1989-1990.

[5] Nussbaum, M. C.(1999), *Objectification*, in *Sex and Social Justice*, Oxford University Press, NY.

social systems such as capitalism, Honneth contends that all forms of reification are due to pathologies of intersubjectivity based on struggles for recognition[6].

In *The Aesthetic Dimension*, Marcuse's purpose is to determine the revolutionary essence of art by writing about a «dimension» in which everything is possible, the retreat «into a world of fiction where existing conditions are changed and overcome only in the realm of imagination».

When we talk about reality, its social and political standards, we refer to something that stands in such ways of individuation, "this is how things are" we can easily say, involuntary approving of the state of things. Following our thread of analysis, reality has contents which must be managed, but which is the *form* that instills our actions? Form is what aims to guide our perceptions and our frame of mind. Well, the aesthetic dimension is exactly where form nourishes itself: «literature can be called revolutionary in a meaningful sense only with reference to itself, as content having become form».

We can tentatively define *aesthetic form* as the result of the transformation of a given content (actual or historical, personal or social fact) into a self-contained whole: a poem, play, novel etc. The work is thus "taken out" of the constant process of reality and assumes significance and truth of its own. The aesthetic transformation is achieved through a reshaping of language, perception, and understanding so that they reveal the essence of reality in its appearance: the repressed potentialities of man and nature.

The work of art thus represents reality while accusing it. The critical form of art, its contribution to the struggle for liberation, resides in the aesthetic form. A work of art is authentic or true not by virtue of its content (the "correct" representation of social conditions), nor by its pure form, but by the *content having become form*[7].

What we call "form" in these pages is actually the representation of contents. And talking about representation we come across two important iconic representations of contents, that is the "symbol" and the "utopia". Symbol as an hermeneutical representation, utopia as an ideological representation.

Utopia must identify political leanings objectively produced in the social course to achieve itself, but must be capable to remake forms, that is the reason why it is so important to stress the role of creativity and imagination in critical theory. Imagination is inevitably needed to keep focused on firm goals for the future and to be critical about contingency, because of its unique ability to grasp objects even if they do not exist *hic at nunc*. Imagination, as Aristotle and Kant understood and described, has the ability to create new things with material offered by knowledge, and make its own autonomy from facts. Transcending present conditions, imagination is always a disclosing of the future. This power of transcending reality is what makes imagination such a precious instrument to call into question any state of things, to animate a sort of permanent revolution.

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[6] Honneth, A. (2012), *Reification. A new Look at an Old Idea*, Oxford University Press, NY.
[7] Marcuse, H. (1978), *The Aesthetic dimension : toward a Critique of Marxist Aesthetics*, Beacon Press, Boston; e-book ISBN 978-08070-15193; see also Marcuse, H. (1999), *Kultur und Gesellschaft I*, SurhKamp, Berlin. It is my choice to highlight words in cursive.

It is convincing that this is the feature able to show better than anything else how critical theory is loaded with utopia: critical theory is not so much interested in reforms or interventions of social engineering but rather it is occupied with an extreme denial of things in existence. And that is probably why critical theory has not so much interest in social sciences, exactly because being sciences they must deal with facts, and only facts.

In this context, the hermeneutical position of the French philosopher Paul Ricoeur about imagination, ideology and utopia should be drawn to mind. He distinctly understood and explained that the critique of ideologies in the Frankfurt School was connected to a project of liberation. That connection between a project of liberation and a scientific approach was directed against the treatment of social reality offered by any positivistic sociology; the concept of an ideology-critique presupposes a stand taken against sociology as an empirical science. The empirical science of sociology is itself treated as «a kind of ideology of the liberal, capitalistic system, as developing a purely descriptive sociology so as not to put into question its own presuppositions. It seems that step by step everything becomes ideological».

«We must integrate the concept of ideology as distortion into a framework that recognizes the symbolic structure of social life. Unless social life has a symbolic structure, there is no way to understand how we live, do things, and project these activities in ideas, no way to understand how reality can become an idea or how real life can produce illusion; these would all be simply mystical and incomprehensible events. This symbolic structure can be perverted, precisely by class interests and so on as Marx has shown, but if there were not a symbolic function already at work in the most primitive kind of action, I could not understand, for my part, how reality can produce shadows of this kind (…). The distorting function covers only a small surface of the social imagination, in just the same way that hallucinations or illusions constitute only a part of our imaginative activity in general»[8].

Ricoeur's viewpoint is that social imagination is absolutely constitutive of social reality, and the presupposition is that of a social imagination, of a cultural imagination operating in both constructive and destructive ways, as both confirmation and contestation of the present situation. The power of imagination acknowledged by Ricoeur is the power that Marcuse entrusts to imagination.

And reasoning on utopia, the French philosopher invites us to stop and think upon the Greek origin of the word and the description offered by Thomas More: a place which exists in no real place. The field of the possible is open beyond the actual, a field for alternative ways of living.

«May we not say that imagination itself – through its Utopian function – has a constitutive role in helping us rethink the nature of our social life? Is not Utopia the way in which we radically rethink what is family, what is consumption, what is authority, what is religion, and so on? Does not the fantasy of an alternative society and its exteriorization "nowhere" work as one of the most formidable contestations of what is? If I were to compare this structure of Utopia with a theme in the philosophy of imagination, I would say it is like Husserl's imaginative variations concerning an

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[8] Ricoeur, P. (1986), *Introduction*, in *Lectures on Ideology and Utopia*, Columbia University Press, NY; e-book ISBN 0-231-06048-3.

essence. Utopia introduces imaginative variations on the topics of society, power, government, family, religion. The kind of neutralization that constitutes imagination as fiction is at work in Utopia»[9].

Imagination has a preeminent role in allowing us to rethink possibilities and ways for our actions, and this is what really represents the core of any utopia. A place which exists in no real place, but a place that can be imagined everywhere.

Turning back to Marcuse, we can easily understand that the political potential of art lies only in its own aesthetic dimension; its relation to praxis is relentlessly indirect and mediated. Furthermore, the more immediately political the work of art is, the more it reduces the «power of estrangement and the radical, transcendental goals of change».

Politics has a strong instrument to numb societies into making them lose their familiarity with imagination of differences: when the imperative only focus on contents, immediately contents generate needs. But when the public reasoning aims to collect contents together with forms, politics takes a step forward (into a new democracy, or into a revolution. This is the same for Marcuse). Aesthetic formation is a process that allows the transvaluation of the norms of the established reality principle, and this dissociation from actuality does not produce false consciousness or mere illusion, but rather a *counter-consciousness*, as Marcuse writes, a negation of the realistic-conformist mind, in the name of precious binomial aesthetic form/autonomy. The aesthetic transformation becomes a vehicle for recognition.

«The world intended in art is never and nowhere merely the given world of everyday reality, but neither is it a world of mere fantasy, illusion, and so on. It contains nothing that does not also exist in the given reality, the actions, thoughts, feelings, and dreams of men and women, their potentialities and those of nature. Nevertheless the world of a work of art in "unreal" in the ordinary sense of this word: it is a fictitious reality. But it is "unreal" not because it is less, but because it is more as well as qualitative "other" than the established reality. As fictitious world, as illusion (Schein), it contains more truth than does everyday reality. For the latter is mystified in its institutions and relationships, which make necessity into choise, and alienation into self-realization. Only in the "illusory" world do things appear as what they are and what they can be. By virtue of this truth (which arte alone can express in sensuous representation) the world is inverted – it is the given reality, the ordinary world which now appears as untrue, as false, as deceptive reality: The world of art as the *appearance* of truth, the everyday reality as untrue, delusion».

The great contribution of art to revolt and struggle for liberation cannot be based and evaluated by the artist's origins or the ideological horizon of his/her class, neither by the presence of the oppressed class in his/her work. If art is capable of forward thinking, it is only in accordance with the work itself as a whole, with what it says, with the way it says it, with cohesion between form and content. Literature is not revolutionary because it is written for the revolution, or for the working class; it is revolutionary for its social function determined by imagination and universality, the real essential aspects of liberation.

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[9] Ricoeur, P., *Ibidem*.

In Marcuse's idea, art creates another reality principle which can, in a psychodynamic sense, allow the subjects to experiment with transgressions that they would not be able to explore in the given reality they inhabit. It is not a rejection of the reality principle, but of how the reality principle operates in civil society today.

Education, *everyday aesthetics* and advanced technologies

Now. Let's stop and take a step forward. Is education still able to manage aesthetic forms at their origin? On the contrary, education seems to have been too contents-oriented over the last fifty years. Contents is what we should achieve, contents is what really matters: form is something in addition linked to people's freedom. This slow and inexorable passage to contents centered institutional education, has had a visible consequence: the aesthetical question of the form has become the main requisite of consumer culture. So the argument is still relevant: has education been capable to create an aesthetic awareness so far?

When we talk of aesthetic awareness we mean that particular consciousness linked to imagination, recognition and refusal. And, above all, is education still calling for an aesthetic perception of the self and of the world around?

The solution can be difficult, but the nature of philosophy is to ask questions. Above all two grey areas should been illuminated. The first one is represented by the so called capitalistic "everyday aesthetics", the second is represented by technocracy and anthropotecniques.

Let's take a close look at the first grey area, in relation to Gilles Lipovetsky: «Aesthetics has become an item of mass consumption as well as a democratic way of life». In his writings he focuses on the artistic aspect of capitalism, explaining that capitalism needs to make goods attractive, beautiful, fancied. It's like a new mythology is being sold to us, a new *grand narrative* (using a word so precious to Lyotard): the narrative of goods. A new mythology that corresponds to a real transformation taking place in consumerism. It's quite known that up until now, the taste for luxury was reserved to rich. «It was anathema because it was seen as an immoral act of wasting resources for anyone who was struggling to meet their basic needs. That was the thinking. There was this idea that people had to know their place and stay there. Our world is no longer like that by any means – Lipovetsky says. Today, the working classes know all about brand names, fashion and luxury thanks to advertising and magazines»[10].

Which is the role of education in this multitude of brands? Here is the point for us. Talking about literary imagination, or aesthetical imagination, we learnt from Marcuse that reality can be forced and overcome into a kind of universality. Well, we don't think that the "flattening" of the capitalistic world can be associated to that kind of universality. Commodity form remains completely opposite to aesthetic form. Education should be used to teach us the difference between those two concepts of form.

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[10] Lipovetsky, G., Serroy, J. (2013), *L'Esthétisation du Monde. Vivre à l'age du capitalisme artiste,* Gallimard, Paris; *On Artistic Capitalism*, Interview on Crash Magazine 65, http://www.crash.fr/on-artistic-capitalism-by-gilles-lipovetsky-crash-65/

Let's move to the second grey area: the age of advanced technologies, Industry 4.0, robots, sophisticated machines able to replace human workers. We cannot stop to debate on the ethical demands for a human sustainability of this technological progress, but for sure we must ask ourselves if education is already equipping people to manage this epochal transition.

Newspapers, magazines, scientific journals are full of articles and theories explaining how producing things in the new era of work robots will be simple, fast and advanced. On the other side, many sociologists warn us about how hard looking for a job in the new age of technology will be.

But, what about the question: are you ready for this big change in reality? We will be introduced to a new aesthetics of work, exactly as it happened centuries ago with the industrial revolution. Are we ready to think of ourselves as part of this change? A new perception of beauty, a new perception of order and proportion, a new representation of objects and state of play: the new age 4.0 seems to request new aesthetics before and within new ethics. Is our education ready to teach good advice or does it want to arrive after robots and after the real transition?

Conclusions

The German philosophical anthropologist Arnold Gehlen believed our real primary nature is hidden by our «second nature» that requires us to create a cultural world. It is culture that, as a second nature, enables us to construct and mediate norms and values[11]. This activity originates in the nature of human beings, in their ontological deficiencies. Animals have a natural head start on human beings, have inherent instincts enabling them to react with absolute certainty to various situations and have been equipped with a natural protection, while human beings are imperfect and in order to survive they are compelled to create conditions for their own existence. In this way culture comes into being.

In more recent times, Peter Sloterdijk, for example, suggests us to work intensively on looking for an original interconnection between aesthetics of life, medical art and politics: if we want to survive keeping our human condition in the next age, we should learn a new art called *the art of living*.

If we believe in an affirmative answer, then we should consequently talk in terms of a reaffirmed human flourishing: will education be ready to still play a big part in between humanism and technocracy? We are convinced that Marcuse's idea of the aesthetic dimension is still a valuable tool for rethinking education not in support of repressive obscene societies, but in support of human deliberation.

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[11] Gehlen, A. (1988), *Man, His Nature and Place in the World*, Columbia University Press, NY.

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Homework Worksheets Designed to Promote Learner Autonomy

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Abstract

This paper examines the effectiveness of a simple worksheet designed based on the Recall Protocol assessment framework as an effort to help students develop learner autonomy. Building students up for autonomous learning can be a long and arduous journey, but it is what language educators aspire to achieve. The worksheet was inspired by one of the author's first-hand experience in the professional interpretation training and the Recall Protocol process. The worksheet was later modified to adapt to different proficiency level students in the intermediate and higher-intermediate Chinese Courses at the Defense Language Institute classrooms. The worksheet streamlines and prompts the processes for learners to take ownership of learning by examining their own comprehension, identifying areas for improvement and setting goals for each learning task. With proper guidance to use the worksheet in homework and in class, students can self-assess learning progress, achieve higher order thinking and set action plans for further learning and background knowledge building in self-directed fashion. This paper details the research attempting to examine the effectiveness of the worksheet and its variations by comparing students' performance on their proficiency tests before and after the worksheet was introduced to their homework and classrooms. The paper will lay out how the device is scaffolded in homework, how instructors utilize it to gain insights into students' learning and thinking processes and how these insights are instrumental for individualized instruction.

Keywords: Learner Autonomy, Listening Comprehension, Reading Comprehension, Recall Protocols, Notetaking, Metacognitive Learning, Self-Regulated Learning

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Introduction

For as long as people can think back, selected-response assessment has been widely employed in schools of all levels, including multiple-choice, matching and true-false questions while there is a growing interest in constructed-response assessment that requires students to compose their own answers (Stecher et al., 1997). At Defense Language Institute Foreign Language Center (DLIFLC), comprehension assessments are either a hybrid module of multiple-choice and short-answer questions or a multiple-choice only module. While the hybrid module employs two types of assessment to make up for the drawbacks of one another, it still does not provide enough clues as to how much a student genuinely comprehends from a passage and what a student needs assistance with, be it vocabulary, grammar or background knowledge.
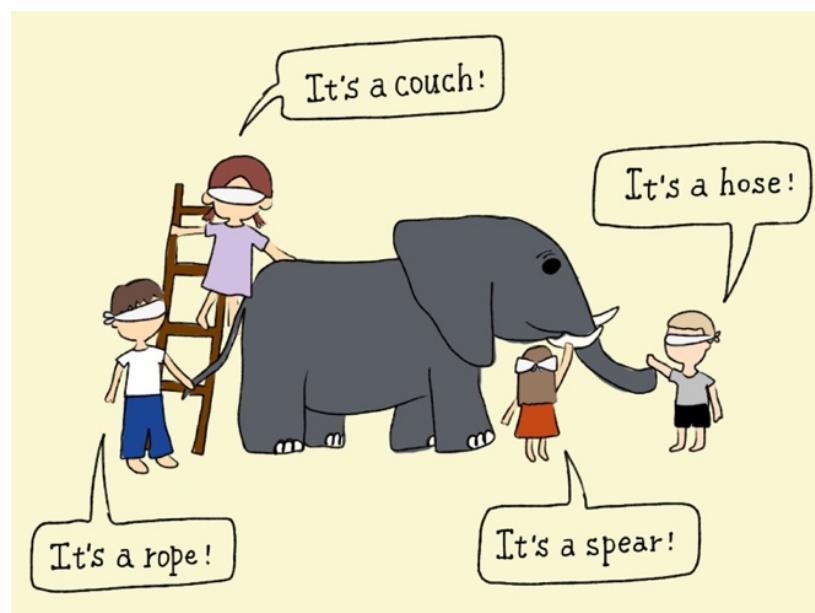
Figure 1: Blind Men and the Elephant

Comprehension, fundamental to language acquisition, is the second subsequent cognitive thinking process in Bloom Taxonomy that requires learners to interpret, categorize, summarize, infer, compare and explain. In this cognitive learning level, the teacher's role is to demonstrate, listen and examine (Oscarini & Bhakti, 2010). Learners' conceptualization and further interpretation of a passage bases on a full scope of information they gather from the passage. To achieve that, a teacher shall provide guidance by demonstrating, listening to students' summaries, inferences, interpretations and explanations, and then examining students' overall comprehension. As shown in Roediger and Marsh's study (2005), taking a multiple-choice test did not help subjects recall information. In the authors' experiences, multiple-choice tests do not provide either students or teachers enough clues to examine students' cognitive learning processes, progress and/or problem-finding skills. As depicted in Figure 1, if one has not been able to both trace the silhouette of the elephant and touch each part of it, conceptualization of the creature being an elephant would not be possible. Constructed-response questions may provide a better look at a student's comprehension level and yet still only a partial look.

To better guide and facilitate students to have comprehensive understanding and progress to the next cognitive learning levels of applying, analyzing, evaluating and creating, both students and teachers need a way to examine progress, pinpoint problems and set courses of actions. In the classroom, a teacher can guide students to both draw out the main idea and describe details in depth; however, when doing self-study, students either move on too quickly from an apprehensive idea or dwell on a certain unfamiliar word for too long. As a solution to the predicament in the authors' classrooms, the RPW and its modified variations were introduced to students' homework to help them track their own train of thoughts without teachers present. A similar note-taking and thinking process in consecutive interpretation is being emulated in the procedure of using the RPW. The RPW is designed vertically and sectioned for note-takers to easily track their thoughts and reconstruct their memories just like how an interpreter would do on a fast-paced consecutive interpretation session (Laurenzo, 2008). Bernhardt and James (1987) described the Immediate Recall Protocol as the procedure in which students listen to or read a passage and reconstruct the information and that offers teachers a chance to obtain more information as in how and what students understand. James (1987) also researched the Immediate Recall Protocol framework involving the listening modality. The framework has been most known as an alternative assessment framework for tests and has been the tool for diagnostic assessment at DLIFLC. Grounded by Hayes and Flower's (1980) observations that the Recall Protocol could help teachers peek into students' analytical process of text, the RPW was designed to visualize the framework mainly for students' self-directed learning in homework and life-long language acquisition. Being a simple chart, it simplifies the self-learning process so students can line up their thoughts gained from both written and spoken text. It also serves as an instrument for teachers to gauge students' genuine progress and further differentiate instruction catering to individual students' areas of improvement.

This paper is to discuss the effectiveness of the use of RPW and its modified variations in homework and in class. While the Immediate Recall Protocol framework is the basis of the practice, the focus of this paper is on how the Worksheets are scaffolded and benefit students in their self-regulated and autonomous life-long learning.

Methodology

Participants

The paper is based on the qualitative analysis of the formal and informal feedback of a total of 18 students, 11 from two classes in the Chinese intermediate course (64 weeks) and 7 in the Chinese higher-intermediate course (6 weeks/19 weeks). Quantitative analysis of the results of their proficiency tests before and after the RPW and its variations were implemented as well as teachers' in-class observations also inform the basis of the paper. Including intermediate to higher-intermediate level students provides a larger scope of the application of the RPWs. All students in both courses were required

to obtain or maintain a minimum of ILR Level 2 proficiency[1] for both listening and reading on DLPT5[2].

Context

The mission of DLIFLC is to provide culture-based language programs for prospect linguists. That being said, exploration of a plethora of subject matters in target languages is fundamental to the training, and it is instrumental to train students to work with unfamiliar topics or context in their target languages. It is ideal that, when working with unfamiliar topics, students process information bottom-up, gathering information from each time they listen to or read a passage and connecting the dots to paint the big picture. Unfortunately, due to lack of background information or prior knowledge of the topics, students tend to get frustrated or dwell on a certain word or unclear idea for too long. The authors designed the RPWs to help their students systematically look through their own notes, organize their thoughts and at least develop a rough picture without getting stuck. The structure is intended to help students stay grounded and follow through each comprehension drill even when no teacher is present to provide assistance or guidance.

Instead of using the Immediate Recall Protocol for diagnostic assessment, which is the common practice within the Chinese Department at DLIFLC, the authors designed and refined the RPW for homework to help students gain ownership of their learning and teachers to gain insights into students' thinking processes.

Class I-1, one of the two intermediate classes participating in the study, started using the Lower-Intermediate Level Recall Protocol Worksheet (LIRPW) or passage listening and reading homework in Week 25 and the original RPW in Week 51. Class I-2, the other intermediate class in the study, started using the RPW in Week 45. Every class was different, so the implementation timing varied. Both classes were given detailed instructions and demonstrations on how to work with the device. The higher-intermediate class participants started using the Learning Process Worksheet (LPW), a refined version of the RPW, from the first week of the course for listening and reading homework.

When Classes I-1 and I-2 students' proficiencies were at the lower-intermediate level, they needed guidance to work through the materials with unfamiliar topics and vocabulary, so they started with the LIRPW with elaborate instructions (Figure 2). This was the first phase of scaffolding to train the students to listen to or read a passage one to two times or three times maximum, to obtain its main idea and retrieve as many details as possible. Depending on students' learning styles, they could work from bottom up to organize the details and form a main idea instead. A very important step was for the students to check their own comprehension by comparing their own notes

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[1] ILR (Interagency Language Roundtable) provides descriptions characterizing 6 basic language skill levels from 0 to 5 and their "plus levels". The minimum requirement of DLIFLC students, ILR Level 2, is described as to have "sufficient comprehension to understand conversations on routine social demands and limited job requirements" for listening and to have "sufficient comprehension to read simple, authentic written material in a form equivalent to usual printing or typescript on subjects within a familiar context" for reading. Full descriptions can be found at https://www.govtilr.org/index.htm

[2] DLPT5 (Defense Language Proficiency Test 5 System) is designed to assess native English speakers' acquired language proficiency. The DLPT5 rating system is based on the descriptions of the ILR Language skill system.

with the listening passage scripts, so they could "diagnose" their own comprehension hurdles by looking at the words, grammar patterns and/or ideas they missed. Since this was the first phase, instead of answering content questions, the participants were asked to design five questions based on the details they extracted, which encouraged them to think like a teacher putting in perspective all the ideas or details. Figure 3 is an example of a participant's homework LIRPW, including the teacher's feedback.

Recall Protocol Worksheet

Instructions: Follow suit the steps below and do NOT look up any words until you are done.
1. For listening:
    1) Listen 2-3 times and write down every time the details you attain in Step 1 (keep 5W's and 1H in mind). Then organize your thoughts into a brief main idea.
    2) Read the script and highlight new words. Try to make educated guesses before you look up new words.
    3) Identify clues that can or could have helped you understand the context better, i.e. grammar patterns and conjunction words that show contrast of time or elaboration or extension of concepts, such as 以前、以後、不再 (contrast of time)、不僅/而且、 雖然/但是…
    4) Diagnose your comprehension by recognizing the major hurdles, such as unfamiliarity with conjunction words, knowledge of specific subject matters, vocabulary, speed, etc.
    5) Design 5 questions based on the passage. Think from a teacher's perspective and apply the 5W's and 1H. Avoid L0+ questions like "What's his name?"

1. For reading:
    1) Read 2 times and write down every time the details you attain (keep 5W's and 1H in mind).
    2) Identify important conjunction words, grammar patterns and function words that show contrast of time or elaboration or extension of concepts, such as 以前、以後、不再 (contrast of time)、不僅/而且、 雖然/但是…
    3) Design 5 questions based on the passage. Think from a teacher's perspective and apply the 5W's and 1H. Avoid L0+ questions like "What's his name?"

Step 1:

1st listen/read
2nd listen/read
3rd listen/read
Main idea:
Grammar words and new vocab words:
Self-diagnosis

Figure 2: Lower-Intermediate Level Recall Protocol Worksheet

Lower Intermediate

1st listen: On July 24th they asked students how it's impacting their health. Interviewed students from age 6 to age 22. Asked about running.
2nd listen: Besides something, they asked students about running, sports, and other physical activities. They are going to do this from September until November until 2020.
3rd listen: This is the 8th time that they have done a check like this. It was organized by the education sector/department. Besides height and body weight.
Main Idea: For the past 8 years and until 2020, the education department has organized a check to ask students about students' health. They do this check from September to November every month and they ask about height, body weight, physical activity level, sports, etc.

Grammar words and new vocab:	1. wènjuàn - questionnaire
1. tǐzhì - constitution	2. jiǎncè - to detect
2. fànwéi - range	3. tiáozhěng - to adjust
Grammar and time measure words highlighted above.	

Self-diagnosis: Honestly, I think that the most difficult part of listening to this passage for me was the audio. The way that the man spoke, it sounded almost robotic, like a voicemail message that is auto-recorded and left on your phone. I had a difficult time understanding it because of that.

5 questions
1. What is being conducted for students?
2. Who organized this?
3. How do they conduct this?
4. What is being asked?
5. When do they do this? How long has it been happening for?

Instead of answering content questions, students are asked to design questions to get the critical thinking process started.

Figure 3: Example of Student's Homework Lower-Intermediate Level Recall Protocol Worksheet

The intermediate classes progressed to the next phase and started using the original version of the RPW (Figure 4), a rather concise version. After a few weeks of being eased into the recall protocol framework with non-textbook materials, they were expected to maneuver through their own thinking processes with more ease. Depending on students' learning styles, they could process a passage in a top-down manner by starting with the main idea and summary or in a bottom-up manner by jotting down every single detail extracted from the passage. Then they would, as part of their routine for listening passages, check their own comprehension by reading the scripts, self-evaluate their own mistakes and identify their areas for improvement and even set up courses of actions to address and improve on their learning issues. In this phase, they had the liberty to choose whether or not to continue with the design of five content questions. The teachers found the five questions could determine if a student activated his higher-order thinking skills.

Figure 5 shows how a student was familiar enough with the RPW to skip using the worksheet but still follow the format. The student also carried over the routine of creating five questions from the lower-intermediate level version. When implementing the RPWs, the students were granted the liberty to choose what worked best for them. This particular student was quite thorough with the details and appeared to be comfortable with the topic; thus, the teacher followed up with very limited comments and added to the student's self-diagnosis.

Recall Protocol Work Sheet

Main idea:

Summary:

Recall protocol:

1st listening

2nd listening

3rd listening

Self diagnosis

Figure 4: Original Recall Protocol Worksheet for All Levels

▼ 3 REVISIONS
Insertions: 0
Deletions: 0
Moves: 0
Formatting: 0
Comments: 3

yaky1011 Commented
  good. maybe add "how can you tell"

yaky1011 Commented
huh???? talking?

yaky1011 Commented
work on colloquialism as well...a lot of colloquial terms can
impede your comprehension as they don't translate literally.

1st: this is a conversation between a man and a woman about the global warming theory. man comments on how hot it is and the woman says it is due to global warming, then the discuss the causes of global warming, what they should do to help prevent it, and what s countries, such as European ones, are already doing.

2nd: this is a conversation between a man and a woman about the global warming theory man comments on how hot it is and then, to the man's annoyance, woman says it is due global warming, then they discuss the causes of global warming, what they should do to prevent it, the possible effects of global warming, and what some countries, such as Eur ones, are already doing, the woman also claims to be much more knowledgeable, and say has already adopted measures to reduce global warming.

Main Idea: Global Warming
Vocab: 全球气候变暖 global warming
气象 meteorology
温室效应 greenhouse effect
绕口 tongue-twister
纪录片 documentary
Questions:
1. What is the woman's response to the man's comment?
2. What is the man's tone?[1]
3. What are two effects of Global Warming?
4. What countries have already begun working to reduce global warming?
5. What are they doing?[2]
Self-diagnosis: I think I was able to get a fairly good understanding of the global concept, however I should work on my detail oriented[3] listening.

Figure 5: Example of Student's Homework Recall Protocol Worksheet

In the higher-intermediate curriculum, teachers worked with students who had taken the DLPT5, and all scored higher than Level 2 before the refresher course. Given that the students could understand authentic materials on everyday topics, most current

events and essential points of their professional fields, more text typologies were introduced to their syllabi. Typologies required students to identify writer's tones, read between lines and infer from, interpret and analyze text embedded with abstract ideas and literary devices, such as metaphor, irony, allegory, etc. The worksheet was thus modified to accommodate the curriculum to guide students to go beyond the literal meanings of text (Figure 6).

The refined worksheet, LPW, to provide a "one-stop shop" including the prompts for students to take before, during and after listening and reading assignments. Since the topics and text typologies selected for this course were generally more complex, students were asked to do background research on the selected topics. When they listened to or read the passages, they were to write down the information they extracted, be it facts listed, arguments presented, connotations behind metaphors or writer's tones and then summarize the passage based on their own notes. As in the lower-intermediate and intermediate scenarios, the students were instructed to assess their work by comparing their notes with the listening scripts for comprehension check and then identify ways to improve.

Self-Examining Learning Process Sheet

(A) Research the Topic (Relevant Background Information and knowledge):	Jot down the things you are uncertain of/or do not understand:
(B) 1st Listening/Reading – Global Main Idea:	
(C) 2nd Listening/Reading – Details Details/Key Info/ Important arguments: Or Any Hidden Message / Idea or Purpose / Author's Tone: Core arguments or supporting elements (if there are any)± 1. 2. 3. … Summary:	
(D) After comparing with the Script (for listening) /which parts you miss or misunderstand and why:	
(E) Self-Evaluation and Diagnosis/what you need to do in order to learn this kind of article better:	

Figure 6: Learning Process Worksheet for Higher-Intermediate Level

Figure 7 shows an example of a student's homework using LPW to organize his thoughts. The student's input and teacher's feedback were all in the target language to match the student's proficiency level.

From lower-intermediate to higher-intermediate levels, the worksheets, and most importantly, the learning processes revolving around the worksheets, are to empower students to gain control of their own learning and develop their own learning strategies to navigate through different text genres and topics.

Figure 7: Example of Higher-Intermediate Level Student's Homework Learning Process Worksheet

Data Collection and Analysis

The quantitative data include:
1.   Classes I-1 and I-2 results of Proficiency Test I which tests comprehension of passages of factual content delivered in a standard dialect on everyday topics, well-known current events and narrations of events. The test was administered in Weeks 51 and 45 in respective class, the same week as the original RPW was implemented.
2.   Classes I-1 and I-2 results of Proficiency Test II which tests the comprehension of concrete discussions, everyday vocabulary and some implications between lines, and requires more adequate vocabulary and knowledge base to excel at this level and understand overtones. The test was administered 1.5 months prior to the DLPT5.
3.   Classes I-1 and I-2 projected DLPT5 results based on Proficiency Test II results and in-class observations
4.   Classes I-1 and I-2 results of the DLPT5
5.   Class H pre-course DLPT5 results
6.   Class H post-course DLPT5 results

The teaching team of the intermediate classes projected their DLPT5 results based on their performance on a practice proficiency test modelling DLPT5 1.5 months prior to the DLPT5 and their in-class observations of the participants' learning styles and performance. The higher-intermediate level participants had taken the DLPT5 a few months before the refresher course and took the exam again upon the completion of the course. The practice test results, projected DLPT5 results and final DLPT5 results of the intermediate participants and the pre- and post-course DLPT 5 results of the higher-intermediate participants were compared in the quantitative analysis. The qualitative data from participants' feedback were included to better understand how the practice of using RPW for homework affects them in terms of the development of students' learner autonomy.

Findings

From Proficiency Tests I to II, none of Class I-1students showed progress in the listening modality; 4 out of 5 students saw improvement; one scored the same number of questions in the reading modality. In contrast, 4 out of 6 in Class I-2 showed progress in the listening modality and all 6 students improved in the reading modality.

When the projected DLPT5 results were compared with the final DLPT5 results, all five Class I-1 students scored higher than projected in the listening modality, 4 scored as projected in the reading modality and 1 scored higher than projected in the reading modality.

In Class H, one out of seven students showed improvement, five students maintained the same rating and one student declined in the listening modality in the DLPT5 after taking the refresher course. Five of seven students received a higher rating and one received a lower rating in the reading modality than their previous DLPT5 results while one student maintained the same rating.

Intermediate Students	Proficiency Test I (LC/RC)	Proficiency Test II (LC/RC)	Projected DLPT 5 Results (LC/RC)	DLPT 5 Results (LC/RC)
Class I-1				
I-1-B	40/47	37/43	1+/2	2/2+
I-1-C	42/49	33/47	2/2+	2+/2+
I-1-D	43/43	39/49	2/2	2+/2
I-1-H	45/41	36/46	2/2+	3/2+
I-1-S	42/50	37/45	1+/2	2+/2+
Class I-2	Proficiency Test I (LC/RC)	Proficiency Test II (LC/RC)	Projected DLPT 5 Results (LC/RC)	DLPT 5 Results (LC/RC)
I-2-AC	34/42	45/50	2/2+	2+/2+
I-2-JR	37/46	51/50	2+/2+	3/3
I-2-JJ	39/43	44/48	2/2	2+/2+
I-2-JN	47/51	51/57	2+/2+	3/3
I-2-CB	47/48	47/52	2/2+	3/3
I-2-M	46/46	46/47	2/2	3/2+

Table 1: Intermediate Level Student Proficiency Tests, Projected DLPT5 and Final DLPT5 Results[3]

Higher-intermediate Students	Pre-course DLPT 5 Results (Listening/Reading)	Post-course DLPT 5 Results (Listening/Reading)
H-L	2+/2	2+/3
H-T	2/2+	3/2
H-S	2+/2+	2+/3
H-E	3/3	3/3
H-M	2+/2+	1+/3
H-Su	3/2+	3/3
H-I	3/2+	3/3

Table 2: Higher-intermediate Level Student Pre- and Post- Refresher Course DLPT5 Results

There were a few variables in the study being participants' study habits, learning strategies, educational background, knowledge base and morale. Most of the participants in the 6- or 19-week higher-intermediate class have a bachelor's degree or took courses in colloge. That means their knowledge bases expanded and made it easier to maneuver the wide range of topics on the DLPT5.

In terms of study habits, most Class I-1 students lacked self-disciplines and procorastinated on their study plans. In Class I-2, most students developed their own study routines and never had homework incompletion issues in the final semester. Class H students were clear and ambitious on what they had to do to maintain or break through their previous DLPT5 scores.

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[3] LC refers to Listening Comprehension and RC refers to Reading Comprehension. The numbers in column 2 and 3 are the sum of the questions each individual answered correctly out of 60 questions of each modality in each test. The numbers in column 4 and 5 are the ratings of each individual's proficiency rating based on the ILR system.

On the front of learning strategies, Class I-1 was rather stubborn about accepting teachers' suggestions. They only had an epiphany in the last two months. 3 out of 5 students stated in the last month of the course that they realized they had to pick up their speed in the preparation for the DLPT5 and stick to the RPW in their homework as the backbone of their study routines. Class I-2 was generally a class of self-disciplined students. Although the class had not been exposed to authentic materials or much learning strategy training much when the author joined the class as the lead teacher at the two thirds mark of the course, it was easy for them to pick up the recommended learning strategies suggested by the new lead teacher. Class H participants were more experienced learners who graduated from the intermediate course at least one year ago. Most of them had their go-to learning sources, ranging from target language news outlets to flashcard apps.

As mentioned, background knowledge of the target language culture and topics ranging from economy to environment is one of the keys to reach a higher level on DLPT5. Class I-1 also had a lower average age and consequently was rather deficient of the knowledge base needed to achieve Level 2 and 2+ on the DLPT5. Most Class I-2 students were well read and curious by nature and found it easier to navigate the various topics covered in the DLPT5. Four of the Class H participants had a bachelor's degree and one took courses in college. Five had regular exposure to the target langugage news or TV shows.

Morale is an essential factor in the success of the students at DLIFLC, particularly in the intermediate course, as this intensive program lasts for 64 weeks and proceeds at an immensely fast pace. Class I-1, unfortunately, suffered low morale in the last semester. That might have had an impact on their Proficiency Test I. Class I-2, contrary to Class I-1, had their morale boosted when approaching the DLPT5 mainly because of the immersion trip to one of the target language countries. Many of them shared that the immersion trip allowed them to apply the target language and gain first-hand cultural experiences they learned in class. Some Class H participants were more driven in the refresher course than when they took the intermediate course mostly because they had more concrete goals and clearer pictures for their futures.

Student feedback showed positive relationships between their succeses on DLPT5 and the use of the RPW and LPW. One student in Class I-1 mentioned in the end-of-course evaluation that "there are many notes on my assignments giving me in-depth feedback for everything I had done that night." Class I-2 students did not share any feedback on the RPW in particular, but in the last two months of the course, the students were very active with the RPW, turning in extra listening and reading in the RPWs. While Class I-1 and I-2 were more subtle or inspecific with their feedback on the use of the RPW and its variations, Class H students were very specific with their views on the implementation of the LPW. They shared in face-to-face interviews and written evaluations their thoughts: "They [LPW] helped me understand what I actually understand versus what I though I understood.", "The homework sheet is effective. I think it allows students to focus on the parts of that they feel they need to work on. Whether it's global understanding, specific grammar patterns, focus on vocab, determining the underlying meaning of the author, idioms. more freedom to explore each Units material by using HW sheet.", " … using HW sheet to do an analysis of articles to get a deeper understanding of texts or sound files, and to be able to figure out

what was not understood at first and realize mistakes to learn from them.", and "I plan to utilize newer study tactics moving forward such as analysis for listening practice and comprehension, and check my grammar and word usage."

Conclusion

While the study could not demonstrate to the fullest scope the direct relationships between the use of the RPW and students' standardized assessments in selected-response form, it generally made an impact on the participants' study habits and helped the vast majority of them meet or exceed their minimum graduation requirement of Level 2 on DLPT5.

Using recall as a teaching device in second-langauge acquisition is to "reflect naturally occurring processes in comprehension" (Bernhardt and James, 1987, p.17). While it is many language educators' experiences that it takes extensive time to grade and give feedback for students recalls, the insights into students' thinking processes and consequent individualized feedback/instruction are crucial to students' learning outcomes. In view of language learning being a continuous task, students ought to have a tool to self-evaluate learning outcomes and set courses of actions for higher goals. The study widened the scope of utilization of the Immediate Recall Protocol to the self-regulated learning processes by assigning RPWss and its variations as homework.

The authors changed their perspectives and created something to apply a much disussed framework in a shifted language teaching and learning paradigm. In the shifted paradigm, teachers are encouraged to look beyond a, b, c, d, and learners are empowered to manage their learning progress. Using the RPW for homework has been a routine for many classes in the Chinese department at DLIFLC. It has become prevalent from class to class and has been modified and refined to accommoate different teaching methodologies, learning styles and learning objectives.

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Museum as Meditative Environment

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Abstract
The article considers a special term "meditative space" regarding modern museums' environment. The term is considered in the context of modern venues in Museum Education that are concentrated on interactive communication with visitors. In accordance with a brief description of the contemporary museum philosophy, the author emphasizes the importance of keeping some elements of traditional expositions. Such a conventional demonstration way allows for the established communication style between museum visitors and works of art. Creating clusters of meditative space in modern museums meet a visitor's need for artifacts' independent perception. These clusters have to be planned by curators who need to be aware of the necessity of such silent activities in the museum's environment. To confirm the premise, the author provides examples from the aesthetic experience perception as well as views of modern researchers. The article provides examples of the meditative spaces organized in modern museums, the specific aim to give visitors a possibility to enjoy y their inner reflection during a museum visit.

Keywords: Aesthetic Experience, Museum Pedagogy, Meditative Space, Museum Environment, Modern Museum, Interactive Communication

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Introduction

The article deals with the particular term "meditative space" in relation to the modern Museum environment. This term is considered in the context of modern Museum education platforms focused on interactive communication with visitors. In accordance with the brief description of modern Museum philosophy, the author emphasizes the importance of preserving some elements of traditional exhibitions. This traditional method of demonstration is well-established style of communication between Museum visitors and works of art. However, the reis a need for special quiet place visitors might need to find self-retrospection and calmness while processing information about the collection. Creating clusters of meditative space in modern museums meets the visitor's need for the independent perception of artifacts. Planned by curators who are aware of the need for such silent activities in the Museum environment, these clusters could turn museums from silent set of artifacts to places of critical thinking and consideration. Several examples from the perception of aesthetic experience are provided in the article as well as examples of meditative spaces organized in modern museums.

The problem of the interactive museum recently has become central to the development of both general and museum pedagogy. Museums and schools around the world discuss issues of active interaction between the museum and the visitor. Many theoretical studies and practical developments in modern museum pedagogy offer new museums' concepts, define new strategies for developing museum activities and museum pedagogy. There are different options of understanding the place of the museum in the modern world. In the museums as the "museum-informative environment" (M. S. Kagan) visitors experience cognitive challenges, gain knowledge about collections and artifacts. The informative environment represents fields of cultural heritage that could be explored in a museums though exhibitions. The "information and cumulative culture of the museum" (Flier) collects cultural memory. Altogether with personal experience during the visit, it accumulates cultural background knowledge. To organize the better museum experience, cultural classification of museums (Sapanzha) is needed and was developed. For understanding "museum perception" (S. V. Pshenichnaya) and move it to the more developed level, museums constantly continue working on different types of materials for individual and group visits. The "typology of dialogue" of visitors with works of art (K. Dufresne-Tasse) gives museum educators the instrument for efficient management of visits. Overall, the museum space as a term combines all types of activities and is also considered from the point of view of interactive communication with visitors based on V. Benjamin's ideas about contact with "living" and "mobile" traditions represented by works of art in museums. The "constructivist museum" (Hein) develops educational methods in modern circumstances of visual culture and technology life. To achieve this goal, numerous approaches and programs are being developed in the field of museum pedagogy from the perspective of artistic perception development (B. A. Stolyarov). The majority of methods are based on interactive (G. Black) and socio-cultural activities of the museum (E. P. Olesina). In general, modern museum is considered as a social, educational platform (Hein). The endless list of existing theoretical research and practical developments could be discussed extensively for Museum Education is trying to hear museum visitors and to be heard by them too.

Methodology

It is important to provide active involvement of visitors in museum activities. However, all the activities being interactive and socially engaged, there is a lack of having in museums a space for communicating with oneself. It is a more traditional and fundamental function of the museum: reflexive perception of the originals, the sensual contemplation (L. Feuerbach) and the special ways of connecting concepts and observations (I. Kant). "The imaginary museum" A. Malro combines the "impractical emotional activity" of a museum visitor into a single discourse of living an individual aesthetic experience while visiting the museum. Why this question was asked in a situation of active development of social projects and transformation of the role of museums in modern society. It would seem that the main requirement is speed and quickness of reaction. Many studies confirm both the clip-like thinking of modern man, and his impatience in the process of obtaining information, the desire to get search results quickly and effectively, emphasizing the dominant role of social networks and a constant connection to the Internet. Personal, psychological, and pedagogical qualities of both modern youth and adults are studied in connection with the constant use of social networks. The principle of individual psychological organization deepens in introversion and introspective thinking. To process new information, our brain needs time. With lack of the time the informational flow is rejected. Eye-opener for seeing the originals and perceive the silence of painting. Find yourself through artworks by immersing into the colors and silent sounds of a painting.

The concept of the deep silent perception could be expanded to a concept of the meditative perception. It does not intend to entertain, but to open a new world of images, phenomena, and information carefully selected by curators for demonstration. Getting into a Museum that does not entertain, but represents, the visitor enters a world that needs to be known and understood, which requires " concentration and immersion" (V. Benjamin). To realize understanding, in accordance with the laws of perception, the human psyche needs to go through three phases. The first is informational when phenomena appear in their true form. The second phase is a surprise, finding what is strange, incomprehensible, new, and so on. (This list may be endless, just as the moments of surprise are endless.) The third phase is searching for your place, yourself, in this space of phenomena and information. Search for the relationship between the presented and your experience, knowledge, and thoughts. Based on reflection, on the basis of such a search, there is a personal increment in a variety of directions, from the expansion of the information field (I did not know this – now I know) to the essence of the phenomena of disclosure (how people of a specific era thought and perceived the world). The peculiarity of the perception process is that we cannot program a sequence of phase processes. Often, when visiting a museum, the visitor is first surprised by something, and only then complements the interest with the necessary knowledge. Or, vice versa, coming to the Museum to learn something ("see " - the purpose of their visit, visitors determine how often), they experience a powerful surge of emotional perception, followed by both informational and reflexive phases. In this context, we would like to mention the concept of a model of Museum visitors' behavior, developed by the Canadian scholar K. Dufresne-Tasse. This model is based on the thesis that any visit to a Museum is, first of all, a dialogue. And just as a dialogue can be both successful and unsuccessful,

so a visit to a Museum cannot take place, that is, leave no trace, but can become effective, accompanied by feelings of " admiration and immersion" (Dufresne, 187).

The tourist industry demands displaying masterpieces, making museums "places of pilgrimage" (Borja-Villel). Business and commercial interests dictate ways and methods of museums' work, and is reflected in the organization of work, and in the ways of communicating with visitors. Modern museum narrate and engage in a new entertaining way, speaking with their audience in a special language of amusement. They respond to the trends of the time. And even with the modern fragmentation of perception of the world, reflected in the fragmentation of modern exhibitions and expositions, it is necessary to find opportunities for expressing general theoretical, aesthetic, and artistic concepts for building a meditative communication process with works. It could be named a "meditative space."

The meditative space: definition and museum experiments

The meditative space of a museum is a special reflexive state reached by a visitor in the museum during the process of viewing a permanent collection or exhibition. It exists as a part of aesthetic perception and reflection. A person is deeply concentrated on his/her internal experiences in the process of contemplating on works of art. It intersects two worlds: the inner world of a person and the physical reality of the museum and its exposition. Thus, the visitor, being physically present at the exhibition, creates a specific additional space for their perception, impressions, experiences, and reflections. One of the factors that activate the meditative space is the presence of original works of art that carry an impressive aesthetic and emotional charge ("aura", according to Benjamin). They are also culturally representative of a particular epoch's style ("living and moving traditions", according to V. Benjamin). All of these factors immerse a person in internal reflections and, as a result, create the preconditions for "silent perception". Forestalling the argument about the possibility of using the term "contemplation", the attention should be drawn to the moment of presence inherent in this concept. Also, contemplation presupposes a response to a particular object. Meditativeness in this context emphasizes the intermediate state in which a museum visitor finds himself: physically, he no longer contemplates the work of art, but it is present in his perception, generating cultural analogies, questions, and internal dialogue. The term meditative space covers the entire complex of feelings, thoughts, and associations evoked by one or more works of art. This is an incomplete process of including a work of art in an internal museum that could be called "pre-state" that requires time and unusual thoughtfulness and mood.

Hence, the meditative space could be defined as a special form of the museum visitor's state based on the aesthetic perception of the original works of art. This space can be maintained by museum employees at the physical level using certain means of organizing the museum's segments and spaces. These segments could be useful to overcome visitors' "museum fatigue" (Black, 66) – "a special physical and mental state that occurs in visitors after a certain time spent in the museum" (Black, 66). Although the difference between the age and psychological features of this condition was not distinguished by age, education, and other criteria, organizing special zones with seats helps to regulate visitors' flow and relieve this fatigue. They could be allocated in the most important areas for familiarization with the help of signs, color zoning or thematic structuring of the exposition (Black, 92). The concept is important

and could have a further development toward the idea of the meditative space: for an unprepared visitor, it will be the "museum fatigue"; for a person with the reflexive experience, it could be a "meditative space", a place of solitude and reflection. For example, the State Tretyakov Gallery (Moscow, Russia) has recently created a special "living room" zone in the middle of the entire exposition (https://www.tretyakovgallery.ru/about/projects/gostinaya-novoy-tretyakovki-i-arzamas/). The room is decorated in the style of 60s of XXth century with the minimalistic aesthetics of colors, furniture, and the interior's details. The living room has books, comfortable chairs, coffee tables, and lamps. All the details create a special ambience of a cozy space for rest, relaxation, and nice friendly conversation. The zone became very popular: people gather there to chat, to look though the books and magazines, and simply to spend time in silence. The living room is intentionally located in the middle of the gallery to help people find a space of solitude and contemplation. Thoughtfully created, such zones not only support visitors, but also advance the concept of modern museums to the level of being people's places.

The meditative environment helps visitors to find themselves in the ocean of associations and information. For example, the Garage Museum (Moscow, Russia), modern avant-guard museum, organized a chamber exhibition "Dolphin in the Fountain" in March 2018, by Ando Vekua (...). This exhibition is about "moving deeper, deeper into the imagination and memories. (https://tvrain.ru/lite/teleshow/artificial_selection/ledi_bred_prinuzhdenie-459716/). The exhibition itself was created as a meditative space that generates visitors' reflection. The curator's intention is clear and goes around the main concept of provoking visitors to look inside themselves.

Another example is even straightforward: museum experience advertises meditative tours in the National art Museum of Belarus (Minsk, Belarus). This program was organized and conducted by the cognitive-behavioral therapist Ekaterina Karpovich: "according to statistics, the average time a user spends in front of a picture is 17 seconds. And how much time does an artist spend to think about an idea and paint a picture? And how much intellectual information and sensory depth can you get in 17 seconds? Art requires attention, awareness, and time. Unfortunately, often our trips to museums are more like a marathon." (https://www.the-village.me/village/culture/culture-news/266613-meditatsii-v-muzee)

E. Karpovich was concerned about deep understanding of a work of art based on the time spent to perceive it. Her intentions were about real perception, when a person not only watch, but sees. Her methods provides a possibility to go from a viewer to a perceiver. This approach is one of the examples of the meditative space, a live meditative space, when a certain atmosphere of perception creates a special "meditative bubble" that surrounds a group of visitors. At this point, they stop being visitors, but become a part of the museum environment in all means.

All the examples indicate that the process of defining and creating the meditative space is a live process. It is developing in the modern world and could be considered as the response to the pressure of the virtual culture, technological challenges, lack of live communication, and the sense of community. It needs to be developed in different ways by curators and museum educators to turn museums into places of solace, self-reflection, and psychological comfort.

The meditative space for educational purposes

From the educational point of view, this space is the perfect end to a museum visit. Whether it is possible to create a meditative space during the tour is a controversial and complex question. The first response to this question is, of course, denial - how can a collective inner meditative state be possible? The process of deep perception, as well as experience, is an internal process. However, our experience shows that when conducting excursions by an experienced curator for a prepared audience of visitors, this space gradually sublimates, uniting the group into a whole unit. There comes a "moment of truth" for the whole group when everyone finds their own way to reflect on the work in a common meditative space created, supported, and guided by a curator. Such excursions were conducted for high school students of the Lyceum #3, Dzerzhinsky city, Moscow Region. A part of the General education program was the subject "History of World Culture". The teacher integrated the study of a certain era of art with visits to the Tretyakov Gallery in Moscow. A visit either started or ended the study of a certain goal of understanding the arts. The visits were conducted by one curator, with whom the school teacher discussed some aspects of the integrated course. For example, the students' response to the previous tour; or the correlation between the informative material and the time allocated for the analysis of the artwork. This organization of work allowed the teacher to expand the horizons of perception of the Gallery's artworks in many directions, from the information field to the development of skills for analyzing a work of art. For the curator, this form of work was also interesting, since it allowed to trace the dynamics of the group's perception of art, along with an increasingly growing individual approach. Students became part of the curator's educational and excursion space, who knew each person by sight and knew the group's individual characteristics and capabilities. For students, this form of work was a revelation. These museum visits have developed their ability and skills to perceive and analyze art, but finally to form their personal meditative space. Later, on the basis of such excursions, students were able to create a kind of meditative space within the framework of classes at the school, which became possible also because these students have a particularly developed rich artistic imagination. After the integrated course, conducting "imaginary excursions" in the classroom became a favorite type of practical training.

In modern life, when too many people gather, the significance of the exhibits is devalued, and in the absence of silence, the visitor does not have the opportunity to enter into an internal dialogue with the work of art, enjoy contemplation, and think about the cultural relations of the work.

Conclusion

The trends in the development of museum space during recent decades considered in the article led to the concept of meditative space as an invaluable part of modern museum activities. The definition and the examples demonstrate a new turn in informative and educational approaches in Museum Studies and praxis. The new methods do not put aside traditional forms of displays and exhibitions for this allows maintaining a classical, "informative", form of communication with works of art. However, the role of modern museums is polyfunctional, from developing social skills and cognitive improvement to creating a field for art perception, reflection, and inspiration. Even being socially active and entertaining, the museum will remain a

meeting place with art if it creates conditions for a meditative space for visitors. Understanding the need for the meditative space and creating special clusters help visitors think about their independent perception. It shows respect to visitors, generates their appreciation of collections and exhibitions. In the world of constant pressure of the digital culture, the museum space, traditional or innovative, remains the interactive platform of cultural heritage with the involvement of visitors in a dialogue, as well as with specially organized additional areas of recreation, privacy, and reflection.

Acknowledgments

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Hybrid Learning Higher Education: The Co-Creation of Value in the Student's View

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Abstract

Interaction (student-teacher relationship) and active participation (student involvement) were enhanced due to digital transformation and as long as the student interacts with the teacher, he changes into co-creator student, as the perception of his role in the process of learning evolves. A context in which it is possible to observe such conjuncture in higher education, is hybrid education where digital technology plays a central role. In higher education with hybrid disciplines, student, teacher and institution are interrelated and, by offering hybrid disciplines, the institution enables the joint value creation, but it remains unclear whether the student will be willing to participate more actively and contribute to such co-creation of value. This study aims to reveal the student's perception of this method which requires a more active participation in his learning process and also aims to examine whether the university should adopt this modality the student's formation process. In order to meet this objective, a qualitative research was conducted, through in-depth interviews with students from a private, community, confessional and philanthropic higher education institution in Brazil. After having processed the data using the content analysis method, it was discoverd that although the student values its protagonism with more responsibility in learning, co-creation is a difficult, laborious process. Thus, it is considered positive for the university to adopt the hybrid model, as it allows students to develop discipline that contributes to their autonomy, as well as a shift in their mindset to a different way of learning and teaching.

Keywords: Hybrid Learning, Interaction, Active Participation, Co-Creation of Value, Higher Education

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Introduction

Co-creation, in certain areas, is more than appropriate, it seems inherent to the activity. This is the case of teaching, where the student, the teacher and the institution focus on the result of the service through the development of skills and abilities. The role of creating value for the student cannot be the sole responsibility of the institution offering the service, since it must be carried out together with it, that is, co-created (Brambilla, 2010; Hofstatter, 2010; Carvalho, 2017). The company (higher education institution), does not create, it can only propose value (Prahalad & Ramaswamy (2004).

It is not the case here to market education, let alone diminish its importance. Understanding it as a service, even though there is a discussion about this not being a traditional service provision, it is, in this circumstance, having as a central point the resources that can guarantee the quality of the service it provides to the educational institution, as reflected Brambilla (2010) and Carvalho (2017), whose research was dedicated to the theme of value co-creation in the context of higher education, both in person and at distance, respectively. Even knowing that the topic is controversial, especially among professionals in the field of education, in this study, the student is understood as the recipient of the service, and education as a service whose main objective is not only profit, but mainly the social perspective (Svensson & Wood, 2007; Brambilla, 2010; Carvalho, 2017).

Value co-creation presents itself as a multifaceted phenomenon that challenges and brings new research opportunities, given the economic and social changes. However, Carvalho (2017) stated that the theme of co-creation of value has still been little explored, especially in distance learning. In the case of hybrid education, understood in this research as a synonym for semi-presential education - a modality that unites traditional presence with distance education, making it possible to enjoy the advantages of both (Voigt, 2007; Bacich, Tanzi Neto & Trevisani, 2015) - if a similar reality.

It seems to make sense to provide a dialogue between co-creation of value, private higher education that adopts the hybrid teaching model and the student's experiences. This research seeks to contribute, by proposing to answer the following question: how does the student feel when studying in the hybrid modality that requires a more active participation in his learning process and examining about being positive, for his formation, the university adopts this modality in its course?

A qualitative research was conducted with undergraduate students of different courses distributed in the areas of Social, Exact and Health Sciences who had already attended at least 20% of the credit hours of the course and at least one discipline in the hybrid modality, of a community, confessional and philanthropic private university in Brazil. Data collection was carried out through semi-structured interviews, recorded on audio and using a script as the guide. The collected data were analyzed through content analysis.

The structure of this study presents, first, the co-creation of value in the context of hybrid higher education. After, the relationship between technology and the concept of the co-creative student is explained. The methodology used to achieve the

objectives proposed by this study is presented. The data analysis and the discussion of the results are presented. Finally, the conclusions of the study are made, as well as the possibilities for further research on the subject.

Background

Value co-creation in the context of higher education

The search for value in education is not a new issue (Brambilla, 2010; Hofstatter, 2010; Carvalho, 2017). In the genesis of teaching there are the essential characteristics of the concept of co-creation of value, that is: interaction (student-teacher relationship) and active participation (student involvement). Studies on co-creation of value in the context of higher education have been on the agenda of many researchers (Tsourela et al, 2015; Ribes-Giner, et al, 2016; Blau & Shamir-Inbal, 2017; Chemi & Krogh, 2017; Ranjbarfard & Sureshjani, 2017). For this, the studies carried out by Prahalad and Ramaswamy (2004) and by Vargo and Lusch (2004, 2006, 2008) served as an initial basis.

Contemporary researchers (Tsourela et al, 2015; Ribes-Giner, Perello-Marín & Díaz, 2016; Blau & Shamir- Inbal, 2017; Chemi & Krogh, 2017; Ranjbarfard & Sureshjani, 2017) believe that it is necessary to bring them into the debate the co-creation of value in the context of higher education to contribute on four fronts of understanding. They are: training students prepared to face the challenges of their academic and professional training, enabling student involvement in different stages of the service offered by higher education institutions, reducing costs and increasing satisfaction, confidence and loyalty. Higher education institutions are reviewing their roles, seeking to follow a more effective path of research, teaching and learning, including other aspects: emotional, sensory, affective and psychological learning (Tsourela et al, 2015).

The concept of co-creation in the context of higher education, indicates that in all educational processes, the participation of students is welcome, in order to try to guarantee the creation of knowledge together with them, that is, to go beyond just taking a course higher education and obtaining a diploma, as well as increasing the competitiveness of higher education (Tsourela et al, 2015). Higher education institutions must then develop and define their vision, guidelines and educational objectives involving students and putting into practice greater motivation in teaching (Bailey, 2000).

The next topic presents digital technology as an enhancer of interaction (relationship between co-creator student and teacher) and active participation (involvement of co-creator student) in the learning process and co-creation of value.

Technology and the co-creator student

The digital transformation, which among other various contributions, expanded access to technologies, including introducing them into education (Castells, 2013), made possible both the interaction (the student's relationship with the teacher) and the active participation (of the student)) gain new contours, that is, they were enhanced, and can also occur collectively, in a network and without depending on time and distance

(Díaz-Méndez & Gummesson, 2012). The concept of co-creative student, proposed by Halbesleben and Wheeler (2009) seems to be in line with this technological context.

The contributions of research by Halbesleben and Wheeler (2009) presented four models to identify the profile and the types of roles that the student can play in the teaching-learning relationship. They are: Student as a Consumer, Student as an Employee, Student as a Co-Creator and Student as a Junior Partner and, of these four models, the authors analyzed that the most congruent for the understanding of teaching as a process of co-creation of value was that of the Student as Co-Creator . In this model, it was found the best results of interest, learning and agrees with the idea of bringing to the relationship, the best composition of value for all involved. For Halbesleben and Wheeler (2009), this model has the differential that the student co-produces the results of the service, that is, its qualification.

Active participation (of the student) and interaction (between student and teacher) can be enhanced, supported by digital technologies. At the same time, the ways of teaching and learning are being reconfigured, enabling changes in the design of teaching and learning practices (Díaz-Méndez & Gummesson, 2012; Tsourela et al., 2015).

An example where it is possible to observe such a situation in higher education is hybrid education. In this academic modality, it is understood that digital technology occupies a prominent place, because it is a condition for it to be realized (Haughey, 2006; Tori, 2009; Horn & Staker, 2014; Bacich et al (2015) The next topic presents the concept of hybrid education and its congruence with the value co-creation process.

Hybrid teaching in higher education

For Tori (2009), Horn and Staker (2014) and Bacich et al (2015), in the hybrid model, there is a potential to improve the quality and efficiency of learning. As these researchers evaluated, due to the combination of virtual and face-to-face learning systems, it is feasible to make use of several languages simultaneously, favoring communication and space / time integration, in addition to meeting different learning styles and rhythms, allowing to increase the productivity of both the student and the teacher.

As for the definition of hybrid education, there are different understandings and, for the purposes of this study, the following was chosen: "any formal educational program in which a student learns, at least in part, through online teaching, with some type of control over time, space, course and / or pace and, at least in part, in a physical, supervised location "(Horn & Staker, 2014, p.34).

The hybrid teaching modality is governed by six principles that were outlined by researchers (Bertolin & De Marchi, 2014) who studied the topic. Table 1 presents these principles and the aspects of hybrid education, indicating the congruence of this modality with the phenomenon of co-creation of value.

Principles	Features	Essential features of value co-creation
1) Time and space flexibility	activities can be carried out at a time and place more appropriate for the student	Active participation
2) Interaction and collaboration in learning	construction of knowledge is permeated by dialogue, by the exchange of experiences and knowledge between the actors involved	Interaction and Active participation
3) Maximizing the use of technology in education	ICT's (information and communication technologies) are at the service of the teaching and learning process, helping students in building knowledge and appropriating the use of digital tools for the professional field	Interaction and Active participation
4) Autonomous learning	training students who self-regulate their learning and who are responsible for the organization of studies	Active participation
5) Quality materials	phases of planning, insertion and evaluation of the tools to be implemented in the disciplines of each hybrid course	Active participation
6) Pedagogical and technical support	student engagement and encouragement in academic activities	Interaction and Active participation

Table 1. Principles of hybrid education and congruence with the Value Co-creation process
Source: Prepared by the authors from Bertolin and De Marchi (2014).

It appears that hybrid education finds in digital technology a fundamental component for its understanding as a process of co-creation of value. The essential characteristics of value co-creation that are congruent with the principles of hybrid education (Bertolin & De Marchi, 2014), that is, the interaction between student and teacher and the active participation of the student to co-create value (qualification) are found in the technological support, your optimization.

After portraying the concept of hybrid education and its congruence with the process of co-creating value, the next topic presents the methodology adopted by this study.

Methodology

A qualitative research was conducted with sixteen undergraduate students, from courses in the areas of Social, Exact and Health Sciences who had already attended at least 20% of the course credit hours and had taken at least one discipline in the hybrid modality. The interviews were performed between the months of August and

November 2019, and the selection of the respondents started with a recommendation of students pointed out by the institution's DE coordinator.

The research locus was a large, private, community, confessional and philanthropic Brazilian university institution, with more than 50,000 students, which offers courses in different areas of knowledge and in different levels: undergraduate, specialization, master and doctorate. This institution offers in-person, distance and hybrid courses, and for over ten years it has been offering distance learning courses. Data collection was carried out through in-depth interviews, recorded on audio, each lasting approximately one hour and carried out at the university itself, on days and times previously scheduled with students. A semi-structured script was used as a guide, based on the literature on the topic.

Both the transcription and the treatment of the data was done using the content analysis method. The indicators were defined to make inferences of the knowledge related to the production / reception conditions (inferred variables) of the content of the messages (Bardin, 2011). The categorical analysis technique, that is, an analysis developed from a category, where the data are grouped, considering the common part between them (Bardin, 2011) was the choice for this study. A category is defined by a key term that expresses both the concept and its semantic field (Vala, 2007).

Thematic analysis was chosen to establish the characteristics of the message, its informational value, words, arguments and ideas (Vala, 2007). From the reports collected from the students, units of meaning were extracted, according to the defined theme, and then inferences were developed. Next, the data analyzes are presented, where the categories that were initially defined based on the Literature are identified, but were consolidated after the data obtained from the interviews.

Data analysis

The analyzed categories aimed to identify how the student feels when studying in a modality that requires a more active participation in their learning process and to examine whether the university adopts this modality in its course for its formation. 'Co-creation' was the category defined based on Literature, in the light of the studies by Svensson and Wood (2007) and Halbesleben and Wheeler (2009) on the active participation of students, the interaction between students and teachers and the roles that the student can play in the teaching-learning relationship. The category 'Adoption' was defined based on research by Bailey (2000) and Chemi and Krogh (2017) on how educational institutions should motivate teaching, with guidelines that involve teachers in the training of students prepared for new and technological world settings. The consolidation of these two categories of analysis took place after data collection. For a better presentation of the analyzed data, in Table 2, below, the categories considered for the study are identified, as well as their respective descriptions.

Category	Description
Co-creation	Presents the interaction between student and teacher and the active participation of the student as the characteristics to cocreate value (qualification)
Adoption	Examines whether to be positive, for student training, the university adopt this modality in its course

Table 2 - Research analysis categories
Source: Research data.

Co-creation in the student's view

The interaction between student and teacher and the active participation of the student are the essential characteristics to create value (qualification). Such characteristics are congruent with three of the six principles of hybrid teaching defined by Bertolin and De Marchi (2014): a) interaction and collaboration in learning; b) maximizing the use of technology in education; c) pedagogical and technical support.

The interviewed students believe that the interaction with the teacher and having active participation - co-creation - during their university career is something rewarding and they are aspects that should be inherent in their learning process, even understanding how hard this is for them. Students 1 and 6 explained:

> I think if you want to grow more, you know, to have some 'bigger prominence', I think you have to have this active participation, it makes perfect sense, right. And I honestly have no problem with that, because I see that it is something, really, natural, it is necessary. So, I have no problem with that, I think it's fair (Student 1).
> I feel kind of obliged, you know, because that is what will define the professional that I will be and, like it or not, I will also prove the quality of the college, directly I will be doing this (Student 6).

From these students' understandings, it is indicated that the concept of co-creation is related to the role that he can (or should) play during his learning process, that is, the protagonist, with more responsibility, because his participation is more active and provides partnership with the teacher. The model of the Student Co-creator of Halbesleben and Wheeler (2009), where the student co-produces the results of the service seems to be in line with the findings of the interviews. In the context of higher education, the concept of co-creation indicates that in all educational processes, student participation is welcome, as was also found in the research undertaken by Tsourela et al (2015), involving the co-creation of value and the university teaching service.

It is possible to analyze that a favorable path for the higher education institution would be to take advantage of the students' willingness to participate and interact and present to them the reason for the institutional choice for the semi-presential teaching modality, as well as its format. "In order to have a good perception of their students, institutions must seek this co-creation" (Damacena & Nascimento, 2016, p. 16), for the students, just being able to pay for the service is not enough to qualify.

Adoption of the hybrid modality for better student qualification

The students believe that it is positive for the university to adopt the semi-presential model for their training. For them, the way that makes the most sense to obtain the service of their qualification is that which allows them to develop, do together and participate autonomously in their process. of learning.

It was possible to understand the student's posture in the same way as Svensson and Wood (2007), that is, an entity actively involved in the teaching-learning process. Students 8 and 13 explained that

> I believe that participating in the production of something would be much more effective for teaching and learning (Student 8).

> What makes the most sense is what I choose, what I want to do (...). Do not impose certain mandatory subjects on me, but what I am interested in participating in (Student 13).

It was analyzed that the reasons given by the students about being positive for their training in the university to offer semi-presential subjects, was the discipline. Students are inclined to understand that when attending semi-presential courses, the university allows them to develop academic discipline, that is, to create a study routine that generates autonomy. Student 15's assessment:

> I think that today it is very common for people to work and study, so I think that for people who have less time to attend classes and things like that, it is very positive and I also think it is positive in terms of creating discipline, because it forces you to study every week, which forces you to do things in the correct sequence (Student 15).

For students, it is positive for the university to adopt the semi-presential teaching modality because it consolidates the paradigm shift, after all, they realize that it is a change of mindset, that is, a different way of learning and teaching, even though this is a challenge that some they accept to face more naturally, while others have more resistance.

Students 8 and 11 exemplify this:

> when you work with semi-presential subjects (...) It seems that the student has to study more alone, than with a teacher: a consequence. But, the student, he has to get used to new technologies because they are a reality, he tends to bring this idea into his daily life (Student 8).

> I think it is positive because it covers a larger audience of students. Sometimes, people have problems with face-to-face, but in semi-face, he gets a bigger scam, but then, on the other hand, there are people who hate semi-face and get beaten up because of him, right. I think there are a couple of sides there, but in my case, for myself, it was quite interesting, a different way of learning, and of teaching also from the teachers that I thought were really cool (Student 11).

Students believe that a higher education institution where it is possible to co-create their qualification is one that prepares students for the reality of the market, bringing the challenges of the profession to academic activities, through classes that connect theory and practice in a way innovative, to consolidate knowledge. It is analyzed that Bailey's study (2000) on involving students and teachers to promote learning in a practical way, is in line with these analyzes. Student 5 consider that

> it would be a course that takes the needs of the market, not only now, more by projection, see what is a trend, State of the Art to be able to contemplate in the course, to train excellent professionals for the market (Student 5).

The results of this research point to an affinity with the studies by Svensson and Wood (2007), that is, the relationship between student and university begins, with the principle that it is the provider of knowledge and the student, its receiver. However, at times, the roles are interchangeable between the two entities in this relationship and this means that the student is not seen as a mere consumer, but as a co-creator.

It seems that higher education institutions need to review their roles, defining a more effective research, teaching and learning path. Among its objectives, the one that indicates that it is the most imperative for institutions is to seek to build a curriculum that favors the development of students' skills to manage personal, social and professional challenges in the face of technological configurations in the contemporary world. These analyzes are in line with the study by Chemi and Krogh (2017), whose focus is co-creation in higher education, involving students and teachers, in order to enable them to face the challenges of the future, in a creative and collaborative way.

Conclusion

This study analyzed how the student feels when studying in the hybrid modality that requires a more active participation in his learning process and examining if it is positive for his formation the university to adopt this modality in its course. A qualitative research was carried out, through in-depth interviews, in a large Brazilian higher education institution. After the treatment of the data by the content analysis method, it was possible to reveal the co-creation of value in the student's view, advancing in relation to the already known advantages and presenting new perceptions on this theme.

Students feel that studying in the hybrid modality, assuming that the essential characteristics of the co-creation of value - interaction and active participation - are aspects that should be inherent to the process of their learning. New insights into the co-creation of value are presented in the context of hybrid higher education, that is, interaction and active participation are genuine attributes to the profile of the university student, enabling him to perceive himself contributing to the construction of a legacy with teachers and the institution you chose to qualify for.

The second finding of this research, about the co-creation of value in higher education that adopts the hybrid teaching modality, confirms the model of the Co-Creator Student of Halbesleben and Wheeler (2009) where the student co-produces the results of his training. It proved that the role of protagonist, with more responsibility in his

learning process can and must be played by the student, in order to promote his partnership with the teacher, because his participation can be more active in this modality.

The third contribution that this study presents is particular and concerns the adoption of the hybrid modality for the better qualification of the student. For students, studying in this modality gives them the opportunity to develop the discipline, while encouraging autonomy, thanks to the study routine that this type of semi-presential education requires for pre-class activities. Students confirm that by adopting the semi-presential teaching modality, the university is on a path of paradigm shift, that is, it proposes a different way of learning and teaching that can enable them for the current and technological reality. Although they assume that this is a major challenge that some students have more resistance to face.

The contribution of this study is to demonstrate that in order to consolidate the co-creation of value in the context of hybrid higher education, the involvement of all entities in the teaching-learning process is necessary. The focus of higher education institutions should be on developing a curriculum where students and teachers participate creatively and collaboratively in the learning process. From this study, a future research agenda can emerge on the co-creation of value in hybrid higher education in the view of students from public higher education institutions, in order to broaden the discussion on this current theme, especially considering the significant changes that the pandemic of COVID 19 imposed on the main entities involved in the teaching-learning process.

Acknowledgements

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An Evaluation Model for a Non-Sexist Education: Beyond Performance Accountability

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Abstract
This article is about the development of assessment tools concerning to the identification of gender biases in teachers of a Vocational Education institution in Chile. Particularly, in the fields of engineering and technology, usually characterized by having male majority presence. Our aim is to identify, based on a mix method perspective, the limits and the potentials of current evaluation systems in its goal of promoting a friendly culture about gender issues and inclusive education beyond policies of performance accountability. Based on international experiences review, we present a heading model in order to identify, within the classroom, practices that reproduce gender bias and stereotypes in a context strongly permeated by a masculine culture. From a performative approach, we empathize in the responsibility of teachers and policy makers in the development of inclusive educative contexts beyond formal curricula, assuming the relevance of institutions self-regulation. Nonetheless, we argue that evaluation systems should be thought as a meaningful formative process that has to give account of the local context and particularities of their members rather than high-stake accountability usually mediated by sanction, classification and erasure of singularity.

Keywords: Sexist Education, Professional Technical Education, Evaluation Model

Introduction

In the last years Higher Professional Vocational Education (*Educación Superior Técnico Profesional* in Spanish) has been gaining more and more relevance due to its key role in the productive and economic systems. The latter has also bring the necessity of designing curricula in accordance to the labor field and with the development of skills for enabling student's adaptation to a dynamic world. Although, these reasons have not been the only ones that have brought Higher Professional Vocational Education to the spotlight. Precisely because HPVE is the heir of the old Schools of Arts and Crafts, institutions designed for training masculine workforce, the HPVE filed has been characterized by having a low female participation. Before a little more than a century, female participation has increased, however, we still face strong gender segregation within careers (Sepúlveda, 2017; Sevilla, Sepúlveda, Valdebenito, 2019).

Duoc UC (Department for workers and peasants development of the Pontifical Catholic University of Chile) is one of the most important Vocational Education institutions in Chile, concentrating two in ten students at the HPVE[1] level. In terms of Duoc UC annual enrolment, 40% is represented by women, but, if we concentrate our attention in the STEM field, feminine presence is only 14%, numbers that extend to all over the Vocational Education field.

The presence of women in the industrial areas of the Secondary Technical Education (Educación Media Técnico profesional in Spanish) is nearly 19%, while it increase to an 80% in the fields of Health, Education and Social Work (Mineduc, 2019). In Higher Education, considering graduate and undergraduate students, women only represent the 20% of enrolment in Science, Engineering, Construction, and Technology[2] (SIES, 2019). Only considering female enrolment in universities we have a more positive number, 28%, but, it decreases to an 11% in HPVE.

Gender gaps in the STEM filed have been recognized worldwide (UNESCO, 2017; CONICYT: 2017; 2019; and Comunidad Mujer, 2016). Women, usually have lower rates in math and science test, results that tend to progressively consolidate while they advance in educative stages (CONICYT, 2017), having as a result the minimal participation of women in these areas. In fact, women participation in the STEM filed has been conceptualized by the metaphor of the "leaking pipeline", in order to emphasize how women presence in these fields tend to decrease while they advance in educative stages and hierarchies.

In this context, the Ministry of Education with the support of the Ministry of Women and Gender Equality have created the 2018-2022 agenda "quality without biases", in order to promote more participation of women in HPVE and, particularly, in historically masculinized educative areas understood in the STEM field. Likewise, in 2019 Ministry of Education provided to the Institutions of Higher Education the

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[1] Formed by Centros de Formación Técnico (CFT), that give technical degrees after two reays of studies and Institutos Profesionales (IP), that give profesional degrees after four years.
[2] Data obtained through SIES 2019 data bases. The Information Service of Higher Education (SIES in Spanish) of the Ministry of Education emerges from the Law 20.129 in 2006, in order to develop a National Information System for Higher Education that gives the necessary inputs for an adequate application of policies, public administration and public information, which also gives academic, administrative and financial transparency. This is open access data and can be search by gender and OCDE area. SIES Web address: https://www.mifuturo.cl/sies/.

commitment to promote gender equality in management positions, being the first step to foster a more inclusive culture in educational communities that also go along with the commitment for developing more research in gender issues. Duoc UC ascribed to this commitment in 2019 and stablished a formal space for developing initiatives that promote equality and discussion within the institution.

Having this commitment in mind, Duoc UC has created a Gender Equality agenda composed by different initiatives, among them, a series of diagnostic research on this issue. These studies have proved that there is not only a problem of gender participation and segregation in careers, there is also sexism within the educational process and the interactions in the classroom. Focus groups with female students have revealed that some professors expressed their open rejection to female presence in historically masculine careers, expressions that, as a result, have driven some female students to quit their studies. In fact, and although in general women usually have better grades and lower drop-out rates, in Duoc UC STEM careers female students have lower grades and higher drop-out rates than their peers in other fields[3], while male students do not show different trends by subject-field area.

Debates concerning sexism in education are not new, as a matter of fact, 2018 and 2019 national protests for a non-sexist education concentrated public opinion, especially thanks to systematic denunciation at the Higher Education level. Thus, emerges the necessity of knowing what is going on inside the classroom and in the teaching-learning dynamics as well, because what happens there can have an effect in the reproduction on sexist patterns affecting personal and professional trajectories of female students but also of those who do not fit in traditional gender roles. With this purpose, we have designed, in a participatory way, a model for teacher evaluation based on a rubric adjusted for HPVE in order to identify sexist practices and dynamics in the teaching-learning process. This formative model aims to promote gender equality practices and also favor continuous improvement and feedback in the educational community of Duoc UC.

The article is structured as it follows: (1) main findings concerning sexism in the classroom interactions and in masculinized contexts; (2) a critic to accountability systems and new proposals for formative models; (3) methodological considerations; (4) conceptual discussion; (5) findings and the design of an evaluation model for gender biases; (6) recommendations for the Higher Education Institutions and (7) final considerations.

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[3] Internal Document N°21: "The persistence of an historical gap: gender participation in VE STEM fields".

Figure 1: evaluation system of gender interactions and dynamics in TVET
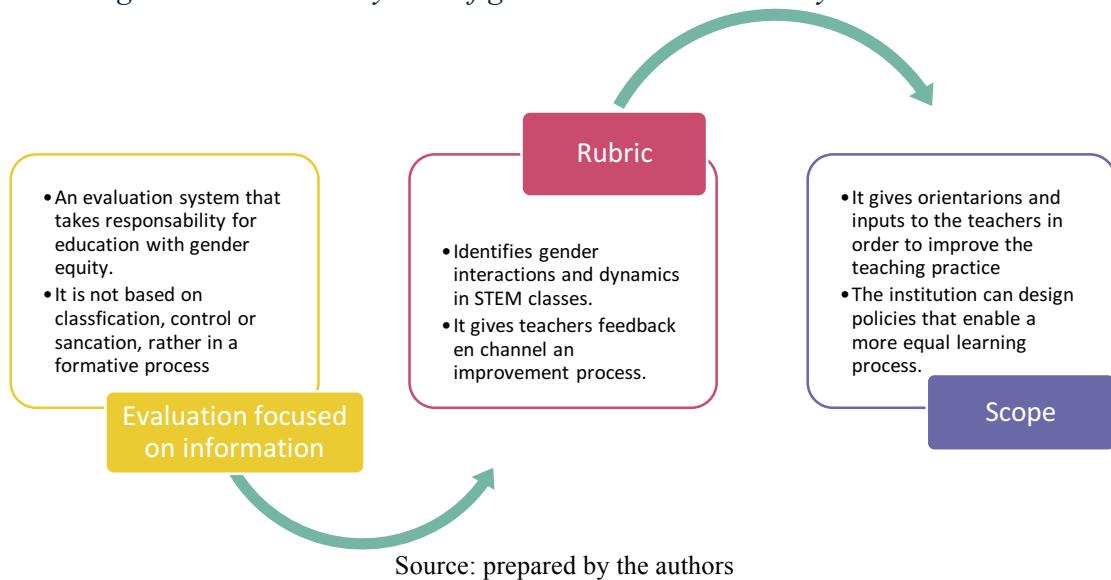
Source: prepared by the authors

Literature review

Sexism in masculinized contexts

A series of research done at the national level about the inclusion of women to masculinized fields, in education but also in the job market, have argued that, although the supposedly openness to women reception and an explicit inclusive discourse, women continue living segregation and exclusion (Angelcos and Isola, 2017; Sevilla, Sepúlveda, Valdebenito, 2019). The study carried out by Sevilla, Sepúlveda and Valdebenito (2019) in public schools that offer Secondary Technical Education, specifically, with students of industrial careers, has shown that although faculty members do not consider necessary to adopt specific measures for women due to their fast adaptation and efficiency in achieving learning goals, both peers and teachers think that women have a hard time learning specialized contents. By the same token, women foresee that, in order to achieve their professional goals, they have to double their efforts in comparison with their male peers. Also, female students think that they will end doing less valued tasks and the female presence is not welcomed in this particular labor market.

According to the latter, teacher's associate qualities such as kindness and sensibility to women, while men are related to leadership and strength. Likewise, the sexist naturalization that links strength with men and fine motor skills with women is highly extended among public schools that offers this education, thus contributing to the sexual division of labor within industrial disciplines (Sevilla, Sepúlveda and Valdebenito, 2019). Another interesting point is that while women do not perceive treatment differences, teachers and male peers recognize that they treat women differently just for being women, promoting what literature has called "benevolent sexism" (Glick and Fiske in Sevilla, Sepúlveda and Valdebenito, 2019).

Theses gender biases inside the classroom have been already studied in primary schools, where research has shown that education plays a key role in the reproduction of gender stereotypes and expectations of behavior, thus the school have been

conceptualized as an institution that systematically produce and reproduce inequalities between men and women (Azúa, 2016, Azúa, Saavedra y Lillo, 2019; Araya, 2004; Colás y Jimenez, 2006; Mizala, Ramírez, Ramírez, 2015; Martínez and Ramírez, 2017; Martínez, 2016; Guerrero, Provoste and Valdés, 2006). Particularly, has been argued that "teachers replicate in the classroom practices that has been historically and culturally accepted, maintaining gender stereotypes in the interactions and discourses" (SERNAM, 2009: 70).

Thus, teachers could affect student's own perceptions about their cognitive potential, also the attitudes and interests towards different knowledge fields as well (Guderson et al, 2010, 2012). Some of this actions are related to masculinized language[4], paying more attention to male than female students, doing cognitive complex questions and giving more feedback to men than to women, especially in "masculine" related subjects: math and science (Guerrero, Provoste y Valdés, 2006; Gray and Leith, 2004; Espinoza and Taut, 2016; Mizala, Ramírez y Ramírez, 2015).

Angelcos and Isola (2017) in their study about the inclusion of women to the great copper mining in Chile argue that although strategies and open discourses about women integration to this historically masculine field, discrimination still last in everyday practices. Particularly, they have shown how women presence, itself, becomes a transgression that exceeds hegemonic norms and cultural values where, paradoxically, traditional gender division of labor has become an anachronism. In this context of social change, these supposedly universal gender norms try to persist through a violent imposition, that is rather ethical than physical. This ethical violence that Angelcos e Isola argue about, is exercised over bodily gender expressions, where female mining workers exaggerate their "female" values and attributes (being tidy, responsible, clean, etc.) as a tactic in order to resist in this field. Thus, although their acceptance to mining is tacit, women are not accepted in their difference.

From accountability to accompaniment

Accountability has traveled from the detailed exam of finances to almost every aspect of professional life (Stobart, 2010). In this way, evaluations are becoming more common in our daily practice, being deployed in multiple spaces and aspects.

Accountability policies in the educational field rely on the responsibility of educational establishments to ensure the quality of the services offered, thus the fact of how someone can be hold accountable, responsibilities and roles, are assign depending on the educational model (Falabella y de la Vega, 2016). Currently, there are at least three models of accountability: state accountability, performance accountability and professional accountability. Nonetheless, performance accountability has been one of the most extended approaches.

Performance accountability system considers that evaluations are a powerful tool for educational reform and, when evaluation is associated with high stake consequences, it motivates improvement incentives (Stobart, 2010). Following this logic, when

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[4] In Spanish, unlike English, there are so many words that are not gender neutral. For example, "todos (for male) and todas (for female) are two not gender neutral forms of naming "everybody", English word which, in principle, gender is not pre-assumed. Usually, teachers use the word "todos" instead of "todos y todas" while they are speaking to "everybody".

educational quality is agreed and standardized, goals can be measured, compared and hierarchized; accountability process are public and linked to incentives and sanctions (Falabella y de la Vega, 2016; Flórez, 2019).

However, different studies have shown that this logic of control, examination and classification has negative consequences, having results that can contradict the expected results even. In fact, although performance accountability systems are encouraged by the ideals of equality and justice, it has been argued that they reinforce social and educational segregation, because individuals stand points, cultural and economic contexts, and its own particularities are not considered (Ball, 2013; Sánchez-Amaya, 2013; Flórez, 2019; Stobart 2010; Fallabella y de la Vega, 2013; Comisión SIMCE 2014; 2015).

Authors like Sánchez-Amaya (2013) has argued that evaluations deploy distinction mechanisms such as: normal and abnormal, accepted and rejected, good and bad, among other hierarchical dichotomies. Thus, examination practices produce knowledge feed power relations. The application of these systems condition individual's possibilities, in other words, individuals are produce and administered through this very evaluation mechanism. Consequently, performance accountability system could have a performative effect by producing docile individuals without subjectivity (Ball, 2015; Sánchez-Amaya, 2013).

It has been argued that performance accountability systems have generated and impoverishment of pedagogical practice, this came be seen in the curricula reduction, training focus on standardized tests, behavior is adjusted in order to achieve evaluation indicators, de-professionalization of teachers by becoming standards implementers rather than conscious of their own pedagogical practices, affecting their reflection and innovation process, their self-stem and motivation with their job (Falabella y de la Vega, 2016; Stobart, 2010; Flórez, 2019; Comisión SIMCE 2014; 2015).

If we are in the presence of a system that controls and sanctions not achieving standards and that also generates the lack of mechanisms and formal strategies for supporting evaluated individuals and guiding them to an improvement process (Stobart, 2016; Comisión SIMCE 2014, 2015), why do we continue using it?

In the last years have appear interesting models that have tried to promote an accountability system beyond the logic of control and sanction, following a path oriented towards improvement and the formative process (Hevia and Vergara-Lope, 2016; Flórez, 2019; Falabella y de la Vega, 2016; Preal, 2009; Holz, 2019).

These approaches left behind the fantasy of absolute control in order to promote self-government and self-determination to the very individuals involved in these accountability practices (Stobart, 2019). They support the participation of individuals in the creation, design of instruments and evaluation criteria, enabling the emergence of an internal culture of improvement where individuals are more conscious of these process, stablishing their own goals and expected values.

These models are not based in sanction, rather in recording experiences in order to give feedback to pedagogical practice, designing strategies and improvement plans

(Preal, 2009; Hevia y Vergara-Lope, 2016). Likewise, they apply a multidimensional model where evaluated dimensions are not translated into a unique and decisive result, instead, each dimension gives information that can be understood as independent evidence that, as a whole, enable decision making (Holz, 2019).

Additionally, these systems consider diverse factors that influence in the expected results: students and teachers social and economic reality, the environment in which the learning process is developed: infrastructure, resources, pedagogical practices, didactical materials, among others. Thus, it is emphasized that the expected results depend on interrelations that include the environment, the educational community, directors and families as well.

Methodological considerations

This study is framed within the gender and education studies. On the one hand, research in education has been considered as the study of methods, proceedings and techniques that gives us access to knowledge, comprehension and explanation of educative phenomena, an also contributes to face social problems (Hernández, 1995). On the other, gender perspective research in education has been a significant contribution to the education field by identification of structures and social practices that reproduce gender inequalities.

Thus, gender studies related to education have contributed to unveil the mechanisms through which educational institutions have part in discriminating women and non-hegemonic subjects, and also how the educational system, in its different levels, reproduce prejudices and gender stereotypes. In this way, our evaluation model for a non-sexist education is attuned to this discussion.

Following Gabriela Delgado Ballestero (2010), we agree with the idea that research is done from an epistemic position, where knowledge emerges from a localized position and from the particularity of the subjective knower. From this standing point, knowledges is always partial, it comes from a particular subject and body, that, depending of the historical process, cultural and semiotic, and the ways gender, class and ethnicity are contingently mixed, enable the configuration of a subject that sees, think and act in a particular way. This is why for us it is important to design an evaluation model sensible to the particularities and situational experiences of the actors that form the educational community.

As Blázquez has argued (2010), due to gender research in education seeks to unveil the experience of the oppressed and the excluded, it is necessary to always adopt an multi-methodical perspective, where the incorporation and confluence of different techniques and methods enable a better approach to the observed and offers a broader, but also, rich and complex view of the studied phenomena.

For the design of the rubric we followed the use of multiple technics: (1) we conducted four focus groups to Douc UC students (see appendix 1), (2) ten classroom observations and (3) 6 in-depth interviews to chiefs of the Technical Pedagogical Unit (see appendix 2).

Figure 2: design and validation of the classroom observation rubric
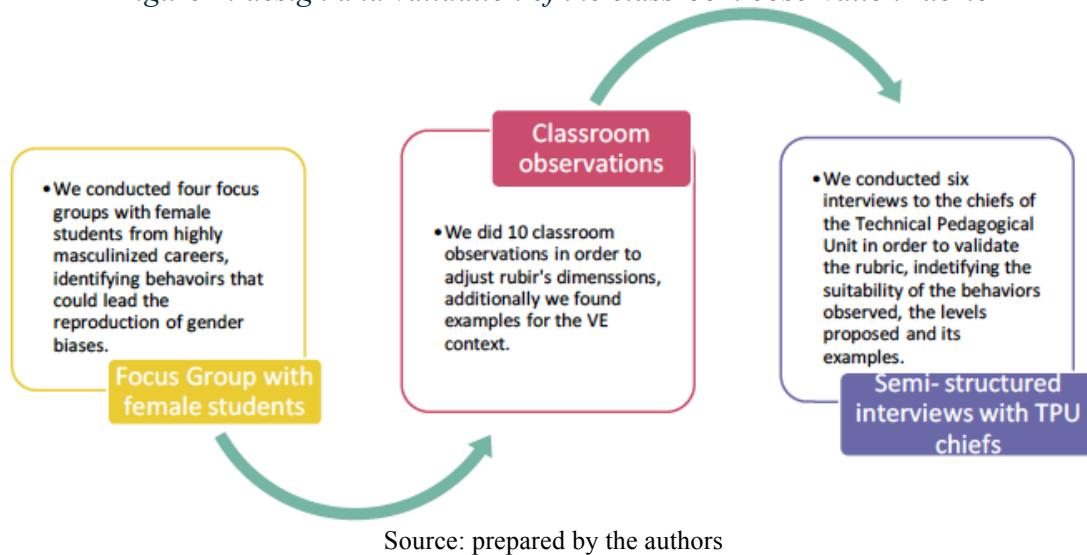
Source: prepared by the authors

Discussion

In the last years, gender indicators have been incorporated to the national educational evaluation systems thanks to the State commitment on this issue (MINEDUC, 2016; CONICYT, 2019), however, these changes have been done following the accountability approach. In this way, when gender issues acquire relevance in evaluative practices they do it in the lens of high stake accountability systems, taking the risk that this challenge for a more equitable culture becomes and indicator devoid of discussions and reflections as Falabella and de la Vega (2013) have shown.

In the Chilean higher education system teachers evaluations are not applied at the central-level, thus, due to external evaluations does not exist, it is left to every institution criteria to have or nor an evaluation system. In the case of Duoc UC, this institution has applied an accompaniment program for teachers in order to support their pedagogical needs, in that way, standardizing and formalizing these measures in the Teachers Accompaniment Program. This program, which is part of a greater model for generating indicators called TDI (teachers development index), follows, however, the high stake logic.

At the time gender equality has become and institutional goal, it has been noted a gap between everyday practices and institutional strategies (Angelcos and Isola, 2017; Sevilla, Sepúlveda y Valdebenito, 2019), where open discourses for inclusion are translated to the logic of individual responsibility masking the very obstacles that should be attended. In doing so, it is not recognized that gender equality is the result of an institutional effort for creating a culture and strategies on this issue. According to the latter, we consider that evaluative practices should contribute to gender equality from a formative point of view. Understanding that this paradigm favors reaching minimal agreements that enable a constructive management (Stobart, 2019), it is worth noting that this is key for an issue in which inequalities and discriminations has been invisibilized. For this, instruments and criteria have to be agreed, promoting and recognizing the educational community commitment. Although, Pedagogical Technical Unit offers a key institutional infrastructure for implementing evaluation

models for a more equal education in gender terms, it has to abandon the individual accountability logic.

Due to the sexism and androcentrism in Chilean educational system (Azúa, 2016; Sevilla, Sepúlveda y Valdebenito, 2019), we have to pay especial attention to discourses and practices, because even in the most progressive approaches, gender equality tend to be exemplified and legitimized by the exaltation of "female" attributes such as tidiness and planning, values that may enable women to perform as equal as men or even better. Thus, it is observed that the conflict over the attributes associated to each sex, through which gender is socially constructed, is part of a complex and sometimes contradictory gear, hidden under more or less conventional attributes that reinforce discourses that create new forms of gender biases.

Findings

Designing the rubric

A series of interviews, focus groups and studies on gender and education has shown us the challenges and difficulties for designing a rubric through which observe not only teacher's actions and discourses but classroom interactions. Although diagnosis and feedback will be oriented to teachers, observations will give account of actions and interactions between them and the students.

Based on what has been argued about the binary and exclusionary structure of gender biases and stereotypes, we designed a rubric with a scale that could enable us to distinguish between those actions and discourses that promote the naturalization of gender binary categories from those who recognize diversity. In the "positive" side, there are attitudes associated with the promotion equal participation among gender, while in the "negative" are those that superimpose one gender (usually male) over the others. Likewise, teachers could have an active role developing attitudes that either promote or difficult gender equality in the classroom (this is what we call "active behavior), or s/he could be a witness allowing conducts to happen without getting involved (this is what we call "passive behavior").

Figure 3: Rubric structure of classroom observation

Dimension	Sub-Dimension	Description	Naturalization of a binary view of gender		Recognition of gender diversity	
			Passive attitude	Active attitude	Passive attitude	Active attitude

Source: prepared by the authors

Sexist practices and discourses inside the classroom

The qualitative data gathered helped us to identify practices and discourses that contribute to perpetuate sexist practices in the VE field, identifying two dimensions: (1) strategies and dynamics about gender inclusion and (2) expressions and preconceptions on gender in classroom interactions.

Figure 4: rubric's dimensions for classroom observations
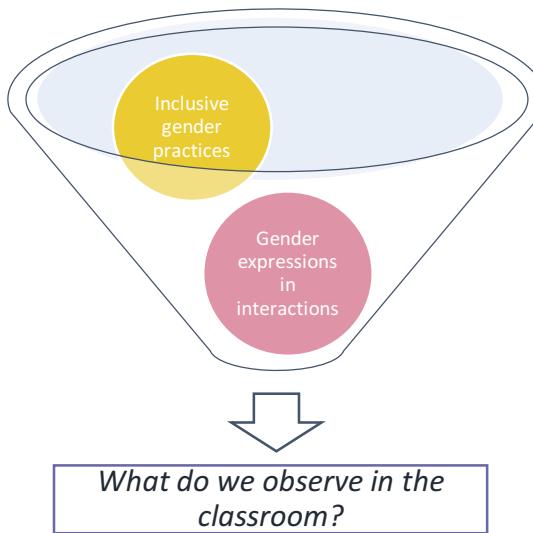
Source: prepared by the authors

First Dimension: gender inclusion practices inside the classroom

Unequal participation in class is one the themes that emerge from the interviews and focus groups with female students. The latter is clearer in the careers where male students outnumbers females, generating, in women, shyness and reducing their interest of participating in class. However, in careers where female students are majority, men do not feel these pressure at all.

Among the behaviors associated with to a low class participation we identified those developed by students and teachers. Low class participation by gender can be explained either by personal interests or teacher's willingness to foster one group over the other. However, Pedagogical Technical Unit chiefs recognize that the type and number of questions or the promotion of participation in activities play a key role, these are resources that teachers can use precisely to promote a more inclusive environment for equal participation.

A second level of analysis in this dimension is related with the identification of practices of gender inclusion and the definition of attitudes and behaviors from a passive/active scheme. We presented to the interviewees situations based on gender biases literature, which some of these were corroborated by them and also providing new examples. Thus, we can appreciate the existence of four practices that occur in the classroom that can positively or negatively affect inclusion and integration of students. These are:

Figure 5: strategies and dynamics for gender inclusion
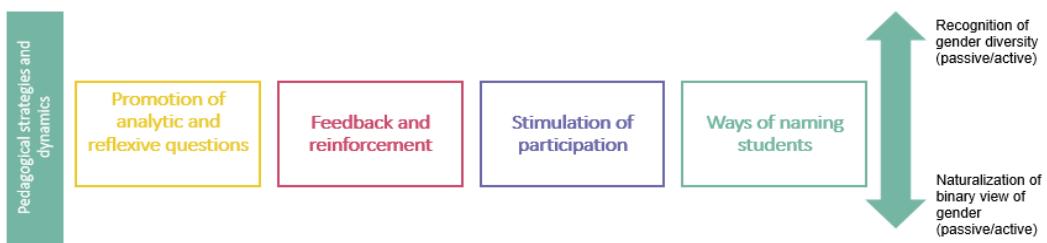

Source: prepared by the authors

We have defined this four dimensions as:

• Promotion of analytic and reflexive questions: this practice is about the generation of complex questions that foster analytical reflection without producing differences on gender identities and sexual orientations.

• Feedback and reinforcement: this practice is associated with promotion of ideas, giving support and favoring student's participation. It is observed teacher's disposition to recognize student's goals and giving positive feedback with clear recommendations to advance and resolve problems. Is it worth noting that these didactic strategies do not generate differences among gender identities and sexual orientation.

• Stimulation of participation: this practice is directly involved with the promotion to participate in class activities, to share opinions and being part of conversations. For this, it is important that participation stimulation is done without denying or invisibilizing students for their gender identity or sexual orientations.

• Ways of naming students: this practice refers to the equitable use of language. It is preferred to use neutral words for referring gender and individual persons, it is promoted to use names without highlighting gender differences under a binary paradigm, for example: ladies and gentlemen or the use of diminutives and kind expressions such as: dear, love, etc.

Expressions in interactions

The biological and binary matrix that support prejudices about each gender seems to be the cornerstone for practices that reproduce gender biases. In what follows, we will explain the dimensions that, inside the classroom, will help us to grasp this prejudices through expressions and interactions.

Figure 6: Dimensión expresiones y precon
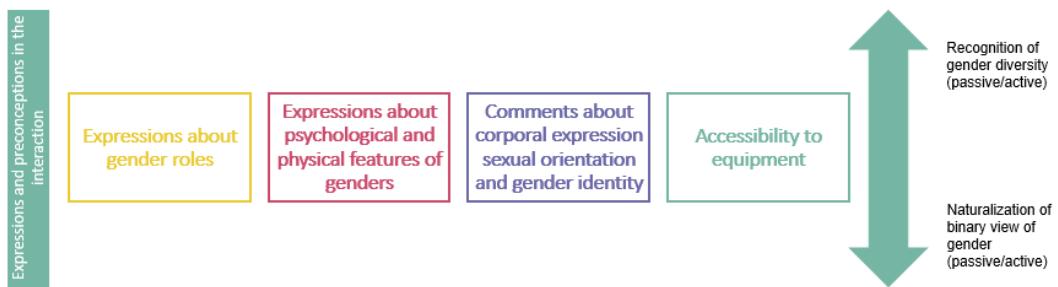
cepciones en las interacciones de género
Source: prepared by the authors

This four dimensions have defined as:

•   Expressions about gender roles: how expressions promote individual's potentials to perform a variety of roles without being restricted by its gender or sexual orientation.

•   Expressions about psychological and physical features of gender: expressions that give account of physical and psychological diversity regardless of gender identities or sexual orientations, avoiding making associations based on traditional gender attributes.

•   Comments about corporal expression, sexual orientation and gender diversity: examples and comments are used to promote corporal expressions, are respectful of sexual orientations and gender diversity, highlighting the existence of emotional/sexual relations.

•   Access to key tools and equipment for the learning process: tools and equipment are distributed without doing differences based on student's gender, sexual orientation and identity.

Recommendations

The design of a rubric for the identification of gender biases adjusted to the HPVE speaks of the necessity for developing a culture committed to gender inclusive and equitable education, one that promotes the involvement of the all the educational community, favoring the common will to improve and advance towards a more just society that guarantees equal opportunities for everyone.

That said, the implementation of Duoc UC "gender equality agenda" is an opportunity for creating initiatives that foster advancing in terms of parity, thus it is recommended that educational institutions lead this kind of efforts. Likewise, it is also important that institutions should find the way to implement evaluation models in formal instances, like, in our case, Teachers Accompaniment Program for example.

Apart from that, it is necessary to collect preliminary data that could be used as a diagnosis of institutional situation about the reproduction of gender biases in classrooms. The latter is also key for designing plans for working this biases in a constructive way, focusing the efforts in the capabilities that are expected to install

rather than individual accountability. For our case, we have considered the following steps in order to implement this model:

Figure 7: Steps for formalizing the preliminary evaluation process

Socialization
- Informative workshops with the chiefs of the Technical Pedagogical Unit for the rubric implementation and to discuss gender issues.
- We will socialize the components and criteria of the rubric with teachers.

Pilot
- We will conduct a model testing phase for validation and reliability to test the instrument and incorporate changes if it is necessary.

Formation
- Educating teachers about gender equality according to incomes obtained.
- TPU chiefs and advisors, should work with teachers permanently in order to give them feedback and accompaniment.

Guide
- We will work with all the educative community in a guide about gender equality practices and inclusive language through participative workshops.

Source: prepared by the authors

Conclusion

Throughout this study, we have noted the interest of different actors in participating in initiatives that promote more gender equality. We have shown that the necessity of improving classroom dynamics require a less conservative institutional agenda in order to design strategies to face this problem. The latter has to be done from both, a curricular but also an extracurricular perspective, incorporating a gender perspective that breaks from heteronormativity and androcentrism in different subjects. It is highlighted the necessity of actualizing pedagogical materials, figures and task resolving activities, in order to include gender diversity and experience. Furthermore, understanding that the toughest barriers for gender diversity appear after student's graduation, it is important that institutions develop strategies with the labor market to guarantee an adequate insertion.

We highlight the analytical exercise that emerged from the data gathering in the design of a contextualized rubric, because it helped Pedagogical support unite to identify gender inequalities in the learning process and reflect upon their own practices, considering the role they have in the transformation of educative spaces and developing more inclusive tactics.

Finally, it is important to include all educational community in the development of a strong outreach, along with a permanent accompaniment process that gives teachers the tools they need. Another key aspect to have in mind is that observations and evaluations do not have to be associated with a sort of teacher's performance index, rather it has to be a feedback process from a formative standpoint.

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Attitude to Authority and Digital Competences of Bulgarian Primary Teachers

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Abstract

The thesis of this study is based on the assumption that the authority of the teacher manifests as a specific status or professional role and should be internalized in his overall professional profile. The teacher's role-playing authority is defined "a formal authority" and is strongly influenced by the requirements of the educational environment and the specific professional competences of the teacher. The attitude of the teachers towards they own authority, which implements the set of professional roles and competences, is a prerequisite for the formation and manifestation of an adequate professional model, which directly influences the quality and culture of the educational environment. To explaining of the nature of the social manifestation and experience of the teacher's own authority in terms of his status-role model are used the concept of liberalism - conservatism. The research is performed with two scales, which are separately developed sets of statements. The first scale – „Attitude to Authority" – is an adapted and integrative version of the established standardized „Attitude to Authority Scale" (Ray, 1971) and GAIAS (Rigby, 1982). The second scale, "Digital Competence", was developed as an integrative scale to explore teachers' attitudes towards digitalization of education and to study specific skills involved in digital competence. Research involve 202 Bulgarian Primary teachers. The results are analysed in three stages: Evaluation of the Scales internal consistency; Factor Analyse and Correlation Analyses. The general conclusion of the study calls into question the effective internalization of this key competence in the professional model of respondents.

Keywords: Attitude to Authority, Digital Competences, Primary Teachers, Professional Roles

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Introduction

According to social psychology, attitude is "an organized predisposition to respond in a favorable or unfavorable direction to a specific class of social objects" (Dzhonev, 1996; p. 213). It is "an unconscious form of stimulation of the psycho-behavioral activity of an individual, acquired in individual experience and is provoked by a certain type of situations" (Minchev, 2006; p. 101).

Attitudes combined the social and the psychological in the person and therefor they directly influence behavior as a functional component of the Self and an integral part of the individual's value system (Dzhonev, 1996; Minchev, 2006; Andreeva, 1983).

The importance of the study of attitudes is considered by a number of authors in the following main aspects:
•   to be determining the specific feelings, appraisals and tendencies to approach / avoid of the person to focal objects (Scott, 1954).
•   to understand and predict trends in the development of significant social trends such as prejudice, environmental protection, educational attainment, and public understanding of science (Allport, 1954; H Tajfel, 1981; Dunlap & Jones, 2002; Pampaka and all, 2012; Sturgis and all, 2010).
•   to understand the mechanisms of formation and changing public opinion, and more generally their impact on important social problems, such as civic participation and participation in the cultural sphere of society as a whole (M. Elliott, Voas, & Park, 2014; Dinas, 2013; Zaller, 1987, 1992; Green, Preston, & Janmaat, 2006; Paterson, 2008).

Authority is also a complex concept studied both as a group (social) and personal (individual) phenomenon, strongly dependent on social relations and the situation in which it exists.

On personal level authority refers to the position of the person in a social system. It is a special type of social attitude that is based on a particular position (Piryov, 1975). This kind of authority is defined as „individual authority" (Ivanov, 1995; Piryov, 1975; Ivanov, 1985; Shibutany, 1969, Reber, 1985, Fotev, 1987).

In a social system the authority legitimizes the right to power but does not identify with it. It is not a form of control but its basis, which is expressed as a right to exercise power (Ivanov, 1995). The authority is also named „social prestige and is the criterion for leadership effectiveness.

Authorities are individuals of high social prestige who are important to other people. Such personalities are attributed to qualities - knowledge, skills, abilities that are valuable to others. They have high expectations and are valued, respected, respected and recognized in smaller, larger communities or in society. (Ivanov, 1995).

The individual authority manifests in two basic forms: formal and psychological authority.

Some authors (J. Adams, A. Romney, G. Homans) consider informal authority is primary, able to explain the formal authority. Other are of the opinion that these are

two independently existing constructs related to different social roles that integrate into the individual, forming its whole authority (Ivanov, 1995).

There is a thesis according to which formal authority is provided by the authority of the professional position. It forms around 65% impact on subordinates. Moral authority depends mainly on the moral qualities of the leader, and functional is determined by the professional competence business qualities and attitude to work of the leader, Moral and functional authority account for 45% of total authority of the person (Kriviradeva, 2018).

According to Max Weber, the social expression of authority is highly dependent on the current social paradigm. In defining the types of authority, Weber attributes the rational-legal authority to increasingly bureaucratic and rationalized societies. This thesis, which is still valid today, constitutes formal authority as a meaningful individual construct, manifested at three levels: the social, the community and the intra-group. (Georgiev, 91, p. 102-103).

The attitude towards authority is defined as "support or opposition for the subordination of individual freedom and autonomy to the collective and its authority" (Duckitt & Bizumic, 2013, p. 843)

In this study, the term Authority is used in the context of education as a social system. This concept explains the social influence of educational institutions and teachers as their representatives, as well as the corresponding power, which legitimizes this influence. In the same context, attitudes toward authority represent attitudes toward power as positive or negative evaluations of control and sanctions applied by the education system and its institutions to its members.

The need to study attitudes to authority in education, and in particular to teachers, is emphasized by authors who traditionally explore attitudes toward authority, because recognizing the authority of educational institutions would greatly support the understanding of attitudes toward institutional authority in general. Rigby at all (1984, 1987), Dornbusch & Scott (1975), Dunbar & Taylor (1982), Gumbert at all (1981).

Competence is defined as a proven ability to use knowledge, skills and personalities / social skills in work or study situations, in professional and personal development (www. Eur-lex.europa.eu). Lifelong learning itself is understood as a continuous process of mastering competencies, which are conditionally divided into two groups: professional and key. Professional competence is a set of knowledge, skills and abilities that workers and scientists / researchers in a given field must possess (www.eur-lex.europa.eu).

With the Recommendation of the Council of the European Union of 22 May 2018, these key competencies have been updated, but without changing their number and understanding of them. There is a stronger emphasis on basic skills such as literacy in reading, foreign languages and basic digital skills and on transferable skills, with a special focus on entrepreneurship education, focusing on improving mathematics skills, natural sciences, technology and engineering (STEM), emphasizes the importance of education for democratic citizenship and values and expands the scope

of digital competencies, including programming and cybersecurity (https://www.mon.bg/bg/100770).

Theoretical background of the study

The main thesis of this study is that the authority of the teacher manifests as a specific status or professional role and should be internalized in his overall professional profile (Kaloyanova and Ivanova, 2010). The teacher's role-playing authority is viewed as "… the inherent essence of his legitimate authority, recognition of his right to make responsible decisions in situations of co-activity that are meaningful to the student" (Ivanov, 1995, p. 99). This type of authority is inherent "a formal authority" and is strongly influenced by the requirements of the educational environment (social aspect) and the specific professional competences of the teacher (individual aspect). The attitude of the teachers towards they own authority, which implements the set of professional roles and competences, is a prerequisite for the formation and manifestation of an adequate professional model, which directly influences the quality and culture of the educational environment.

The present study uses the concept of liberalism - conservatism, which is one of the leading modern approaches to classifying people's social beliefs (Jost, Federico, & Napier, 2009). This concept explains the nature of the social manifestation and experience of the teacher's own authority from the point of view of his status-role model, namely - as aimed at freedom, shortening the distance and flexibility (liberal authority) or as centered in tradition, power and directive interactions (conservative authority).

In this study attitudes towards teachers own authority are examined in relation to one of the teacher's current professional competencies - the digital competence. The digital competence of the teacher is being considered as "… the ability to use ICT with a good pedagogical-didactic ICT understanding and to be aware of how this might impact the learning strategies and educational formation of pupils" (Krumsvik, 2007, p. 68).

The digital competence of teachers also includes knowledge and attitudes to using ICT, various softwares and on-line based information, with a critical attitude towards the quality of resources and information, as well as the activation of problem-solving skills (Ilomäki et al., 2011; Krumsvik, 2011, 2012; Käck & Männikkö Barbutiu, 2012).

There are five basic skills considered as the basic structural components of digital competence: Information and data literacy, Communication and collaboration, Digital content creation, Safety and Problem Solving (Carretero, St. et al., p.11).

In this research, digital competence is studied not only in aspect of the five including basic skills, but also with regard to teachers' attitudes towards digitalization of education, since competence itself requires as a prerequisite the existence of such an attitude, on the one hand, and - attitudes toward professional role-playing authority are influenced precisely by specific attitudes toward particular competencies.

The theoretical model of the study is shown on Figure 1.
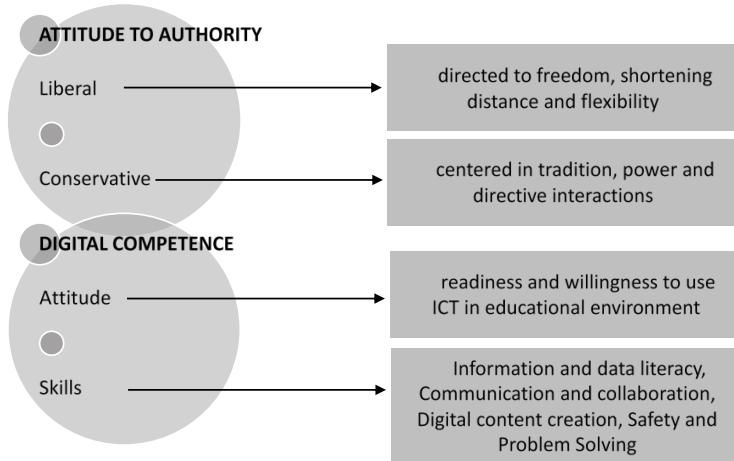
Figure 1: The theoretical model of the study

Methods

The study is performed with two scales, which are separately developed sets of statements. The first scale – „Attitude to Authority" is an adapted and integrative version of the established standardized „Attutude to Authority Scale" (Ray, 1971) and GAIAS (Rigby, 1982).

The scale contains three sub scales. The sum of all items in the scale totals 24.

•   Sub-Scale 1: "Leadership: executive vs. decision maker" includes items 1 to 8
•   Sub-Scale 2: "Institutional Authority: delegation vs. force" includes items 9 to 16
•   Sub-Scale 3: "Pedagogical Interaction: Freedom vs. Regulation" includes items 17 to 24

Each one Sub-Scale contains 8 items.

All items are scored from 4 to 1, as 4 (Strongly agree), 3 (Agree), 4 (Disagree), 1 (Strongly disagree). The sum of the scores is interpreted by 3 scales of referent values according to 3 different type of Authority – Liberal, Medium and Conservative (Tabl.1).

Table 1. Referent Values of Authority Type

Type of Authority	Leadership	Institutional Authority	Pedagogical Interaction	Total
Liberal	32 – 24	32 – 24	32 – 24	96 – 72
Medium	23 – 15	23 – 15	23 – 15	71 – 49
Conservative	14 – 8 and up	14 – 8 and up	14 – 8 and up	48 – 24 and up

The second scale, "Digital Competence", is developed as a integrative scale to explore teachers' attitudes towards digitalization of education and to study specific skills involved in digital competence, combined into three criteria: Information and data literacy and Digital content creation; Communication and collaboration; Safety and Problem Solving.

The scale contains 4 subscales:
•   Sub-scale 1: Attitudes towards digitalization of education - includes items 1 to 10
•   Sub-Scale 2: Collecting and Arranging Information and Creating Educational Content (Information and Content) - includes items 11 to 20
•   Sub-Scale 3: Communicating with Students, Colleagues and Parents (Communication) - includes items 21 to 25
•   Sub-Scale 4: Safety and Problem Solving in an Educational Context (Safety and Problem Solving) - includes items 26 to 30

Analogically, the items are scored from 4 to 1, as 4 (Strongly agree), 3 (Agree), 4 (Disagree), 1 (Strongly disagree). The sum of the scores is interpreted by 4 scales of referent values according to 3 different levels– High, Average and Low (Tabl.2).

Table 2. Referent Values of Digital Competence

Level	Attitude to Digitalization	Information and Content	Communication	Security and Problem Solving	Total
High	40 – 30	40 – 30	20 – 15	20 – 15	120 – 90
Average	29 – 19	29 – 19	14 – 11	14 – 11	89 – 59
Low	20 – 10 and up	20 – 10 and up	10 – 5 and up	10 – 5 and up	60 – 50 and up

Research involve 202 primary teachers from Bulgarian educational system. 193 teachers are female, and 9 – mail. 1,5% are under 25 age; 7,9% - between 26-30 age; 36,6% - between 31-45 age; 30,7% - between 46-55 age and 23,3% - over 55 age. 68,8% work in schools in big towns, 24,3% - in small towns and 6,9% - in villages. Most of the respondents (51,5%) works in primary schools. 40,6% works in secondary schools and 7,9% of respondets works in Elementary schools.

The results are analysed in three stages:
•   Evaluation of the Scales internal consistency by the Cronbach Alpha Consistency Assessment procedure (Cronbach, 1988);
•   Factor Analyse – KMO and Bartlett's Test and extraction of the main Factors;
•   Correlation Analyses with Pearson linear correlation coefficient (r).

Results and Discussion

1.1.   Evaluation of the Scales internal consistency

Internal consistency of items is evaluated by the Cronbach Alpha Consistency Assessment procedure. Alpha Cronbach's Values are shown below (Cronbach, 1988):
0,9 – 1,0   Excellent
0,8 – 0,9   Very good
0,7 – 0,8   Good for practical purposes
0,6 – 0,7   Modest
0,6 and down   Miserable
The results for both scales and their subscales are shown in a Table 3.

Table 3. Cronbach's Alpha of Scales and their Sub-scales

Scales	Sub Scales	K	α	corr	α
Attitude to Authority	Leadership	8	,114	,016	
	Institutional Authority	8	,264	,043	,555
	Pedagogical Interaction	8	,499	,111	
Digital Competence	Attitude to Digitalization	10	,847	,357	
	Information and Content	10	,677	,174	,824
	Communication	5	,625	,250	
	Security and Problem Solving	5	,427	,130	

In the Digital Competence scale the Cronbach's coefficient is very good - 0.824. It ranges from unacceptable to high values, with the lowest for the Security and Problem Solving subscale - 0.427 and the highest for the Digitalization Attitudes subscale - 0.847. It can be concluded that the surveyed teachers have a high degree of coherence of their opinions, especially regarding attitudes towards digitalization. In this subscale the most heavily embedded item is *I feel completely confident and trained to integrate information and communication technologies into the educational environment –* 0,565, and the least implied is *I have developed and maintain my own teaching blog / site –* 0,323. The average score is 86,65, which value falls within the average levels according to Table 1.

All items in the Communicaton subscale are low implied. In this scale, in fact, the most heavily embedded item *I participate in experience sharing groups with colleagues who use digital technology in their daily work* has a coefficient of only 0,500, and the least implied - *The digital students register is a convenient and integral part of my work and greatly facilitates parental feedback –* 0,236.

The average score on individual scales is respectively:
- Attitude to Digitalization – 30,84 (High);
- Information and Content – 26,72 (Average);
- Communication – 13,33 (Average);
- Security and Problem Solving – 15,76 (High).

It can be seen that the respondents demonstrate relatively moderate to high attitudes towards the digitalization of education. Although the Security and Problem Solving scale has high average levels, it is the scale with the lowest Cronbach's coefficient, and the least implied item belongs to this scale. This is the item *In the internet communication I demand the established "netiquette" should be observed –* 0,386

The Attitudes to Authority scale has a low consistency, which is on the border of the acceptable values of Cronbach's alpha – 0,555 (Table 3). The internal coherence of the individual subscales is unacceptable. The lowest levels of consistency are on the Leadership scale, although the least implied item *The teacher should not obey an order if it is obviously morally wrong* has a coefficient 0,360, and all 8 items show moderate adequacy on the scale - in the range from 0,528 for the item *A Teacher should always change his actions to ensure agreement and harmony in the educational environment* to 0,627 for the item *The teacher should not demand silence*

and obedience in the classroom. The average score of the respondents on the scale Attitudes towards authority is 64.22, which shows moderate attitudes.

The average score on individual scales is respectively:
- Leadership – 22,71 (Medium);
- Institutional Authority – 20,59 (Medium);
- Pedagogical Interaction – 20,92 (Medium).

Therefore, in the view of primary teachers, authority is legitimized on the border between liberalism and conservatism, but teachers have an unstable and often contradictory opinion about the individual manifestations of authority. They have very high attitudes towards digitalization, but in certain aspects of this competence, their positions are unstable. It should be emphasized that the position of primary teachers on the means and effectiveness of communication in the digital environment, as well as on electronic resources for pedagogical interaction, remains particularly unclear.

1.2. Factor Analyses – extraction of the main Factors

The Cronbach's alpha reliability assesment showed instability across the two subscales of the both scales The factor analysis aims to isolate only the main factors and show the subscales belonging to them. The second objective is that the both scales align their indicators to allow correlation analysis.

The latent structure of the Attitude to Authority scale indicates refraction in the second component (Figure 2). This means that it is acceptable to accept a two-component factor matrix. After statistical processing of the scale data by rotation of the component matrix, two main factors were formed (Table 4). The first factor covers the Leadership subscale and the Institutional authority subscale, and the second includes the Pedagogical interaction subscale. The overall reliability of the scale increased – the Kaiser-Mayer-Olkin coefficient was 0.586 (Table 5). His interpretation is similar to Cronbach's alpha. In this case, the authority scale is considered.
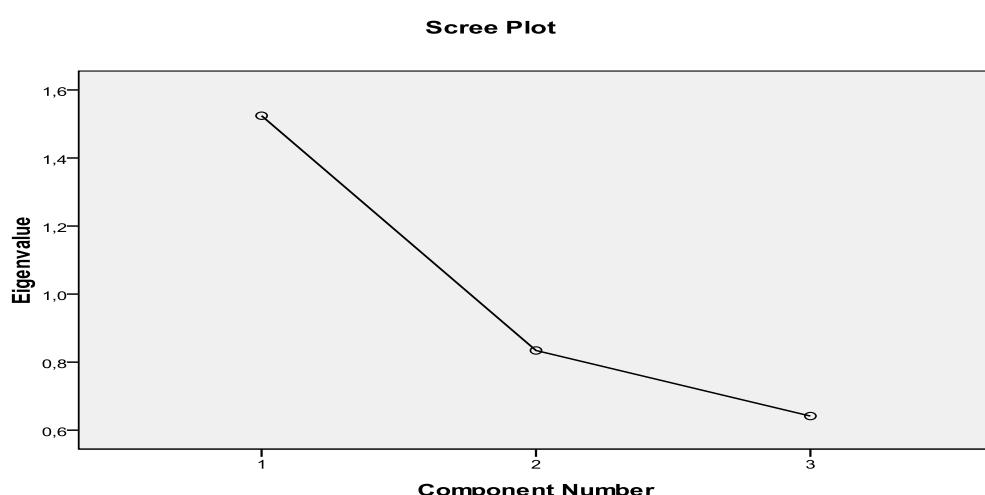
Figure 2. Latent structure of Attitude to Authority Scale

Table 4. Rotated Component Matrix^a of Attitude to Authority Scale

Rotated Component Matrix^a

	Component	
	1	2
scaleleleader		,986
scaleinst	,780	
scaleped	,848	

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 3 iterations.

Table 5. KMO and Bartlett's Test (Attitude to educational Authority Scale)

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		,586
Bartlett's Test of Sphericity	Approx. Chi-Square	40,563
	df	3
	Sig.	,000

The latent structure of the Digital Competence scale is uniform, without refractions (Figure 2). Two factors were also formed in this scale. In this case, however, one of the scales - Information and Content, can not be categorically related to any of the factors, although it is more heavily embedded in the first factor. It can be assumed that the first factor combines the subscales Attitudes towards digitalization, Information and content and communication, the second includes the subscale Information and content and Security and problem solving (Table 6).
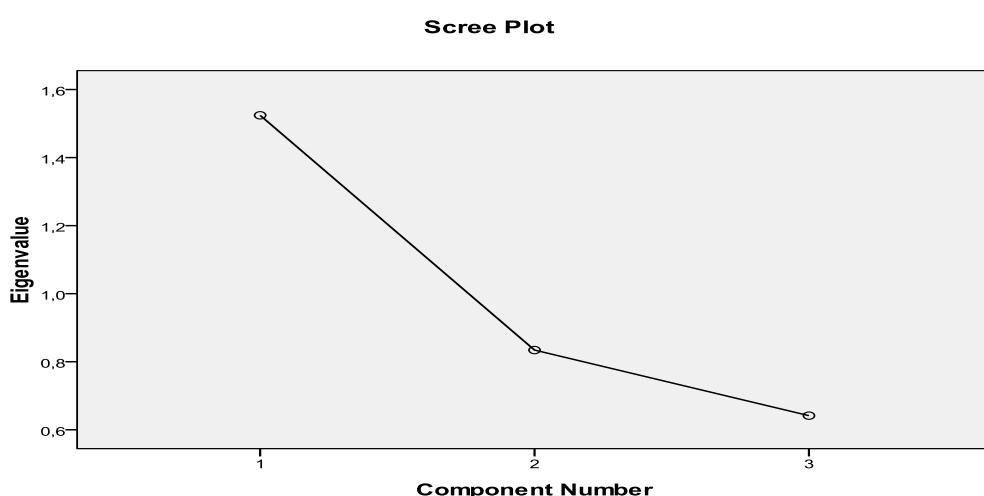

Figure 2: Latent structure of Digital Competence Scale

Table 6. Rotated Component Matrix^a of Digital Competence Scale

Rotated Component Matrix^a

	Component	
	1	2
scaled1	,854	
scaled2	,634	,511
scaled3	,735	
scaled4		,938

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 3 iterations.

Table 7. KMO and Bartlett's Test (Digital Competence Scale)

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		,605
Bartlett's Test of Sphericity	Approx. Chi-Square	109,562
	df	6
	Sig.	,000

Factor analysis allows to continue with correlation analysis under the following conditions:

•   The Attitudes towards authority scale has two clearly identified factors, while the Digital Competence scale has a uniform latent structure;

•   The subscales of the both scales refer to two factors, but in the Digital competence scale they are not clearly differentiated;

•   The reliability coefficient of the both scales after the factor analysis is relatively equivalent and modest.

1.3.   Correlation Analyse

Under the above conditions, correlation analysis is only possible if the both scales are characterized by a normal data distribution. The following histograms make it clear that the distribution in the both scales is relatively uniform and allows correlation to be derived using the Pearce coefficient (Figure 3).
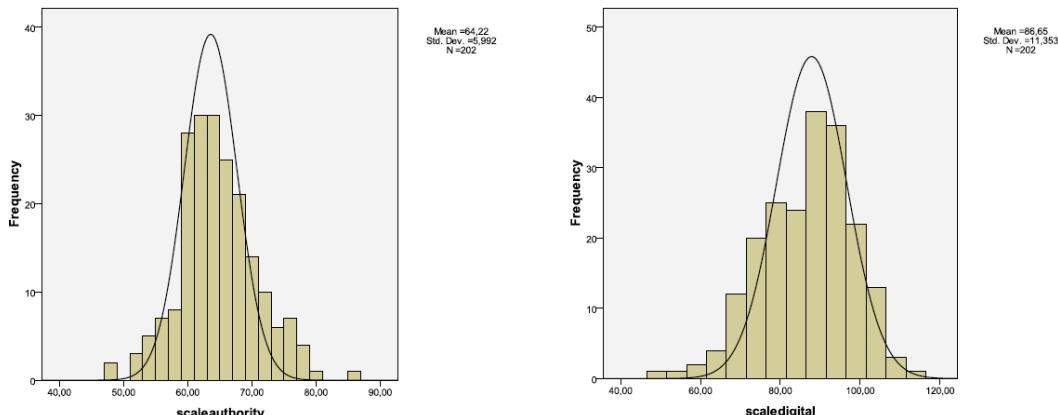
Figure 3: Data distribution in the main Scales

Table 8: Correlations between Attitude to Authority Scale and Digital Competence Scale

Correlations

		scaleauthority	scaledigital
scaleauthority	Pearson Correlation	1	,255**
	Sig. (2-tailed)		,000
	N	202	202
scaledigital	Pearson Correlation	,255**	1
	Sig. (2-tailed)	,000	
	N	202	202

**. Correlation is significant at the 0.01 level (2-tailed).

In this case, a correlation between the two scales could be clearly identified, ie. to determine the relationship between the attitudes towards authority and the digital competence of the respondents. The table shows that there is a positive correlation, though a weak correlation – 0.255. This suggests that the high values of digital competence will be mainly related to liberal authority.

Where such correlation exists, it should be determined how it is characterized For this purpose, the average values of respondents who showed high digital competence (between 90 and 120) will be compared with the average values of the same respondents on the Attitudes to Authority Scale (Table. 1, 2).

The average on the Digital Competence Scale is high with 87 respondents. Their average score is 96,72, ie. just above the lower limits of the high reference values. The average score of the same respondents on the Attitude to Authority Scale is 65,33 - a stable moderate value.

The result shows that digital competence is well formed (x = 86,65 при n=220; x = 96,72 при n=87), while attitudes toward authority are almost relevant to values throughout the research sample (x = 64,21 при n=220; x = 65,33 при n=87).

After establishing the normality of distribution in the digital competence subscales, a correlation analysis was made between the different subscales in the both major scales.

Table 9. Correlations between Subscales in both Scales

Correlations

		scalelelea der	scalein st	scalepe d	scaled1	scaled2	scaled3	scaled4
scalelelea der	Pearson Correlation	1	,233**	,189**	,158*	-,026	,132	-,052
	Sig. (2-tailed)		,001	,007	,025	,714	,062	,462
	N	202	202	202	202	202	202	202
scaleinst	Pearson Correlation	,233**	1	,354**	,287**	,182**	,167*	,146*
	Sig. (2-tailed)	,001		,000	,000	,010	,017	,038
	N	202	202	202	202	202	202	202
scaleped	Pearson Correlation	,189**	,354**	1	,113	,155*	,010	,143*
	Sig. (2-tailed)	,007	,000		,108	,028	,887	,042
	N	202	202	202	202	202	202	202

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Correlation analysis shows the following correlations between the subscales in the both scales:
•	Sub-scale Leadership correlates weakly with a sub-scale 1: attitudes towards digitalisation in education
-	The average value of the result in the sub-scale leadership is 22.71, ie. in moderate values of the authority type.
-	The average value of the result in the sub-scale attitudes towards digitalization is 30.84, ie. in the lower limit of the high reference values.

Given the established ratios, the conclusion can be that the attitudes towards digitalization are combined with a moderate manifestation of authoritative leadership.

•	Sub-scale Institutional authority correlates with all subscales of the Digital Competence scale, the most pronounced being the correlation with Sub-scale 1: Attitudes towards digitalization in education
-	The average value of the result in the sub-scale Institutional authority is 20.59, ie. in moderate values of the authority type.
-	The average value of the result in the sub-scale Attitudes towards digitalization is 30.84, ie. in the lower limit of the high reference values.
-	The average value of the result in the sub-scale Information and Content is 26.72, ie. in with an average reference value.
-	The average value of the result in the sub-scale Communication is 13.33, ie. in with an average reference value.

-        The average value of the result in the sub scale Safety and Problem Solving is 15.75, ie. in the lower limit of the high reference values.

It can be generalized that maintaining a moderate institutional authority among teachers is significantly related to all aspects of their digital competence.

•   Sub-scale Pedagogical interaction correlates weakly with two subscales: Subscale 2: Information and Content and Sub-scale 4: Safety and Problem Solving
-        The average value of the result in the sub-scale Pedagogical interaction is 20.92, ie. in moderate values of the authority type.
-        The average value of the result in the sub-scale Information and Content is 26.72, ie. in with an average reference value.
-        The average value of the result in the sub-scale Safety and Problem Solving is 15.75, ie. in the lower limit of the high reference values.

The characteristics of the highlighted ratio show that the manifestations of moderate authority in the pedagogical interaction of primary teachers are mainly related to moderate competencies for working with electronic information sources and development of electronic educational resources, as well as a high degree of security and problem solving skills.

Conclusion

Authority for primary teachers is legitimized on the border between liberalism and conservatism. The individual manifestations of the authority of teachers are unstable and often contradictory. They are combined with high attitudes towards digitalization, but with an unclear position on the means and effectiveness of communication in a digital environment, as well as on electronic resources for pedagogical interaction.

For this reason, the manifestations of moderate authority in the pedagogical interaction of primary teachers are mainly related to moderate competencies for working with electronic information sources and development of electronic educational resources, as well as with a high degree of security and problem-solving skills.

As expected, the uniform latent structure of the Digital Competence scale determined the large number of correlations with one of the subscales of the Attitudes to Authority scale. In this case, they refer to the Institutional Authority subscale. Therefore, the nature of instituinal authority as moderate between the liberalism and conservatism, are highly dependent on the digital competence of the teacher and especially on the attitudes towards digitalization and problem-solving skills.

Once again the tendency is ascertainedthat the teachers demonstrate a high degree of digital competence, which is combined with moderate, still tending (in some essential aspects) to conservative authority, calls into question the effective internalization of this key competence in the professional model of respondents.

The findings from previous studies confirm that teachers understand and are motivated to expand their competencies, but still experience a lack of personal

resources to delegate rights to other educational subjects and to abandon traditional instructional-directive approaches to interacting in the educational environment.

Acknowledgment

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Research of Primary School Students' Knowledge and Attitude to Internet Tolerance

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Abstract
Internet tolerance is a very relevant problem in the context of the 21st century, when a greater percentage of communication between people in most countries, including children, occurs precisely in the virtual space. The survey included 230 girls and boys from primary school. A brief literature preview and the results, taken by the research provides an excellent opportunity some conclusions to be made, which will approve the work of primary teacher in conversations with students about their tolerant behavior. It is a fact, that there are parents and teachers with no idea what really happens in their children's and student's virtual life. It is their responsibility to keep children in safe and to control their behavior in order to learn social norms for respectful attitude towards others. Internet allows more free behavior because of the anonymity and the sense of impunity, as well as the fact that someone remains hidden behind the monitor and do not have to confront one's opponent directly. This creates the illusion of courage and often leads to reckless actions that can hurt the other person. All these facts have provoked the research that will be commented in current article.

Keywords: Tolerance, Children in Primary School, Communication, Internet

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Introduction

Student's online communication is a huge challenge for pedagogical subjects, because they have to protect children and in the same time to learn them behave properly on the Internet. The number of users all over the word suppose that anything could happen in the virtual space, anything could be said and anything could be done. Children should be well trained that online communication has some rules that must be followed. Fast connection, social media, the possibility to communicate with many people is a great advantage and it should be used in the most appropriate way – not for bullying others. Some researchers are indicative that parents influence their child behavior online. Such problems as absence of family support, presence of family isolation, prevalence of failure in job and education, the feeling of worthlessness, may affect the way that child behave in Internet. Something more, these problems could be both the consequences and the causes of addictive use of the Internet (Tajalli, Zarnaghash, 2017, p. 163). Family conversation about different topics, including use of digital technologies, have positive influence regarding children's mental health and emotional intelligence, self-efficacy and academic results (Tajalli, Latifian, 2008; Tajalli, Ardalan, 2010). Family patterns are pointed as basic not only about time, spent in front of the screen, but about students' communicative e-tolerance as well. Internet is a place where millions of people meet each other. They have the possibility to stay anonymous, to express their point of view, even to be someone else. There isn't a paper with rules about e-behavior. Many sites have some kind of protection, but in most cases it is possible for everyone to say anything on Internet. "The human mind is innately different and diverse. If one looks carefully one cannot find two nations, two families, two men, or even two brothers or two sisters who think alike and behave alike. The universe is thus naturally inclined to be diverse" (Antun, 2013). That's why nowadays we speak about tolerance between people. Someone is not forced to accept other's opinion, but he/she should know that there are different points of view.

There are some benefits (getting information, increase cognitive function, building relation with others) and some risks (tendency of psychological disorders, less of Internet literacy, decrease visual function) of Internet use for children (Rachmayani, 2017, p. 142-143). Other benefits are: study help, social interaction, student community (Heinze, Procter, 2006, p. 246). Social media can be used very easily to interact both with friends and with others online and helps to improve social development of students and their relationships with peers (Subrahmanyam, Greenfield, Kraut, & Gross, 2001). Parents also understand that Internet can support learning of their children and in the same time to affect them negatively, especially if they are not able to control their children's internet use and other online content (Zotova, Zinchenko, 2014). Not only at home, but also at school students' Internet use is not limited. Therefore, their internet literacy education should be improved, so to protect their online activity (Ey & cupit, 2011; Yan, 2009) and e-behavior.

Online communication is different from "face to face" dialogue. Some authors look into friendship development through the internet. A comparison between online and offline companionship shows that both have different contexts. It turns out that online communication may have a different implication, as well as used communication methods are different and have its time and place to be implemented (Hamburger, Kingsbury, Schneider, 2012). There are different reasons for people to prefer online

communication: convenience, to seek new friendship, to seek potential partners, to keep in touch with friends and families, faster response rate, reliability, cheap, current trend, accessibility and others (Nordin, 2014). "Use of the Internet for interpersonal communication is not the same as offline face-to-face communication. The absence of nonverbal cues, lack of warmth, and less demand for engagement in Internet communication lead to impersonality, shallow interactions, and difficulty in building social support" (Lee, Leung, Lo, Xiong, Wu, 2011, p. 386-387). In spite of this, results of other researches indicated that young adults spend more time communicating online and building online relationships with friends and unknown individuals, and this time is more than middle and late age adults (Thayer, Ray, 2006, p. 438).

In pedagogical practice, it is supposed that when students are required more frequently to cooperate online, they actually share a common problem. In result, on some level create their own "problem solving" community (Heinze, Procter, 2006, p. 236). Why online tolerance is so necessary? "Social media platforms have enabled people from anywhere in the world to express their views and discuss any issue of interest in online discussions/debates" (Mukherjee, Venkataraman, Liu, Meraz, 2013, p. 1680). Tolerance is very important concept in the field of communications. It is connected with critical thinking and exchange of rational arguments on an issue among participants that seek to achieve consensus, solution, understanding (Habermas, 1984). It is important for children in primary school to know how to be tolerant with others in Internet, because they spent much time there. They behave there without limits and restriction. Online communication shouldn't be an uncontrolled area where everyone could insult, threaten or torture others and this is a statement that students should know from an earlier age.

Methodology and Results

In current research were included 230 students from primary school. . The research is conducted through a questionnaire, which includes 20 questions and explores student's opinion in several areas: what do they really know about the concept of tolerance; are they tolerant online; are other children show tolerance in the virtual space; basic tools of communication on the Internet (emoticons, abbreviations, upper and lower case letters usage in text, i.e.) and their meaning; what is their reaction when they become offended or an object of a rude notion; when it's easier for them to communicate with their peers – online or in face-to-face conversation.

Most of children (62,4%) know the meaning of tolerance from their parents, and 31% - from their teachers (Figure 1). This shows that the basic pedagogical subjects (parents and teachers) are positive about their responsibilities to discuss such important themes with children as communicative tolerance and interaction with others. Very few children have pointed that they are informed about tolerance by Internet (4,8%) and TV (1,9%), which means that regarding these basic topics media don't have much influence.
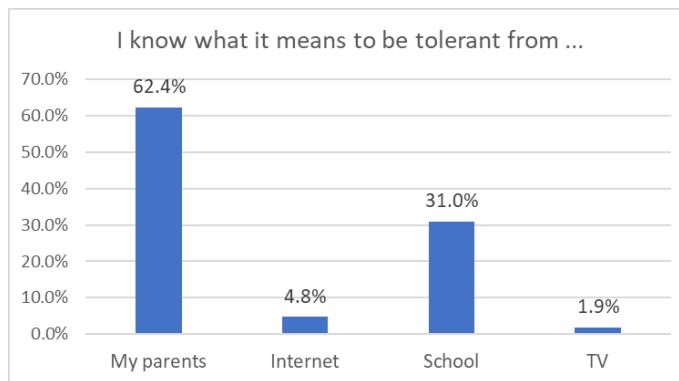
Figure 1. Sources of information about tolerance

Children, included in the research, show tolerance on the Internet (Figure 2):
- only if I know the person I'm talking to – 24%;
- only if he/she is my friend – 21,8%;
- always with no matter who is opposite – 18,2%;
- if he/she is tolerant of me too – 15,1%;
- it depends on the situation and on the person – 11,1%;
- sometimes – 8,9%;
- never – 0,4%;
- I am not tolerant with other people – 0,4%.

Most of the students set conditions for tolerance – they are tolerant to their friends, to people that they know, in suitable situation, probably when they are in good mood.
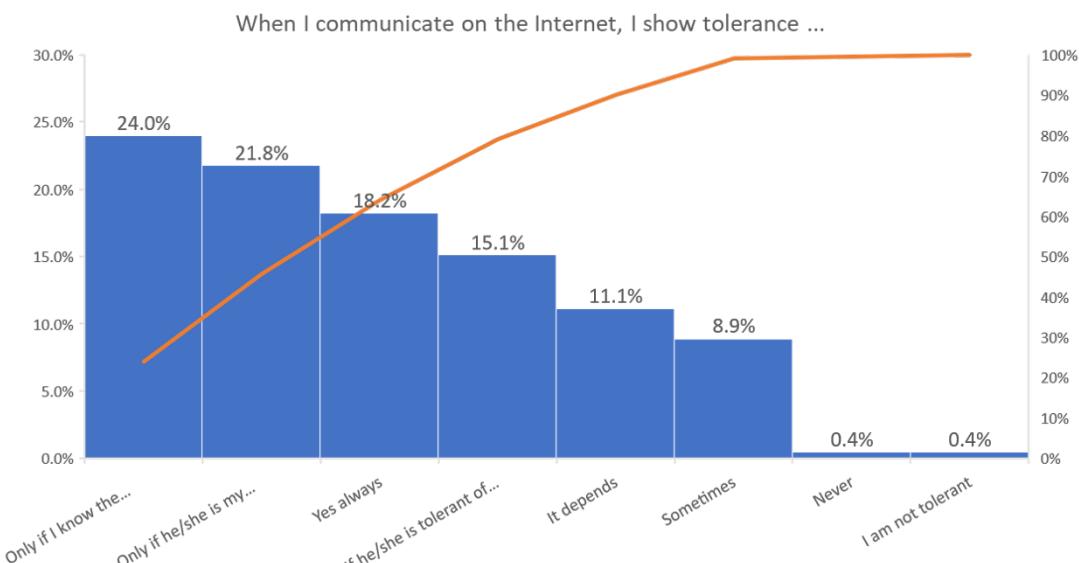
***Figure 2. Conditions for showing tolerance on the Internet***

Using words that insult others is the most indicative sign for not being tolerant to other people on the Internet (Figure 3). 17, 9% of questioned students think so. To criticize someone's opinion is another intolerant action – 13,2% of children have pointed that. It is very interesting that today's youth feels bad when they are not accepted or are excluded from the social group – as per 10,2% this is intolerant to them. 6,8% are afraid of not gathering enough "likes" for their post. Obviously,

priorities are quite different in 21st century. These results shows that every student has different idea for Internet communication tolerance.
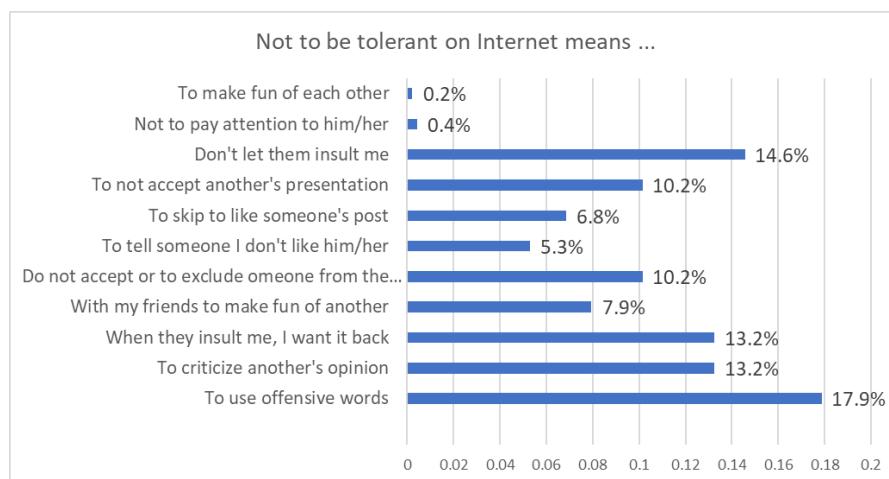

Figure 3. Intolerant behaviors on the Internet

Students in primary school are well informed about most used abbreviations in social media as OMG, LOL, CUL, NP, NB (Figure 4 & Figure 5). 83,4% of respondents know and use OMG and 73,9% - LOL. In the questionnaire were included other abbreviations as well, but they have no exact analogue in English, so to be translated and explained.
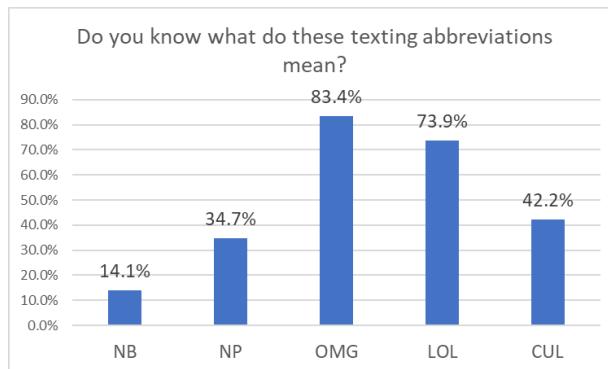

*Figure 4. Knowing the meaning of online texting abbreviations*
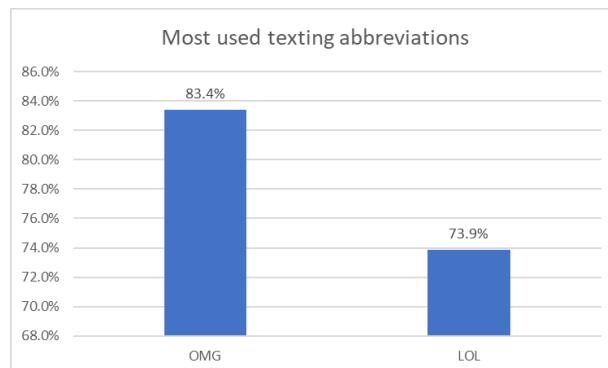
Figure 5. The most popular online texting abbreviations among respondents

Results on Figure 6 shows that children mostly use emoticons with positive message to the others (big smile, tears of joy, smile, tongue-out, love, wink and so on). Relatively much less is using of emoticons with negative meaning (angry and cry).
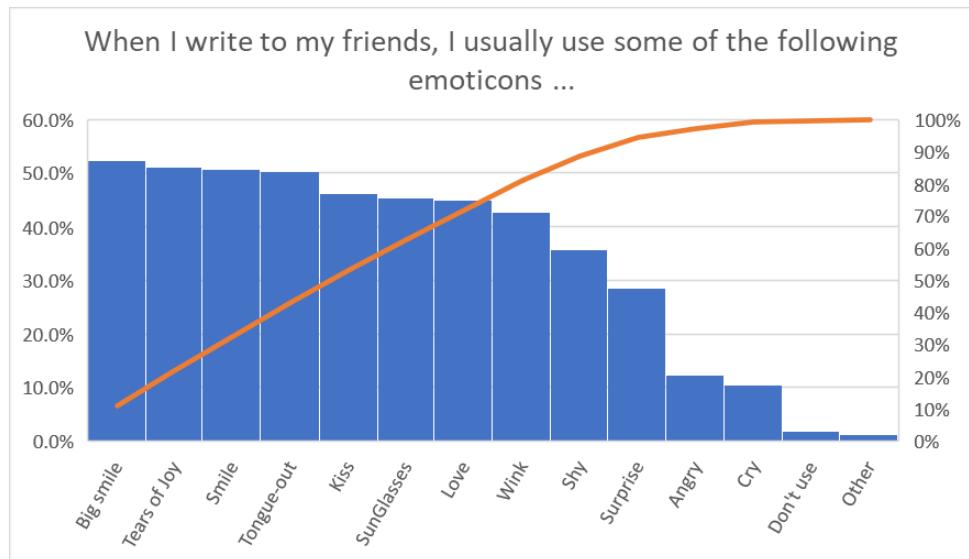

Figure 6. Most used emoticons
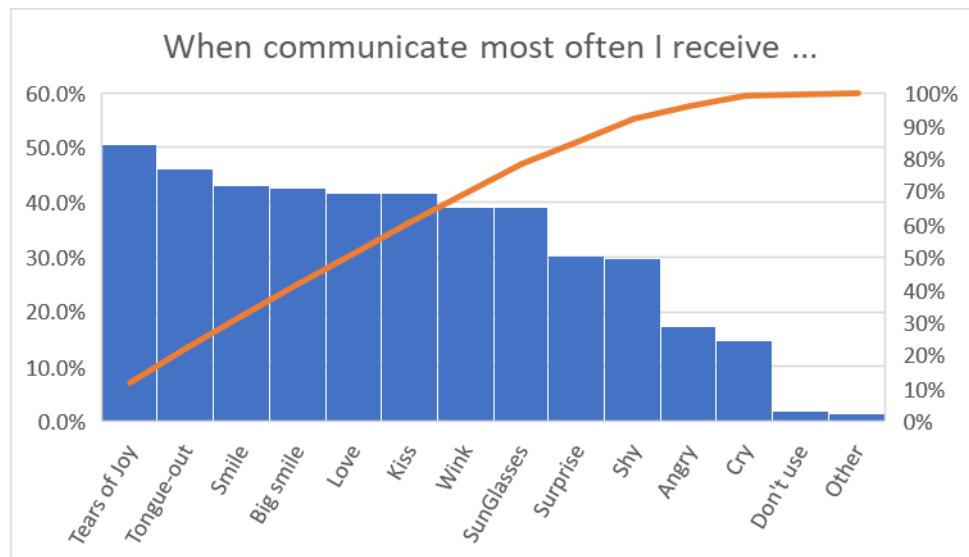
Figure 7. Most used emoticons in return

Except on sending more emoticons with a well-meaning message than negative, current research shows that students usually receive positive emoticons in return (Figure 7). This is indicative for presence of positive communication between student in primary school with no aggression and lack of tolerance. It is the same with pupils' favorite emoticons (Figure 8 & Figure 9).
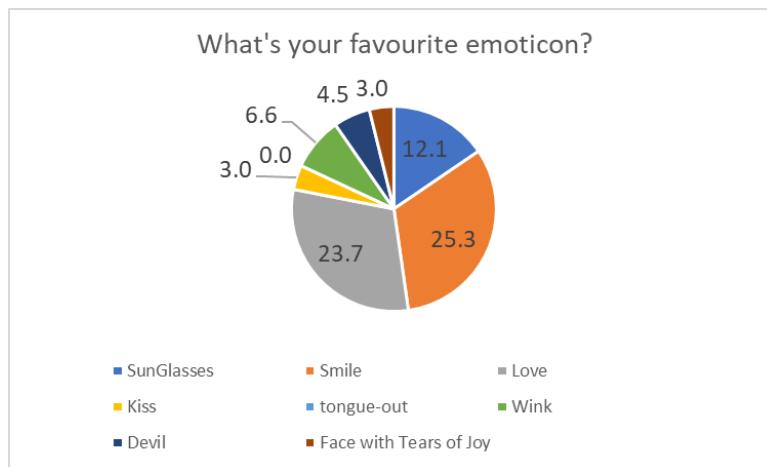
Figure 8. Pupil's favorite emoticons

Definitely, positive emoticons are used more often than negative, which is a hopeful fact for future online communication between students in primary school.
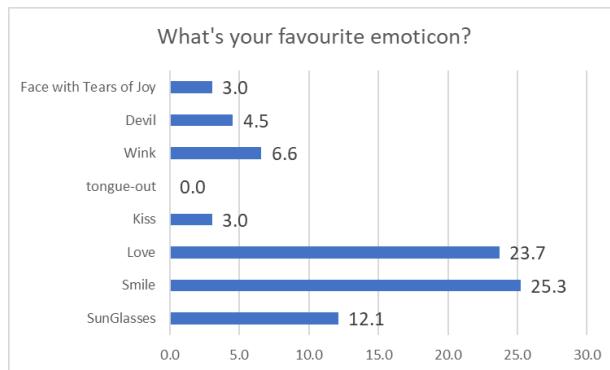
Figure 9. Pupil's favorite emoticons

Most of the pupils questioned (70,9%) are sure that they have never been insulted in the virtual space (Figure 10). Despite this satisfactory result, there are 27,4% that claim the opposite. It is a serious percent that should draw attention to the theme. This is a value that can be easily increased, that's why pedagogical subjects must be activated to prevent and to overcome this problem. Otherwise it could affect destructively the whole child's growth, provoking aggression, depression, alienation.
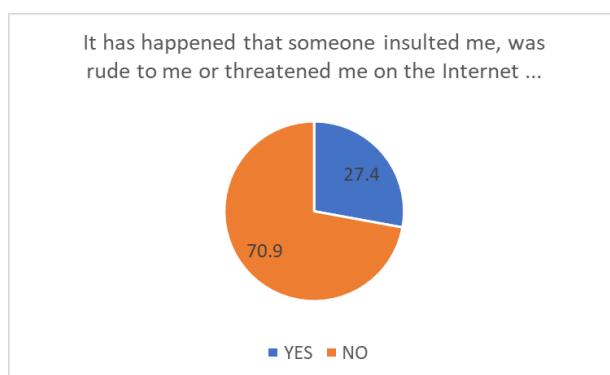

Figure 10. Have respondents been insulted on the Internet?

When have been insulted, respondents react in different ways, as follows in descending order (Figure 11):

- I share with a friend or an adult – 60,5%.
- I'm looking for a way to get it back – 21,1%.
- I go offline – 20,4%.
- I explain that this is not correct – 19,7%.
- I immediately insult him/her too – 17%;
- I'm looking for new friends – 13,6%.
- I don't know what to do – 9,5%;
- I am getting sad – 9,5%.
- It happens so often that I don't pay attention at all – 8,2%.
- I get scared – 6,8%.
- I am crying – 5,4%.
- Everyone does it – 4,8%.
- I'm threatening the abuser back – 0,7%.

It is quite sure that pupils are theoretically prepared how to deal with such an unpleasant situation, namely to seek the assistance of an adult – parent, teacher or another trusted person. More anxious are other results that show willing for immediate revenge, fear of being bullied, resignation to aggression, which is clearly everywhere.
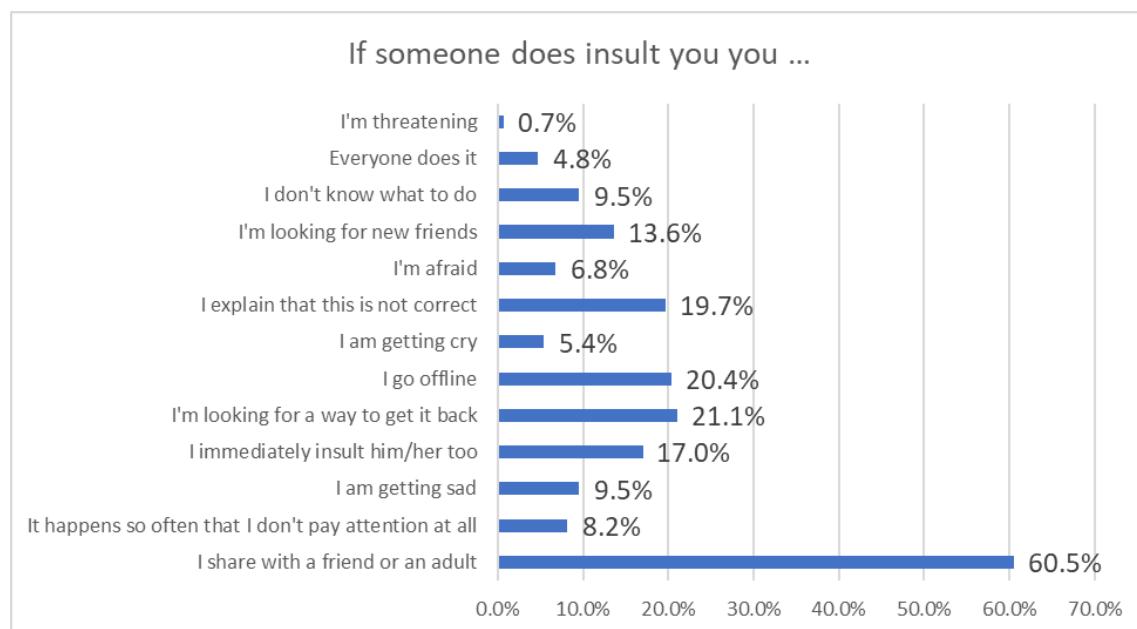
Figure 11. Actions in return of an insult received

Very few children point that there is possibility to have insulted someone on the Internet (Figure 12). 87% are positive that such a thing has never happened, but 10,8% confess that they were in the role of an e-abuser sometimes.
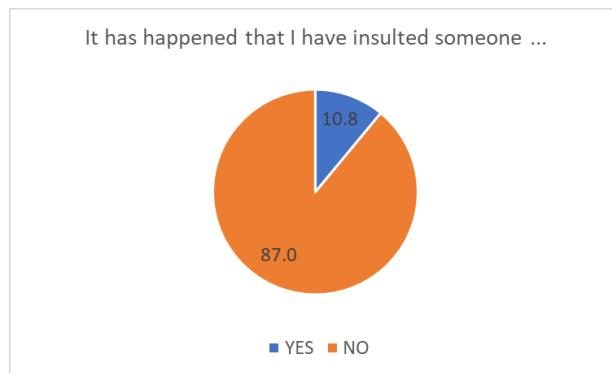
Figure 12. Have respondents insulted someone on the Internet?

When respondents behave bad with someone online they react in some of the ways, listed below (Figure 13):
- I'm looking for a way to apologize – 47,1%.
- I'm feeling uncomfortable – 23,1%.
- I get an insult back – 23,1%.
- I'm losing a friend – 20,2%.
- Nothing is happening – 18,3%.
- I don't pay attention – 14,4%.
- This is normal – 11,5%.
- I feel good – 11,5%.
- Everything is allowed on the Internet – 10,6%.

Most of the pupils feel bad and look for a way to fix the problem, especially if it affects a friend. Although there are opinions shared that are quite disturbing as "nothing is happening", "I don't pay attention", "this is normal", "I feel good" and "everything is allowed online". This is a sign for low tolerant culture and lack of skills for positive communications with others.
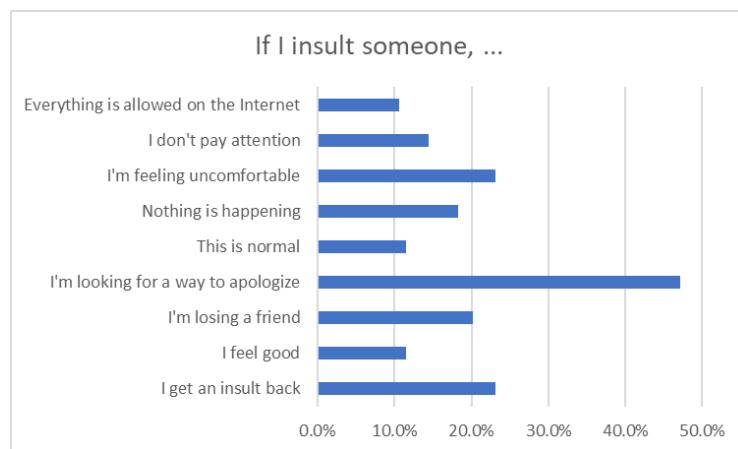

Figure 13. Actions when someone insults others

It is noteworthy that children studied don't live with illusion that Internet is a safe place. They know that bad things could happen there. And here is there opinion about the reasons which provoke that (Figure 14):
- Nobody knows you – 45,9%.
- No one is afraid of the opinion of others – 30,1%.

- More opportunities to express personal opinion – 30,1%.
- Nobody sees you – 27,3%.
- People don't know each other – 12,6%.
- Because people are sometimes very bad, rude – 6,6%.
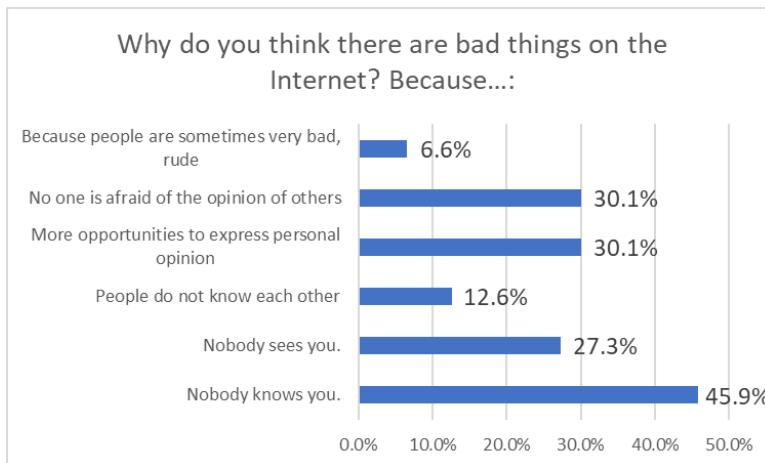
Figure 14. Reasons for Internet not to be a safe place for children

Sending messages at any time is a kind of e-violence. That's why pupils have been asked if they pay attention about hours, in which they send messages online. 57,8% of the respondents answer positively, but 23,4% give negative answers with the explanation that no one of their peers complies with the time (Figure 15).
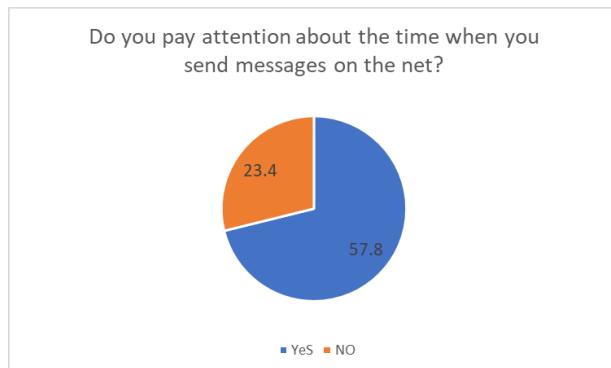
Figure 15. Showing tolerance about messages sending time

The older the child grows, the less the influence of his parents and teachers becomes at the expense of the influence of his peers. This is also evident in the answers to the last question from the survey, which is who the child's preferred people for are sharing personal information (Figure 16). Most of the children have marked "my friends" – 78,5%. Only 10% prefer to share their opinion on the Internet and 9,6% - in social groups. Apparently "face to face" communication is the preferred one for trusted connection with other people.
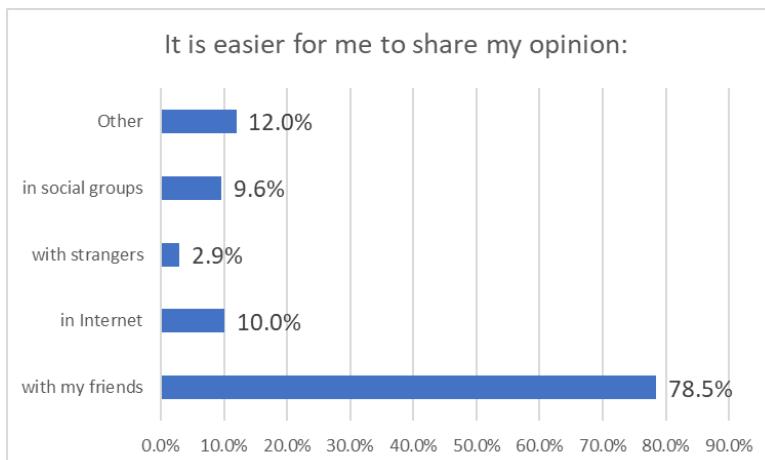
Figure 16. People that pupils share their opinion with

Conclusions

Online communication has different aspects that are object of scientific interest and research. Online communicative tolerance is a personal characteristic that could be educated from an earlier age. Current research shows quite positive results of pupils' intentions to behave appropriate in the virtual space. Most of the respondents know well what is expected from them and they can be a corrective for others' behavior. There are, however, some students that share a different point of view, as per which non-tolerance is usual for e-communication. This is because of different factors: guarantee of anonymity and impunity, variety of expression tools, instant response, space free of adults, lack of control and others. There is no doubt that parents and teachers are responsible for pupils' social skills, including Internet communication tolerance.

Some of the children studied demonstrate selective tolerance – their behavior depends on the people standing on the opposite. They are tolerant to their friends, but could be much rude to strangers. This is a sign for communicative immaturity that also should be developed and turned into acceptable style of communication with others.

Acknowledgements

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How Can Educators Make Online Work Well?
Communicating Through Graphic Design: Relevance, Focus, Reflection

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Abstract

This paper connects best practices observed and developed through experiential learning in online forums, structured as open reflective spaces, with structured feed forwards. We are all online, constantly communicating, exchanging, learning, teaching, developing and creating. In such a vast space we often lose sight of the importance of the space itself. Almost every day we incur a vast number of digital learning experiences, that we have to face head on, often without a clear guide on how to find our way through the measureless steps. Creative thinking and reflecting continuously on our own practice is vital in understanding how to best cater for such diversity. The aim of this study is to observe best practice in online teaching and learning, drawn from a ten-year online practice and the observation of 32 online modules. Student Learning & Learner Diversity is at the core of teaching in an online space and structured praxis is essential in order to encourage, assist and maintain engagement across tasks. Design seizes "difference" as an opportunity to be developed and enhanced, a space to finetune and embrace flaws and limitations, supporting and encouraging a multitude of different perspectives. When supported correctly the collective strength of the online space, along with the materials and reflections of the cohort body, work together symbiotically as constantly evolving innovative spaces.

Keywords: Pedagogy, Communication, Graphic Design, Reflection, Diversity, Distance Learning, Coaching, Online Learning, Reflective Practice, Praxis, Educators, Online, University, Cultural Differences, Achievement, Motivation

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Introduction

In 2020 the outbreak of Covid pushed Universities into new territory, communicating and exchanging ideas and theories at a distance. This is not wholly a new practice there are several institutions that have been delivering distance learning programmes online for some time. To make online work well, it is important to recognise flexibility and accessibility as the core drivers of change to design learning materials and methods of teaching and learning that remove barriers, moving education into the future.

Higher Education Institutes (HEI's) have been faced with dramatic change to the design of teaching and learning materials, a change that was an inevitable progression for campus-based practitioners teaching in a digital world. Sped up by Covid-19 the consequence of this new direction in teaching and learning has presented many practitioners with an unprecedented level of problems.

With the 2020 Covid-restrictions the significance of 'place' has been put into question and the functional relevance of online learning pushed to the fore, exchanging the conventional space for the unconventional space and the importance of design is now in focus. Professor of Higher Education at the University of Oxford, Simon Marginson stated, students generally report that university is much more than just tuition—place is also really important. Another prevalent fear amongst practitioners is, how can we protect more people from the impact of full- or part-automation of roles, and prepare them to take advantages of the changes coming from the fourth industrial revolution, working alongside machines and AI?' (Design Council, 2020). In order to progress through the digital revolution, we need to embrace and not fear new ways of teaching, learning and working and receive new digital channels of communication, with an open and balanced perspective.
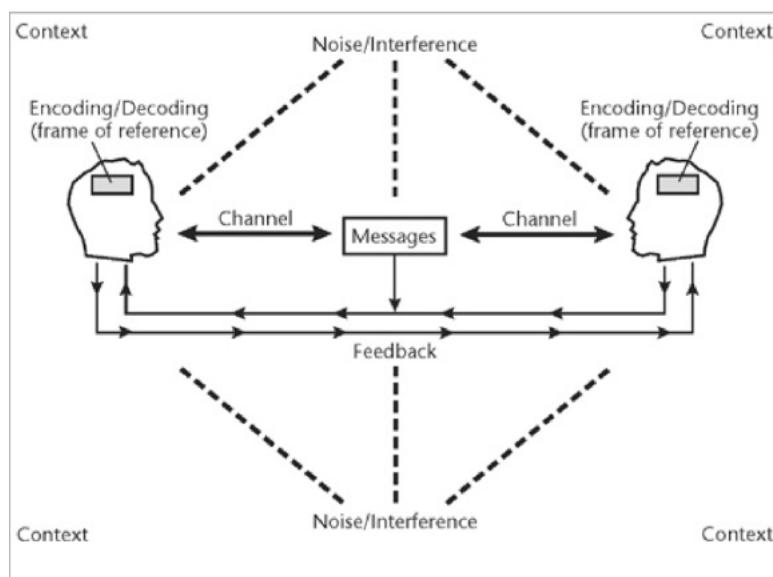

Figure 1. The communication process (Dunn, Goodnight, 2014).

Decoding is the process of interpreting or attaching meaning to another person's message. Communication often stops because people decode messages differently

based on their frame of reference. Because of diverse attitudes, knowledge, and past experiences, receivers often interpret messages differently from the way they were intended by the senders. (Dunn, Goodnight, 2014).

Margaret Youngblood is a San Francisco graphic designer, vice president and creative director at Banana Republic 'You cannot problem solve unless you understand and approach problems from a holistic standpoint: economically, socially and culturally.' (Holland, 2020).

A key focus of communicating online is the ability to recognise and embrace difference, a particular human skill unique within each of us. However, it is also important to pay attention to the difference between what 'difference' and 'diversity' mean individually. Difference is a comparator of non-similar things and diversity is a range of different things.

"It is not our differences that divide us. It is our inability to recognize, accept, and celebrate those differences." ― Audre Lorde, Our Dead Behind Us: Poems

Page states in order 'to realise the benefits of diversity, we need logic and theory to identify the types of diversity that improve outcomes and to understand the conditions under which they do so. And then we need practice. The heart of Graphic Design and design-focused disciplines embraces diversity and uses a practice of theory and practice-based problem solving to arrive at the best solutions. According to the Design Council, 2020, design skills will be necessary skills in every sector of industry in the world '43% of people working across the economy using these skills are in jobs that generate innovation, creative thinking and problem-solving'.

In the 21st Century transferable skills are essential and developing networking skills, maintaining collaborative relationships with people, and making decisions as a team are considered essential skills to be successful in the new era (Collins and Halverson 2009; Reigeluth 1999; Partnership for 21st Century Skills 2011). This suggests that every subject can benefit from the structured holistic practices used in design, where diversity is celebrated as innovation and a source for change.

One of the important factors in distance learning is recognising how diversity effects the shared space, the consumption of knowledge and how diversity and difference in learning style needs should be considered when creating materials at any level of engagement. It is only through encountering cultures and belief systems unlike our own that we learn anything about the flaws and limitations inherent in our own perspectives, (IAFOR, 2020)

To answer the question, how can educators make online work well, the focus of this paper is on the distance learning delivery of graphic design. Through building, developing, authoring, leading and teaching online courses the author's personal practice has highlighted a number of key points, and allowed key insights found working over 10 years in online educational practice, observing and teaching across 32 modules to be shared. New light can be shed on the creative and useful nature of the online learning space. Creative thinking and reflecting continuously on our own practice is vital in understanding how to best cater for such diversity. Design seizes "difference" as an opportunity to be developed and enhanced.

On the subject of transforming education, it's important to recognize that we are remodelling the delivery of the message. As Marshall McLuhan said, 'The medium is the message' and the greater the medium the bigger the message and the internet is a vast data space, with minimal limitations.

Around nine years ago the author was asked to create an online graphics degree for which there were very few reference points or similar courses that required the production of such a vast array of artefacts at a distance. Graphic design requires a lot of studio practice and often relies heavily on the development of a community of practice. This is usually achieved within physical communal studio spaces where students can share ideas. After a period of trial and error, successful iterations produced a working model that created the basis of a working version of the physical studio space online. The initial online teaching and learning method was developed over a duration of five years, 2012- 2016, and is known as the 'discovery co-operative' coaching and discovery-learning model. Through 'discovery co-operative' coaching and a discovery-learning model both tutors and students are empowered to identify and address problems and developmental issues quicker and the competencies of the design course can be achieved faster through improved online cohesion. (Ord-Shrimpton, 2016). The model released in 2017 included previous model components in combination with the refined online studio practice forum model (Ord-Shrimpton, 2019).

The key focus of employing these two models together allows tutors to build on environments of learning and harness the power of distributed creativity, referring to situations where collaborating groups of individuals collectively generate a shared creative product. The term collaborative emergence refers to these group processes (Sawyer, 2003a), collaborative emergence is known as 4 points: the activity, moment-to-moment contingency, the interactional effect and the process is collaborative. (Sawyer, Dezutter, 2009).

Closing the teaching and learning loop with a final stage of further structured development is presented in this paper as the C Model which has been reworked and refined over the duration of the last nine years.

Components of difference in teaching online

The challenge in designing technological systems is reconciling the competing priorities of technical feasibility, functional usability, what people want technology to do, and the demands of site-specific use. (AIGA, 2020). As a result of the pandemic thousands of teachers, lecturers and professors have been thrust into the digital sphere without understanding the complexities of different technologies, the importance of difference in terms of country-specific learning styles and the location specific interactions and nuance of face-to-face. All of these form a new zone of proximal development, (Vygotsky,1934); it is now not just knowing what the learner can do, but also what is the educator able to do?

Key insights found through delivering online educational content have helped answer the questions, how do we embrace difference and how can we make online work well?

Observations from personal practice show:

- The global learner will experience many different learning methods - it is important that educators combine learning methods to ensure inclusive engagement applies balanced cultural homogeneity.
- Teaching and learning content must incorporate distributed creativity and collaborative emergence.
- Discovery co-operative coaching should be employed together with the online studio practice forum model.
- The learning content should consider, contain and add notes to the global learner's cultural diversity.

In 2020 the concept of 'difference' has yet to be integrated into all of our systems and processes. In education there are hundreds of differences and it is important for educators to embrace each of these differences and seize them as opportunities for positive growth and development. Digital skills and a digital framework should be encouraged across all levels of learning, even if the core focus is not digital. Tutors need digital skills, the establishment of a shared understanding, common purpose and goals (JISC, 2020). From the findings of this practice, the framework should take into account the following:

- Teaching methods
- Student learning styles
- Cultural styles of learning
- Age in learning
- Level in learning
- Number of years a student has been learning
- Subjects learnt prior to learning new subject
- Work based practice in learning relevance
- Neurodiversity

Using an informed approach to recognise, accept and guide we can create learning environments that embrace and enhance each difference using a framework of continuous student and educator focused reflection in our digital practice.

Online educators should take time to understand the sensitive learner in two specific ways, neurodiversity and digital capabilities, and should be willing to adapt old and new methods to fit in with new technology rather than simply expecting to transfer all campus skills directly into the digital arena. Precise observation and consideration of the above framework elements should be factored in.

How do we embrace difference in a distance learning space?

Diversity refers to the great variety of human characteristics—ways that we are different even as we are all human and share more similarities than differences. These differences are an essential part of what enriches humanity, and moving beyond "us" versus "them," and beyond fear, is crucial to civil society, (University of Saskatchewan, 2020). There is no prerequisite set of rules that can be applied to any one distance learning space, as they can vary so immensely. However, applying specific attributes that can be built on and developed over time are essential to developing good distance learning practice. Attributes such as awareness and respect

of diversity and difference, paying attention to one's own bias, developing a good ethical viewpoint and developing a line of inquiry into each student's learning style, help tutors to engage and coach students to assist them to identify their strongest attributes and areas for development, which is in keeping with Haider's research, which found knowing students' learning styles at the beginning of the online forums enabled a tutor to see when they needed to gently manoeuvre specific students to move out from their comfortable and secure learning styles to the one which is unfamiliar and uncomfortable (Haider, 2015).

Particular to graphic design is the generation and consumption of images, through the practice discussed here, observations of cultural identity have a big impact on the consumption of images. Communication through visualization is at the same time pictorial and linguistic. It is socially and culturally conditioned, based on familiar linguistic patterns, as in a 'pie chart' metaphor for market shares or a 'starry night' metaphor showing data in 3D (Bertschi & Bubenhofer, 2005). In consideration of this factor, educators should be mindful of all visual content and adapt and substitute content where necessary, to respect cultural diplomacy, for example HSBC created a series of adverts about local cultures and travel that identified the importance of respecting local knowledge, paying attention to the sensitive customs within each culture.

Each educator should aim to adopt and adapt skills on the fly as new solutions are found. When team members think differently…their collective performance includes a diversity bonus, an extra amount. That bonus is a quantifiable, measurable value add…Diversity bonuses challenge narrow "meritocratic" thinking. Diversity bonuses mean that the best team will not, as a rule, consist of the best performing individuals. The best team will include diverse thinkers (Page, 2017). Online teaching requires international humility and inclusion, where a team of diverse educators meets a student cohort equally if not more diverse, teaching considerations that incorporate elements of all student diversity will have the most significant impact on distributed creativity in online forums. The online forum is an expedient way to connect students across vast distances and it allows them to share intimate cultural knowledge. Working and communicating across cultures and disciplines requires more time for a group to balance and understand each other's differences. It does not necessarily come naturally to students to mix in culturally diverse groups, but it is indeed an important opportunity for students to learn to work together with people not necessarily acting exactly like them. (Frydenlund, 2017)

According to Page, cognitive diversity differs from identity diversity - differences in race, gender, age, physical capabilities, and sexual orientation. That said, identity diversity, along with education and work and life experience, will be a contributor to those differences. Why is diversity so important? There are many reasons, as the University of Saskatchewan so eloquently states:
▪   Experiencing diversity at university prepares students for the diversity they will encounter the rest of their lives
▪   Students learn better in a diverse educational setting.
▪   Attention to diversity leads to a broader range of teaching methods, which benefits the learning process for all students.
▪   Experiencing diversity makes us all better citizens in our democracy.
▪   Diversity enhances self-awareness.

The findings of this practice support the above points, as design engenders a strong ethical practice and a continuous process of reflection, not only on the individual's learning capabilities, development and achievement; but with a strong focus on the ethics, unconscious bias and diversity involved on each specific project. This ongoing process of evolving reflection and awareness can be seen in the way students begin to comment and reflect on each other's work over time. The students are developing a sustainable, globally tenable, reflective practice. As Nussbaum clearly stated in 1997, our primary goal should be to produce students who have a Socratic knowledge of their own ignorance – both of other world cultures and, to a great extent, of our own. These students, when they hear simplistic platitudes about cultural difference, will not be inclined to take them at face value; they will question, probe, and inquire. Because they have a basic awareness of cultural and methodological issues, they will have a way of pursuing their questions further. They will approach the different with an appropriate humility, but with good intellectual equipment for the further pursuit of understanding. These traits, so important to a citizen today's interdependent work, are very unlikely to be developed by personal experience alone.

The quintessential benefit of online learning using online forums where work is shared and discussed, is that social levelling affords every participant an equal chance to share their voice, ask questions, observe and review content, use forums and assessment work on a level playing field. Through practising online the subtleties of each learning style become more apparent and this enables the educator to tailor learning resources through a solid process of reflection to create an educational environment that is all encompassing, if the components of difference are embraced. For example, the sensitive student is able to fully express their work and opinions online in a way that they may be unable to express in public situations. Anonymity afforded by the digital space in combination with a well organised forum space encourages learners from all backgrounds to share and contribute more extensively to the collective shared learning experience.

Embracing difference not only in terms of learning background and cultural diversity, but also individual experience enables educators to make online work well.

Conclusion: Reflective teaching and learning embraces difference

Reflection engenders independent learning, to quote one of Forster's 4 points on the subject of independent learning (1972) it includes freedom of choice in determining those objectives, within the limits of a given project or program and with the aid of a faculty adviser. Learners are now in a global competition for work. Reflective spaces enable learners to be prepared for industry, to be immersed in an experience that caters for and imitates industry and this can be different in different cultures.

A reflective practice should be employed at every stage of the learning process, fostering an open continuous reflective practice helps educators and students to see and identify flaws and embrace difference. The critical role of tutors is to be directive, supportive, a resource depending on individual students' needs and group needs. In a nutshell, tutors have to become leaders to shape, influence and support as well as encourage, enable and empower students to become critically reflective (Haider, 2015).

Real-time spaces can often pose problems for different cultures however, digital spaces encourage open flexible discussion, and this helps to merge cultural expectations. The teaching and learning model used in this case harnesses the power of real-time forum discussion, allowing each student the time to reflect in action and apply active learning through forum interaction. Feedback from a broad demographic and spectrum of input is essential in the design cycle and the virtual online studio forum provides students with access to a broad array of peer input, (Ord-Shrimpton. 2019). Which is supported by the thinking of Iba and Miyake in 2010, who wrote, in recent complex society, it is essential to find problems and think of solutions from various points of view with a creative mind. People need to learn ability to practice their ideas and create new viewpoints and ways of thinking. It is also necessary to construct their own living knowledge based on their situation, not just by memorizing existing information. Under present circumstances, a few people can realize such a creative way of learning, but others do not seem to know how to do so.

Critical reflection consists of systematic reflection on practice against the backdrop of theories. In other words, the critical reflective process is all about digging and delving deeper by reflecting and questioning the questions and refusing to take things for granted. Also, critical reflections should lead students to become creative in their approach to social work. (Haider, 2015). Educators should practice online using a combination of Donald Schön's two levels of reflection: (i) reflection- in-action and (ii) reflection-on-action and Terry Borton, Reach, Touch and Teach from Borton's development framework, this is because the nuances of face to face and environmental teaching are not translatable at a distance, educators have to be more aware and use reflection-in-action and reflection-on-action to ensure that both teaching and learning takes place online.

It is advisable students should follow and use Graham Gibbs Reflective learning cycle (1988) and David Kolb's Experiential learning cycle, reflective observation (1984). Through practice, testing and observation, the consolidation of the methods above are combined in the C model, which is displayed in Figure 2. Students are recommended to use a continuous process of active reflection as soon as they enter the forum, because if they reflect too far after the date of the task in question they may get distracted and not achieve the intended outcomes. Students deconstruct the issues with theories and then reconstruct; this process enables students to become critically reflective, (Haider, 2015)

C Model

Relevance Focus

Relevance of the response & focus on key details in relation to task

Reflection

Set SMART action plan goals for in-forum sessions with examples

Feed Forwards

Build on outcomes of relevance, focus and reflection with core level feed forwards using GTD methodology

Fig 2. C Model

Outside of the design cycle used in design lessons a combination of reflection in action, active learning and experiential learning should be fed into the learning contents and a final feed forwards model employed to complete the cycle.

The C model was generated from observations of design principles in practice. The aim of the C model transforms and connects the learner, the learning space, the tasks and the assessment through reflective feedback and pedagogical feed forwards. The relevance focus refers to key details in relation to content and tasks, and clearly defined SMART actions (specific, measurable, achievable, realistic, and timely), updated in process based on student interactions within forum spaces. These actions encourage students through observation of the tutor commentary and peer-to-peer interactions to develop their critical analysis skills. In 2014, Al-Mubaid, evidenced the process of critical thinking is the process that leads to creativity in thinking and can be viewed as thinking and reasoning at its full strength. Teaching students how to think deeply while in their online course is one of the goals of this project where the main goal is to reach the highest level of quality thinking.

The first two parts of the C model are further consolidated in a streamlined list of feed forwards points that are outlined as brief but focussed notes on the assignment feedback after submission. This model closes the teaching and learning loop with relevance, focus, reflection and feed forwards, using a simple get things done (GTD) methodology, (Allen, 2015) that helps to generate positive outcomes and improvement in subsequent modules. Constructive alignment is a concept in teaching that aligns the teaching activities within a course with the aims of the course (Biggs & Tang, 2011). This means that all activities should lead to the attainment of the course objectives, and these course objectives should be highlighted as definitive points in a list in the feedforwards feedback.

The technique to communicating online effectively is to ensure that you consider the teaching and learning experience as a collaborative journey and not a one-to-many oration experience. The content must be clear, well planned and structured to assist

the learner to collaborate both independently and in teams, and feel confident in their actions to help them to move forward outside their comfort zone. Tutors must take time to be aware of cultural learning styles, expectations and behaviour and help them to shape their thinking and challenge their perceptions. Online spaces are open reflective spaces, that are continuously evolving and should not be seen with the same rigidity as physical spaces. When organised well, the digital space itself, (with timely guidance and orientation) harnesses the potential of the collective strength to embrace diversity by thinking creatively and spontaneously to produce performance enhanced results and embrace difference and global diversity.

Having gained deep insight from nine years of online practice it is hoped that the 3 teaching and learning models,
- Discovery co-operative coaching method
- Online studio practice forum model
- C Model

will be kept in mind when new educators begin to make their own online materials.

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Behaviours - Silent Conflicts at High Schools in Ho Chi Minh City, Vietnam

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Abstract

In recent years, foreign investment has immigrated into Viet Nam. Particularly big cites like HCM city. Which has drawn to challenging changes to the national educational system. These changes focus on both students' in-class and outside-class knowledge. This study explores the impact of foreign and traditional cultural values on students' and teachers' in-high school communications in Ho Chi Minh city Viet Nam. My study provides some recommendations for teachers and educators to teach their students the appropriate communicative cultural values in the changing social and cultural contexts. I conducted this study by surveying 1200 high school students and interviewing 60 teachers from 12 high schools in Ho Chi Minh city. The survey highlighted that psychological crises and the lack of communicative and problem-solving competence impacted students' success in communication. The survey shed light on the impact of media such as newspaper, TV and internet on students communicative performance. The interviews addressed teachers' perceptions on the work pressure such as overloading teaching content, making it hard for them to provide with their students a perfect education including knowledge and personality. A big gap between what they have been teaching their students in classes and what students may see in their real-life contexts influences on students' awareness of behavioral culture. Imported cultural values via the communicative channel results in teacher's concern in their students' awareness . An integrated teaching between schools and family may contribute to a better outcome in students' understanding culture and society.

Keywords: Socialised Environment, Culture, Behaviours, High Schools, Ho Chi Minh City

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Introduction

There has been an increasing number of immigrants to Vietnam in the recent years. According to the statistics of immigration management released by Ministry of Public Security, there were about 19.369.133 foreigners from more than 100 countries and territories in the world travelling to Vietnam and 4.283.561 Vietnamese people travelling overseas in 2019. These resulted in creating many opportunities for Vietnamese investment, tourism, and cultural and historical branding. However, these also brought challenging changes for the integration of Vietnamese economic, social and educational system.

This study explored the impact of traditional and exotic cultural values on high school teachers' and students' behaviors in Ho Chi Minh City, Vietnam. It also provides practical implications for stakeholders including teachers, researchers and managers in the education field regarding how to appropriately communicate the traditional cultural values and accept the external new cultural values into Vietnamese social and integrative context.

The research employed the sociology survey methodology. Data were collected from a survey of 1200 students and an interview of 60 teachers of Grade 12 in twelve high schools in Ho Chi Minh City. The study utilized socialization theory for data analysis. Many researchers argued theoretically different perspectives about the socialization that,

Fichter, an American sociologist, noted that socialization is the interactive process between person and person, which resulted in the acceptance of an action modeling and the adaptation of modeling.

G. Andreeva, a Russian sociologist, pointed out that socialization is the two-facet process. One facet is that a person accepts social experience by involving the social environment. Another facet is that the person reproduces proactively by their relationship through their involvement in social activities and relationships.

Smelser, another American sociologist, thought that socialization is the process in which the person learns the action methods correlative to their system of roles to serve the implementation of modeling behaviors correlative to these systems of role which they have to play in their life (Vu Quang Ha and Nguyen Thi Hong Xoan, 2013).

R. Stark argued that socialization is the process in which infants learn to become mature people integrated with cultural characteristics and can participate in the social relationships.

Tony Bilton found that "Thanks to the process of socialization, we can accept the sociocultural backgrounds where we were born, achieved personal social characteristics, learned how to think and behave appropriately in our society, (Nguyen Dinh Tan, 2005)".

In the dictionary of sociology, 2 researchers, G.Endruweit and G.TrommsDoff shared that "Socialization is the process which is adaptive and interactive with values,

standards and modeling behaviors, where in a social member accepts and maintains their abilities in social activities (Dictionary of Sociology, World Publisher, 2002).

And in the book Theoretical and applied cultural issues (2013), Tran Ngoc Them introduced a model of the cultural structure including: perceptions, organizations, and behaviours.

A number of theoretical and empirical studies are devoted to examining the topic on a domestic and foreign scale. Amongst those, researches conducted a large number of research samples from creditable sources and published in academic journals are reviewed in this paper.

"School violence has been a controvesal topic hared by several scholars. Victims and perpetrators involve students, parents, teachers, and school climate. School violence normally occurs in two forms namely psychological violence by oral language and physical violence" Students suffering school violence behaviours are those who have misperceptions about violence, high-stress level, bad communication skills, difficulties in relationships with friends, and receive punishment for their mistakes by their parents" (Nguyen Ba Dat, 2014).

While Craig et al.'s research (1998) found "a significant proportion of school-aged children in Canada as either bullies or victims", "studies adressed the association between school climate, including school environment, location, general educational dis/advantage, educational systems, and student's abuse" (Sonia, Alison, Taylor , Malavika and Alison, 2018), (Elizabeth, 2018). "The perpetuate aggressive behaviors and bullying from parents, teachers and students serves by the lack of positive interactions" (Craig, Peters, and Konarski, 1998); (Abbie and Randi , 2020), "positive psychosocial school climate plays a foundational role in bullying prevention", (Sabina and Mark, 2014); Jennifer, Dewey and Timothy, 2012). Also, "healthy learning environments, teachers' supports, and greater social belonging might be protective factors that reduce student's depression (Maria, Dan and Robert (2007)".

Besides, school culture has been taken into accounts by scholars. "The primary influences of school culture on students' behaviors were found to be peers, teachers, administrators, and parent", (Linda, 2010)" "Ron et al. findings (2003) states that "students' fear of attending school and assessments of school violence are influenced by different types of school-related variables. Especially, students' exposure to an unfavorable school culture was associated with low attachment to learning and peer approval of deviance". Each of which was "positively associated with disciplinary problems, conduct disorder, oppositional-defiant disorder, attention-deficit hyperactivity, and substance use" (David , David and Mark, 2000)".

The definitions pointed out that socialization is a long-term process (from the periods of pregnancy to maturation) wherein every person will interact, learn, and accept values, standards and modeling behaviors from social groups and organizations in which they participate as member: family, school and society. Through their participation, they will self-create personal values, standards and modeling behaviors which are appropriate to both social groups and organizations which they are members in and their personal expectations and goals.

The research adapted this theory to explore the school students' perceptions, attitudes and schooling behaviors influenced by socialization environments. The school students will mainly interact, learn, and accept values, standards and modeling behaviors from groups of official socialized environment including their family, teachers and friends whom they communicate with. In addition, these school students will be influenced by the groups of unofficial socialized environment including press, television, internet and social networks which they interact every day.

Based on these debates, the theoretical underpinnings are illustrated and visualized in Figure 1.

Figure 1.

The impact of Social environment on Schooling Behavioral Culture
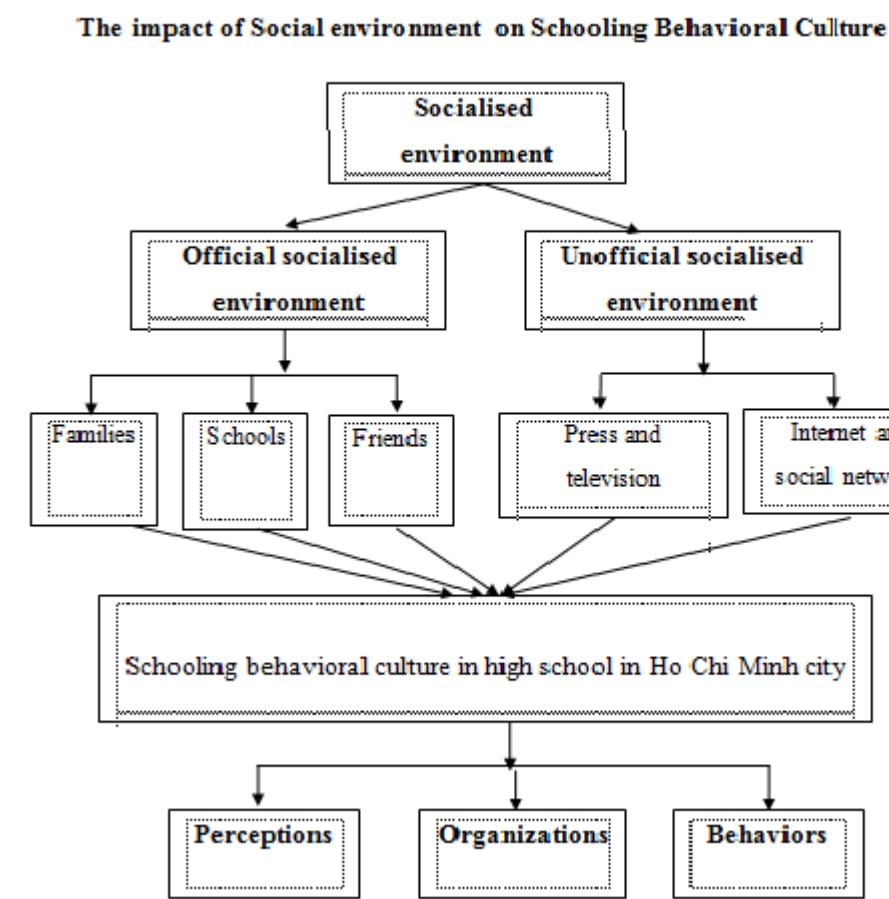
1. Perceptions of invisible pressures in schooling behaviors

A child has received the nurture and education from their mother since they were in the periods of pregnancy such as their mother's eating and resting habits. When they are newly born, they would receive the best nurture and caring from their parents and grandparents. Depending on the child's developmental range of age, each family will use their own different specific methods to nurture and educate their children how to behave. Family is at the core of educating their children during these periods. Until the child's school age, this child continues to receive additional education from teachers and schools. At this time, there has been a transition between family and teachers and schools. The main role of children education will shift to the teachers' practices and the

schools. On average, a child will experience 20 years of schooling from pre-school to higher education graduation.

Many parents feel worried about not only their children's learning performance but also their behavioral manners and communications with friends and teachers. Schooling behavior is a bridge connecting the student-student and student-teacher relationships at the school. If students behave appropriately, they will become easier to network and share learning exchanges and after school activities with their friends.

However, evidence from the realities showed grey area in the school. These issues related to the inequity, teachers' emotional behaviors to students, boycott, bully, violence, conflicts between parents and teachers regarding education responsibilities for shaping students' morality and personality. They were about the conflicts about the traditional and/or new education methods, which resulted the ineffectiveness of parent-student-teacher nexus and collaboration. They furthered the teachers' pressure regarding heavy workload, salary policies and demotivation in career love, which resulted that many teachers were not effective in their practices.

Hofstede argued that "Inequity between parent and children is continuous to the inequity between teachers and students elsewhere with large interval of power. By contrast, teachers behave equally towards students and they also expect to be treated equally by their students elsewhere with small interval of power. Culture of large interval of power easily accepts physical punishment at the school, at least for teenagers, rather than the culture of small interval of power. This kind of punishment reflects the teacher-student inequity. It is regarded as an abuse of power to children in the societies of small interval of power and parents can report to the police, (Dr. Dinh Viet Hoa and Pailema, 2015)".

Therefore, the research investigated what the invisible pressure at the school wherein teachers and students faced in their schooling behaviors was. The study looked at Hofstede's perspectives to seek whether Vietnam was positioned within the group of large or small power interval. The findings showed that 72,8% of the students and 87,1% of the teachers reported being under pressure at their schools. The invisible pressures that the teachers and the students suffered were ordered from the most important to the least, as illustrated in Table 1.

Table 1. Students' and Teachers' Invisible Pressure in Schooling Behaviors

No.	Students' invisible pressure in schooling behaviors	Teachers' invisible pressure in schooling behaviors
01	Pressure in family's and teachers' expectations about learning performance and personality development, 32,1%	Pressure in parents' expectations and passing the responsibilities for student learning performance and personality development, and manager's requirements about targets and achievements, 39,6%
02	Psychological crisis in puberty; maturation; expectations about expressing selves and being recognised, commended, admired and cared by friends, teachers and family; frightened and ashamed psychology for not daring to express in communications with friends and teachers, 17,3%	Differences in positions and age resulted difficulties in approaching and understanding students' silent psychological crisis clearly and intensively, 14,4%
03	Expectations about equality in learning and teachers' behaviors, 13,6%	Emotions in teaching and behaviours resulted that many teachers did not assure the equality in teaching to all students, 12,7%
04	Needs to explore new things from teachers, friends and world. Lack of communicative skills and skills in dealing with unanticipated communicative situations. Boycotting, bullying and school violence resulted that students did not feel open, felt cautious and unconfident in communications, 10,4%	Most of the time is for teaching and other practices. Time for getting close to students to understand their psychology and to support communicative skills was limited, 12,9%
05	Crisis and lack of experience in selecting traditional and modern behavioral values appropriately due to the conflicts about education goals and methodologies between family and teachers and schools resulted students' difficulties in selecting appropriate behaviors and the ineffectiveness of awareness, attitudes and behaviors. 10,9%	Differences in education goals and methodologies between parents and teachers and schools resulted unlink and conflicts among stakeholders. 11,8%
06	Shame of body appearance, gender, learning performance, family backgrounds, and parents' social status and jobs influenced students' selecting friends, behaving towards their friends and teachers at the school. 15,7%	Pressure in low salary and heavy workload resulted that many teachers felt bored with their career, undedicated and unmotivated to teach. 8,6%

There have been differences in the pressures among groups of teachers. More specifically, the group of teachers at the international schools mainly faced the pressures in satisfying their students' parents and managers regarding the quality of teaching and communications with students. The group of teachers at the gifted and practical schools suffered the pressures in their personal teaching capabilities and their students' learning performance. The group of teachers at the ordinary schools faced the pressures in the education methodologies between parents and schools, heavy workload and salary.

For students, the pressure in satisfying their parents and teachers with personal learning performance was the most important to the group of students at the gifted and practical schools (expectations about outstanding achievements to be offered admission to university without its entry examination) and the international schools (expectations about outstanding achievements for overseas higher education). The group of students at the ordinary schools suffered the pressures in personal learning performance and morality assessment. There were more male students reporting their pressures in their personal learning performance than female students. More female students reflected their pressures in communicating with friends, being teased about their body appearance and family backgrounds compared to the group of male students.

The results indicated that the students, parents, teachers and schools appeared to face several invisible pressures in their schooling behaviors. These pressures related to the differences in education methodologies between parents and schools; policies regarding work organization, inappropriate and ineffective pay rates; lack of experience and communicative skills; and students' crisis in their puberty. Under Hofstede's stance and the current realities, the results further noted that Vietnam was positioned within the group of schooling large power interval.

2. The roles and influence of social media on schooling behaviors

According to Networks' statistics on 21 November 2019, there have been about 64 million Vietnamese people using internet among 97 million of its population, 143,3 million phone users and 58 million social network users on their mobile devices until 2019. On average, Vietnamese people spend approximately 6 hours and 42 minutes on their daily activities on the internet. Specifically, Vietnamese people spend about 2 hours and 32 minutes using social networks, 2 hours and 31 minutes watching live streams or online videos, and 1 hour and 11 minutes listening to music. YouTube is the most popular social network in Vietnam, ranked as top 5 in the world across countries whose people watch videos on YouTube, exceeding the countries with advanced technologies such as Japan, Korean, Taiwan … (Vnnetwork, 2019).

It was noted that internet plays a pivotal and influential influence on Vietnamese people. In today's digital area, internet becomes a mediated tool which supports the students search for learning resources and cultural and historical knowledge online apart from school textbooks. It is also a mean of entertainment for the students to listen to music, watch films, read online comics, play online games, and connect friends, relatives and the surroundings after their school hours.

However, internet highlights its negative facet. If the students cannot control their time for internet access, they will be addicted and waste their time. This will adversely

influence on their concentration on learning. In addition, there is a large amount of information on the websites and social networks associated with violent and sexy content and images. If there is no appropriate instruction from the teachers and the parents' monitoring, the students will easily involve in wrong awareness and may cause serious behaviors inappropriately.

According to the survey results about violence against children released by UNICEF on 4 September 2019, one third of the teenagers in 30 countries responded that they used to be the victims of bullying on the internet. One fifth of the teenagers said that they used to quit schooling and be violently bullied on the internet. Twenty one percent of Vietnamese teenagers reported that they were the victims of bullying on the internet, (Unicef, 2019).

Therefore, this research explored the amount of time for students' accessing and using internet content in their free time at home. It gained understanding of the actual challenges regarding the social media's roles and influence on the students. This group of participants currently experiences the psychological crisis in their puberty with typical characteristics: curiosity, desire for learning, mimicking and expressing self. In this research's scope, social media on the internet included websites, social networks: Facebook; Twitter; online comics, games, music, films, magazines and YouTube channels.

The survey results revealed that 100% of the students reported having their own mobile phones and using the internet via their desktops, laptops or smart phones when they have free time at home. They reflected their usage purposes: contact their friends (22,1%), online group learning (6,0%), receiving homework from their teachers (10,4%) and entertainment activities (61,5%). These entertainment activities included playing online games, listening to online music, reading online comics and accessing the social networks. This survey was conducted prior to the COVID-19 pandemic; therefore, the response rates of students' using the internet for online group learning and receiving homework from their teachers were quite low and no students used the internet for online learning.

The students spent time using the internet in the evening after their homework hours and on the weekend. They spent from 45 to 90 minutes accessing the internet. There were differences in the purposes of using the internet between groups of male and female students. The group of male students often played online games and accessed the social networks while that of female students accessed the websites, read online comics and news on the social networks. More specifically, 70% of the students reflected that their parents monitored the content and their time for the internet access, and 80% of the participants reported that they did not receive the instruction about using the internet from their teachers.

Regarding the internet's negative influence, the survey results indicated that about 58% of the students regarded using the internet as a decrease in their abilities in personal learning concentration. Sixty eight percent of the students reflected that internet was essential for their daily accessing the social networks. Seventy two percent of the students perceived that online games and social networks wasted their time adversely influencing their learning, but they could not quit them.

About 25,8% of the students noticed that they used to be teased about their body appearance and bullied via the social networks, text messages and emails. More specifically, 79,5% of these students kept silent and did not seek the other support, about 15,3% of them solved the problems in their own ways, and around 5,2% of them reported to their parents and teachers for further support. There were fewer male students reporting being bullied violently than female students. But, the extent of violent bully was more serious because of its physical bully. In the meantime, more female students highlighted that they were bullied mentally through verbal behaviors, text messages and photos regarding body shaming in comparison to male students. As a result, how to identify and intervene in to protect the group of female students from their friends' bullying was more difficult than that for the group of male students.

The results showed the social media's two-facet aspects in today's schooling behaviors. Adding to the benefits, internet is regarded as an origin of wrong awareness resulting in the students' inappropriate behaviors, schooling violence and social crimes except its addictive facet adversely influencing their learning performance and outcomes.

3. Differences in lessons learned from the parents and teachers and the real-life experiences caused the silent conflicts about the students' perceptions and behaviors

All children have been educated how to behave morally by their family since they were young. They continued to inherit the education from their teachers through lectures in morality. In the context of Vietnam, children will be taught basic knowledge about how to behave by their teachers from the pre-school to lower secondary level. These are from the simple lessons for the children about how to greet and answer these questions and the moral lessons in Ethics course at the primary level to the lessons in Civil Education course at the lower secondary level. At the upper secondary level, the students will be taught the knowledge about Vietnamese regulations and law. Although they had learned the basic knowledge about how to behave and communicate morally, there were many students who were aware and behaved inappropriately. The schooling grey area regarding violence and bully remained. The reasons for these issues were that there were the silent conflicts in the students' perceptions and behaviors differing from what they learned from their parents, teachers and real-life experiences.

The survey results also revealed that about 73,4% of the students reported the differences in what they learned from their parents, teachers and real-life experiences. There were 9 typical different categories of schooling behaviors regarding what the students observed and experienced from the real-life situations, ordered from the most important to the least, illustrated in Table 2. The remarkable differences things are: 52,1% inferiority, sense of group belongings, boycott, 17,4% discrimination on family backgrounds, body shaming and 12,8% schooling violence and bully.

Table 2. Differences in Behaviors that the Students Were Taught and Observed from Their Real-life Experiences

No.	Things that the students learned from their parents and teachers about how to behave	Things that the students observed from their real-life experiences and the websites, social networks, and online games and films
01	Harmony and friendliness with friend	**Inferiority, sense of group belongings, boycott 52,1%**
02	Self-confidence	Sense of frightened and ashamed
03	Faith	Telling lies
04	Being respectful to background difference and body appearance	**Discrimination on family backgrounds, body shaming 17,4%**
05	No violence and bully	**Schooling violence and bully 12,8%**
06	Not being foul-mouthed and no slang	Being foul-mouthed, slang
07	Equity and equality	Inequity/inequality
08	Being respectful to teachers and adults	Sense of frightened or disrespectful to teachers and adults
09	No drug and stimulant use	Being addicted

Conclusions

1. Psychological crisis in the puberty and the lack of communicative competence and experiences in problem-solving influenced the students' communicative skills and success at the school.

2. There were no control of content when accessing the internet and appropriate orientation to the purposes of using the internet from the parents and the schools. This resulted in the adverse impact on the students' perceptions and behaviors: wrong awareness of the behavioral cultural values, which lead to negative behaviors with their friends regarding teasing, body shaming, schooling violence and cyber bully.

3. The pressures in heavy workload resulted that many teachers had no time to accomplish their multitasks well in supporting their student's life skills, identifying and assisting their students deal with their psychological crisis as expected by the students' parents. In addition, the differences in the education goals and methodologies between the students' parents and teachers caused the conflicts adversely influencing the students' learning orientation.

4. The differences in what the students were taught about how to behave and their real-life experiences and observations influenced their perceptions, attitudes and behaviors of behavioral culture. This adversely impacted on the students' selecting appropriate behaviors, shaping their personality, ethical and world views.

5. The research findings emphasized the importance of family-school-society partnerships in supporting and assisting the students gain understandings of the social and cultural values to develop their appropriate awareness, perceptions, attitudes and behaviors in the globally integrative context.

Appendix

List of surveyed schools

No.	Name of schools	Address
01	Bình Chánh High school	1. D17/1D, Huỳnh Văn Trí street, Bình Chánh village, Bình Chánh district, HCM City
02	Sai Gon Practical High School	220 Trần Bình Trọng street, Ward 4, District 5, HCM City
03	Marie Curie High school	59 Nam Kỳ Khởi Nghĩa street, Ward 7, District. 3, HCM City
04	Võ Thị Sáu High school	95 Đinh Tiên Hoàng street, Ward 3, Bình Thạnh District, HCM City
05	Phú Lâm High school	No.2 2D street, An Lạc Ward, Bình Tân district, HCM City
06	Nguyễn Tất Thành High school	249 Nguyễn Văn Luông street, Ward 11, District 6, HCM City
07	VNU-HCM High School for the Gifted	153 Nguyễn Chí Thanh street, Ward 9, District. 5, HCMC
08	Bình Phú High school	102 Trần Văn Kiểu street, ward 10, District 6, HCM City
09	Trường Chinh High school	No.1 N11 street, Tân Hưng Thuận Ward, District 12, HCM City
10	Nguyễn Thái Bình High school	913-915 Lý Thường Kiệt street, ward 9, Tân Bình district, HCM City
11	Albert Einstein International Primary, Lower and Upper Secondary School	13C habited area, Nguyễn Văn Linh street, Phong Phú Ward, Bình Chánh districts, HCM City
12	Đinh Thiện Lý International Lower and Upper Secondary School	80 Nguyễn Đức Cảnh street, Tân Phong Ward, District 7, HCM City

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An Innovative Learner-Centric Framework for Sustainability of Traditional Private Higher Education Institutions post the COVID Pandemic

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Official Conference Proceedings

Abstract

Post the COVID pandemic the increasing quality and affordability of digital education is not at all great news for traditional brick-and-mortar private higher education. To reposition the pull of such institutions, the research attempts to develop an innovative prototype called 'BLUECHIP' that would systematize a whole-institutional backed choice-based learning at the researcher's host institution. By default, it would empower teachers to decisively use a mix of 'BLUE' instructional approaches comprising Blended (physical-digital), Liberal (flexible and borderless), Ubiquitous (anywhere-anytime) and Experiential (project/problem-centric) for the attainment of higher learning and assessment outcomes. And by design, its CHIP (Creative, Holistic, Insightful, Personalised) based pedagogical applications would consistently add value to teaching-learning practice and praxis. Under in-house grant support of INR 1 million, it would actuate cohesion and coupling of various departments to ensure an annual institutional performance index of at least 1 on the set target-attainments under the institution's sustainability parameters like financials, talent development, and transfer indicators, which would serve as a multiplying factor to the appraised increments of an employee, both teaching and non-teaching. The methodology had involved data-analysis based on the feedback involving more than 3000 stakeholders under relevant sets of variables to impact learner-centricity along with the collective joy of learning. Subsequently, 60 potential change-makers were nominated by the institution to serve as master trainers of BLUECHIP for onward training and teaming of 400 employees to effectively engage a population of 6000 learners in 60 programs with 1000 authored BLUECHIP modules by the end of 2020-21 academic year.

Keywords: Private Higher-Education, Learning-Experience, Learning-Environment, User Experience, Sustainability, BLUECHIP, CHIP

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Introduction

Higher Education in Crossroads? Even before the COVID-19, there has been rapid growth and adoption in education technology, with global education technology investments reaching US$18.66 billion in 2019 and the overall market for online education projected to reach $350 Billion by 2025. Whether it is language apps, virtual tutoring, video conferencing tools, or online learning software, there has been a significant surge in usage since COVID-19 (Li; Lalani, 2020). From the other survey of resources (Shah 2019, Impey 2020, Gopinathan 2020, Kandri 2020) it was evident that Massive Open Online Courses (MOOCs) that were born without a business model would make big money. Coursera reportedly is over 1 billion in valuation and it shares with top partner universities 6-15% of the total revenue and 20% of gross profits on its courses. Enrolment at Udemy, another MOOC provider, was up over 400% between February and March 2020. These surges correspond to lockdowns across the world as the pandemic started to rage. Then, Udacity reportedly offers nanodegrees, which are industry-recognized to help students advance their skills that roughly cost US$1,200, and edX 's micro master's degree cost is about $1,000. A nano master's degree would take around 3-4 months involving 10 hours per week whereas a micro master would roughly be equivalent to one semester of a full-time master's program. The pandemic is refocusing attention on the opportunity for MOOCs to democratize higher education, by providing cheap or free access to anyone in the world. Traditional Higher Educational Institutions can question the merit and validity of such nano and micro degrees or MOOCs or such micro-credentials but the reality is that employers are gradually shifting their recruitment preferences for proven skills without any particular bias on the source of certification of those skills. When massive businesses have already moved from offline to online, the moot question is, why are traditional brick and mortar higher education hesitant to accommodate learning credits from online education even post COVID?

The Future is Digital. Due to the COVID situation, it is widely believed that the rate of growth of digital production and consumption shall increase manifold. As part of our social responsibility, we cannot afford to have digital laggards and digital illiteracy. According to the resources referred (KPMG 2019; Pew Research Centre 2020; Statistica 2020; LiveMint 2020, Computer World 2020) the future is digital. More than half of the 5 billion mobile devices are smartphones and the number of smartphone users in India is estimated to reach 442 million in 2022. People in advanced economies are more likely to have mobile phones – smartphones in particular – and are more likely to use the internet and social media than people in emerging economies. For example, a median of 76% across 18 advanced economies surveyed have smartphones, compared with a median of only 45% in emerging economies. Indians on average consume over 11 GB data per month and 4G data constitute 96% of the total data traffic consumed across the country. By 2030, a billion Indians will have access to the internet, about 839 million will be regular smartphone users, and over 500 million will access digital content in regional languages. 5G will be expected to be available in India by 2021 that would ensure peak data speeds of up to 10 Gbps – up to 100 times faster than the 100 Mbps of 4G. Given the trends, the rise of smart machines, robots, AI, cognitive computing, etc. are certain to beat us in the future.

Pre-COVID Analysis. Our research objective was to rank as per significance the factors that mattered to a learner at the author's institution. A comprehensive list of 59 curricular, co-curricular, and extra-curricular factors (variables) was collated based on the general expectations from accredited professional higher education institutions, especially the self-financed ones. In 2018, more than 3000 students had participated in that survey questionnaires including binary variables as well as few continuous variables on a 5 point Likert scale and the samples were drawn based on convenience sampling. The findings were as below.

- 59 variables from X1 to X59 was categorically regressed using different predictive data modeling to see the effects on our Binary Study Response Variable Y [if satisfied = 1, if not satisfied = 0].
- Based on the analysis we were able to improve especially on the factors that were significant with negative effects (see Table 1) like mapping of affordable MOOCs and other online resources for teaching courses (X16, X59), Continuous evaluations outside pen-paper types (X8), Modernization of cafeterias, labs, and classrooms (X48, X49), Introduction of Centres of Excellence (X23, X37), and other activity-based learning like problem-based flipped-classroom, etc. (X55).
- The working with Table 1 factors also added to the sustained emphasis on factors that were significant with positive effects (see Table 2). For example, the above Centres of Excellence also contributed to X4, X5, and X56. The introduction of 8 am-8 pm learning day helped X6, X50, and X3, the impetus on LMS (Learning Management System) that was actuated in 2017 was further made effective with demanded features for better outcomes with X54, besides additional surveillance systems, security monitoring, and safety audits ensured that the top priority for the learner, X14 was taken care of.
- Only 19 out of the 59 factors were found to be significant for a learner.

Table 1: Factors significant with negative effects by priority

Variable	Factor
X16	Payable Faculty guided international study programs
X8	Helpfulness of internal examination
X23	Development of English communication
X49	Lab and learning infrastructural facilities
X48	Good Canteen services
X37	Yoga and meditation camps
X59	Relevant academic certifications with additional fees
X53	Maintenance and protection of utilities
X55	Classroom-activity based learning

Table 2: Factors significant with positive effects by priority

Variable	Factor
X14	Over all safety-security inside the campus
X6	Initiative to provide additional development
X4	Language learning and communication skill development
X50	If initiative taken for lab and infrastructural facilities after college hours
X5	Adequate social and cultural events organized
X56	Scope of Learning performing arts
X14	Requirement for Technology based teaching skills
X1	Requirement of more industrial exposure
X2	Requisite interest in your program of study
X3	Need of conducting enough industry interactive sessions

Post-COVID Analysis. The Annual Academic Survey was conducted from May - June 2020, with 5805 students with a primary focus to help gauge the significance of online education – involving the LMS, pre-produced content, online teaching, e-assessments and its overall effectiveness as whole technology enabled academic delivery system. The questionnaire was e-mailed to all respondents and it used a multiple-choice response: Strongly Agree, Agree, Cannot Decide, Disagree, Strongly Disagree, and No Comments. The majority preference with 'Agree' and 'Strongly-Agree' feedback was for the following:
- The effectiveness of using technology for academic delivery.
- Addition of interactive assessments like online quizzes, polls etc.
- 3-4 hours of online-teaching (curricular) a day and a maximum of 5 days a week.
- Tailor-made pre-produced content on curricular-topics in LMS

The Problem. In light of the above situation we the traditional brick and mortar higher educational institutions were mandated to adapt quickly to the digital future, while retaining our differentiators vis-à-vis online education and distance education for our sustainability in the new normal era. Either we have to perform or perish. To address that the internally funded project entitled "BLUECHIP" was undertaken at the author's institution.

Methodology

BLUECHIP. We introduced an innovative Learner-Centric Framework named BLUECHIP for future-proofing of traditional private higher education institutions post the COVID Pandemic (See Figure 1). Where the BLUE (Blended, Liberal, Ubiquitous, and Experiential) components as a combination shall provide for an integrated environment for learning and the CHIP (Creative, Holistic, Insightful, and Personalized) design shall cater to the learning experience. As the physical-digital ecosystem, BLUE shall always be accessible to all and is expected to gain more significance and technology-muscle for the continuous quality improvement in higher education. However, it cannot merit becoming a unique differentiator for us. Whereas, CHIP can. It will signify the ingenuity of user experience design for consistently enhancing the learners' experiences. Synergizing the two together as BLUECHIP, there shall be a higher probability for our institution's sustainability in the future. Traditional higher educational institutions with CHIP value shall predominantly bring

personalized teacher-student interaction to the fore compared to online education and distance learning institutions.
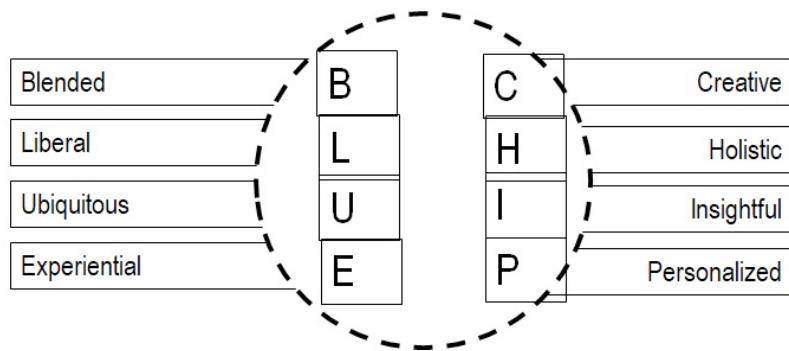
Figure 1: BLUECHIP components

Step 1: Positioning the BLUECHIP. We reviewed the literature to form a perspective as an integrated BLUE environment for learning and doing alternatives and CHIP for yielding learner-centric value propositions based on those alternatives in the context of a digital future.

Blended Learning
Garrison (2004) defined blended learning as "the thoughtful integration of classroom face-to-face learning experiences with online learning experiences". Blending as the "new normal" in course delivery was identified pre-COVID in terms of the hybridization of online and face-to-face discourse, delivery media, and instructional methods (Norberg, Dziuban, & Moskal, 2011; Graham 2006; Cross, 2006). The diversity of blends reflected the range of possibilities for transforming learning experience in particular and the learning effectiveness, learner satisfaction, faculty satisfaction, access, and cost-effectiveness in general. The 'how-people-learn' framework focused on the development of learner-centered, knowledge-centered, assessment-centered, and community-centered learning environments (Bransford, Brown, & Cocking, 1999; Bunderson, 2003). A review of the literature, in general, informed that there was not any perfect model to guarantee the efficacy of blended learning (Zhang, Zhu 2017).

Liberal Education
Liberal education is based on the liberal arts that had formed the basis of education since the ages, which had been about enabling free-thinking and noble actions for a quality living of all. Further study of various literature (Sorgner, 2004; Barnes 1984; Antony, 1990; Isaiah 1969) expanded the idea of liberal education as momentary and lifelong freedom associated with various stages of life with corresponding values and interests that changed with time.

Ubiquitous Learning
As a new learning environment, ubiquitous learning integrated the benefits of e-learning and mobile learning and enhanced context-aware and seamless learning from any location at any time. According to various studies (Ahonen, 2005; Bomsdorf, 2005; Brusilovsky, 2003; Kappel, 2002) both space and the learner took different roles in adaptation, where learner used the learning system accessing the space to perform related activities. Besides, the plasticity of digital learning spaces or

repositories took into account the learners' choices on selection and adaptation and promoted cooperative learning.

Experiential Learning

The concept of experiential learning was that learning should be a continuous process involving students in the co-creation of knowledge as they integrated theory and experience by doing (Kolb, 1984; Kolb, 2005; Kolb, 2008; Valkanos, 2007). The metrics of experiential learning had to be at best qualitative because it involved spontaneous and multiple interactions among students, business and faculty in the problem-solving process (O'Brien, 2017).

The CHIP

CHIP is posited as a virtual integrated intelligent circuit that will be 'Insightful' in designing value for all participants in the knowledge chain. Where the 'Personalized' demand would come from learners and 'Creative' supply would be from 'Holistic' knowledge sources comprising, an organically formed network of educators, experts, AI bots, digital repositories, etc. Thus the CHIP's Creative, Holistic, Insightful, and Personalized teaching-learning attributes would be taken as a composite unit to deliver user experience through the BLUE learning environments. Graham Wallas' Art of Thought (1926) had laid a four-stage model of the creative process (Preparation, Incubation, Illumination, Verification) that later became a five-stage model with the Intimation stage presented as a general conceptual architecture within which relevant concepts and theories from more recent creativity research, including neuroscience and intuition, were positioned and from which a number of implications were drawn (Sadler-Smith, 2016). The CHIP model (Figure 1) would be well-formed with the addition of a sixth-stage in form of the Collaboration stage for higher learner-centricity with a conscious accommodation of Bloom's taxonomy levels (Anderson et.al, 2001). The two primary ends of the CHIP's knowledge chain would be the co-creators of new testable and usable content akin Neil Fleming's VARK (Visual, Auditory, Reading/writing, Kinesthesis) at basic, intermediate, and advanced levels.
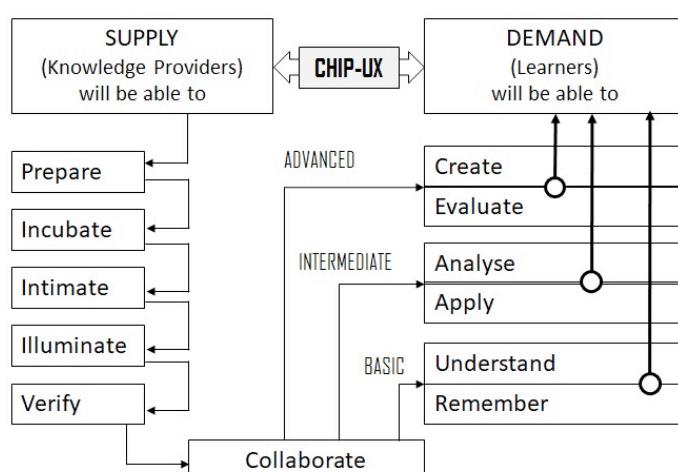
Figure 2: CHIP Model for Learner Centricity

Table 3: A typical BLUECHIP Dashboard

Code	SPA	A	B	C	D
SPA-F	**Financials**				12
Listing of all Sustainability Performance Areas (SPAs) under SPA-F_{1-n} with the pre-set target A values (fixed). The B and C values of SPA –F_{1-n} will dynamically get updated.					
SPA-A	**Academic**				25
Similarly, listing of all SPAs under SPA-A_{1-n} with fixed A and dynamic B, C					
SPA-G	**Governance**				10
SPAs under SPA-G_{1-n} with fixed A and dynamic B, C					
SPA-S	**Support Services**				08
SPAs under SPA-S_{1-n} with fixed A and dynamic B, C					
SPA-P	**Placements & Partnerships**				15
SPAs under SPA-P_{1-n} with fixed A and dynamic B, C					
SPA-W	**WoW Factors**				20
SPAs under SPA-W_{1-n} with fixed A and dynamic B, C					
SPA-R	**Response System**				10
SPAs under SPA-R_{1-n} with fixed A and dynamic B, C					
				Total of D	**100**
Index					
A	Performance Target Value (PTV) followed a standard unit of measure. For qualitative measures the PTV was defined as a number in a scale of 1-5, (representing $20 - 100$ percent).				
B	Actual fulfilment as on the instant against the corresponding A				
C	Performance score against the concerned A as on the instant = B/A				
D	Relative weightage of SPAs (was fixed at the time of SPAs and PTV finalization).				
E	Average Performance Score for a SPA group. For Example, $E_{SPA-F} = \sum C_{SPA-F1-n} / n$				
F	Net Performance Score for a SPA group. For Example, $F_{SPA-F} = D_{SPA-F}/100 * E_{SPA-F}$				
Institutional Sustainability Performance (ISP)					
ISP = Average ($F_{SPA-F,} F_{SPA-A,} F_{SPA-G,} F_{SPA-S,} F_{SPA-P,} F_{SPA-W,} F_{SPA-R}$)					

Step 2: Model Framework. The sustainability of private higher education primarily depended on the students' fees unlike the case with government-aided institutions. The BLUECHIP perspective model (see Table 3) assured the entire organization for ensuring higher intake-capacity occupancy with an enhanced learning experience. Subsequently, the author organization's functional units had identified its Sustainability Performance Areas (SPAs) as SMART (Specific, Measurable, Attainable, Relevant, Time-bound) goals at the start of the academic year of 2020-21.

Step 3: Appraisal System. A new system of performance-appraisal of our employees would be in vogue that will bring the best motivation for all in the organization to contribute and secure an ISP score of more than or at least equal to 1. Logically, the obtained ISP shall be the multiplying factor to the number of annual increments merited by an employee as per the BLUECHIP's HR increment policy of the organization. For example, it has been mandated that all teachers have to attain the

certification of 'BLUECHIP Teacher' based on their CHIP-UX work evidence in order to be considered for any increments, etc. Aside from that, the policy ensured periodic training and development of all employees based on their needs assessment vis-à-vis the relevant SPAs. The 'A' value fixation of the SPAs followed a participatory process and was fixed at the start of the academic year. While the actual values 'B', 'C', 'D', and the ISP score will get populated as per the progress status inputs. All employees of the organization were trained to access the BLUECHIP management system and generate progress status query reports under as well shall be visible to all employees for needful corrective, collaborative, and cogent actions. The appraisal year with BLUECHIP was notified to all concerned, which was October 2020-September 2021.

Results

The SPAs as per the above model (Table 3) for the said appraisal year beginning October 2020- September 2021were finalized. In that pursuit, under one of the goals of SPA-A, the organization got its online-education audited by QS-iGauge and received its E-Lead (as E-Learning Excellence for Academic Digitization). Besides, with respect to another goal relating the pedagogy, the routine was initiated in three zones- Z1: 8 am – 10 am, Z2:10am - 4 pm and Z3: 4 pm – 8 pm. The bands Z1 and Z3 were with a choice based selection from a bouquet of short certification courses with CQ (Career Quotient) points and Z2 were earmarked for curricular courses and compulsory finishing sessions for employability readiness. Further, a new normal pedagogy approach that included the BLUE environments and the CHIP design experience (see Figure 2) was under prototyping. The Z1-3 learners were motivated to attain minimum CQ points. Furthermore, all programs were mapped with relevant MOOCs and digital repositories, 3-year degree Bachelors' programs were upgraded as per CBCS (Choice Based Credit System) with 140 credits. Aside from that, 60 potential change-makers were selected as master trainers of BLUECHIP for the development of 400 employees to actuate the BLUECHIP SPAs. The expected results among others based on quantifiable pieces of evidence were to improve the experiences of 6000 learners in 60 programs with 1000 in-house VARK modules under the overall motivation for the organization towards achieving an ISP of at least 1 or more than 1 by September 2021.

Identity Icon	Approach Design	Description
	EDUTORIUM	Education technologies transform the website to *edutorium* - as the one-stop digital campus for a learner mirroring authentic physical campus.
	HYBRID CLASS	Blending the pre-produced and live content, especially for practical and demonstrative sessions with a provisioning for both physical and virtual participation
	My-CALL	Learner is able to prepare dashboard based on choice on electives, projects, prototypes, performances, etc. and a choice of career and is able to monitor, evaluate, and share
	My-T.KIT	Learner has the technology requisites to access the internet, apps, content, storage, support, e-learning and e-assessment and also for authoring content
	My-LIFE	Life-changing experiences for all types of personas with usable value propositions and measurable evidences for quality living
	LMSing	LMSing will be about learning and exchange of nano and micro modules in anytime and anywhere mode: micro-credentials, authenticated by credible institutions
	HOTShoT	Learning with HOTS (Higher Order Thinking Skills) for holistic transformation of the learner for effective outcomes involving the self, enterprise, and society.

Figure 2: New Normal Pedagogy Approach using BLUE Environments and CHIP Experience

Conclusions and Discussion

Higher Education, post-COVID should actually be put to testing and evaluation based on the desired experiences of learners so that there is higher assurance on intake-pull even during unfavorable or disruptive times. The present situation compelled us to look at new user stories, problem scenarios, and alternatives that would lead to effective value to all participants adding to the vitality and viability of the organization. In this regard, BLUECHIP should be an innovative deployment, especially for private higher education institutions, where the sustainability is majorly dependent on student fees at one side and on the other dependant on overcoming the competition, especially from the high quality to cost propositions of online education.

BLUECHIP is intended to widen and deepen the collaboration among the learners, researchers, teachers, staff, and alumni. Besides, other stakeholders like parents, higher education officials, industry associates, and partners. There will be different user stories based on specific scenarios and solutions (see Figure 3-Appendices), which will be important inputs for actuating valuable user experience. The graduate

attributes have to focus more on learner-centricity and on the quality of knowledge-transactions as posited with the CHIP model. Problems will keep on changing, and more so, after every major disruption. Accordingly, any actionable learner-centric model under the BLUECHIP perspective has to be agile enough to suitably adapt to any change and transformation. A country like India with the highest population in the age group of 18-25 years has an opportunity to maximize its gains from its new National Education Policy 2020 (NEP), again a transformative change, to fructify its ambition to be part of the comity of developed economies in the near future. For that, higher education institutions have to play a significant role. Where, the learner-centric attributes have to be derived from NEP as exemplified below, which should become the source for BLUECHIP's SPAs.

- Multi-disciplinary education ensuring the unity and integrity of all knowledge.
- Life skills such as communication, cooperation, entrepreneurship, resilience, ethics, empathy, social service, sports and wellness, creative and performing arts, respect for public property, scientific temper, liberty, responsibility, and pluralism.
- Recognizing, identifying, and fostering the unique capabilities of each student, and to promote each student's holistic development in both academic and non-academic spheres.
- Flexibility, so that learners have the ability to choose their learning trajectories and programs, and thereby choose their own paths in life according to their talents and interests.
- Emphasis on high-order assessments for conceptual understanding rather than rote learning and learning-for-exams.
- Creativity, critical thinking to encourage logical decision-making.
- Extensive use of technology in teaching and learning and increasing inclusion.
- Continuous professional development and positive working environments.
- Efficiency of the educational system through autonomy, good governance, empowerment, audit and public disclosure, quality accreditations, and continuous review. Some of the instrumenting UX verbs for the SPAs in the SPA-A category can be:
i)   Catalyze – multifarious user activities under focussed goals by deploying state-of-the-art technology, resources, processes, means, and machinery.
ii) Cultivate - intellectual capital to enrich and employ users to add to the body of knowledge and understanding.
iii) Design - environment to provide user-centric quality of services under an inter-disciplinary eco-system of joyful participation, co-creation, and usable solutions.
iv) Enhance- the user access with equal opportunity, inclusion, fellowship, the voice of reason, the spirit of inquiry and exploration.
v)   Foster- user-industry linkages for value generation in curricular and co-curricular deliverables, incubation of ideas, internships, placements, etc.
vi) Deliver – local and global insights and exposure to users for real-life problem solving by way of investigation, experimentation and validation.
vii) Create – provisions to promote innovation and change

All the eight education and learning components of BLUECHIP were empirically proven before and are available in various literature studied here. Based on that BLUECHIP it will be a value proposition for organizations in general and educational ones, in particular, involving the whole organization under one common motivation of learner-centricity. Moreover, as a synergistic combine BLUECHIP is expected to

create new vistas for research, innovation, and development in the wider the interest of all higher education participants, councils, regulators, industry associates, entrepreneurs, online education business, grant providers, etc. and thus becoming the new elixir of sustainability of traditional higher educational institutions.

Appendices

Figure 3: Instance about User Stories under CHIP

Acknowledgement

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Role of a Subjective Difficulty Rating in Using a System for Practicing English Speaking

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Abstract
We have been developing a system that checks and provides information about the words and sentences that learners use when they practice speaking English. In this study, we investigated the role of a subjective difficulty rating to identify sentences that were problematic for the learners by using our system. In the experiment, 72 Japanese university students were provided with 47 Japanese sentences and their English translations in advance of review quizzes. We instructed them to practice speaking the English translations without looking at the text information. This system, then asked them to translate the Japanese sentences into English. Then a self-reflective questionnaire was administered and participants rated the difficulty of each sentence on a five-point Likert scale. The average difficulty ratings of the 31 sentences that were answered correctly by more than 80% of the students varied from 1.7 to 4.2. Even though most students answered the questions correctly, they did not regard all the correctly answered sentences as easy. The standard deviation scores of the difficulty ratings of each sentence varied from 0.9 to 1.4. The difficulty ratings of some sentences were different for individual students. These results suggest that a subjective difficulty rating could play a role in observing how students actually feel about the difficulty levels of the sentences in the system, and could identify their individual weaknesses. Incorporating this kind of subjective difficulty rating into the system could help generate useful information for selecting the sentences within the system that suit individual student needs.

Keywords: Language Learning System, Subjective Difficulty Rating, Speaking Practice, CG Characters

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Introduction

The Ministry of Education, Culture, Sports, Science and Technology published the English Education Reform Plan (2014) that prioritizes improving Japanese students' oral English proficiency. However, many students report they lack confidence in speaking English (Kashiwagi, Kang, & Ohtsuki, 2018). A lack of opportunities for speaking English may also exacerbate this problem. Students need a practice environment where they can develop their English-speaking skills, and also some studies on reducing EFL learners' unwillingness to speak English are needed as reported by Isoda in a 2009 study. When considering how best to facilitate their English-speaking practice, we need to observe which language items they find difficult to handle and identify the specific words and phrases that pose challenges.

We have been developing a system that checks and provides information about the words and sentences that learners use when they practice their English speaking. In this study we investigated the role of a subjective difficulty rating that identifies sentences that are problematic for learners by using our system. With this system and a questionnaire using a five-point Likert scale, we conducted an experiment with first-year Japanese university students to investigate the following research questions:

1.   What difficulty level did students perceive for the sentences they answered correctly? What difficulty level did students perceive for the sentences they answered incorrectly?
2.   Are the difficulty ratings of the sentences different depending on the individual student? What is the response variance for each sentence?
3.   Could a subjective difficulty rating play a role in providing information about sentences that learners can use to practice English?

First, we describe the system, followed by the experiment and its results, and then discuss the findings. Finally, we give our conclusions on the role of a subjective difficulty rating in our system.

Structure of the System

This section introduces the structure of the system in Figure 1, and provides an example of its use. The structure consists of a question setting tool, "MINI BASIC," and AnimeViewer. AnimeViewer is a viewer tool for generating and displaying CG content from a script written in TV Program Making Language (hereinafter called TVML). To produce CG content in the system, we use TVML Player X. TVML is a text-based scripting language that automatically generates television programs (Hayashi, 1999). TVML Player X is the software used to read a TVML script and it automatically generates the program's video and audio.

For the teacher to easily create TVML scripts by selecting prepared question data, we developed a question setting tool and an application tool called "MINI BASIC" (Kashiwagi, Kang, & Ohtsuki, 2020). Japanese and English sentences are organized into situational categories, including "Cleaning and Washing," "Illness and Injury," and "Commuting" in the question setting tool, and related question data are prepared in a CSV file such as "Qdata file." When question data are selected, these are sent to "MINI BASIC."

In "MINI BASIC," a template file in TVML format is prepared to create a TVML format question file. A TVML format question file is created in the tool by obtaining question sentence text data from the question setting tool and by inputting the data into the template file in TVML format. In this manner, when a teacher selects a question in the question setting tool, corresponding question sentence data are obtained, and a TVML format question file is automatically generated. The TVML format question file is then sent to the AnimeViewer and the CG content is produced.

After the teacher checks student's answers, the results of the evaluation are saved in the question setting tool. To exchange data between the question setting tool and "MINI BASIC," virtual communication ports are used.
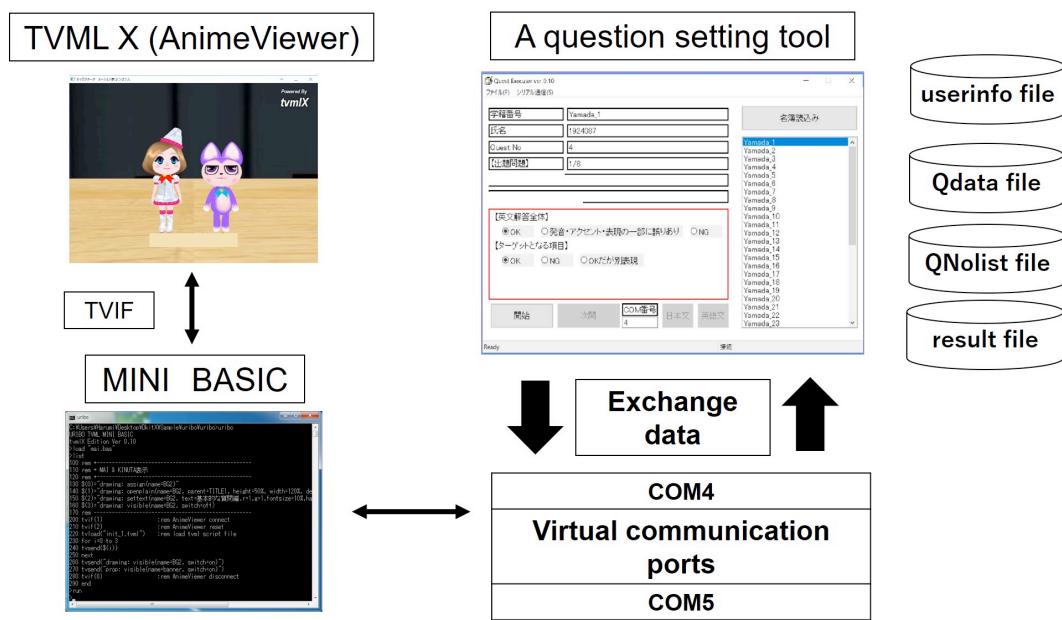
Figure 1: System overview.

An Example of the System in Use

An example of how the system operates is shown in Figures 2 and 3.

1.   When a teacher presses the button, the phrase "Read in the user information" appears on the top right side of the screen shown in Figure 2 (1), and user information is read in. Usernames are then displayed on the right side of the screen (2) in the tool.
2.   When the teacher selects a username (3), corresponding question data are presented in the middle of the screen (4). For example, in Figure 2, the username "Yamada_1" is selected, and the information from the first question is displayed, in this case, the Japanese sentence "*Sentakumono wo sotoni hoso*" and the English sentence "Let's hang the laundry outside."
3.   When the teacher presses the "Start" button (5) on the bottom left of the screen, related question data are sent to MINI BASIC and converted into a TVML file. The converted TVML file is then displayed on the AnimeViewer. In this example, CG characters appear on the screen of the AnimeViewer, as shown in Figure 3. The learner is then given instructions such as "Please translate the following Japanese sentence into English." The Japanese sentence from the first question "*Sentakumono*

wo sotoni hoso" is then displayed on the AnimeViewer in Figure 3 (6). At the same time, a synthetic voice is generated and speaks the Japanese sentence for the learner.

Figure 2: Example screen from the question setting tool.

Figure 3: Example screen of AnimeViewer.

4.   The learner orally translates the Japanese sentence into English.

5.   While listening to the learner's answer, the teacher checks the items shown in Figure 2 (7). Two evaluation items are prepared by the system. The first item is used to check whether the answer is correct as a whole sentence including vocabulary, grammar, and pronunciation. Three evaluation levels are set for the item: "correct," "some mistakes," and "incorrect." When there are some mistakes in the answer, such as mistakes in the pronunciation of a word, vocabulary, or grammar, we evaluated it as "some mistakes." The second item is used to check whether the target word or phrase is correct. Here, the target words or phrases are shown in blue in Figure 4. For

this item, we set three evaluation options, "correct," "incorrect," and, "correct, but another expression."

6.　　　Navigation to the next question is accomplished by pressing the "Next" button shown in Figure 2 (8).

7.　　　When the system finishes providing questions, and after the answers are checked, the results are saved in the "result file" (Figure 1) in the question setting tool.

Experiment

Participants

Participants were 72 first-year students who were learning English at a university in Japan. They took review quizzes in their English language classes using the system. They also answered a post-practice questionnaire rating the difficulty of the questions in the quizzes on a five-point Likert scale.

Procedures

We first provided students with Japanese sentences and their English translations in advance of each of three review quizzes. We instructed them to practice speaking the English sentences without looking at the text information. All 47 sentences are shown in Figure 4. These sentences are expressions related to "Cleaning and Washing," "Illness and Injury," "Commuting," and other daily life situations.

Review quizzes	English sentences	
	Yeah, the laundry has piled up.	I have several loads of clothes to wash.
	OK. Where is the laundry detergent?	Let's hang the laundry outside.
	Yes, and please fold the laundry.	I have to vacuum the floor.
1	I veg out at home.	It's warm and comfortable.
	There's a 60 percent chance of rain.	Lately the weather forecast has proven right.
	Could you cut it short all around?	Just trim it overall, please.
	Oh, It has just slipped my mind.	It's on the tip of my tongue.
	I feel dizzy.	I have the chills.
	I feel like throwing up.	I have diarrhea.
	I've got hives on my back.	I sprained my ankle.
	It's just constipation.	You have a seasonal nasal allergy.
2	I'll prescribe a painkiller for you.	I'll prescribe antibiotics for you.
	You might have pneumonia, so I'll take an X-ray for you.	It's tight around my waist.
	I think I need the next size up.	It's in the back of the store.
	It's down the hall.	
	No, I'm not up to it. Go ahead without me.	You're a strong drinker. It doesn't show on your face at all.
	Shall we order sea urchin and fatty tuna sushi?	We should get out of the way of the car.
	Yes, the car is splashing water from a puddle.	I didn't notice the bicycle passing me from behind.
	I can tell we won't make it across the crosswalk from here.	You lose your sense of direction walking around in underground malls.
3	Walking there, I found that it's not that far.	It's just before the third intersection.
	Is there anything that would make a good landmark?	I'm sorry to have made you call so many times.
	It's all garbled.	My unread e-mail is piling up.
	Unfamiliar attachment files carry viruses.	I forward an e-mail from our client to our boss.
	I made proposal materials in Power Point.	Sure, I import the Excel graphs and photos into Power Point.

Figure 4: English sentences provided to students in the review quizzes.

Next, we administered the respective review quizzes one at a time. Students were asked to translate the Japanese sentences into English using the system. Each review

quiz has three or four versions, and the number of participants are shown in Figure 5. In addition to 47 sentences, six sentences that were not shown to the students in advance were included in the review quizzes, these unannounced sentences are highlighted in yellow in Figure 5.

Quiz version / Review quizzes	Version1	Number of participants	Version2	Number of participants	Version3	Number of participants	Version4	Number of participants
1	Yeah, the laundry has piled up.		I have several loads of clothes to wash.		Yeah, the laundry has piled up.			
	Let's hang the laundry outside.		Yes, and please fold the laundry.		Yes, and please fold the laundry.			
	OK. Where is the laundry detergent?		It's warm and comfortable.		OK. Where is the laundry detergent?			
	My clothes smell damp.	22	I put the folded clothes away in the drawers.	25	I hear the washing machine spin-drying.	25	-	-
	There's a 60 percent chance of rain.		Lately the weather forecast has proven right.		Lately the weather forecast has proven right.			
	I have to vacuum the floor.		I veg out at home.		I have to vacuum the floor.			
	Could you cut it short all around?		Just trim it overall, please.		Just trim it overall, please.			
	Oh, It has just slipped my mind.		It's on the tip of my tongue.		Oh, It has just slipped my mind.			
2	I feel dizzy.		I have the chills.		I feel like throwing up.			
	I have diarrhea.		I have diarrhea.		It's just constipation.			
	I sprained my ankle.		I've got hives on my back.		I've got hives on my back.			
	You might have pneumonia, so I'll take an X-ray for you.	22	You have a seasonal nasal allergy.	25	You might have pneumonia, so I'll take an X-ray for you.	25	-	-
	I'll prescribe a painkiller for you.		I'll prescribe antibiotics for you.		I'll prescribe a painkiller for you.			
	I can't decide what to wear.		I don't have a bag that goes with the clothes I'm wearing today.		Doesn't this skirt look childish?			
	It's tight around my waist.		I think I need the next size up.		It's tight around my waist.			
	It's down the hall.		It's in the back of the store.		It's down the hall.			
3	No, I'm not up to it. Go ahead without me.		You're a strong drinker. It doesn't show on your face at all.		You're a strong drinker. It doesn't show on your face at all.		Shall we order sea urchin and fatty tuna sushi?	
	We should get out of the way of the car.		Yes, the car is splashing water from a puddle.		I didn't notice the bicycle passing me from behind.		We should get out of the way of the car.	
	I can tell we won't make it across the crosswalk from here.		You lose your sense of direction walking around in underground malls.		I can tell we won't make it across the crosswalk from here.		I didn't notice the bicycle passing me from behind.	
	Walking there, I found that it's not that far.	16	Is there anything that would make a good landmark?	16	You lose your sense of direction walking around in underground malls.	20	It's just before the third intersection.	20
	I'm sorry to have made you call so many times.		I'm sorry to have made you call so many times.		My unread e-mail is piling up.		I'm sorry to have made you call so many times.	
	My unread e-mail is piling up.		Unfamiliar attachment files carry viruses.		Unfamiliar attachment files carry viruses.		It's all garbled.	
	I forward an e-mail from our client to our boss.		I made proposal materials in Power Point.		I made proposal materials in Power Point.		Sure, I import the Excel graphs and photos into Power Point.	

Figure 5: Quiz patterns of respective review quizzes.

A doctoral student evaluated the students' answers by checking the items mentioned in the previous section. We calculated the percentage of correct answers using the results of the first evaluation item and whether the answer was correct as a whole sentence. Only the results of the evaluation option "correct" were used in the calculation. The options, "some mistakes" and "incorrect" were excluded.

During the review quizzes, a CG character gave students instructions, such as "Please translate the following Japanese sentence into English." The first Japanese sentence was then displayed on the screen, as shown in Figure 3. At the same time, a synthetic voice was generated which read the Japanese sentence to the student out loud.

After the quizzes, a self-reflective feedback questionnaire was administered to gather responses regarding perceived difficulty ratings for the sentences. A five-point Likert scale (one = least difficult to five = most difficult) was used.

Results and Discussion

We calculated the percentage of correct answers and the average values of the difficulty ratings for the respective sentences to address our research questions.

RQ1: What difficulty level did students perceive for the sentences they answered correctly? What difficulty level did students perceive for the sentences they answered incorrectly?

First, we analyzed how students rated the difficulty levels, using the five-point Likert scale, of the sentences that most answered correctly. Figure 6 shows 31 sentences that were answered correctly by more than 80% of the students. The average subjective difficulty ratings for these sentences are also shown. Additionally, we calculated the standard deviation scores of the difficulty ratings for each sentence to provide a rough indication.

As illustrated by the figure, the results indicate that average subjective difficulty ratings for sentences answered correctly by 80% or more of students varied from 1.7 to 4.2. When we look at the detailed results, we find that some words such as "prescribe antibiotics," "constipation," "hives," and "garbled" were included in the sentences with average subjective difficulty ratings higher than 4.0. We assume that these words were unfamiliar and difficult for most students to use. The results suggest that students do not regard all sentences with a high percentage of correct answers as easy, even when they gave correct answers themselves. By using subjective difficulty ratings, we were able to better observe how the students felt about the difficulty levels of these sentences.

Next, we analyzed how students rate the difficulty of the sentences which were translated correctly by less than 50% (see Figure 7) of the participants. The average subjective difficulty ratings for those sentences and their respective standard deviation scores are also shown.

As this figure shows, the average difficulty ratings for eight of the ten sentences were greater than three. This indicates that most students found it difficult to work with the sentences that less than 50% of the participants translated correctly. With most sentences, the percentage of correct answers coincides with the average values of the subjective difficulty ratings.

This also holds true for the sentences that 10% of the students answered correctly. The average difficulty rating of those three sentences was 4.6. Most students found it very difficult to use these sentences easily. We found that these sentences included words such as "damp," "spin-drying," and "put away," that were probably unfamiliar or unknown to the students. This is likely true for words such as "prescribe" "antibiotics" "constipation," "hives," and "garbled" that were found in other sentences rated as difficult. These results suggest that students need a way to become more familiar with terms and phrases related to daily life.

English sentences	Percentage of correct answers	Average values of the difficulty ratings	Standard deviation scores of the difficulty ratings
It's tight around my waist.	95.7	2.6	1.0
Let's hang the laundry outside.	95.5	2.8	1.2
I forward an e-mail from our client to our boss.	93.8	3.4	1.1
No, I'm not up to it. Go ahead without me.	93.8	3.2	1.2
I didn't notice the bicycle passing me from behind.	92.5	3.0	1.1
It's warm and comfortable.	92.0	1.7	0.9
Could you cut it short all around?	90.9	3.5	1.1
Sure, I import the Excel graphs and photos into Power Point.	90.0	3.6	0.9
It's just before the third intersection.	90.0	2.7	1.1
I have to vacuum the floor.	89.4	2.5	1.2
I'll prescribe a painkiller for you.	89.4	3.8	1.1
We should get out of the way of the car.	88.9	3.2	1.0
I'm sorry to have made you call so many times.	88.5	2.8	1.1
I veg out at home.	88.0	3.6	1.4
I'll prescribe antibiotics for you.	88	4.1	1.1
OK. Where is the laundry detergent?	87.2	3.3	1.3
There's a 60 percent chance of rain.	86.4	3.3	1.1
I made proposal materials in Power Point.	86.1	3.4	1.1
It's just constipation.	84.0	4.2	1.0
I think I need the next size up.	84.0	3.2	1.0
Yes, and please fold the laundry.	84.0	2.7	1.2
I have the chills.	84.0	2.9	1.3
It's down the hall.	83.0	3.4	1.1
I've got hives on my back.	82.0	4.2	0.9
Yes, the car is splashing water from a puddle.	81.3	3.8	0.9
Is there anything that would make a good landmark?	81.3	3.3	1.1
It's in the back of the store.	80.0	3.1	1.1
Just trim it overall, please.	80.0	3.9	1.2
I feel like throwing up.	80.0	3.2	1.2
It's all garbled.	80.0	4.0	1.2
It's on the tip of my tongue.	80.0	3.9	1.2

Figure 6: Sentences that more than 80% of students answered correctly.

English sentences	Percentage of correct answers	Average values of the difficulty ratings	Standard deviation scores of the difficulty ratings
I can't decide what to wear.	45.5	2.6	1.1
I don't have a bag that goes with the clothes I'm wearing today.	44.0	3.6	1.0
You have a seasonal nasal allergy.	36.0	4.1	0.9
Unfamiliar attachment files carry viruses.	33.3	3.6	1.0
My unread e-mail is piling up.	33.3	2.8	1.2
Doesn't this skirt look childish?	28.0	3.9	0.9
Shall we order sea urchin and fatty tuna sushi?	20.0	3.6	1.1
My clothes smell damp.	9.1	4.6	0.8
I put the folded clothes away in the drawers.	4.0	4.5	0.8
I hear the washing machine spin-drying.	0.0	4.7	0.7

Figure 7: Sentences that less than 50% of students answered correctly.

It should be noted that all six of the unannounced sentences highlighted in yellow were among the sentences that less than 50% of students answered correctly. It seems that most students find it difficult to work with sentences they had not seen before, and they need practice that will help them smoothly generate appropriate English terms and phrases as they encounter them.

RQ2: Are the difficulty ratings of the sentences different depending on the individual student? What is the response variance for each sentence?

We analyzed the standard deviation scores of the difficulty ratings of the sentences discussed regarding RQ1 to observe the response variance. For the sentences answered correctly by more than 80% of the students, the standard deviation scores of the difficulty ratings varied from 0.9 to 1.4. The difficulty ratings of some sentences were different depending on the individual student.

Among the sentences that less than 50% of students translated correctly, notable response variance was only observed in the sentence with a standard deviation score of 1.2. Most students felt that these sentences were difficult to use. This is especially apparent when we look at the sentences that 10% of students answered correctly; the average values of difficulty ratings for these three sentences were more than 4.5. Their standard deviation scores for these sentences were lower than 1.0. The difficulty ratings of these three sentences were similar for almost all the students.

These results suggest that the standard deviation scores of the difficulty ratings allow us to observe students' response variance for individual sentences, and it can help us understand the difficulty levels of each sentence on an individual student level.

RQ3: Could a subjective difficulty rating play a role in providing information about sentences that learners can use to practice English?

For the third research question, students used a five-point Likert scale to subjectively rate the difficulty levels of the English sentences. The subjective difficulty ratings revealed several important points, as described above in relation to RQ1 and RQ2. First, even though students correctly answered certain sentences, they found those sentences difficult to work with. The subjective difficulty rating allowed us to observe what an analysis of correct and incorrect answers alone could not by showing how the students felt about the difficulty levels. Second, the standard deviation scores of the difficulty ratings allowed us to observe the response variance among students for each sentence. We believe that the subjective difficulty rating can assist educators in understanding students' performances and identifying their individual weaknesses to provide tailored support alongside the objective review quizzes. Incorporating this kind of subjective difficulty rating as part of the system, can offer useful guidance for selecting sentences according to individual student needs.

However, a limitation of the current study is that the sentences were rated only after the review quizzes were taken. The difficulty of using some sentences could change between the period before students practiced the sentences and took the quizzes, and after they practiced them, while the difficulty levels of other sentences will likely never change regardless of how much the student practices. By conducting pre- and post-practice questionnaires, we might observe changes in the difficulty ratings of

some sentences. We believe that we can best observe the detailed differences in the difficulty levels of each sentence by analyzing the results of both questionnaires. In future research, we hope to investigate both pre- and post-practice subjective difficulty ratings.

Conclusion

We have been developing a system that helps learners practice English speaking by preparing the sentences and the evaluation items to check the words and sentences they can use. We conducted our study with 72 Japanese university students who used the system. They then answered a questionnaire with a five-point Likert scale that helped us to investigate the role of a subjective difficulty rating in identifying sentences in the system that were problematic for the learners.

The results indicate that average difficulty ratings for the 31 sentences that 80% or more of students answered correctly varied from 1.7 to 4.2. Even though most students gave correct answers, they did not rate all these sentences as easy. We also found that the standard deviation scores of the difficulty ratings for these sentences varied from 0.9 to 1.4. This indicates that some students rated some sentences differently than the average. The detailed results suggest that students need to become familiar with terms and phrases related to daily life. Problematic words included "spin-drying," "constipation," and "garbled." From the results of the experiment, we suggest that a subjective difficulty rating could play a role in observing students' feelings regarding the difficulty levels of the sentences, and in learning how to support individual students' weaknesses. If we incorporate this kind of subjective difficulty rating into the system, it could offer useful information for selecting the sentences within the system that suit the needs of individual students.

As a continuation of this study, we hope to observe the detailed differences of the difficulty levels of respective sentences by conducting a questionnaire both before and after they practice the sentences. We believe that we could observe the process of students' practicing by analyzing the results of the two questionnaires.

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Organizing a Group of Students in order to Research the Rebound Effect in Industry 4.0

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Abstract

The paper presents a framework with respect to organizing a group of students in order to research the rebound effect in Industry 4.0. The framework points two coordinates. The first one refers to conceptual delimitations and working hypotheses. The main coordinate is focused on carrying out the research process. It will develop aspects as: defining the concept of rebound effect, research challenge - working hypotheses, organizing the research process, awareness among students of industry-specific concepts 4.0, awareness among students of the concept of rebound effect, setting the purpose of the research, ways to achieve the set goal, establishing research teams and choosing topics, identification of studies in the scientific and professional literature relevant to research topics, critical analysis of relevant studies in the scientific and professional literature, carrying out literature review studies, quantitative analysis of the occurrence of the rebound effect in Industry 4.0 and critical analysis of the obtained results.

Keywords: Rebound Effect, Industry 4.0, Research

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Introduction

William Stanley Jevons, in his famous book, The Coal Question of 1865, argued that improved coal use efficiency would lead not to a reduction in national coal consumption, but rather to an increase. Jevons states: "It is a total confusion of ideas to assume that efficient fuel use is equivalent to reduced fuel consumption. On the contrary, the truth is ... Every improvement in the engine, when made, only accelerates the consumption of coal again." These ideas later developed under the name of Jevons Paradox.

Beginning with William Stanley Jevons in 1865, the concept of the rebound effect continued to be developed, especially after the 1970s, when the need for sustainable global development grew. Thus, a problem was identified regarding the possibility of energy efficiency in reducing energy consumption.

Technological advances and discoveries have led to a continuous increase in productivity in energy use, as a factor of production, at the same time, energy consumption increasing exponentially (Carl von Utfall Danielsson, 2009). Although this is not necessarily surprising (after all, energy increases with GDP and GDP has grown steadily over time), economic reasoning can be used to provide an explanation for the fact that energy efficiency it may not be as effective as hoped. When energy is used more efficiently, the price of a given amount of energy decreases (ceteris paribus, ie the other factors remain unchanged). When prices fall, demand increases, so that, indirectly, the improvement/efficiency of the energy industry leads to changes in consumption patterns. This mechanism is described in the literature as the ***rebound effect.***

Organizing the research process

The emergence of Industry 4.0, especially of the phenomena and processes generically called 4.0 challenges me to find out if the rebound effect in the sense of Jevons but also an extension of it is generated or not in the new economic context specific to the development of Industry 4.0. Therefore, I extend the concept of rebound effect giving it the following meaning, transformed into two working hypotheses:
• Hypothesis 1: 4.0 phenomena and processes, although aimed at increasing economic efficiency, in the form of a better use of production factors and a reduction in specific consumption, really lead to a decrease in total resource consumption.
• Hypothesis 2: if industry 4.0 does not diminish the rebound effect either then the circular economy can be considered a solution in diminishing the rebound effect.
The research is carried out together with the students of the Faculty of Cybernetics, Statistics and Economic Informatics, specialization Statistics and Economic Forecasting from the third year, by organizing them in work teams during seminars but also for drafting projects in the discipline, by individual work, outside seminar hours.

The research process is organized in ten stages, presented below:
• Awareness among students of industry-specific concepts 4.0
• Awareness among students of the concept of rebound effect
• Setting the purpose of the research

- Ways to achieve the set goal
- Fixing the research teams and choosing the topics
- Identification of studies in the scientific and professional literature relevant to research topics
- Critical analysis of relevant studies in the scientific and professional literature
- Carrying out literature review studies
- Quantitative analysis of the occurrence of the rebound effect in Industry 4.0
- Critical analysis of the obtained results

Awareness among students of industry-specific concepts 4.0

In the first phase, a review is made of the main types of industrial revolutions and what is the paradigm specific to each of them, presented in table 1.

Table 1. The main types of industrial revolutions

Type of industry	Paradigm
1.0	introduction of mechanical devices powered by water and steam
2.0	introduction of the concept of mass production, based on electricity
3.0	introduction of integrated circuits, information technology for production automation - digital revolution
4.0	interconnection of digital, physical and biological systems (internet, sensors, smart, Artificial Intelligence, Virtual Reality, Augmented Reality, robots

Industry 4.0 aims to achieve more efficient production, which saves more resources and reduces the carbon footprint. It is characterized by:

■ Strong individualization of products (customization) in the conditions of an extremely flexible mass production
■ The technology needed for this empowerment is improved by introducing methods of self-optimization, self-configuration, self-diagnosis, understanding and intelligent support from people operating in an increasingly complex job.
■ Automation and data exchange in production technologies
■ Businesses are created as intelligent networks throughout the entire production chain through interconnected machines, components and systems that can be controlled with each other.
■ Smart factory: sensors, IoT, robots

Awareness among students of the concept of rebound effect

To facilitate the understanding of the concept of rebound, students are presented with a film available at https://www.youtube.com/watch?v=PXf4KVWyfjs&feature=youtu.be which presents the Jevons paradox as well as specific industries in which it manifests itself.

After discussions on the concept of rebound effect, students follow documentation activities on the concept of rebound, by searching in the most important scientific literature resources available online:
- Google

- Web of Science - Core Collection, InCites Journal Citation Reports, Derwent Innovations Index, Clarivate Analytics
- Emerald Management EJournals
- Euromonitor Passport
- de Gruyter ebooks
- CAB ebooks
- CEEOL
- JSTOR Business Collections I, II, III si IV
- PROQUEST Central
- Scopus, Elsevier

Setting the purpose of the research

The purpose of the research was set for all students as being: ***use of statistical methods and econometric models for the analysis of phenomena and processes specific to Industry 4.0. Identifying the occurrence of the rebound effect***
Students included in the research process are guided with reference to the steps to be taken to achieve the goal. These are presented in box 1.

Box 1. Components of the research approach

Stages of the research process

- Part 1. the current state of knowledge

- Part 2. contribution to knowledge

- Part 3. conclusions and recommendations
- APA References
  https://sc.upt.ro/attachments/article/42/02%20Anexa%201%20Redactarea%20bibliografiei.pdf

In order for the research process to generate new results, it is suggested to avoid the beaten paths and to follow some patterns used for the elaboration of the projects, proposing the development and application of soft skils in the approach of the scientific approach. These are highlighted in box 2.

Box 2. Soft skills needed to achieve the goal of the research

It is not the destination that is important, but the JOURNEY

- CREATIVITY
Curiosity and enthusiasm innovativeness

- SUITABILITY
Ability to excel in any circumstance

- WISDOM Ability to use information and knowledge effectively
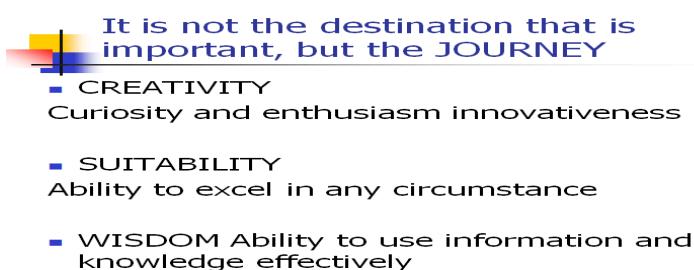
Setting research teams and choosing topics

The research is performed individually or in teams of 2-3 members. Students identify areas of interest both from the immediate perspective of the development of undergraduate work and the career path after graduation, in the context of achieving the purpose of research. The distribution of teams by topics is presented in table 2.

Table 2. Distribution of research teams

Team	Topic
1	Rebound effect on the car market - Automation
2	Study on the rebound effect for CO2 emissions from passenger transport
3	Manifestation of the rebound effect by applying new technologies in the educational system
4	The rebound effect in the economy
5	The rebound effect of electric / hybrid cars against conventional ones (in terms of consumption)
6	The rebound effect in the stock market
7	The rebound effect in technology development
8	Combating the Jevons Paradox
9	Technology development in the labor market - the rebound effect
10	The rebound effect on the solar house
11	The impact of Industry 4.0 on the labor market - prospects for the rebound effect
12	The rebound effect and the influence of technology in sports
13	The rebound effect in the aeronautical industry
14	The circular economy in the fashion industry
15	The rebound effect on the future of the labor market
16	The rebound effect and new technologies used in agriculture
17	Increasing the consumption of plastics from the perspective of the rebound effect

Students are asked to identify 10-12 scientific and professional studies that are suitable to be used in conducting a critical analysis of the literature. The online sources of the studies selected by each team are presented below.

Critical analysis of relevant studies in the scientific and professional literature

In the first phase, students are asked to identify common issues that appear in the identified scientific studies, with reference to the research topic to be developed. These are extracted in the form of a survey.

In the second phase, students identify different and contradictory aspects that appear in the identified scientific studies.

At this stage, each team starts research actions specific to conducting a literature review study. Thus, the common aspects identified in established scientific studies are written in the form of a literature review study, while the contradictory aspects identified are considered working hypotheses for quantitative analyzes to be developed in the later stages of the research approach.

The main aspects from the literature review studies lead to the development of six major coordinates:
- Jevons Paradox

- Direct rebound effect
- Indirect rebound effect
- The rebound effect at the microeconomic level
- The rebound effect at the macroeconomic level
- The paradigm of technological development on the rebound effect

Quantitative analysis of the occurrence of the rebound effect in Industry 4.0

The steps of the quantitative analysis approach to be followed are described in Figure 1.
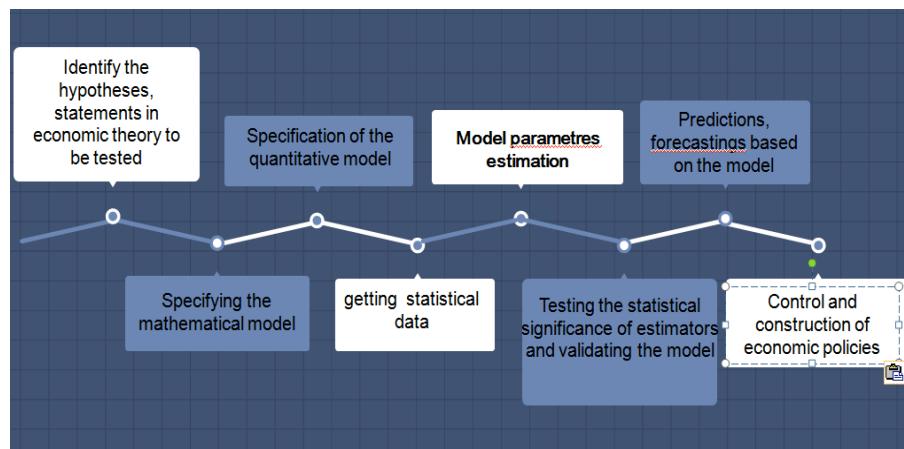
Figure 1: Stages of the quantitative analysis approach

Students are asked to identify a number of 18-20 statistical indicators for which to analyze the availability of data to the main data providers: National Institute of Statistics, Eurostat, WorldBank, OECD. The types of statistical data are described in box 3.

Box 3. Types of statistical data
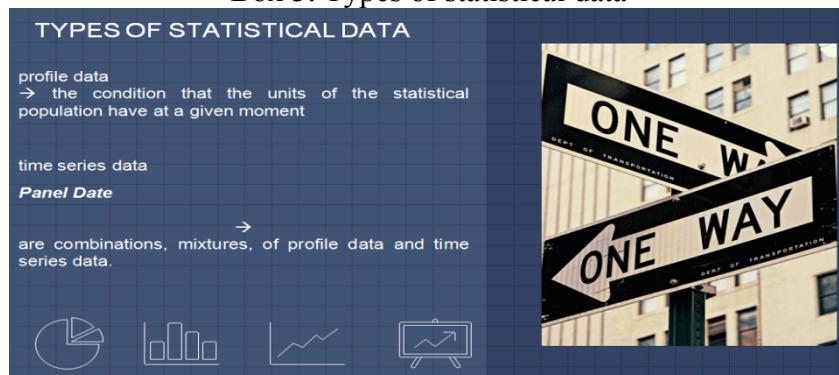
For data processing it is proposed to use two types of models, specific to statistical-econometric modeling (figure 2):
- Deterministic models;
- Econometric models.

Deterministic models, of the form y = f (x) which are frequently used in economic analysis, in the factor analysis of the variation, in time or space, of socio-economic phenomena, reflecting deterministic or functional connections.

Econometric models that describe the statistical or stochastic connection between the inputs of the system (influencing factors X) and its outputs, the resultant variable Y, of the form　　y = f(x)+u.
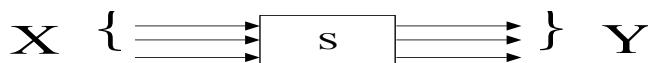
Figure 3: Statistical-econometric modeling

For the indicators organized with profile data, the following types of analysis are proposed, in order to highlight the manifestation of the rebound effect on the phenomena and processes specific to industry 4.0.:
- Regression analysis;
- Cluster analysis;
- Analysis in main components.

For the indicators organized with data observed in time, the following types of analysis are proposed, in order to highlight the manifestation of the rebound effect on the phenomena and processes specific to industry 4.0.:
- Data analysis using exponential smoothing method;
- Models ARIMA and SARIMA;
- Models VAR.

For the indicators organized with panel data, panel regression is proposed.

Conclusion

The approach of scientific research undertaken together with the students in order to research the rebound effect in Industry 4.0 generated four scientific main domains:
- Manifestation of the rebound effect in transports
- Structural changes in the labor market - manifestation of the rebound effect
- The development of Industry 4.0 accentuates the rebound effect
- The circular economy as a solution to diminish the rebound effect.

The research topics that can be used for develop the domain about the manifestation of the rebound effect in transport are:
- Rebound effect on the car market - Automation
- Study on the rebound effect for CO_2 emissions from passenger transport
- The rebound effect in the economy
- The rebound effect of electric/hybrid cars against conventional ones (in terms of consumption)
- The rebound effect in the aeronautical industry

Research topics that can be used for develop the domain about structural changes in the labor market - the manifestation of the rebound effect are:
- Development of technology in the labor market - the rebound effect
- The rebound effect on the future of the labor market

Research topics that can be used for develop the domain about the development of Industry 4.0 that emphasizes the rebound effect are:

- Manifestation of the rebound effect by applying new technologies in the educational system
- The rebound effect in technology development
- The rebound effect on the solar house
- The impact of industry 4.0 on the labor market – perspectives of the appearance of the rebound effect
- The rebound effect and the influence of technology in sports
- The rebound effect and new technologies used in agriculture

Research topics that can be used for develop the domain about the circular economy as a solution to reduce the rebound effect are:

- Circular economy in the fashion industry
- Increasing the consumption of plastics from the perspective of the rebound effect

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An Intersectional Understanding of International Female Doctoral Students' Narratives

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Abstract

This paper explores the experiences of international female doctoral students in Australia, including significant social and academic life-events, through narrative inquiry. Many theoretical and empirical doctoral studies explore the experiences of doctoral students in 'big-picture' and generalised ways. This research contributes to our understandings of more specific experiences. The goal of this study is to begin mapping an account of the intersection of gender, higher degrees, and social identities of these students from their point of view. Therefore, I have conducted a narrative inquiry among 13 international female doctoral students through multiple email exchanges, followed by in-depth interviews. A total of 65 narratives and 13 interviews have been collected at the end of the data collection. The theory of Intersectionality and the Feminist Standpoint theory consolidate to aid the thematic analysis of research participants' narratives, as they reflect how power operates within our social and academic culture. The research findings contribute to our understanding of the complexity and diversity of the international female doctoral students' lives and allow the educators, universities, policymakers, and future doctoral students to see a closer and more detailed view of these students' life events.

Keywords: International Female Doctoral Student, Narrative Inquiry, Intersectionality

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Introduction

Modern societal structures are patriarchal and constructed in such a way where men make most of the political, economic and cultural decisions (Profeta, 2017). Tertiary education around the world is not an exception - more men are in leading position than women (Aiston & Yang, 2017; Winchester & Browning, 2015). Australia moved relatively quickly to enroll women in the universities. However, the men-women ratio never achieves the satisfactory bar in the decision-making position. Men often hold the maximum leading places and make decisions for women at the university level. As a result, women voice often hidden from the mainstream student voice (Booth & Kee, 2011). Contextual background and cultural differences create a different circumstance for international female students, which lead them living in a parallel community and separate them from the multicultural society of Australia (Gomes, 2015). The struggles of international female doctoral students are more complicated due to less number of women enrollment rate in higher degree research programmes along with the mode of their study and intersectional identities (Devos et al., 2017).

According to recent data, women comprise around 45% of higher degrees research students globally but underrepresented at the doctoral level, even where they are over-represented at the master's level research programme (Contreras-Aguirre & Gonzalez, 2017; OECD, 2019). Following the global trend, more women are enrolling to pursue higher degrees in recent years than before in Australian universities (Australian Government's Department of Education and Training, 2016) [Figure 1,2,3 and 4]. However, the growing number of women in Australian higher education does not confirm an equal and women-friendly environment for female students in the university atmosphere (Pritchard, 2007; Savigny, 2014). Instead, it shows a gap of information as the data is absent or publicly unavailable (Boey, 2014).

Figure 1: Gender breakdown of students enrolled in Australian higher education,1949-2012 (Parr, 2015)
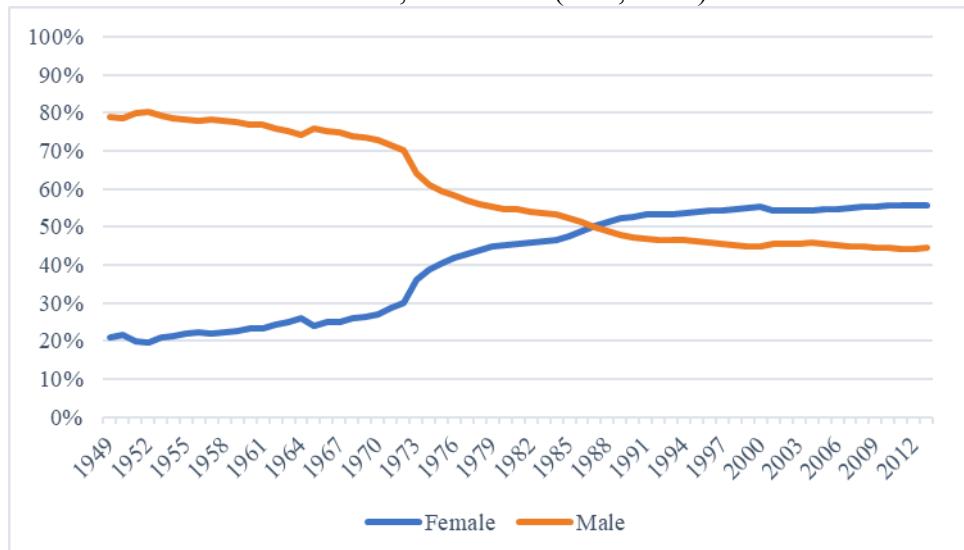
This statistic shows the growing trend of women enrolment rate in Australian higher education from 1949 to 2012. The significant growth occurred between 1973 and 1991. Furthermore, this growth continued to increase over time presented in Figure 2.

Figure 2: Gender breakdown of students enrolled in Australian higher education, 1989-2017
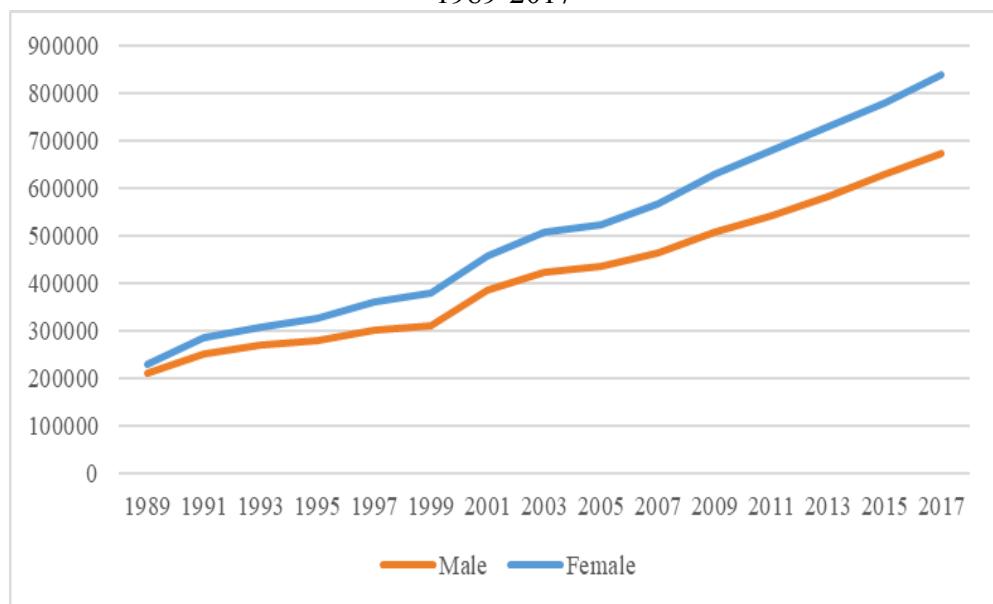
Source: Australian Government's Department of Education and Training (2018)

Though the women enrolment rate is higher than the men in the overall Australian higher education system, women were still behind than men in HDR enrolment till 2017. The number of female students increased over time, but men were in the leading position because men's number also increased steadily in the HDR enrolment.

Figure 3: Gender break down of HDR students in Australia, 1989-2017
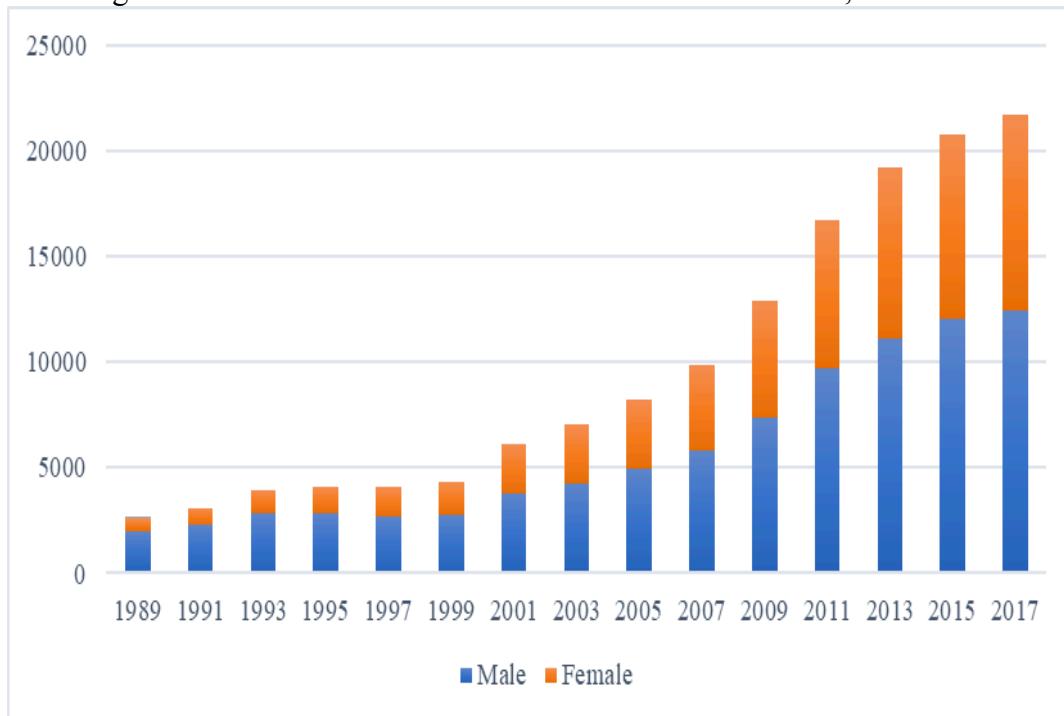
Source: Australian Government's Department of Education and Training (2018)

Figure 4: Gender breakdown of International students in Australia, 1989-2017
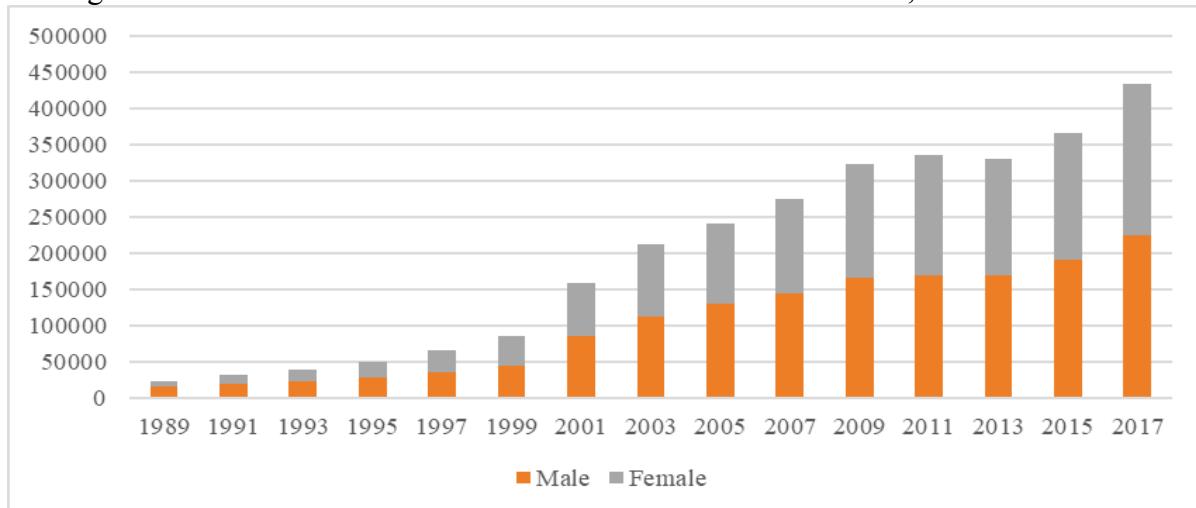
Source: Australian Government's Department of Education and Training (2017)

Figure 5: Number of male and female international postgraduate students in
Australian universities by field (Larkins, 2018)
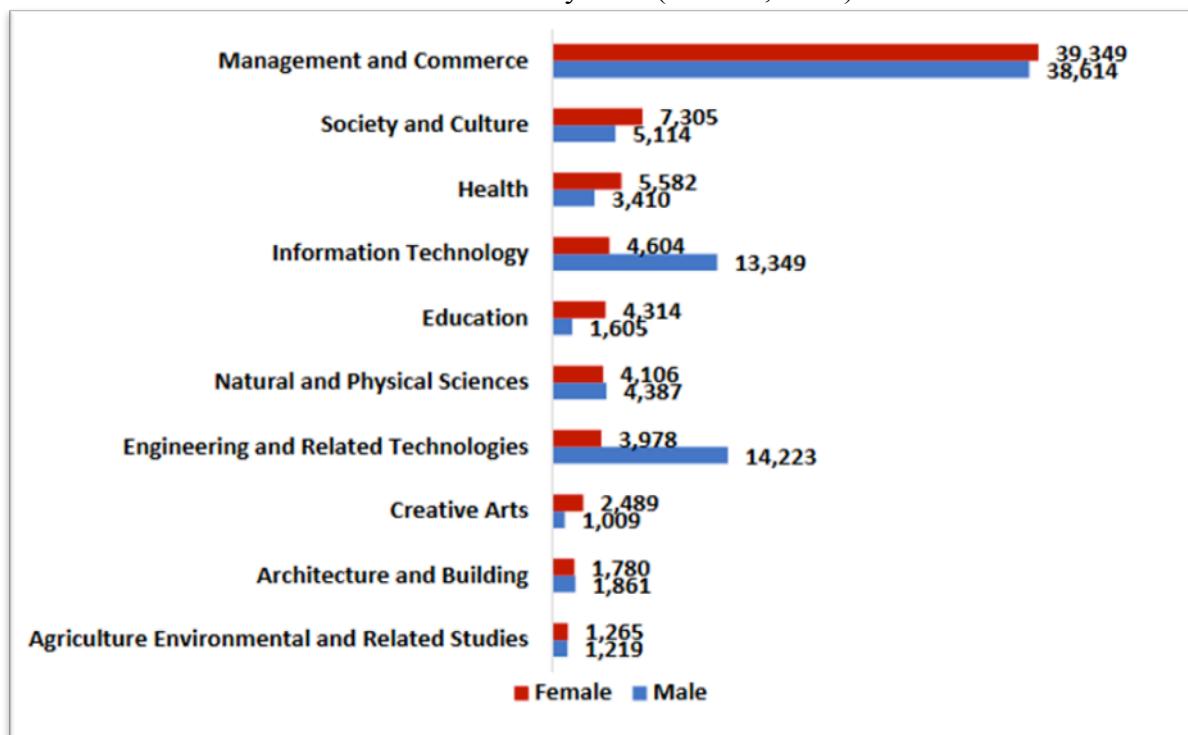
In 2018, remarkably, more international female students were enrolled in postgraduate programmes in Australian universities than international male students in almost all the field of study except IT and engineering-related fields (Larkins, 2018). Though these women comprise a more significant number among international postgraduate students in Australian, did not get much attention by the policymakers and/or universities because little work has been done only focusing on the facts, figures and lives of international female postgraduate and doctoral students' till now. Therefore, their struggles are hidden to the world. There is a need to explore these students' lives that take places within and outside the university. It is essential to identify the strategies that can support female international doctoral students in

balancing research study, work and home life (Boey, 2014). With this background in mind, I intended to conduct this project to explore the narratives of international female doctoral students in Australia.

The objective of the study

The objective of this study is to explore the academic and social experiences of international female doctoral students in Australia. This includes understanding experiences which impact their journeys as postgraduate students and observing their changing perceptions about education through the pathway of doctoral study. The goal of this study is to begin to map an understanding of the intersection of gender, higher degrees and social identities that are experienced by these students.

Research questions

1. How have international female doctoral students in Australia experienced PhD journeys?

a) What motivates them to undertake a PhD?

b) How do they experience their academic and social life during their PhD?

c) In what ways do intersections of gender, doctoral studies and other social identities impact their experiences?

Narrative inquiry

This is a narrative study (Clandinin & Connelly, 2000). Narrative inquiry is a way of inquiring into people's live events. It remains attentive to the broader contexts and relationships within the nest of human lives (Meister, 2011). I chose narrative inquiry for data collection because the intension was to collect in-depth data, which needs to reflect participants' life experiences. Life experiences come out better through stories. We are all storytellers, and stories are the best way to see the past. This method helped me to dig into my participants' life events and helped the participants to reflect on their experiences.

There were three phases in the data collection process. The first phase was the briefing session. This was an essential session to start-with. The objective of this session was to explain the purpose and goal of the study to the participants as well as introduce and negotiate a flexible framework to support their narratives. Another purpose of this session was to break the ice to ensure a safe and friendly space for the participants so that they can open-up while writing their narratives and participating in the interviews. Participants who understood and agreed with the process of data collection were invited to the second phase.

I have adapted multiple email exchanges method from the letter exchange method for the second phase of data collection (Barksdale, Watson, & Park, 2007; Smith, 1993), which helped me to dig into life events of the participants by requesting for more clarification if needed and covered many aspects of their lives in a short period of time.

The last phase was the semi-structured interviews. This is the stage where the data became more detailed and confirmed the credibility of the participants' narratives. All the interviews were transcribed and returned to the participants for editing and final approval at the end of the data collection. The written narratives were also compiled in one document for each participant and send back to them for a thorough review. A total of 65 written narratives and 13 individual interviews were stored at the end of the data collection.

Theoretical Framework

The Feminist Standpoint theory and the theory of Intersectionality consolidate their collaboration in the study to explain the experiences of international female doctoral students. Intersectionality analyses and signifies social positionality of the participants based on their experiences from a particular location (Crenshaw, 1989) and the recognition of their experiences is the basis of standpoint theory (Harding, 2004).

Feminist standpoint theory provides an explanatory framework devoted to explaining how knowledge remains central to maintaining and changing biased systems of power. It advocates using women's everyday lives as a foundation for constructing knowledge. It helps scholars to understand and explain the world through marginalised, subordinated and oppressed women's point of view in the society. It is the process of acknowledging their knowledge, skill and experiences (Pandey, 2016). This theory is deep-rooted in the assumption that knowledge is socially situated and primarily based on the lives of men in dominant races, classes, and cultures. Since women's lives are different from men's and most knowledge does not reflect their realities, it is necessary to reveal the social order from women's point of view (Harding, 1991, 2004).

The intersection of multiple identities creates an environment for women to have multi-dimensional experiences. Therefore, the theory of Intersectionality recognises that women who have several oppressed identities in society live different lives than women who share only one or some of those oppressed identities (Crenshaw, 1989).

This theoretical position analyse the positionality of international female doctoral students by recognising their intersectional identities simultaneously and inclusively in a society. This framework structures the understanding of the intersection of participants' social and academic identities. Simultaneously, it focuses on their perspectives and gives importance to their point of view about their social positionality as international female doctoral students in Australia.

Understanding the participants' positionality through the narratives consists of four steps. First, we accept the fact that their identities are inseparable from each other. Second, as a result of such inseparable identities, we recognise that their positions are unlike many students. Third, we must admit the truth that the more layers of disadvantages that are present in their life are rooted in the way the society operates based on its history and policies. Finally, it is necessary to include their voices in the knowledge and equitably address their needs.

The theoretical approach acknowledges systemic discrimination takes place due to people's circumstance or uniqueness such as sexual identity, gender identity, race,

economic status, immigration status, national origin, ethnicity, physical and educational ability. This systemic discrimination among all other aspects of one's identity influences accesses to opportunity. Recognising the multiple barriers to opportunity and multiple forms of prejudice is the first step in this approach. In the material world, people are frequently subject not only to discrimination based on multiple aspects of their identity but also to discrimination unique to the intersection of their identities (Cho, Crenshaw, & McCall, 2013). So, for example, the stereotypes and difficulties faced by an Asian female doctoral student can differ from women of other races, native-born Australians, or immigrant Australians. This theoretical framework goes beyond recognising the multiple forms of discrimination and identifies that the different forms of disadvantages may intersect with each other and result in overlapping and reinforcing barriers to opportunity. These overlapping systems result in unique forms of insight that only impact those in that community.

This theoretical approach can also include focusing on the unique challenges of those who experience the intersections of multiple identities. For example, International students (who face both racial discrimination and discrimination because of their immigration status) or international female doctoral students (who face discrimination because of their gender identity, age, and/or marital status). Both have the possibilities to face the intersection of their multiple identities. Therefore, this framework demands recognition of the voice of those most directly impacted because they are often excluded from mainstream conversations. At this point, this framework allows us to understand the importance of listening stories from the participants directly and valuing their voice. Valuing voice means lifting, promoting, and supporting the leadership and storytelling of those most affected by policies and practices and centering their practical suggestions (Harding, 2004).

Affected individuals have the actual experience that makes them thought leaders in the movement for social justice. Therefore, valuing voice allows those who are affected by policies or practices to play a substantial role in building their own story. It is obvious to recognise that there are multiple voices within a movement when speaking about issues. There is no single way of experiencing an issue, and multiple voices and perspectives need to be considered in order to make a real, lasting, and equitable change (Harding, 2004). For example, when talking about the need to promote accountable supervising or academic supports may be mindful to uplift the experiences of international postgraduate students, domestic postgraduate students, male and female doctoral students to confirm that the movement is inclusive. However, each students' experiences within the system are often different and require different monitoring solutions.

The success of this theoretical approach is ensuring different voices (from different dimensions) are included in the dominant converse about an issue. Therefore, the research approach recognises the importance of each student's perspective about their social and personal life while narrating their PhD experiences to get an overview of their life experiences during doctoral study. One way to cover all the aspects of international female doctoral students' lives is to get disaggregated data through their narratives. The narratives, which include their background, family, and community lives as well as their study and work experiences. Highlighting the importance of disaggregated data assures that the specific experiences due to intersectional identities

are not missing, rather being uplifted. This protects the voices of those who are directly impacted by ensuring their unique experiences are recorded.

Data analysis

The selection of the subtext was essential for data analysis. In this step, with the research questions in mind, I marked all the relevant sections of the narratives and assembled to create a new file or subtext. For example, quotes about various aspects of the participants' academic lives and social lives were marked separately.

The second step was defining the thematic categories. I identified the themes from the selected subtext, named separately by using NVivo. Words, sentence and sometimes a group of sentences been considered under a theme.

The third stage was sorting the material into categories: At this stage, I grouped different parts of the narratives under the defined thematic categories. Such as under the 'student-supervisor relationship', all the relevant subtext has been included for further analysis.

Finally, the narrative content collected in each thematic category was used to describe the meaning of the narrative text by using the theoretical framework.

Conclusions

I have categorised the findings into three themes. First, the context and factors that motivated these students to undertake a doctoral degree. Where I have seen the histories of their lives, which influenced them to undertake a PhD, this also reflected their expectations. The primary motivation came from their Family upbringing, Past Social context, Previous school/University experiences, peer influences and lastly many of them decided to undertake a PhD for their career advancement.

The second theme was the study experiences during their PhD. They have narrated their study experiences in two ways. They talked about their achievements, which includes milestones of PhD that fuels their journey as well as discussed and reflected on their on-going struggles. For example, one of the common struggles among international female doctoral students was their communication issues. Many of them stated that their communication issues are not rooted in their lack of language skills but lack of cultural knowledge, which hampered their social lives and student-supervisor relationships. One of the participants explicitly narrated her experiences with her two-male supervisors, who dominated and were rude to her. She said,

"I felt that they underestimated me because I am a small tiny woman comparing to them, and I am also not confident in my communication skills. Therefore, I suffered in my first two years. Later I have changed my way of communication and had to raise the volume of my voice during the meeting so that they take me seriously".

However, the student-supervisor relationship is not only being suffered due to communication skills. Another participant faced similar experiences from her female co-supervisor. She believed her co-supervisor were not supportive because of her

religious and cultural beliefs. Her co-supervisor does not like Muslim people because she had some bad memories from her past with Muslims.

So, if we analyse these two cases carefully, there were multiple layers of identities of each student, such as gender, ethnicity, religion cultural identities, academic status, which intersected and put them in a circumstance which was difficult to overcome and a challenge for them during their PhD. However, they also shared many good experiences because the intersection of multiple identities does not always put people in a disadvantaged situation; sometimes, it brings benefits to them.

The experience of international female doctoral students is unique in a sense because when they try to adjust their academic life in a new educational environment, they also experience a changing landscape of their lifestyle, which is an add on difficulties during their PhD. That was my third theme. It is widespread among international students that they face challenges in finding suitable accommodation in Australia at the beginning of their study. On top of that, financial instability, family responsibilities and community issues are some prevalent challenges for them. It becomes more complicated when that student is a woman and career-oriented because society is judgmental towards women actions.

Overall, the research findings highlighted the complexity and diversity of international female doctoral students' experiences from a feminist perspective, revealed their expectations and reality, which will allow educators, policymakers and future students to better prepare for the future.

As with all research, there were limitations to note. First, because of the nature of narrative research, this study conducted with a small group of participants. Therefore, the study purpose was not to generalise the findings to the broader population; instead, it provides an in-depth exploration of the participant's experiences and perspectives. Second, doctoral students' heavy workload was a demotivating factor for the participants to continue their participation in this study, and I had to allocate more time for data collection. Third, although a narrative approach offers space to explore stories and pay attention to the diversity of human experiences, it has challenges conducting unconventional inquiry (Heikkinen, Huttunen, Syrjälä, & Pesonen, 2012). In this case, I was aware of these challenges and took precautions to avoid and reflect upon them.

Acknowledgements

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Appreciative Inquiry: The Fundamental Questions of AI's Validity and Appropriateness in Transforming English Education in Japan

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Abstract

Foreign language education in Japan is currently undergoing educational reform with the implementation of a newly revised course of study which mandates that English classes be taught solely in English (MEXT, 2019). Despite these efforts, it appears to be an illusion as the government limits and controls the contents of English education and instruction. School curriculums are controlled by the National Course of Study and the textbooks used are predominantly chosen from government authorized individuals based on reviews by prefectural boards of education. This has provided many roadblocks to English education in Japan as decisions about curriculum has failed to involve key stakeholders such as teachers and students. Hence, the teachers are not prepared to handle the guidelines in the curriculum in teaching English courses and the demands being placed on them especially with changes to the content and their teaching styles. This traditional way of thinking and decision making has significantly affected the performance of student's English competence. Therefore, as educational leaders it is imperative that Appreciative Inquiry (AI) is recognized as much more than an organizational development tool and therefore utilize its strength to reshape the practice of learning, design and development- an orientation to educational change. This paper outlines the principles of AI and its applicability to language education reform in Japan; illustrates AI practices and compares AI to traditional approaches of organizational change and its validity and appropriateness. The study highlights recommendations that can be used by educational institutions in successfully managing transformational change.

Keywords: Appreciative Inquiry (AI), Organizational Change, English Education Reform, Educational Policy, EFL, Educational Transformation, Leadership, Management & Administration, Organizational Change

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Introduction

Great emphasis has been placed on English study in Japan, both in the public-school system and through the enthusiastic use of thousands of private English training centers. Nonetheless levels of English among adults are below the world average. This is particularly striking when compared to the astoundingly high quality of achievement in math, which is consistently demonstrated in international tests. An over-emphasis on rote learning, relatively low levels of exposure to foreigners in everyday life, and teacher-student norms which impede conversation practice all contribute to the problem (English First Report, 2017)

In the past six years, Japanese adults have not improved their English. If anything, their skills have declined slightly. During the same period, other Asian countries, most notably Indonesia and Vietnam, have made enormous progress. Despite being a far wealthier and more developed country, Japan is struggling to teach its students English for use in a competitive global economy. While all students now study English at some point during their education, English has only been taught in Japanese primary schools since 2011, and instructional methods at all levels rely on transcription to the Japanese alphabet, memorization, recitation, and, at higher levels, translation. Additionally, there is little emphasis on English as a tool for international communication. A series of education reforms has been implemented in an attempt to improve English proficiency, so far with no measurable impact on adult learners communicative skills.

The approaches to problem solving and organizational change affect the capacity to act strategically as leader managers. Our mindset and thought processes can affect how we drive organizational change. It is important that Appreciative Inquiry (AI) is recognized as much more than an organizational development tool and therefore utilize its strength in research to transform organizations. As posited by Watkin & Mohr (2001) AI can be used to reshape the practice of organizational and educational learning, design and development; an orientation to organizational change. Understanding and applying appreciative inquiry can affect the influence and change process as managers and decision makers to approach organization problems with skills and perspectives that are informed by thought that address the context, complexity and significance of organizational situations.

Principles of Appreciative Inquiry

Appreciative Inquiry according to Cooperrider and Whitney (2005) is the study of what "gives life," energy and vitality to organizations, teams and people when they are at their best. Appreciative Inquiry does not assume that any person or organization is always at its best. It does however posit, that both research and experience show, that people learn, and organizations change most readily when they focus on, study, and engage in dialogue about strengths, patterns of success and who they are at their best. Based on this purpose, the Appreciative Inquiry process engages large groups of people in dialogue and deliberations about their individual and collective strengths, their hopes and dreams for the future, as well as opportunities and plans for collaborative action.

In their book titled, *"Appreciative Inquiry: A Positive Revolution in Change"* Cooperrider &Whitney (2005) proposed "a new model of change leadership" (p.2) for organizational improvement. Appreciative inquiry demonstrates that within organizations nowadays, many leaders, professionals, and staff members focus on how to identify and solve problems, how to overcome their weaknesses and defects, and how to cover and polish their disadvantages. In this way, everyone is surrounded by a myriad of problems, difficulties, and weaknesses that give rise to a negative feeling of their organizational environment. Within such an organization, both leaders and staff members are passive and possess a low morale. However, appreciative inquiry calls for people to "approach the problem from the other side" In essence, problems are not to be ignored, but to be examined from a positive perspective, because appreciative inquiry "suggests the idea that collective strengths do more than perform- they transform" which in of itself is organizational improvement.

Appreciative Inquiry is a strengths-based approach to learning, change, planning and implementation. Using AI as a process to design a curriculum produces organizational learning opportunities and creates the conditions for a remarkable implementation. Applying AI to the capstone project involves the 4D cycle which includes: Discovery, Dream, Design and Destiny. Likewise, understanding and applying appreciative inquiry can affect the influence and change process as leader managers and decision makers to approach at the Board of Education with skills and perspectives that are informed by thought that address the context, complexity and significance of organizational situations.

AI can be used to redesign the practice of organizational learning, design and development- an orientation to change (Cooperrider &Whitney 2005). Through AI, curriculum transformation can occur as all stakeholders will be involved in 4D process hence they are involved in creating and implementing the transformation based on personal and collective strength.

4-D Process

According to Cooperrider and Whitney (2005) the process generally follows the Appreciative Inquiry 4-D Process: Discovery, Dream, Design and Destiny.

Figure 1. Appreciative Inquiry "4 D" Cycle (Cooperrider &Whitney, 2005).
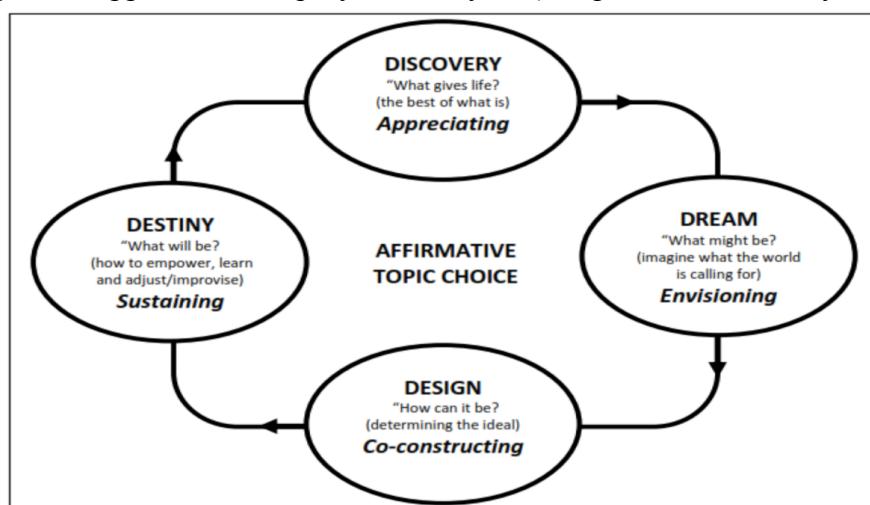
The four key phrases of an AI process includes:

Discovery

The first phase in the model it consists of participants interviewing each other and sharing stories about their peak experiences.

Dream

Based on the information obtained from the interviews, employees envision themselves and their organization functioning at their best. Through various kinds of visualization and other creative exercises, participants think broadly and holistically about a desirable future.

Design

Based on these dreams participants propose strategies, processes, and systems; make decisions; and develop collaborations that will create and support positive change. They develop provocative propositions or possibility and design statements that are concrete, detailed visions based on what was discovered about past successes.

Destiny

In the Destiny phase, participants begin to implement both their overall visions of the Dream phase and the specific provocative propositions of the Design stage. This phase is ongoing as participants continue to implement changes, monitor their progress, and engage in new dialogue and Appreciative Inquiries. AI is so structured that it engages employees to identify and co-create an organization's future. Understanding and applying appreciative inquiry can affect the influence and change process as leader managers and decision makers to approach organization problems with skills and perspectives that are informed by thought that address the context, complexity and significance of organizational situations.

Open Ended Interview Questions that Address Organizational Improvement

AI is so structured that it engages employees to identify and co-create an organization's future. Understanding and applying appreciative inquiry can affect the influence and change process as leader managers and decision makers to approach organization problems with skills and perspectives that are informed by thought that address the context, complexity and significance of organizational situations. According to Cooperrider & Whitney (2005) the AI interview process generally follows the Appreciative Inquiry 4-D Process. The discovery phase, which is the first phase in the model consists of participants interviewing each other and sharing stories about their peak experiences.

The AI interview questions are structured to address organizational issues and problems from a more constructive perspective by reframing problem statements into statements that focuses on strengths and successes. In formulating AI interview questions Vogt, Brown & Issacs (2003) believes that examining each question is crucial to the interview process. The researcher should therefore ask themselves:

• Which questions assume a solution?

•   Which assume error or blame, leading to narrow discussions or defensiveness?
•   Which stimulate reflection, creativity, and/or collaboration among those involved?
•   What assumptions or beliefs are we introducing with this question?
•   How would we approach this issue if we had an entirely different belief system?

Vogt et al (2003) adds that paying close attention to the construction, scope and assumptions of the questions asked will connect ideas and find deeper insights that may create a forward movement.

AI and organizational Improvement

An example of the appreciative inquiry process is outlined in the case of Nutrimental Foods of Brazil (Cooperrider & Whitney, 2005). Cooperrider & Whitney (2005)explains how the closure of the plant for a full day brought all seven hundred employees together for a day of discovery into the factors and forces that have given life to the system when it had been most effective, most alive, and most successful as a producer of high quality health foods. With cheers and good wishes, a smaller group of one hundred fifty stakeholders from all levels, suppliers, Appreciative Inquiry distributors, community leaders, financiers, and customers went into a four-day strategy session to articulate a new and bold corporate dream. With the stories from the day before in mind, people were asked to dream: "What is the world calling us to become?" "What are those things about us that no matter how much we change, we want to continue in our new and different future?"

After four days of appreciative analysis, planning, and articulation of three new strategic business directions, the organization launched into the future with focus, solidarity, and confidence. Six months later, record bottom-line figures of millions of dollars are recorded; profits are up 200 percent. Co-CEOs Rodrigo Loures and Arthur Lemme Netto attributed the dramatic results to two things:
1. Bringing the whole system into the planning process
2. Realizing that organizations are in fact "centers of human relatedness which thrive when there is an appreciative eye—when people see the best in one another, when they can dialogue their dreams and ultimate concerns in affirming ways, and when they are connected in full voice to create not just new worlds but better worlds."

These meetings and discussions with various stakeholders and collection of data showed how as a system they were all dependent on each other to achieve organizational objectives. Understanding and applying appreciative inquiry can affect the influence and change process and approach organization problems through the provision of skills and perspectives that are informed by thought that address the context, complexity and significance of organizational situations.

Traditional Approach to Organizational Change vs Appreciative Inquiry

Figure 2. Problem Based questions versus Appreciative Inquiry Questions on
Education Reform

Problem Based Interview	AI Interview Approach
Main Focus: Problem Question 1. In what ways does your understanding of the current education reform impact your classroom instruction? 2. What is your systematic approach to incorporating the strategies and structures of the education reform in your teaching?	Main Focus: Discovery 1. What do you appreciate most about the education reform? What aspects of the education reform do you feel encouraged to use in the classroom? 2. Since the start of the education reform, what are some of the positive outcomes you have experienced from using the strategies and structures of the education reform in your teaching?
Main Focus: Solution Questions 3.What measures can you employ to increase your knowledge about language strategies that are aimed at developing student's English proficiency and help students actively utilize the four language skills (listening, speaking, reading and writing) in the classroom and throughout their lives by the time of graduation? 4.How can you become a change agent and motivate other teachers to embrace the BOE's effort of English education reform in order to meet the learning needs of the students?	**Main Focus: Dream** 3.I know you work extremely hard to develop the student's English proficiency and help students actively utilize the four language skills (listening, speaking, reading and writing). What could happen that would make you feel fully engaged and energized about the education reform process? What growth have you seen in your use of the strategies and structures of the education reform in your teaching? 4.What would it take to create change and motivate other teachers to embrace the English education reform in order to meet the learning needs of the students?

A comparison of the interview questions in figure 1 highlights the opportunities that can be discovered and how improved practices can be implemented. Carefully analyzing the questions shows that the problem-based questions though open-ended

seems very narrow and can evoke a defensive response as seen in the sample group meeting. In the meeting Tina tried to justify her answers rather than proceeding along a framework of inquiry. This reveals that the problem based interview is less likely to result in individual or organizational improvement.

In contrast, the AI interview questions focus on the discovery and dream phases and opens the responder's mind more by stimulating extensive reflecting thinking and more creative responses. Additionally, the scope of the questions matches the needs being addressed; the discoveries that are being pursued. Cooperrider & Whitney (2005) posits that the appreciative interview is grounded on discovery. At the discovery phase every question is positive allowing people to study what makes them the best, analyze and map their positive core and investigate their root causes of success.

Following the discovery phase is the dream phase and as seen in the formulated AI questions, "interview stories and insights get put together to constructive use; people listen carefully to moments of organizational life at its best and share images of their hopes and dreams for their collective future" (Cooperrider & Whitney ,2005, p. 27). These questions would generate images of possibility and potential. In the negotiation process a positive attitude of AI would allow us to focus on "what we want for the education system in Japan" rather than "what we don't want". Stakeholders will be able to work as a collaborative team, due to the influence of the organization's need to succeed, to identify aspirations and desired results that will create a compelling vision of the future using the best of the past and also inspires and challenges the status quo. Cooperrider & Whitney (2005) adds that after the strategic focus or dream is articulated attention is turned to developing the ideal organization (appreciative organization), the design and destiny phase in relation to its world.

Conditions for Success

Questions one and two of the AI approach incorporates what Cooperrider & Whitney (2005) identifies as the "freedom to be known relationship" (p.56). The teachers are treated beyond the role of just being a teacher to that of "human being" (p.56). The teachers will therefore feel as part of a team equipped with the power to influence change that will result in organizational improvement. The second freedom, the freedom to be heard is highlighted in the third AI question. This question aids listening and hearing and allows the teachers to recognize that they are appreciated, heard and recognized. The question highlights empathy, "I know you work extremely hard to develop the student's English proficiency and help students actively utilize the four language skills…which is quite inviting and will prompt teachers to provide information and ideas that can catapult change and improvements.

Furthermore, question four addresses the freedom to act with support. The AI framework provides opportunities for employees to be free to act with support. The teachers can recognize that others truly care about their work. This will then motivate them to become cooperative and innovative whilst feeling safe to experiment. Additionally, this drive will see them performing at optimal levels in the organization and embracing the well needed change.

Methodology: Organizational Description

AI's Applicability: Shizuoka Prefectural Board of Education

The Prefectural Board of Education (BOE) is a representative council established to oversee matters related to education in accordance with the Act on the Organization and Operation of Local Educational Administration in Japan (MEXT, 2017). The main role of the BOE's education center is to provide quality teacher training. Currently, in increasing efficiency the center provides in-house training as opposed to outsourcing for trainers which increases profit margins. The education center of the BOE like most Japanese working environment predominantly has a culture that surrounds openness, therefore engraved in the organizational processes is an established culture of openness and collaboration. The education center provides a range of services which includes training rooms, meeting rooms, teacher-training programs, test-recordings, administration support, ICT support, resource library and video conferencing.

The primary mission of the education center is to promote proper education in response to changes in Article 1 of the Japanese society, Act on the Organization and Operation of Local Educational Administration which states that "Education must be provided with the aim of fully developing the individual character… to cultivate a people that is sound in mind and body and imbued with the qualities that are necessary in the people who make up a peaceful and democratic nation and society" (MEXT, 2017).

The education center goals and strategies are based and focused on the understanding of its mission. Consequently, for example, it provides teachers with a broad general education, training and development along with advanced knowledge and practical instructional skills aimed at providing students with the best education. It persistently seeks to provide continuing professional development for teachers and the wider school community, operate as a meeting center for the local school community, promote lifelong learning, conduct educational research and provide guidance on specialist matters concerning education.

The education center has a productive team that works hard. This comprises of individuals who are intrinsically motivated, certified and knowledgeable about educational practices globally. The entire staff are qualified trained teachers who are now consultants with the BOE. There is also a variety of cutting-edge technology ranging from computers to software that aids in the production of high quality and interactive training seminars.

Findings

Using AI for Educational Reform Shizuoka Education Center

Developing the AI interview questions for the education center during the period (2017-2018) required immense thought and was no easy feat and required critical thinking and reflection. According to Cooperrider & Whitney (2005) the AI interview process generally follows the Appreciative Inquiry 4-D Process. The discovery phase, which is the first phase in the model consists of participants interviewing each other

and sharing stories about their peak experiences. The AI interview questions are structured to address organizational issues and problems from a more constructive perspective by reframing problem statements into statements that focuses on strengths and successes. Bushe (2013) characteristics of AI interview questions was used as a guide in ensuring the right path is followed. It was ensured that the questions were:

• surprising, causing people to reflect and think.
• touching people's heart and spirit.
• forces to look at reality from varied perspectives.

When employees are open and cognizant of the AI approach powerful positive questions can be asked for example at the Board of Education:

• What is our proudest achievement in the last year or two at the BOE?
• What do we do or provide that is world class for our stakeholders, employees and industry?
• What new skill do we need to move forward as trainers?
• How can we best meet the needs of teacher, employees and the school community?
• What strategic initiative would support our aspirations?

At the BOE these questions generated images of possibility and potential. In the negotiation process a positive attitude of AI allowed us to focus on "what we want for the BOE" rather than "what we don't want". We were able to work as a collaborative team, since we were influenced by the organization's need to succeed, to identify aspirations and desired results that would create a compelling vision of the future using the best of the past and also inspires and challenges the status quo.

Discussion and Conclusion

AI is essentially a research method that seeks to unravel the strengths of the organization and discover the organizational factors, that create success in the past and then build on those factors to help the organization create a positive future. Appreciative Inquiry is referred to as a both a philosophy and a methodology for positive change. (Cooperrider & Whitney, 2005). AI can be considered an alternative approach, framework or mindset that focuses on highlighting and affirming personal success factors within an organization that is utilized with existing organizational development interventions such as strategic planning, organizational design, restructuring or project evaluations.

Appreciative Inquiry is a strengths-based approach to learning, change, planning and implementation. Using AI as a process to reform education in Japan will produces organizational learning opportunities and creates the conditions for a remarkable implementation. Applying AI to organizational change involves the 4D cycle which includes: Discovery, Dream, Design and Destiny. Through this process change can occur. Through AI, educational transformation can occur as all stakeholders will be involved in the 4D process hence they are involved in creating and implementing the transformation based on personal and collective strength. Using AI will definitely ensure that the purpose of reform which is to implement changes in English education in order to improve the speaking proficiency of Japanese students is fulfilled.

AI is so organized that it engages employees to recognize and co-create an organization's future. Understanding and applying appreciative inquiry can affect the influence and change process as educational leaders and decision makers to approach educational problems with skills and perspectives that are informed by thought that address the context, complexity and significance of organizational situations. It addresses organizational issues and problems from a more constructive perspective by reframing problem statements into statements that focuses on strengths and successes. It is recommended that educational institutions in Japan get on board in utilizing the strengths of AI. The Appreciative Inquiry process engages large groups of people in dialogue and deliberations about their individual and collective strengths, their hopes and dreams for the future, as well as opportunities and plans for collaborative action.

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