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Towards a Consensus: Harmonizing Definitions and Consistency in Terminology Use of Conceptions of Teaching in Higher Education. A Systematic Literature Review

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Abstract

Teaching conceptions in higher education, or so-called academics' conceptions of teaching (ACTs), are essential in informing teaching behaviors and influencing students' learning. Consequently, several attempts have been made since the 1990s to understand what ACTs represent and how they can be developed towards student-centered teaching. However, the expected results did not occur as planned because ACTs were frequently misinterpreted mainly because of the similarities with teaching beliefs and other comparable concepts like cognitions about teaching or perspectives of teaching. Hence, many fundamental issues still need to be solved (e.g., ACTs definition, terminology use, measurement, etc.). The present systematic literature review aimed to clarify the conceptual discrepancies in the ACTs' definitions and terminology and propose a consensus regarding the most appropriate working definition and terminological use. We analyzed 1123 studies using systematic online searching in the Web of Science Database and citation searching. After the eligibility process, we came across 78 eligible articles. The results showed that most of the studies used the terminology and definitions of "conceptions of teaching" (Pratt, 1992) to the detriment of the "beliefs of teaching" or another related term. Even though the concepts "conceptions of teaching" and "beliefs of teaching" come from different theoretical perspectives—where "conceptions" originate from a phenomenological approach, characterized by qualitative methodologies, and "beliefs" come from a cognitive approach, represented by quantitative studies—most studies used them interchangeably. However, the authors only extremely rarely (N = 2) appeared aware of this interchangeability and explicitly mentioned it. While the "conceptions of teaching" emerged as the most utilized term, Pratt's (1992) definition was the most often employed definition of ACTs. We advocate for consistency in teaching conceptions, research definitions, and terminological use, paramount for diminishing the risk of misinterpretation, comparing, and synthesizing findings, as well as straightforward communication among educationalists, researchers, and policymakers.

Keywords: academics' conceptions of teaching, beliefs of teaching, framework of definitions and terminology, higher education, systematic literature review

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1. Introduction

The traditional model of a teacher who instructs, communicates, displays, illustrates, and knows everything, expecting students' attentiveness, effort, comprehension, and knowledge acquisition to occur, is no longer effective in promoting learning outcomes. Effective teaching requires an instructional approach centered on student needs, involving active, collaborative, and self-regulated learning (Vermunt et al., 2017). As student-centered teaching in higher education (HE) was proven to foster better outcomes in terms of student learning and inclusivity (Klemenčič et al., 2020), one of the main stakes of academic developers is helping academics to successfully transition towards student-centered or learning-focused instruction (Cassidy & Ahmad, 2019). There is a higher chance that students will be authentically engaged in their learning process and embrace reflective study practices (i.e., deep learning approaches) if their teachers embrace student-centered instruction (Asikainen & Gijbels, 2017). However, there is consistent evidence that HE in Europe, but not solely, is still centered on traditional teaching (e.g., lecturers, teacher-centered practices), which makes the shifting paradigm from what teachers know and like to teach to what students need to learn less probable (Klemenčič et al., 2020).

Teaching can now be explained more than merely delivering or discussing information. Therefore, a crucial aspect of the teaching transformation is the alteration of teachers' conceptions of teaching (Sadler, 2012a, 2012b). Numerous studies have concluded that developing university teaching conceptions (i.e., thinking about teaching) is the primary groundwork of their teaching competencies (Bowden, 1990; Gibbs & Coffey, 2004; Karm et al., 2022). Before adopting student-centered teaching strategies, academics must be aware of and modify their teaching conceptions to facilitate student learning (Kember, 1997). However, even if HE institutions have invested massive resources in the last decades in the instructional training of academics, university pedagogical training programs have modest effects on the desired conceptual change (Ilie et al., 2020). Nevertheless, the modest impact of the existing training programs on ACTs development is not surprising as the improvement and further transposition of ACTs in observable teaching behaviors remains (i.e., just like it was 30 years ago) one of the many "mysteries of higher education" (Murray & MacDonald, 1997, p. 331; Samluelowicz & Bain, 1992, p. 110).

Over the last thirty years, there have been several attempts to understand what conceptions of teaching are and how they can be enhanced, not only in the case of academics but in the case of teachers at all educational levels (Åkerlind, 2008; Kagan, 1992a; Kane et al., 2002; Kember, 1997; Pratt, 1992; Karm et al., 2022). However, the lack of clarity in ACT definitions and conceptual delimitations, especially with the concept of *teaching beliefs* but also with other related concepts (e.g., teachers' thinking about teaching, cognitions about teaching, subjective theories, perspectives about teaching, or teaching orientations), caused massive ambiguity in the terminology used, making

progress unlikely (Fischer & Hanze, 2020; Kagan, 1992b; Kane et al., 2002; Kember, 1997). These ambiguities are also partially attributed to the nature of existing published empirical investigations, which are primarily theoretical and founded on relatively small numbers of participants, making the findings' general effect unclear and less definitive (Kagan, 1990; Pajares, 1992; Saroyan et al., 2009). After more than fifty years of investigations, there is still no clear agreement concerning the categories describing ACTs and the association between those categories (i.e., whether they are independent or hierarchical or whether frontiers between them are soft or hard) (Entwistle & Walker, 2002; Kember, 1997; Samuelowicz & Bain, 1992, 2001).

In the current manuscript[1], we aim to systematically synthesize the knowledge of previous research that investigated ACTs and see what the roots of the definition of teaching conceptions are and to what extent the authors in the field consistently used and acknowledged their origins in their papers. Specifically, after presenting a short synthesis of the previous systematic literature reviews on teaching conceptions or beliefs at all teacher education levels (i.e., primary, secondary, HE, and adult education), we discussed the need for a new synthesis of teaching conceptions in HE teachers. Further, we presented the state-of-the-art regarding (1) how conceptions of teaching in HE (ACTs) were defined and (2) how consistently the similarities in the terminology and definitions of "teaching conceptions" and "teaching beliefs" were acknowledged and used throughout the years and advanced two central research questions. Additionally, we introduced the design, the method (i.e., literature search and inclusion criteria), and our systematic literature review findings. This work also presents potential implications for ACTs, communication between the main stakeholders (i.e., academic developers, researchers, and policymakers), and implications for future investigations to develop teaching conceptions in HE.

Previous reviews and fundamental papers on conceptions and beliefs about teaching

An empirical paper (Pratt, 1992) that is critical for the understanding of ACTs and six literature reviews that (Kagan, 1990, 1992a, 1992b; Kane et al., 2002; Kember, 1997; Pajares, 1992) summed up the research on teaching conceptions in the educational field in the last century. While the paper of Pratt (1992) analyzed teaching conceptions of adults and adults' teachers and only is a qualitative study with a selective literature review, four of the six literature reviews analyzed teachers' beliefs at primary and secondary educational levels (Kagan, 1990, 1992a, 1992b; Pajares, 1992). Only two reviews informed the research on conceptions of teaching strictly at the HE level (Kember,

[1] With special attention to the studies that present differences in the use of the terminology of ACTs and ABTs or studies in which the differences or similarities cannot be figured out (see Table 3), as most of the existing literature considered them as interchangeable, the present manuscript uses "conceptions of teaching" and "beliefs of teaching" as largely synonymous. Terminological demarcations and elucidation of differences and similarities regarding "conceptions of teaching" and "beliefs of teaching" are discussed throughout the manuscript.

1997; Kane et al., 2002). As the roots, definitions, meanings delineations, and usage of ACTs and ABTs terminology are messy, we included literature reviews and fundamental papers on primary and secondary teacher and adult education in the theoretical synthesis to portray the two concepts' differences and similarities. We will briefly synthesize all the seven papers to understand better the origins and trajectories of the definitions and terminology related to ACTs and/or academics' beliefs of teaching (i.e., ABTs).

Between 1990 and 1992, Dona M. Kagan realized a series of three reviews on primary and secondary teachers' beliefs and related concepts, like teacher cognition, conceptions, knowledge, and self-reflections on learning and teaching (Kagan, 1990, 1992a, 1992b). Even if all three reviews are considered foundational for the understanding of ABTs, none of them meet the methodological criteria of a systematic literature review. In her first literature review of this series of three, Donna Kagan (1990) reported on a synthesis of 49 articles (i.e., from 1981 to 1989). The author acknowledges that the review lacks the red storyline and organization of systematic analysis such that substantive issues and findings are emphasized. Instead, she presented and discussed the reviewed studies regarding the method(s) employed to access and assess teacher cognition. The author analyzed five approaches to assess the teacher's cognition in this first review. One of the assessment approaches was related to "direct and non-inferential ways of evaluating teacher's beliefs". Kagan (1990) defined the cognition of teachers (i.e., both pre- and in-service) as being formed by their self-reflections, knowledge, and beliefs of teaching, students, and the subject matter (i.e., content). Regardless of the definition, she mentioned that she uses teacher's beliefs and knowledge interchangeably because what a teacher knows regarding teaching is highly subjective. In her first review, Kagan (1990) defines beliefs of teaching as "The highly personal ways in which a teacher understands classrooms, students, the nature of learning, the teacher's role in the classroom, and the goals of education" (p. 423). Moreover, she also discusses several ambiguities and contradictions addressed in the following reviews.

In her second review (Kagan, 1992a), the author reported on a synthesis of 25 studies on teacher's beliefs (from 1981 to 1990). In this review, the author proposes a more refined version of the teacher belief definition, adding that teacher beliefs are often unconscious, tacit assumptions about teaching, the subject matter, learning and students. Also, the author concluded that teacher beliefs are hard to change, pointing out the scarcity of empirical proof of effective conceptual transformations in teachers (e.g., academics' teaching beliefs contextualization, beliefs' translation into the classroom, etc.).

In her third review, Kagan (1992b) analyzed 40 pieces of research that examined the topic of learning-to-teach (i.e., issued between 1987 and 1991) for debutants and preservice teachers. Kagan (1992b) reported that in their first teaching year or the preservice period, there is a single developmental phase in which debutants mainly develop their understanding of pupils. Further, based on this understanding, novices adjust and rebuild their portrayals of themselves as teachers and develop teaching and classroom management procedures and routines. Kagan (1992) concluded that

preservice teacher training programs failed to adequately address the development of teachers' beliefs and instruction development.

Concomitantly with Kagan's (1992a, 1992b) second and third literature reviews, Pajares investigated 36 studies published on a broader time horizon (between 1968 and 1991) on teachers' and candidates' (i.e., preservice teachers) beliefs. Pajares (1992) was in the same line as Kagan (1992a) and claimed the poor conceptualization, the scarcity of definitions, different understandings, and the inconsistency in the usage of terminology of teachers' beliefs. However, the analysis of Pajares was more specific in examining the multitude of meanings attributed to teachers' beliefs and how those meanings differed from other similar concepts (e.g., conceptions, orientations, knowledge, etc.). In his review, based on previous findings, Pajares (1992) offers a comprehensive picture of teachers' beliefs, giving a broad definition and a synthesis of 16 fundamental assumptions about teachers' educational beliefs. Pajares (1992) asserts that research on teachers' beliefs should become a must as they may prove to be one of the most important constructs in educational research. Nevertheless, his review mainly focuses on teacher cognition research, investigating only preservice and secondary education teachers' beliefs, knowledge, and conceptions underpinning their instruction practice. Also, even though the author specifies that studies usually struggle with the methodology and design, such information about the reviewed studies needs to be included.

Unlike the previously described reviews, Pratt's (1992) study uses the terminology of "conceptions of teaching" instead of "teacher beliefs". Even though Pratt's study is not a systematic literature review but a qualitative study with a selective literature review, he cautiously delineated his methods in the paper (e.g., "guiding frames of reference", "phenomenography as research methodology", "data collection", and "data analysis"). Given the importance of this work in the domain, as the state-of-the art regarding ACTs cannot be concluded without considering Pratt's (1992) work, we decided to include its work in this section. In his study, Pratt and his collaborators interviewed 253 adults and adult teachers from five countries (i.e., the USA, Canada, Singapore, Hong Kong, and China). According to Pratt (1992), teaching conceptions are the groundwork when it comes to the study and practice of teaching. In his study, Pratt operated the recall of teaching activities and methods (i.e., participants' descriptions of their teaching) as representative (proxy) for the participant's actual actions and teaching practices. Teachers' teaching approaches and adult students' learning processes are seen by Pratt (1992) as equivalent sets of components in an interdependent and dynamic trilogy formed of beliefs, intentions, and actions. In this trilogy, most people's beliefs signal/inform their intentions, which successively direct the teaching process. Pratt (1992) discovered five categories of teaching conceptions (i.e., c1: delivering the subject's content or engineering; c2: apprenticeship or the modeling of students; c3: stimulating the intellect, developmental; c4: fostering individual agency, nurturing; and c5: pursuing a fairer society also called social reform). The associations between teachers, learners, context, content, and ideal vision characterize the identified categories of teaching

conceptions. As defined by Pratt in 1992: "Conceptions are specific meanings attached to phenomena which then mediate our response to situations involving those phenomena. We form conceptions of virtually every aspect of our perceived world and, in so doing, use those abstract representations to delimit something from and relate it to other aspects of our world. In effect, we view the world through the lenses of our conceptions, interpreting and acting in accordance with our understanding of the world" (p. 204). Additionally, in his end note, Pratt specifies that through the paper the term conception will be referred to not as a verb, but as a noun (i.e., conception (noun) = "an abstract, cognitive representation of some phenomenon"). Pratt (1992) furnishes a structured framework that distinguishes between conceptions of teaching, actions, intentions, and beliefs. He acknowledges these elements are interrelated but different within the broader context of teaching conceptions.

Kember (1997) reported a synthesis of 13 studies issued between 1983 and 1994. In his review, Kember organized the research on ACT under two comprehensive orientations (i.e., learning-oriented/student-centered and content-oriented/teacher-centered). Each orientation is compounded by two associated conceptions bonded by an intermediate and transitory category (i.e., interaction between students and teacher). According to Kember, the two orientations represent two poles (i.e., within a continuum), among which the five conceptions describe well-defined points. Also, Kember (1997) argues for the academics' possibility to shift their teaching conceptions across the continuum over time. Kember specifies the use of "beliefs of teaching" terminology and acknowledges that it is less commonly used in research in HE. However, Kember acknowledges that in most investigations, this terminology is synonymous with Pratts' (1992) definition of teaching conceptions, acknowledging that although there are minor differences between ACTs and ABTs terms, they were used as 'largely synonymous' in most existing studies. It is worth mentioning that Kember does not advance its definition of ACTs but uses Pratts' (1992) definition and uses ACTs and ABTs interchangeably. However, Kember (1997) advanced a relational model between ACTS, academics' teaching approaches, and learning outcomes. As far as we know, Kember's synthesis is the first literature review exclusively on teaching conceptions of university teachers.

Based on an analysis of fifty papers (i.e., published between 1983 and 2001), Kane and her colleagues (2002) thoroughly reviewed the literature on ABTs and academics' teaching practices. First, the authors elucidated the background of research on beliefs of teaching in primary and secondary teachers (i.e., research on teacher knowledge and beliefs and confusing terminology). Second, the theoretical framework employed to investigate the academics' theories of action is presented. Additionally, in the Appendix, the authors attached summaries of the analyzed studies presenting the identification information of the paper, the theoretical framework, research focus, participants, data assembled, and data analysis techniques. Therefore, the primary aim of this critical review was to assess the correspondence between academics' espoused action theories and the theories they use in their teaching. According to the authors, some of the analyzed studies

told only half of the story (i.e., they could not distinguish between what academics said about their teaching and what they effectively did in their teaching practice). The authors advanced valuable suggestions for academics' instructional development and future studies on ACTs (i.e., data collection, data analysis, irregular terminology use, etc.). Also, the authors signaled the errors made in the process of knowledge import on teachers' beliefs from research on primary and secondary to HE. After reviewing the studies on ACTs and ABTs, Kane et al. (2002) concluded that it is obvious that academics form teaching conceptions or beliefs in HE in general and also regarding their objectives and intentions in the class. Kane et al. (2002) noted the complexity and variation in terminology within literature, emphasizing that researchers often use terms like teacher cognition, knowledge, beliefs, and conceptions interchangeably. Specifically, in the case of "teaching conceptions" and "teaching beliefs," they concluded that these two terms are occasionally used interchangeably and other times with distinct meanings, highlighting the necessity of differentiating between them to avoid vague or misleading conclusions. The authors analyzed how ACTs and ABTs were used in several studies, indicating variability in how they are applied and understood in research contexts. Even if Kane et al. (2002) do not inherently view the terms as interchangeable, they recognize that broader literature may treat them as such. Hence, to aid further study, Kane and her colleagues advocate for a more unambiguous distinction between these terms and agree upon standard definitions, accentuating the importance of concomitantly examining teaching beliefs or conceptions and actual teaching practices.

The need for a new synthesis of academics' conceptions of teaching (ACTs)

Based on the prior literature reviews on ACTs and/or ABTs at all educational levels, we summarized recommendations for future investigations concerning the necessity of agreeing on the conceptualization of teaching beliefs/conceptions, their meaning, and terminological consistency at all educational levels, not only HE. We presented the evolution of suggestions in Table 1.

An important first step in making the most of the resources invested in enhancing teaching practices in HE is a systematic review that could ensure a comprehensive understanding of how conceptions and beliefs are defined, understood, and used by researchers and professionals in the field. Next, after clarifying those, there is a higher chance that one could understand how ACTs and/or ABTs can shape teaching practices and their efficacy.

Even though they did not systematically solve the mystery themselves, the last synthesis on ACTs and ABTs signaled the necessity of clarifying those two fundamental issues (Kane et al., 2002; Kember, 1997) or otherwise, there will be misunderstandings and misuses that will make their understanding even harder. Which, to some extent, did happen (Åkerlind, 2008; Degago & Kaino, 2015).

Table 1. The expansion of the suggestions for forthcoming examinations to address the conceptualization and terminological consistency use emphasized in the prior literature reviews on investigations that examined the conceptions and/or beliefs of teaching

Topics of proposed suggestions for future studies	Kagan (1990, 1992a, 1992b)	Pajares (1992)	Pratt (1992)	Kember (1997)	Kane et al. (2002)
	Primary and secondary teacher education		Adult education	Higher education	
s1. the conceptions/beliefs of teaching definition					
(1) explore more in-depth the nature of teaching beliefs/conceptions acquisition	⊗	⊗	⊗	⊗	⊗
(2) careful reconsideration & agreement on the conceptualization of teaching beliefs/conceptions	⊗	⊗		⊗	⊗
(3) adult educators / academic developers / teacher trainers must first clarify their own conceptions/beliefs of teaching			⊗	⊗	
(4) further investigation of the relationship between dimensions/categories (i.e., discrete categories vs. continuum with well-defined positions)	⊗	⊗	⊗	⊗	⊗
(5) more research on the coherence (and disallowances) between learning to teach in standard preservice (i.e., primary, secondary, and within the higher education context)	⊗	⊗			⊗
s2. consistency in the **use** of **terminology** general agreement on the meaning of teaching beliefs and teaching conceptions	⊗	⊗	⊗	⊗	⊗

Note*: s1 and s2 = categories of suggestions for future studies; ⊗ = the authors of the respective literature review made at least a recommendation from the issue illustrated in the first column.*

Since then, there have been many publications and evolutions in the domain. However, none of the studies published after 2002 systematically approached those critical matters. To fill those gaps, we further advanced two main research questions.

The current systematic literature review

Q1. Is there a preferred definition among the researchers who studied teaching conceptions in HE?

The main difficulty in investigating ACTs lies in the ambiguity with which they are defined. According to Tillema (2000), conceptions derive from academics' beliefs, including previous experiences, school practices, and personality traits. According to Pratt (1992), it is the other way around: conceptions of teaching are composed of a trilogy of beliefs, intentions, and actions. While some authors consider the academics' conceptions about learning as different concepts but strongly correlated with ACTs (Trigwell & Prosser, 1996), others consider them an integral part of ACTs (Young, 2008; Jacobs et al., 2012). In another study, teaching conceptions and beliefs are considered different concepts (Entwistle et al., 2000). According to the study conducted by Entwistle and his collaborators (2000) argue that ACTs are more accessible, can be deliberately developed, and have subjective connotations compared to ABTs. At the same time, beliefs

are considered emotion-driven, more intangible, and located at an unconscious level (Entwistle et al., 2000). Vermunt and Endedijk (2011) give a distinct definition, which subsumes conceptions of a HE teacher's learning, good teaching, and beliefs regarding student learning under the umbrella of learning and teaching beliefs. Given the multitude of definitions and operationalizations when referring to ACTs and ABTs, a systematic approach must be conducted to clarify the definitions.

Q2. How consistently were the similarities in the terminology and definitions of "teaching conceptions" and" teaching beliefs" in HE acknowledged and used throughout the years, and how "should" we name them?

The terminology used in this research field is not a matter of personal preference but a crucial aspect of the research. In reality, the terminology is based on different epistemological assumptions (Åkerlind, 2008), ACTs being also called "conceptions about teaching and learning", "cognitions about teaching", "perspectives of teaching", or "teaching beliefs." Kane et al. (2002) signaled that in the process of knowledge importation from research on primary and secondary to HE on teachers' beliefs, numerous errors were made. ACTs and academics' teaching beliefs have been used interchangeably by Kember (1997), who noted in his review that it is also the case in other studies, even if those do not mention this interchangeable use. In his synthesis, Kember (1997) analyzed the use of "beliefs of teaching" terminology, concluding that it is less commonly used in research in HE. Nevertheless, his review was based on 13 studies published between 1983 and 1994. However, as Pratt (1992) remarked, defining conceptions/beliefs of teaching is, in the best case, a gamble/game of each player's preference. This seems to be still true as more recent studies, such as those by Åkerlind (2008) and Degago & Kaino (2015), have called for more clarity in the ACTs definition and terminology used.

2. Methodology

Literature search procedures

The study selection process is presented in Figure 1. In the first phase, we searched for studies cited in previous reviews (i.e., backward citation searching) on the topic of ACTs or ABTs (Kane et al., 2002; Kember, 1997; Pajares, 1992; Pratt, 1992), as well as studies which cited these reviews, but not only (i.e., forward citation searching). We came across 56 articles. Then, we ran a systematic search in the specialized literature in the field, in the Web of Science database, using the following algorithm: "teach* concept*" OR "conception* of teach*" OR "teaching and learning conception*" OR "conceptions of teaching and learning" OR "conceptions about teaching and learning" OR "conceptions about teaching" OR "teach* beliefs" OR "beliefs of teach*" OR "teaching and learning beliefs" OR "beliefs of teaching and learning" OR "beliefs about teaching and learning" OR "beliefs about teaching" AND "higher education" OR "college" OR "faculty teacher" OR

"professor*" OR "teach* assistant*" OR "instructor" OR "academics" NOT " secondary education" OR "primary school". We looked in the resulting papers' titles and abstracts for mixtures of these syntagms or words. We imposed no limit on published sources. Our search was performed from 1 January 1900 to 4 September 2022 (the search day). After completing the search process, 1067 studies were found. In the first step, duplicate studies (N = 3) were removed. Together with the 56 papers identified from citation searching, we obtained an initial pool of 1120 articles. After the abstract analysis, 957 abstracts that did not meet the eligibility criteria were removed. Next, we analyzed 166 full-text papers, of which only 78 articles were eligible for the current analysis.

Inclusion criteria

For the inclusion of the studies in the subsequent analyses, we considered two criteria: c1) the study must address a topic strictly related to the university level (i.e., ”teaching conceptions”, ”conceptions of teaching”, ”conceptions about teaching”, or ”conceptions about learning and teaching”) under this name or a related name (e.g., beliefs of teaching or another related concept); c2) conceptions of teaching or teaching beliefs must be measured in a self-reported manner, or academics must be the direct object of measurement/observation.

Coding of studies

After the full-text analysis of the 78 final eligible studies in the final sample, we extracted information related to the following aspects: the question or problem that the study addresses; the key concepts, how they are defined, and what theories underlie them.

The studies' coding involved extracting quantitative and qualitative data from most of the sections of the analyzed research studies. To respond to our first research questions, besides the identification of study's characteristics (i.e., authors, publication year, and title), the used terminology (i.e., whether authors used ACT or beliefs of teaching), the definition (i.e., authors' definition or a definition taken from the literature), the equivalence regarding the use of ACT and ABTs, whether the authors mentioned if they are using the two terms interchangeably, and how they used the two terms (i.e., interchangeably or not).

Coding procedure

Each of the 78 selected studies was independently coded by the present manuscript's first and second authors. First, the two coders independently coded a few studies. Afterward, the need for more clearness and consistency in the coding setup was debated to enhance coding consistency. The initial interrater reliability was 92.31%. In the case of the articles (N = 6), where the two authors individually reached different conclusions, online meetings and analysis of the differences were performed until the two coders had a 100% agreement.

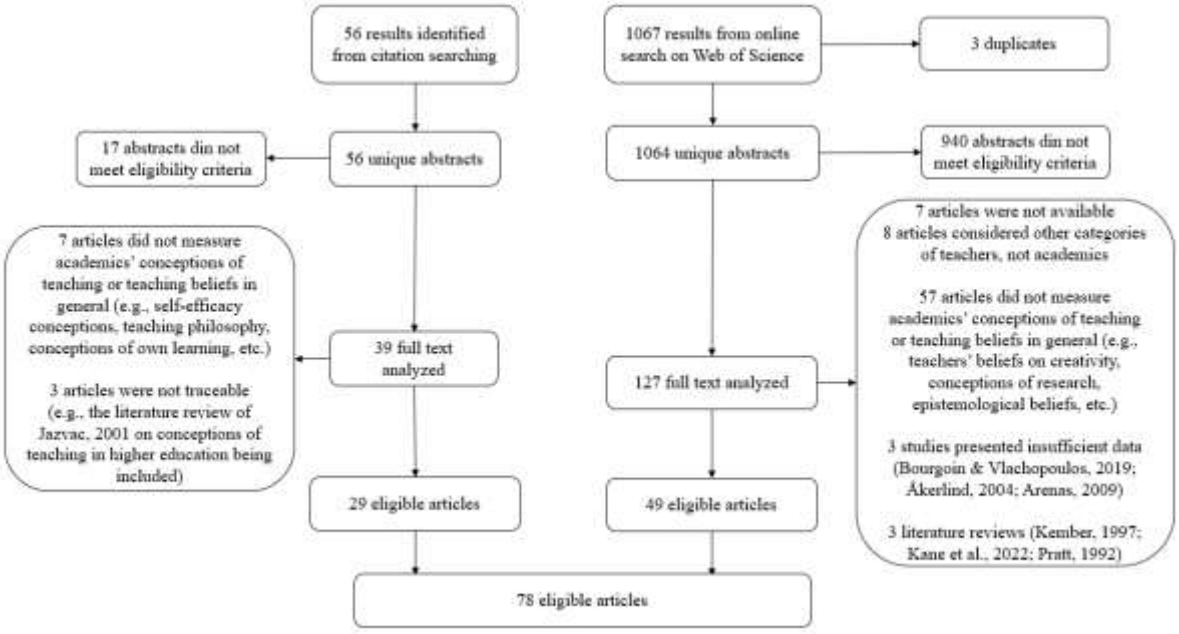

Figure 1. Systematic literature review process and selection of the papers for the current manuscript

3. Findings

This section briefly describes the main findings of our systematic analysis. For the first research question, we contrasted the most used definitions and the terminology referred to inside the definitions and studies (i.e., "names") of ACTs and/or ABTs in the HE research field with the more isolated ones (i.e., authors' own definitions or citations of other papers that did not advance a definition of ACTs or ABTs but only investigated one of them or both to some extent). It must be noted that we aimed to conduct an accountability of the existing definitions, not an in-depth analysis of the meanings of the definitions. Regarding our second research question, we assessed the consistency in the terminological use and the equivalence between ACTs and ABTs. For this, we categorized the articles into two main categories: those using the terminology interchangeably and those showing differences in the use of terminology.

As Table 2 shows, out of the 78 articles in the final sample, 37.18% (N = 29 articles) presented at least one of the “more accurate” definitions resulting from a systematic literature review in the field of ACTs/ABTs at primary and secondary teacher education (Kagan, 1990, 1992a, 1992b and Pajares, 1992), adult education (Pratt, 1992), and HE (Kane et al., 2002; Kember, 1997). The same proportion of 37.18% (N = 29) of the analyzed articles presented no clear definition of teaching beliefs or conceptions or had no definition. While 23.07% (N = 18 articles) introduced their own definition of ACTs (not ABTs), in the case of 16.66% of the papers (N = 13 articles), the authors cited some other articles that investigated ACTs or ABTs, even if the cited papers themselves used one of the “more accurate” definitions.

As some of the authors presented more than one definition of ACTs or ABTs (e.g., Lee, 2019 – cited two Nestor, 1987 and Pajares, 1997 when defining ABTs or Jacobs et al., 2012 which cited Pajares, 1997 and Kagan, 1992a when defining ABTs and Pratt, 1992 when defining ACTs), we came across 89 definitions, which will be further presented. The exact number and specifics of each definition are presented in Table 2. The following percentages regarding the first research question are referring to N = 89 identified definitions of ACTs and ABTs. The "conceptions of teaching" or one of the similar terms (e.g., teaching conceptions, conceptions about teaching, or conceptions of learning and teaching) emerged as the most utilized term (i.e., 73.03%) when defining teachers teaching conceptions and/or beliefs at the HE level. On the contrary, 14.61% (N = 13) used the "beliefs of teaching" terminology, while 12.36% (N = 11) even if they used the terminology of ABTs, they did not have a clear definition or no definition at all of ABTs.

The most employed definition of ACTs (19.23%, N = 15 out of 78 articles) was the one proposed by Pratt (1992). According to Pratt (1992, p. 204) teaching conceptions in HE are defined as: "... specific meanings attached to phenomena which then mediate our response to situations involving those phenomena. We form conceptions of virtually every aspect of our perceived world, and in so doing, use those abstract representations to delimit something from, and relate it to, other aspects of our world. In effect, we view the world through the lenses of our conceptions, interpreting and acting in accordance with our understanding of the world".

Table 3 illustrates the consistency in the terminological use throughout the analyzed articles and the equivalence between ACTs and ABTs. N = 44 (56.41%) of the 78 analyzed articles in the present endeavor used the terms ACTs and ABTs interchangeably. However, only 2 out of the 44 studies (i.e., Fischer & Hanze, 2020 and Devlin, 2006) specified that they used ACTs and ABTs as synonyms throughout the paper. The rest of the 42 studies used the terms as synonyms without specifying it.

We found substantial discrepancies in the use of terminology between ACTs and ABTs. Out of the 78 eligible articles, thirty-four (i.e., 43.6%) presented essential differences in terminology. Specifically, nine articles (i.e., 11.5%) specify the differences in the use of terminology, while eight articles (i.e., 10.3%) do not specify these differences. Also, six articles (i.e., 7.7%) do not mention ACTs, and two (i.e., 2.6%) do not cite any related articles. Furthermore, seven articles (i.e., 9.0%) do not mention ABTs, and another two (i.e., 2.6%) neither mention ABTs nor cite any associated articles.

Table 2. Summary of the terminology, definitions, and number of articles that defined or not teaching conceptions/beliefs in higher education (N = 78)

Papers referred to when citing definitions of ACTs/ABTs in the 78 analyzed papers	**Text of the definition**	**The terminology used in defining teaching beliefs or conceptions**		**Total**
		Conceptions of teaching *(conceptions of learning and teaching; teaching conceptions; conceptions about teaching)*	***Beliefs of teaching*** *(beliefs about teaching, teaching beliefs)*	
A "more accurate" definition resulting from a literature review in the field				
Nespor (1987)	"Beliefs are important influences on the ways they conceptualize tasks and learn from experience . . . little attention has been accorded to the structure and functions of teachers' beliefs about their roles, their students, the subject matter areas they teach, and the schools they work in." (p. 317)	-	N_{def} = 3 Addy & Blanchard, 2010; **Lee, 2019; Pajares, 1992	**3**
Pajares (1997)	The author did not offer a definition of ABTs but advanced sixteen fundamental assumptions that may be made when investigating teachers' educational beliefs.	-	N_{def} = 3 Samuelowicz, 1999; ***Jacobs et al., 2012; Lee, 2019	**3**
Kagan (1992a)	"Teacher belief is defined broadly as tacit, often unconsciously held assumptions about students, classrooms, and the academic material to be taught." (p. 65)	N_{def} = 3 Jacobs et al., 2014, 2016, 2020	N_{def} = 4 Popova et al., 202; ***Jacobs et al., 2012; Chapman & McConnell, 2018; Popova et al., 2020	**7**
Pratt (1992)	"Conceptions are specific meanings attached to phenomena which then mediate our response to situations involving those phenomena. We form conceptions of virtually every aspect of our perceived world, and in so doing, use those abstract representations to delimit something from, and relate it to, other aspects of our world. In effect, we view the world through the lenses of our conceptions, interpreting and acting in accordance with our understanding of the world." (p. 204)	N_{def} = 15 Pacifico et al., 2021; **Jacobs et al., 2012, 2014, 2015b, 2016, 2020; ***Degago & Kaino, 2015; Pauler-Kuppinger & Jucks, 1992; Kember & Kwan, 2000; Mladenovici & Ilie, 2023; Saroyan et al., 2009; Light & Calkins, 2008; Calkins et al., 2022, Pacifico et al., 2020; Devlin, 2006	-	**15**
Kane et al. (2002)	Kane et al. (2002) do not propose a definition for ACTs or ABTs but instead advocate for a more unambiguous distinction between these terms and agreement upon standard definitions, accentuating the importance of concomitantly examining teaching beliefs or conceptions and actual teaching practices.	N_{def} = 1 Seng & Geertsema, 2018	-	**1**
Authors' own definition				
Sadler (2012a, b)	Sadler uses the term "conceptions of teaching" to describe academics' ways of thinking about teaching. For example, the author acknowledges that:	x	-	**2**

Eley (2006)	"A student-centred, learning-oriented conception of teaching is one category or way of thinking about teaching." (Sadler, 2012b, p. 732). "Conceptions of teaching are seen as entities that can exist independently of detailed planning and teaching activities." (p. 209)	x	-	**1**
Buswell & Berdanier (2020)	"Teaching conceptions, which are the values and rationales that instructors hold that guide teaching practices, are less studied." (p. 1)	x	-	**1**
Samuelowicz & Bain (1992)	"Conceptions of teaching are answers to the question *What is teaching?* which may elicit directly the conceptions of teaching." (p. 97)	x	-	**1**
Karm et al. (2022)	"How academics respond to these academic development opportunities is somewhat dependent on the academic's conceptions of teaching – their role in the process, their perceptions of student roles, as well as their perceptions of the learning process itself." (p. 2)	x	-	**1**
VanDriel et al. (1997)	"The conceptions of teaching identified referred to teachers' beliefs about student-centered teaching, incorporating reflections on their current teaching practice with respect to developing metacognitive skills and evaluation." (p. 10)	x	-	**1**
McAlpine et al. (2006)	"In our view, conceptions, the often unexamined values and beliefs that underlie our thinking and actions, are further from decision making and implementation than the levels of specificity identified in this study. They represent espoused, relatively abstract notions, perhaps idealized, that can be expressed in an enormous and complex range of different knowledge and goal statements, and ultimately enacted in a range of ways." (p. 23)	x	-	**1**
Entwistle & Walker (2000)	"A sophisticated conception of teaching stems from the teacher's own deep understanding of the subject, but depends on much more. It requires an act of imagination through which the teacher first envisages the subject from the students' perspective, and then devises ways of helping the students across the initial gulf of incomprehension which separates them from the discourse of the discipline or profession." (p. 22)	x	-	**1**
Degago & Kaino (2015)	"This study explored university instructors' conceptions of teaching (the ways in which they understand and experience teaching), which according to scholars predominately determine how they approach their teaching and the way their students approach learning." (p. 2)	x	-	**1**
Owusu-Agyeman et al. (2017)	"The conceptions of lecturers' in teaching and learning processes only serve as philosophical underpinning that could be altered momentarily depending on the method a lecturer would adopt to meet the knowledge needs of students." (p. 2)	x	-	**1**

Åkerlind (2008)	"From a phenomenographic perspective, different conceptions of teaching are seen as representing different breadths of awareness of the phenomenon of teaching, constituted as an experiential relationship between the teacher and the phenomenon." (p. 634) "From a cognitivist perspective, different conceptions are seen as reflecting different beliefs about teaching associated with different mental representations of the phenomenon, constructed on the basis of individuals' experience." (p. 634-635)	x	-	**1**
Barnett & Guzman-Valenzuela (2017)	"Conceptions of teaching are, in essence, a response (by individual teachers; by course teams) to the tacit question: What is it to teach?" (p. 115)	x	-	**1**
Postareff & Lindblom-Ylänne (2008)	"Presumably, teachers' underlying conceptions of teaching define teachers' purposes of teaching." (p. 118)	x	-	**1**
Carvalho et al. (2021)	"Conceptions of learning and teaching refer to what faculty think about teaching effectiveness." (p. 745)	x	-	**1**
Dall'Alba (1991)	"Teachers' conceptions or ways of understanding teaching were the object of phenomenographic analysis in this study." (p. 293)	x	-	**1**
Young (2008)	"Fortunately, as assimilations of beliefs related to experience, conceptions of teaching are malleable and susceptible to ongoing change." (p. 3) "**…**conceptions of teaching and learning can be understood to be in ongoing states of development." (p. 3)	x	-	**1**
Noben et al., 2021	"Conceptions of teaching describe teachers' views about teaching (i.e. the way they think about teaching and learning)." (p. 2)	x	-	**1**
Other definitions (i.e., not consecrated)				
Entwistle & Walker (2000)	See the definitions above in the Authors' own definition section	N_{def} = 4 Virtanen & Lindblom-Ylänne, 2010; Van den Bos & Brouwer, 2014; Degago & Kaino, 2015	-	**4**
VanDriel et al. (1997)		N_{def} = 1 Stevenson, Ferguson, & Power, 2014	-	**1**
Samuelowicz & Bain (1992)		-	N_{def} = 1 Ottenhoff-de Jonge et al., 2021	**1**
Virtanen & Lindblom-Ylänne (2010)	"Conceptions of teaching are beliefs which form the background for approaches, meaning the sets of practices and strategies which will be implemented in the different contexts of teaching" (p. 356).	N_{def} = 2 Gonzalez, 2011; Wegner & Nuckles, 2015	-	**2**

Ramsden (2003)	The author did not offer own definition of ACTs, but suggested the idea that ACTs reflect personal theories derived from academics' teaching experiences.	N_{def} = 1 Mimirinis & Ahlberg, 2021	-	**1**
Kember & Kwan (2000)	The author did not offer own definition of ACTs in their paper, but uses the definition of Pratt (1992).	N_{def} = 1 Degago & Kaino, 2015	-	**1**
Pratt (1998)	"Beliefs represent the most stable and least flexible aspect of a person's perspective on teaching." (p. 21)	-	N_{def} = 1 Taylor et al., 2007	**1**
Harwood et al. (2006)	Beliefs are defined as "epistemological commitments to how a content domain should be taught" (p. 70).	-	N_{def} = 1 Wheeler et al., 2017	**1**
Bullough & Knowles (1991)	"We believe beginning teachers could be assisted significantly in their development if teacher educators … would direct energy toward helping the beginning teacher to make explicit, carefully analyze, and thoughtfully explore and critique the metaphors and images they bring to teaching, inasmuch as they form the lenses through which teacher education and teaching are made either appropriately or inappropriately meaningful. Doing this would open up fresh ways of thinking about teacher education and development that are so essential to revitalization and reform." (p. 139)	N_{def} = 1 Vilppu et al., 2019	-	**1**
No clear definition of teaching beliefs or teaching conceptions OR no definition at all		N_{def} = 18 Buswell, 2018; Stes & Van Petegem, 2011; Pedrosa-de-Jesus & Lopes, 2011; Trigwell & Prosser, 1996; Jucks & Hillbrink, 2017; Visser-Wijnveen et al., 2009; Murray & MacDonald, 1997; Tavakoli et al., 2015; Czajka & McConnell, 2019; Ho, Watkins, & Kelly, 2001; Owens, 2012; Sadler, 2012; Perez-Villalobos et al., 2019; Gow & Kember, 1993; Jacobs et al., 2015a; Pérez-Rodríguez et al., 2021; Prosser et al., 1994; De Rijdt et al., 2016	N_{def} = 11 Rienties et al., 2013; Fischer & Hanze, 2020; Norton et al., 2005; Samuelowicz & Bain, 2001; Norton et al., 2010; Allendoerfer et al., 2014; Hativa, 2000; Guskey, 1986, 2002; Gilmore et al., 2014; Rienties et al., 2011	**29**
	TOTAL	**N_{def} = 65**	**N_{def} = 24**	**89**

Note: x = an author / the authors used/created their own definitions of ACTs or ABTs; N_{def} = number of definitions; ** = the author(s) cited two definitions of ABTs of ABTs or ACTs (e.g., Lee, 2019 cited Nestor's (1987) and Pajares' (1997) definition of ABT; Jacobs et al., 2016, 2020 cited Kagan, 1992 and Pratt 1992 when defining ACTs); *** = the authors used three different definitions of ACTs and ABTs (e.g., Degago & Kaino, 2015; Jacobs et al., 2012)

Table 3. Overview of the consistency in the terminological use and the equivalence between ACTs and ABTs (N = 78)

Interchangeably use of terminology			**Differences in the use of terminology**							
					Not possible to be figured out					
Clearly specified	**Not clearly specified**	**N total**	**Clearly specified**	**Not clearly specified**	ACTs not mentioned throughout the paper	No articles cited ACTs in the paper	ABTs not mentioned throughout the paper	ABTs not mentioned & No articles cited ABTs in the paper	**N total**	**N total analyzed articles**
N = 2	N = 42		N = 9	N = 8	N = 6	N = 2	N = 7	N = 2		
Fischer & Hanze, 2020; Devlin, 2006;	Perez-Villalobos et al., 2019; Vilppu et al., 2019; Mladenovici & Ilie, 2023; Eley, 2006; Pedrosa-de-Jesus & Lopes, 2011; Jacobs et al., 2015b, 2016; Norton et al., 2005, 2010; Gonzalez, 2011; Mimirinis & Ahlberg, 2011; Calkins et al., 2012; Karm et al., 2022; VanDriel et al., 1997; Lee, 2019; McAlpine et al., 2006;; Van den Bos & Brouwer, 2014; Entwistle & Walker, 2000; Degago & Kaino, 2015; Pauler-Kuppinger & Jucks, 2017; Owusu-Agyeman et al., 2017; Kember & Kwan, 2000; Visser-Wijnveen et., 2009; Wegner & Nuckles, 2015; Light and Calkins, 2008; Jacobs et al., 2015a Stevenson et al., 2014; Pacifico et al., 2021; Åkerlind, 2008; Barnett & Guzman-Valenzuela, 2017; Rienties et al., 2013; Ho et al., 2001; Owens, 2012; Sadler, 2012a, 2012b; Allendoerfer et al., 2014; Hativa, 2000; Samuelowicz, 1999; Ottenhoff-de Jonge et al., 2021; Young, 2008; Rienties et al., 2011; De Rijdt et al., 2016;	**44**	Wheeler et al., 2017; Postareff & Lindblom-Ylänne, 2008; Buswell & Berdanier, 2020; Seng & Geertsema, 2018; Samuelowicz & Bain, 2001; 2010; Jacobs et al., 2012, 2014, 2020; Virtanen & Lindblom-Ylänne,	Saroyan et al., 2009; Murray & MacDonald, 1997; Tavakoli et al., 2015; Czajka & McConnell, 2019; Gow & Kember, 1993; Pacifico et al, 2020; Noben et al., 2021; Jucks & Hillbrink, 2017	Addy & Blanchard, 2010; Chapman & McConnell, 2018; Popova et al., 2020, 2021; Guskey, 1986, 2022	Taylor et al., 2007; Mattheis & Jensen, 2014	Pérez-Rodríguez et al., 2021; Samuelowicz & Bain, 1992; Buswell, 2018; Stes & Van Petegem, 2014; Gilmore et al., 2014; Trigwell & Prosser, 1996; Carvalho et al., 2021	Dall'Alba, 1991; Prosser et al., 1994	**34**	**78**

Note: N = number of articles.

4. Discussion of the findings

Several researchers shouted long ago that the mystery of how ACTs are transposed in observable teaching practices must be solved as soon as possible (Kane et al., 2002; Kember, 1997; Samluelowicz & Bain, 1992). Nonetheless, this can be accomplished only by enhancing the findings' trustworthiness and agreement towards definitions and terminology of ACTs and ABTs (Kember, 1997; Pajares, 1992). This messy literature was reviewed only twice, specifically on higher education teaching conceptions (Kember, 1997; Kane et al., 2002). Even though Kember's (1997) and Kane and her colleagues' (2002) reviews brought some clarifications, their work's essence lies in their recommendations. Years have passed, and we still need to reach a consensus on the definition and terminology of ACTs.

It is essential to mention that this literature review aimed to systematically investigate the terminological consistency and definitional clarity concerning academics' "conceptions of teaching" (ACTs) and "beliefs of teaching" (ABTs) in previously published studies. Our main aim was not the creation via inductive (e.g., grounded theory or content analysis) or deductive procedures (e.g., operationalization or hypothesis testing) of a definition of ACTs or ABTs but to shed light on the consistency of the use of definitions and terminology until the search day (i.e., 4 September 2022). Our work focused on the demarcations between these two terms (i.e., ACTs and ABTs) and other related terms (i.e., cognitions about teaching or perspectives of teaching) and their definitions so that it could eventually lead to the establishment of a clear definition, explicit acknowledgment of terminology, and consistency in analysis and findings reporting.

Our systematic analysis showed that the vast majority of studies adhered to Pratt's (1992) definition of teaching conceptions and favored the use of the term "conceptions of teaching" under this form or an equivalent (e.g., conceptions about teaching or conceptions about learning and teaching). As Kember (1997) concluded in his literature review, the prevalent use of "conceptions of teaching" and the adoption of Pratt's (1992) definition may suggest a dominant trend. Although this conclusion is still valid today, we must be aware that although Pratt's definition was used predominantly, it was only the case for around 20% of the studies (i.e., N = 15 out of 78 articles). Additionally, 37.18% of studies presented no clear definition of teaching beliefs or conceptions or had no definition, while 23.07% introduced their own definition. Also, it should be emphasized that besides the definitions of Pratt (1992), Pajares (1997), Kagan (1990, 1992a, 1992b), and Nespor (1987), there were 23 more definitions of teaching conceptions vehiculated. The tremendously high number of ACTs and ABTs operationalization is an unmistakable indicator of the existing ambiguity in the field. By operationalizing the ACTs and ABTs definitions in the 78 analyzed articles, we strictly meant to emphasize the differences between how different authors tracked and used the ACTs or ABTs and not the meaning of the definitions themselves. Simpler said, we made an accountability of the definitions rather than an in-depth analysis of their meanings. A more in-depth analysis of the

diversity of definitions and the extent to which, even if they are different in writing, the meaning conveyed by the text is the same, almost the same, or profoundly different is needed.

Our results also emphasize the necessity for greater consistency and transparency in terminological usage. *The majority of the analyzed papers (56.41%) used the "conceptions of teaching" and "beliefs of teaching" interchangeably without explicit mention. On the contrary, the remaining 46.46% viewed them as distinguishable. However, in this latter stance, even if it was clear that there were differences in terminology usage, the differences were impossible to figure out or were not pinpointed.* The term "conceptions of teaching," which is rooted in the phenomenological paradigm and is characterized by qualitative methodologies, was predominantly utilized to the detriment of the "beliefs of teaching" terminology (i.e., which comes from the cognitive paradigm and is usually investigated via quantitative studies). Despite the distinct theoretical backgrounds of these two terms, our findings indicated that they were frequently used interchangeably in literature. However, only a tiny percentage of 2.6% (N = 2 out of 78 articles) acknowledged this interchangeability explicitly. Hence, this alleged lack of awareness stresses the possibility of misinterpretation and the challenge of comparing and synthesizing findings, representing critical literature gaps.

Implications for research and practice

To improve the quality of teaching in HE, researchers must exploit the pedagogical empirical literature and theory to deepen their knowledge and share the findings of the inquiries so that other educationalists and researchers can analyze them, learn from them, and, if necessary, criticize them (Roxå & Mårtensson, 2009). In this systematic literature review, we advocate for consistency in research definitions and terminological use of teaching conceptions, paramount for minimizing the risk of misinterpretation, comparing, and synthesizing findings, as well as straightforward communication among educationalists, researchers, and policymakers.

In HE, it is rather often the case of interchangeable use of several concepts and phrases (e.g., cooperative and collaborative learning or staff development and instructional development) that share standard features even if their precise meanings sometimes differ (Arendale, 2005; Erașcu & Mladenovici, 2023). Generally, regardless of the research topic, the quest for interchangeability presents several noteworthy implications for research and practice. Following Kember's (1997) buzzes, more recent studies also called for more clarity in the ACTs definition and terminology (Åkerlind, 2008; Degago & Kaino, 2015).

In our particular case, on the one hand, the interchangeability of "conceptions of teaching" and "beliefs of teaching" without explicit recognition raises several important implications. First, it increases the risk of misinterpretation (Samuelowicz, 1999). Terminological misinterpretation can lead to inconsistency in the understanding and application of research results, further skewing the development of robust theories.

Second, the scarcity of terminological and definitional consistency may make comparing and synthesizing findings across studies difficult (Åkerlind, 2008). Consequently, it may hinder the development of our understanding and the capacity to draw comprehensive conclusions. Third, it leads to the spread of uncertainty and a deficiency of understanding between the main educational actors. Consistent terminology is paramount for effective communication among educationalists, researchers, and policymakers. It ensures that dialogues are grounded in a shared understanding. Otherwise, facilitating coordinated efforts to improve teaching and learning practices in HE via effective training could be restrained (Sadler, 2012a).

On the other hand, it is crucial to distinguish between ACTs and ABTs, as this recognition also has essential implications. If we agree that ACTs form the lenses through which academics interpret their teaching, we could also suppose that a collection of teaching conceptions forms a framework theory that serves as a basis for explaining and predicting everyday instruction (Vosniadou & Skopeliti, 2014). By relying on such a framework theory, academics can make sense of their teaching situations (Vilppu et al., 2019). However, this is only possible if there is clarity in the research landscape of teaching conceptions. Hence, to develop more precise conceptual frameworks and advance the field of study, researchers must avoid confusion and ensure that a study is grounded in a well-defined theoretical basis. By clearly distinguishing between ACTs and other related terms, one can contribute to the improvement of research findings validity and their inclusion in meta-analyses and further systematic reviews.

Recommendations for future studies

Considering the early presented arguments and the suggestions of earlier reviews at the pre-university level (Kagan, 1990, 1992a, 1992b; Pajares, 1992), the fundamental paper on adult education (Pratt, 1992) and the HE level (Kember, 1997; Kane et al., 2002), we advance the following recommendations for future studies aiming to investigate ACTs.

In order to enhance transparency and decrease the gamble of misinterpretation, future studies should establish and adhere to explicit definitions of "conceptions of teaching" and/or "beliefs of teaching" based on their theoretical underpinnings. Accordingly, the study of Devlin (2006) is an example of good practice regarding proper terminological usage and clear definitions. After a concise recap of the main issues in the context of ACTs absence of a precise and agreed-upon definition and consistent nomenclature use in the area), the author presents the most often terminology used interchangeably with the ACTs. Next, Devlin (2006) cites Pratt's (1992) definition of ACTs and further brings clarification regarding the definition and terminological usage throughout the paper: "For the sake of clarity, in this paper, conceptions of university teaching are defined as specific meanings attached to university teaching and learning phenomena, which are claimed to then mediate a teacher's view of, and responses to, their teaching context." (p. 112). This kind of practice can be easily employed, significantly reducing the chance of misinterpretation.

Future investigations should explicitly confess whether they use these terms interchangeably and justify their choice. This translucence will aid in comprehending the context and rationale behind the terminological use. As a good practice for the assumed interchangeability between ACTs and ABTs, we recommend the work of Fischer & Hanze (2020), which made a clear distinction between various terms (i.e.., beliefs, conceptions, orientations to teaching, personal practical knowledge, subjective theories, and attitudes) that are often used to define how university teachers understand their role in the learning process and what they think about teaching. The authors also mention relevant research on ACTs (Kember, 1997; Trigwell & Prosser, 1996; Kane et al., 2002) to emphasize this terminological overlap. On the contrary, a relevant example of a situation when ACTs and ABTs are not used interchangeably but clearly expressed is the work of Jacobs et al. (2012). In their article, Jacobs and colleagues clearly defined ACTs by citing the work of Kagan (1992) and Pratt (1992). Afterward, the authors mentioned the following explanation: "Conceptions should be distinguished from beliefs (Fishbein & Ajzen, 1975) and perspectives (Pratt, Arseneau, & Collins, 2001; Pratt, 2001) related terms which are often used in the literature but encompass more aspects than conceptions do. Beliefs also include confidence in one's ability to affect student performance (teacher efficacy), nature of knowledge (epistemological beliefs) and causes of student performance." (p. e483).

Last but not least, future investigations on ACTs should emphasize the importance of definitional and terminological consistency. The correct use and clear distinctions between these two concepts can foster a more coherent and reliable body of literature which can further open the doors for more specific and tailored measurement instruments and informed and evidence-based educational policies (Sadler, 2012a). Without all those components, developing a precise language for understanding how academics represent their ACTs independently and about their teaching actions is unlikely (McAlpine et al., 2006).

Limitations of generalizations

The current systematic literature review was written from a narrative perspective to gain more insights. Even if a meta-analytical study would acquire less in-depth data (Shih & Fan, 2009), it could provide some valuable insights by systematically and quantitatively analyzing definitions and variations of ACTs and/or ABTs. Looking forward to the coming investigations, employing more data analyses, clear coding schemes and definitions to manage heterogeneity, and carefully evaluating the methodological rigor of the incorporated studies using a qualitative assessment tool would also be beneficial.

Due to the eligible studies' number in our final database that examined teaching beliefs and/or teaching conceptions at the HE level and measured them, the current findings should be considered as indicative and subject to additional examination. A significant limitation of our study is that we performed our systematic literature search only in the Web of Science database concomitantly with the backward citation searching

techniques. Future studies should extend our search even further (i.e., unpublished sources) and update the search to date, as in between, some other studies respected our inclusion criteria but were published after the search day (e.g., Balan et al., 2023).

Another limitation of our investigation is that we focused mainly on the demarcations between ACTs and ABTs and their definitions, hoping this would lead to a clear framework of definitions and terminology. However, even though it is of paramount importance, focusing exclusively on definitions and terminological transparency provides only a partial picture. The lived experiences of teachers in HE, the challenges they encounter in day-to-day teaching, and the dynamic nature of their instruction practices are equally vital in understanding the full spectrum of ACTs and ABTs. Hence, it is crucial to delve more in-depth into the nuances that impact and discriminate them to understand these concepts better. For example, future studies could aim to refine existing definitions based on empirical evidence by utilizing either a deductive (e.g., starting with a theory of ACTs and/or ABTs or hypothesis and testing it against data) or inductive technique (e.g., content or thematic analysis). Also, complementary to the exact unambiguous usage of definitions and terminology, it would be worthwhile if future studies explore how ACTs and/or ABTs manifest in various educational contexts, how they interact with other relevant concepts (e.g., teachers teaching approaches or teaching self-perceived efficacy) and how external factors (e.g., institutional, cultural, or disciplinary disparities) influence their formation and manifestation which further influence academics' teaching behaviors (Fischer & Hanze, 2020; Mladenovici & Ilie, 2023; Sadler, 2012a).

5. Conclusion

Our systematic literature review highlights the prevalent yet often unacknowledged interchangeability of "conceptions of teaching" and "beliefs of teaching". While Pratt's (1992) definition emerged as the most often employed one, teaching conceptions evolved as the most used terminology. Our results call for a concerted effort to achieve greater consistency in terminological use and definitional clarity of the teaching conceptions in higher education. Whether one uses ACTs and ABTs as interchangeable or not, it is essential to acknowledge their use to contribute to the minimization of existing ambiguities that lead to colossal misinterpretation. Also, to avoid perpetuating ambiguity and enhance the comparability of research findings, generalize the conclusion, and improve communication among the main stakeholders, one must very carefully read and cite the previous studies on ACTs and ABTs. In this regard, our synthesis may be beneficial. We hope that future studies will consider our recommendations and aim for consistency and accuracy in defining and using the terms ACTs, ABTs, and other messy concepts in the educational literature. Only in this way can researchers, practitioners, and academic developers contribute to a more coherent and impactful body of knowledge in the educational field.

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Research on pedagogical practice in initial teacher education for primary and pre-school teachers: a systematic literature review

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Abstract

The initial training of future teachers in pre-primary and primary education is of major importance for the quality of education of pre-school and early school-age children. It involves preparing students, for a teaching career and involves both theoretical training and practical introduction to teaching. The practical part of training is done usually in partnership of university institutions, with the schools of practice. Concerns about the different aspects of practice are visible in studies looking at how the practice programs are conceptualised, run, organised, and evaluated, from the perspectives of people involved: student, mentor, and university coordinator. Trying to understand how practicum is done within the frame of interinstitutional collaboration and shared responsibility, drawing on the theory of the third space, a systematic literature review was conducted to answer: How is the pedagogical practice of future primary and pre-school teachers researched from the perspective of the coordinator-student-mentor triad? 96 studies were selected, based on criteria related to issue researched, methodology used, categories of participants in the study, and results obtained. The analysis showed that most of the studies are qualitative, with relatively small numbers of subjects, most frequently students. The findings reflect the impact of the practice on each category of partners and the various facets of collaboration between those involved, as well as highlighting areas that the research did not fully address and require further investigation. The findings also highlight aspects to be considered for the further improvement of the teaching practice part of the initial teacher training programs.

Keywords: initial teacher education, practicum, preschool and primary education, systematic literature review

1. Introduction

Initial teacher training is the key to teacher quality and performance (UNESCO, 2019). This first career stage is the beginning of the learning and training process for a teaching career, developing the skills to implement quality educational activities (Wiens et al., 2021). The European Commission recognises that when an education system appears to be failing to educate students, the cause is often seen as the quality of education that teachers provide (European Commission, 2019). Moreover, education policy efforts

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aimed at improving student outcomes should target initial teacher education (ITE) (Bunoiu & Ilie, 2017; van Katwijk et al., 2019).

ITE is a complex system of dynamic elements that influence each other. It encompasses both the theoretical and practical training of future professionals who will be responsible for teaching a class, group of school / pre-school children (Schwille & Dembélé, 2007). Initial training should be defined by knowledge, practice and professional involvement (Tondeur et. al., 2020). While knowledge is acquired through theoretical courses and can be objectively assessed and supplemented later, practice and professional involvement are long-term processes involving the training and development of professional and transversal skills specific to the teaching profession.

Teaching practice is understood as a setting in which future education professionals are confronted with real situations (Hirmas, 2014), in a controlled and even simplified version (Guevara, 2017), in which students can observe, assist, teach, and conduct research in the field of education (Caprano et al., 2010). Exposure to real teaching experiences gives prospective teachers the opportunity to be relatively independent under the guidance of a tutor or mentor from the university or partner institution (Cohen et al., 2013; Graham & Thornley, 2000). Given the multiple valences of the teaching practicum for initial teacher training, we aimed in the present study to systematically identify the ways in which improving the teaching practice of future teachers has been researched and approached so far, answering the following research question: *How is the pedagogical practice of future primary and pre-school teachers studied from the perspective of the coordinator-student-mentor triad?*

1. Theoretical background

Pre-service teacher education

In the context of ITE, theoretical training is complemented by practical training, to build the professional identity of future teachers. These foster reflective processes and mobilise professional skills, contributing to the quality of the training programme (Mendoza et al., 2020; Musset, 2010; Tondeur et al., 2020). The relationship between theory and practice should be seen as one of connection, in which the two components inform each other (La Velle, 2019).

Two models of teacher education are known: the concurrent model and the consecutive model. In the concurrent model, practical training takes place at the same time as theoretical training, while in the consecutive model, practical training takes place after completion of theoretical studies (European Commission, 2019). These models correspond to the two training routes: a traditional one, carried out in vocational schools and university centres, and a modern one that aims to train teachers in a short time at the place where these teachers will carry out their professional activity (Musset, 2010).

The (social) constructivist theory and the third space theory are used as grounding theories for the research approach in this study, as they explain the importance of interactions between the members of the triad: coordinator - student - mentor which act while undertaking the teaching practice preparation in ITE. Thus, we chose to take into account for the present study *the third space theory* because it values the partnership within the teaching practice triad (Beck, 2018). This theory is established between the personal and the social and involves the internal structures of the student, the way in which he understands and assumes his roles, but also external elements of the interactions he has that must be exploited through communication, reflection, and critical analysis. In the learning community, together with the coordinator, peers, and mentor, the student creates links that form the third space to make learning meaningful (Tatham-Fashanu, 2023; Beck, 2018). In the third space theory, the university and the practice partner need to collaborate, to be partners, not subordinates. This leads to a detachment from the simple theory-practice relationship that can exist between the two partners and to the transformation of roles and responsibilities so that learning opportunities are generated for future teachers (Green et al., 2019).

In essence, the 'third space' suggests stepping out of the normal work environment (school or university) and into a neutral space to design, develop and deliver education to future teachers based on a shared understanding and vision (Jackson & Burch, 2018).

Partnership in pedagogical practice

In some educational systems, including the Romanian one, university employees are responsible for coordinating pedagogical practice. The practice partner appoints mentors, who are teachers from the partner institutions, to work alongside the practice coordinator. The term 'mentor' encompasses the multiple roles this professional has in initial training: guide, advisor, supporter, and even friend (Koç, 2011; Murray et al., 2021; Rakes et al., 2023). Despite the recognised special role in student training, mentors are poorly prepared to carry out mentoring activities (Clarke & Mena, 2020). During pedagogical practice, university coordinators, together with students and mentors, have the opportunity to collaborate by bringing together knowledge from academia and practitioners from pre-university settings. The student learns between mentoring and supervision, between guidance and control (McDonough, 2014).

The partnership between universities and schools is not always comfortable because the specifics of pedagogical practice go beyond their traditional field of activity. Ideally, there should be a collaborative partnership, with a balance required between training in teaching and learning concepts and training in practical skills through teaching experiences that ensure knowledge transfer (Bourke, 2019).

Researching pedagogical practice

Over time, there has been a growing research interest in practice issues (Fuentes-Abeledo et al., 2020; Lawson et al., 2015), as there is a desire for teachers to excel in the activities they undertake, but we have not been able to identify systematic reviews of topicality. The studies highlighted that the value of pedagogical practice depends on the content, structure, mode of delivery, and level of preparation of students. Two myths of practice have also been identified: a *positive* one, which captures the role of practice on the formation of better teachers, and a *negative* one, which warns that practice might promote conservative patterns of behaviour in the teaching process (Fuentes-Abeledo et al., 2020).

In attempting to identify literature reviews that capture as many aspects as possible that shape the pedagogical practice of prospective primary and pre-school teachers, we identified few such studies. Studying the issues of pedagogical practice of future professionals in primary and pre-school education, we found a lack of literature reviews that bring together the aspects that relate to this educational segment.

The few studies identified captured pedagogical practice from the perspective of the three actors involved: the coordinator/supervisor in the university, the student and the mentor in the partner educational institution. Thus, Cohen et al. (2013) and Lawson et al. (2015) focused their literature reviews on capturing aspects of the practice programme during initial training from the perspective of the practice triad.

The study by Cohen et al. (2013) presents elements referring to the concept, conduct, and organisation of pedagogical practice analysed from the perspective of the benefits for the triad: students, mentors, and practice coordinators, the types of activities they carry out, and the learning outcomes. On the other hand, Lawson et al. (2015) and Matengu et al. (2021) capture both individual relationships within the triad and institutional relationships between the university and the institution of application. Analysis of the operational and pedagogical structure and collaborative-participatory aspects confirms that practice is demanding for those involved and highlights the importance of collaboration between university practice supervisors and school mentors for the practical training of students.

Recently, due to the pandemic period we have been going through, studies have been focused on analysing the effects of the way online work is organised on the practice and how it has adapted to the new conditions. Vancell (2020), Carrillo and Flores (2020) explored the ways in which training programs have adapted to the shift to online courses as alternatives to classroom practice, highlighting the need for a vision that goes beyond traditional educational practices so that training institutions and mentors can address limitations that may arise in the future.

However, the systematic reviews mentioned, even if they cover a multitude of aspects of pedagogical practice, are either outdated, covering periods up to 10-15 years ago, or have focused on niche periods, such as the pandemic, or the investigative focus has been limited. Therefore, in the present study, we would like to add to the research discussions

the latest trends and findings in researching the teaching-practice partnership between university coordinators, student teachers, and school-based teacher educators.

2. Research methodology

Aiming to identify *how the pedagogical practice of future primary and pre-school teachers is studied in the literature from the perspective of the coordinator - student - mentor triad,* we focused, more specifically, on:

1) What aspects of practice do the studies for each triad member cover?

2) How is the collaboration between coordinators, students, and mentors studied in the context of pedagogical practice?

Methodology

Given the research focus, inclusion criteria were established:

Firstly, studies must be at the primary or pre-school level in compulsory mainstream education. Generally, ITE is mainly aimed at mainstream education, which covers the majority of the population in the 2/3 - 11 age group. The specifics of training for these segments of education to teach multiple subjects to the same group of school/pre-school children over 3 - 5 school years are different from those of teachers specialising in teaching a single subject.

Secondly, we looked for studies with an empirically investigative focus, be it a qualitative, quantitative, or mixed investigative design. The idea that educational research offers fresh perspectives and directions from institutional reality, which is all the more valuable because it is original, served as justification for such a choice.

Thirdly, the study had to address groups of subjects that could be identified in different contexts, such as university internship coordinators, the student as the beneficiary of the training, and the mentor/tutor/collaborating teacher in the school or pre-school institution where the internship takes place. University - student - school institution are practice partners who can influence each other positively or negatively, implicitly influencing the outcome of the practice training programme.

A final criterion was English as the language of publication, as for other languages, the accuracy of the translation could not be guaranteed, which could lead to misinterpretation.

To carry out the proposed study, a search algorithm was designed with three indicators in its structure: initial teacher training, pedagogical practice, and the level of schooling for which the training is carried out. For each of the three concepts, we identified synonyms frequently found in the articles studied in the pre-empirical stage of the systematic literature review.

Thus, we have identified four key terms and expressions for:

- *initial training*: 'initial teacher education', 'ITE', 'pre-service teacher education', 'initial teacher training', 'ITT', 'pre-service teacher training';
- *teaching practice*: "initial teaching practicum", "pre-service teaching practicum", "school-based practicum", "student-teacher practicum";
- *level of schooling*: early childhood education, preschool education, primary education, elementary education

The development of the algorithm was achieved by combining the key terms mentioned, using logical connectors ”OR”, ”AND”, and ”AND NOT”, which allowed the formulation of a research algorithm to identify relevant studies. The obtained algorithm was tested on different search databases so that it could be applied in the same way. After checking and adjusting the algorithm, in August 2021, we applied it to the databases of the National University of Singapore (NUS Library), Scopus, Web of Science, ERIC, ProQuest, and Google Scholar.

The choice of NUS Library was based on the fact that it allows the identification of studies by eliminating duplicates, applying filters for the targeted disciplines (education, psychology, and social sciences). As for Google Scholar, the large number of results was narrowed down by analysing them until three consecutive pages with irrelevant results were identified.

Based on the results obtained, the next step was the elimination of duplicates and the selection of articles that would form the basis of the systematic literature review. The elimination of duplicates was carried out manually, as not all databases allowed saving them in a format that could be checked with the help of a digital tool.

The selection of studies was done in two stages. The first stage, reading the titles and abstracts, aimed to identify articles according to the inclusion criteria. The result was a database of 364 studies, which was created in Excel spreadsheet software with information on key terms, type of publication, geographical region, publication period, type of design, instruments used, identification data of the sample under investigation, the problem studied, and the results obtained. At this stage, studies that did not provide sufficient information on the investigative approach or that could not be fully accessed were eliminated. This resulted in 79 articles addressing the practice issue with its various aspects. From the study of the bibliographic sources of the coded articles, following the "snowball" technique, we added a further 17 articles that met the inclusion criteria, thus obtaining a total of 96 articles. In the PRISMA diagram (Figure 1), it can be seen the searching process and the selection of articles to be reviewed.

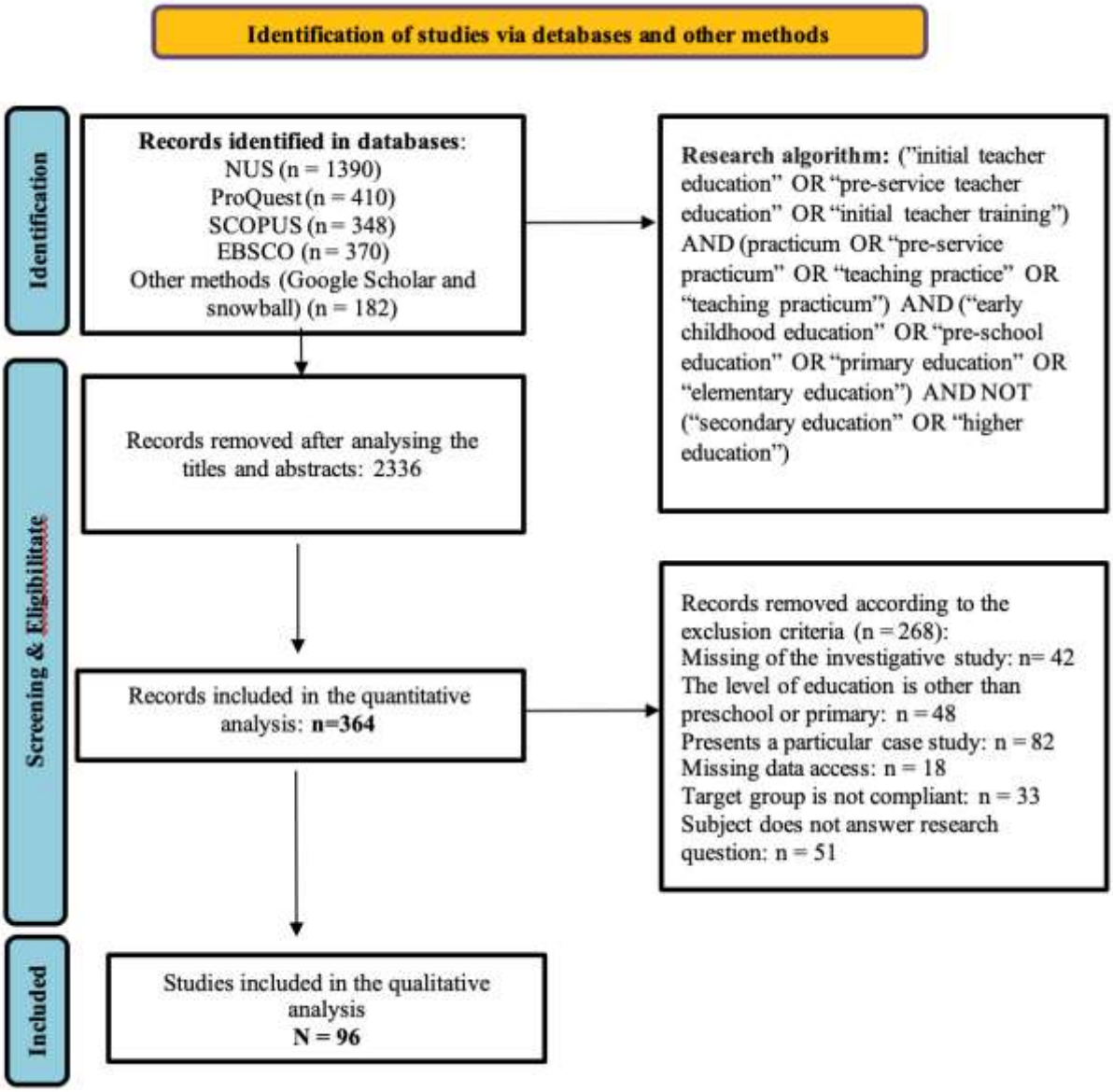

Figure 1. PRISMA diagram (adapted after Page et al., 2021).

3. Results

For the analysis of the selected studies, we took into account the targeted issues and aimed to identify those aspects that illustrate the roles of the triad of practice and the interactions between them in order to make the pedagogical practice programs of future primary and preschool teachers more effective.

Peer-reviewed articles made up more than 90% of the publications, which also included theses, dissertations, and papers presented at international conferences. The analysis of data related to publication period, type of research methodology, and geographical region is of interest as it demonstrates the focus of researchers on the issue of pedagogical practice. Thus, an increase in the number of studies published over time is observed from 1992 to the present, with the majority of studies published in the last 10

years. In terms of the geographical region in which the studies have been carried out, there is a greater concentration of studies in the European area, possibly due to changes in the last ten years due to the Bologna process and the European Commission's recommendations to improve the quality of teachers through educational policies aimed at initial training. The majority of the research methodologies used in the chosen studies were qualitative, with quantitative and mixed methods following.

The key terms identified have been coded and track issues that shape the relationships between members of the practice triad. Key terms referring to collaboration, communication, or partnership, in whatever form, from simple collaboration with the mentor, coordinator, or peers to carry out activities related to the internship programme, to collective reflection, peer review, and peer mentoring, were the most frequent. This confirms that there are necessary and useful links within the triad for the development of practice activities.

Theme: Skills training			
Sub-theme	*Author*	*Type of study*	*Subjects*
Professional skills	Fotopoulou, 2020; González et al., 2018; Agbenyega, 2012; Stenberg & Maaranen, 2020 a; Stenberg & Maaranen, 2020 b; Craveiro et. al., 2018	Quantitative Qualitative Mixed	Students
Practical teaching skills	Sirmaci, 2010; Toklu & Hursen, 2021	Qualitative Mixed	Students
Communication skills	Han et al, 2017; Hamaidi et al., 2014; Soini et al., 2015	Mixed Qualitative Quantitative	Students
Digital skills	Lemon & Garvis, 2016; Ballesteros Regaña et. al., 2019; Kim, 2020 Mohebi & Meda, 2021;	Quantitative Qualitative	Students Coordinators
Theme: Structure of the internship programme			
Curriculum - contents	Johansson & Sandberg, 2012; Rose & Rogers, 2012	Qualitative	Coordinators Students
Organisation of activities	Choy et al., 2014; Undiyaundeye & Inakwu, 2012; Harwell & Moore, 2010	Quantitative Mixed Qualitative	Students
Feedback and reflection	Bayat, 2011; Cenqiz, 2020; Chitpin & Simon, 2009; Foong et al., 2018 a; Foong et al., 2018 b; Galini & Kostas, 2014; Hojeij, 2021; Jain & Brown, 2020; Nolan, 2008; Nolan & Sim, 2011; Ntuli et al., 2009; Joseph & Brennan, 2013; de la Serna, 2011; Mena et al., 2016;	Qualitative	Students

	Khales, 2016; Loman et al., 2020; Martin & Clerc-Georgy, 2015; Davey, 2001		
Program / student evaluation	Aspden & McLachlan, 2017; Grudnoff et al., 2017; File & Gullo, 2002; Tasgin & Kucukoglu, 2016; Shahid & Hussain, 2011; Göçer, 2013; Al-Barakat & Al-Hassan, 2009; Koç, 2011; Laframboise & Shea, 2009; Sinclair, 2008; Ismail & Jarrah, 2019; Tok, 2011; Kaldi & Xafakos, 2017; Grudnoff, 2011; Johnson, 2013;	Qualitative Quantitative Qualitative Mixed	Triad Students Students Students
	Theme: Partnerships		
Partnership with colleagues, mentor, and coordinator	Ammentorp & Madden, 2014; Walsh & Elmslie, 2005; Gardiner & Robinson, 2009; Parsons & Stephenson, 2005; Beck & Kosnik, 2002; Sağ, 2008; Ussher & Carss, 2014; Heung-Ling, 2003; Stavropoulos, 2016; Maynard, 2000; Bullough et al., 2002; La Paro et al., 2020; Ferrier-Kerr, 2009; Ronsyn, 2013; Graves, 2010; Mena et al, 2017; Ben-Harush & Orland-Barak, 2019; Edwards & Protheroe, 2004; Hagenauer et al., 2021; White, 2009; Kokkinos & Stavropoulos, 2014	Mixed Qualitative Quantitative Mixed Qualitative Quantitative	Students Mentors Triad Students
Institutional partnership	Kula & Güler, 2021; Martin et al., 2011; Mauri et al, 2019 Mason, 2013;	Qualitative Quantitative	Triad Mentors Students
Ways of collaboration	Schiff, 2015; Waber et al., 2020; Stanulis & Russell, 2000;	Qualitative	Students Mentors
	Theme: Mentors and mentoring		
The roles of mentors	Ausiku et al., 2019; Cheng, 2005; Hobjila, 2012; Kupila et al., 2017; Jaspers et al., 2014; Jaspers et al., 2018; Hung et al., 2003; Puroila et al., 2021;	Qualitative Mixed	Mentors Students
Types of mentoring	Cavanagh & King, 2019; Kakana et al, 2017	Qualitative Mixed	Students Mentors
Difficulties of students and mentors	Craveiro, et al, 2018; Castañeda & Zuleta Garzón, 2005; Tok, 2010; Goodfellow, 1995; Koerner, 1992; Yoon & Larkin, 2018; Fuentes-Abeledo et al., 2020;	Mixed Qualitative Quantitative	Students

Student teacher

Of the three members of the practice triad, the most present in the identified studies are *students*. For them, initial training through pedagogical practice should ensure *the acquisition of competencies and skills* for the teaching profession (González et al., 2018). Through the teaching exercise, the theory learned is put into practice (Craveiro et al., 2018; Fotopoulou, 2020; Rose & Rogers, 2012), thus laying the foundations of *professional identity* (Craveiro et. al., 2018; Fotopoulou, 2020; Soini et al., 2015; Stenberg & Maaranen, 2020 a, b). The student's progress from the beginning of the internship program to its end indicates the level of theoretical knowledge acquired, the effectiveness of the activities carried out to acquire practical skills, and the effectiveness in the teaching activity (File & Gullo, 2002; Göçer, 2013; Johnson, 2013; Laframboise & Shea, 2009; Shahid & Hussain, 2011; Tasgin & Kucukoglu, 2016; Tok, 2010).

Among the *professional competences* that students acquire during their practice are those related to classroom management, teaching and assessment design, and communication (Sirmaci, 2010; Toklu & Hursen, 2021). Communication, as a professional competency, is developed by encouraging the student to ask clarifying questions so that there are no unclear or misunderstood issues (Hamaidi et al., 2014; Han et al., 2017).

The digital competences necessary for the teaching profession are used with regard to students in the activities they carry out during their pedagogical practice, up to the use of digital resources and technologies in the classroom or the creation of digital content for the activities supported. Moreover, assessment of competences is carried out through digital portfolios (Lemon & Garvis, 2016). Studies have shown that although students appear to have sufficient theoretical knowledge, follow the routines of the institutions in which they carry out their practice, master the theory and methodology of instruction and the didactics of the subjects, and use technology in carrying out activities, at the beginning of their careers, the experience of practice does not seem to have sufficiently prepared them for the challenges they have to face (Göçer, 2013; Shahid & Hussain, 2011).

Reflection is the activity that future teachers carry out in order to analyse their own practical performance. The student critically analyses their own practice (Bayat, 2010; Cenqiz, 2020; Han et al., 2017; Hojeij, 2021; Martin & Clerc-Georgy, 2015), grounding their teaching in research (Laframboise & Shea, 2009). Reflection, as a practice in initial training, although more effective if carried out in a group through reflective dialogue than if carried out individually (Castañeda & Garzón, 2005; Fo et al., 2018; Nolan, 2008), plays a role in surfacing aspects of detail in the activities carried out. Conducted individually, reflection can be documented in the form of a structured question-based journal or an unstructured journal that gives students the opportunity to write about their own teaching experiences freely (Cenqiz, 2020). If at the beginning of the training period the capacity for reflection is limited, the student acquires autonomy by showing depth in

analysing classroom practices (Galini & Kostas, 2014). Reflection increases the student's self-confidence, improving communication skills, which leads to overcoming some of the difficulties that may arise in carrying out pedagogical practice (Khales, 2016).

In terms of assessment and self-assessment, this is done through the portfolio, e-portfolio prepared by the student during the period of practice, but also through demonstration lessons, research, problematization and case studies (Joseph & Brennan, 2013; Ntuli et al., 2009).

The difficulties that students face during the practical training period are not lost sight of either. Starting in the pedagogical practice program brings insecurity, anxiety, and stress due to a lack of experience in planning and facilitating learning in classroom management, but these can be overcome with familiarity with the requirements, with the mentor, and with how to seek and get answers to questions (Craveiro et al., 2018; Koç & Yildiz, 2012; Prada Castañeda & Garzón, 2005). During the course of the pedagogical practice, students reported difficulties in teaching different types of lessons and selecting the most appropriate teaching strategies, time and class/group management, insufficient diversity of teaching tasks, working with different categories of students, and even lack of guidance from the coordinator or mentor (Fuentes-Abeledo et al., 2020; Hamaidi et. al., 2014; Ismail & Jarrah, 2019; Tok, 2010). These may be due to differences between theory and practice (Craveiro et al., 2018; Rose & Rogers, 2012).

Practice coordinator

The university practice coordinator is rarely the focus of studies, with many unknowns remaining about their role or influence on student learning. Most often, coordinators focus their work on issues related to designing and organising the internship programme, ensuring the transfer of theoretical knowledge into actual practice, and supporting the student in lesson planning and reflection (Davey, 2001). They also identify institutions where the internship can take place and monitor students in terms of the level of practical knowledge they have acquired through (Johansson & Sandberg, 2011).

Coordinators in the university are responsible for creating a conducive learning environment by informing participants, placing students in practice in pairs or even groups, and assessing them accurately (Bullough et al., 2002; Gardiner & Robinson, 2009; Walsh & Elmslie, 2005).

Activities should be carried out in a step-by-step manner, encouraging student participation so that the student achieves the expected learning outcomes (Stenberg & Maaranen, 2020). The categories of tasks proposed include planning, assessment, and reflection (Johansson & Sandberg, 2012; Fuentes-Abeledo, 2020). The actual involvement in school activities is carried out gradually, from the teaching of lesson sequences prior to the actual practice (Choy et al., 2014; Kupila et al., 2017; Undiyaundeye & Inakwu, 2012), followed by observing activities carried out by mentors, and then teaching some lessons in their entirety (Choy et al., 2014; Harwell & Moore, 2010).

Coordinators use *digital means* for providing feedback to students for instructional design, for designing and organising pedagogical practice and communicating with institutional partners (Lemon & Garvis, 2016).

During initial training, practical training is carried out at the same time as theoretical training. Identified studies have shown that students have limited skills in applying theory to practice in lesson preparation and conscious reflection on practice (Agbenyega, 2012; Cavanagh & King, 2019; Craveiro et. al., 2018), which calls for coordinators to increase the number of hours of pedagogical practice (Graves, 2010; Toklu & Hursen, 2021).

The competences are achieved by means of a curriculum designed to allow the student to apply the theories learned but also to practice skills and attitudes. This requires both the active involvement of the student and the positive example of the mentor (Rose & Rogers, 2012).

Mentors

Mentors are seen as facilitators of learning (Cheng, 2005; Wilson & Huynh, 2020) and positive role models (Rose & Rogers, 2012) who create social and cognitive conditions for the development of future teachers' professional identities (Solé et al., 2018; Yoon & Larkin, 2018). They can influence, through their facilitation style, the depth of the student's thinking (Foong et al., 2018; Mena et al., 2016) by collaborating with the prospective teacher both in teaching activities and in the whole journey of planning, document analysis, and lesson plan making, assuming the role of teacher (Schiff, 2015; Jain & Brown, 2022; Nolan, 2008; Nolan & Sim, 2011; Stanulis & Russell, 2000; Waber et al., 2020).

The mentor's roles in mentoring students are diverse, ranging from providing the space for the practice to take place to observing the student's work to providing personal, professional, and educational guidance to the mentored students (Ausiku et al., 2019; Cheng, 2005; Hobjila, 2012). The mentor has a role in practice; the learning process of teaching is both personal and social (Cheng, 2005). It provides feedback on the development of activities (Foong et al., 2018; Galini & Kostas, 2014; Hojeij et al., 2021; Loman et al., 2020), but also on the classroom management of students, improving the quality of teaching (Hung et al., 2003). In order to understand and optimally perform their roles, mentors need motivation, specific supervisory and mentoring skills, specific training, and are undertrained (Ausiku et al., 2019; Kupila et al., 2017; Puroila et al., 2021).

The mentoring activity starts with observing the learning environment and the children, then familiarising the student with the pedagogical and methodical aspects, and culminates with the approach to teaching as a whole, including the relationship with the parents of the school/preschool children. These activities are carried out under the supervision of the university coordinator and mentor. While the student may be a

reflective observer or active participant, the mentor should be a supporter, role model, facilitator, collaborator, and evaluator. Roles are exercised both before mentoring and during and after mentoring (Kupila et al., 2017).

In the work of the mentor, there may be challenges due to the fact that the mentor has professional roles towards the students they educate (Koerner, 1992), but also roles given by the mentorship of future teachers (Yoon & Larkin, 2018). Primary are the duties towards the students, with mentoring and coaching perceived as additional tasks (Jaspers et al., 2014; Jaspers et al., 2018). Challenges also result from the fact that there are aspects of the running of the partnership with the university that need to be clarified: what documents need to be drawn up during the practice, what are the specific duties of mentoring students, or how student assessment is carried out (Aspden &McLachan, 2017; Goodfellow, 1995; Shahid & Hussain, 2011).

Partnership in the teaching practice programme

The university-school/kindergarten partnership, after-school/before-school centres, etc. enable practical activities to take place, with pre-school educational institutions being the place where theoretical and practical knowledge are brought together (Ammentorp & Madden, 2014; Grudnoff et al., 2017; Mauri et al., 2019). To support students, universities can partner with teachers from educational institutions to act as mentors, which increases the involvement of experienced teachers in initial training (Mason, 2013).

Moreover, the partnership relationships are not only institutional, as the studies show, but mainly interpersonal, established between student and mentor, between student and group mates, and between student and university placement coordinator.

Student collaboration with group peers is a form of partnership that has the advantage of fewer mentors but also of peer learning and mutual feedback (Bullough et al., 2002; Chitpin & Simon, 2009; Loman et al., 2020; Joseph & Brennan, 2013). This type of collaboration also manifests itself in peer assessment, a way of evaluating students from the perspective of future education professionals (al Barakat & al Hassan, 2009; Koç, 2011). It is achieved by completing evaluation forms, which support the development of skills in using standards in assessment, lead to awareness of issues related to teaching activity, increase student responsibility, and diversify practice by providing opportunities to compare different activities (Koç, 2011). This placement model can also have disadvantages if students do not establish collaborative relationships with group colleagues (Parsons & Stephenson, 2005) and if there is no emotional and professional support from the mentor (Beck & Kosnik, 2002; Graves, 2010; Hagenauer et al., 2021; Sag, R., 2008; Ussher & Carss, 2014). Even if there are multiple students assigned to a mentor, it is necessary for the mentor to provide individualised support to each student in order to successfully complete the teaching and practice activities (Ronsyn-Misselbrook, 2013)

Building positive relationships between stakeholders in pedagogical practice must take into account issues related to communication, collaboration, and supporting the student in a professional manner by a mentor who is trained to perform the required roles (Edwards & Protheroe, 2004; Heung-Ling, 2003; Maynard, 2000; Mena et al., 2017; Stavropoulos, 2016). School institutions that practically prepare future teachers need to be supported, as they are spaces where students and mentors carry out various professional development activities (Edwards & Protheroe, 2004). If the relationship is not a constructive one, difficulties in carrying out pedagogical practice, stress or even lack of student effectiveness can occur (Ferrier-Kerr, 2009; Kokkinos & Stavropoulos, 2014; La Paro et al., 2020). These can be overcome if the practice triad of student, mentor and coordinator functions optimally (Ben-Harush & Orland-Barak, 2019), if there is a shared vision of practice (Sağ, 2008; White, 2009).

School-university collaboration is a complex one (Martin et al., 2011) that should be leveraged by increasing the number of practice hours (Kula & Güler, 2021) and involving mentors in joint partner institution-university activities (Mason, 2013). The mentor and the coordinating teacher should collaborate on an equal footing and with shared roles in the practical training of future teachers (Mauri et al., 2019). Students' expectations are directed towards both mentors and co-coordinators and the institution where they carry out their practice activities. From mentors, students want collaboration and guidance, while from coordinators, they want to maintain contact with them and the institution where they carry out their practicum, as well as rigorously supervise their teaching experiences. From the institution where the students carry out the practice, they want to create a desirable working environment and information on specific rules and routines (Sağ, 2008).

Mentor-coordinator collaboration is visible up to the student and even program evaluation stage to make the necessary adjustments so as to lead to improved student outcomes, and acquisitions that prepare the future teacher for the complexity of the demands of teaching (Grudnoff, 2011; Grudnoff et al., 2017; Kaldi & Xafakos, 2017).

4. Discussions and conclusions

The systematic literature review presented above has allowed us to identify some aspects studied over time concerning the pedagogical practice of future teachers in primary and pre-school education from the perspective of practicum triad: coordinator - student teacher – mentor triad.

Being informed by the third space theory in pedagogical practice we have tried to present the results from two perspectives: personal and social, structuring the data both to cover the three members of the triad, and to capture the interactions between them, in different learning environments.

The student teacher is seen in relation to the motivation for choosing the profession, the perception of the internship program, but also in terms of competences, self-efficacy, relationships with colleagues, or with an internship mentor. It has been found that future teachers in pre-school and primary education are more interested in teaching practice than those from other specialisations, and that they show a higher level of efficacy compared to those preparing to teach at the secondary level (Sirmaci, 2010).

The mentor is responsible for the student teacher's professional training, and it is necessary to clarify the specialisations and parameters of the relationship with the student. Less present in the studies is the university internship mentor, who is responsible for planning, organising, and evaluating the internship programme.

The coordinator at the university is the one who organises, plans, and coordinates the teaching practice programme. Less present in the studies identified, they are required to provide guidance to students, which is difficult to do given that future teachers feel the need for this support to underpin their learning.

The social perspective includes all the relations established within the teaching practice triad. From this point of view, we have underlined the idea that the institutional *partnership* must be supported by the interpersonal one. The three members work together at every stage of the placement to prevent and resolve problems that may arise due to the student's lack of experience. Communication, collaboration, involvement, responsibility, and facilitating learning are important in practical training activities. The common and specific roles of each partner should be known, assumed, and fulfilled professionally so that the student is well prepared professionally at the end of the training programme, but also to reduce tensions that may arise (Kupila et al., 2017; Tuyan, 2023).

Less studied were the roles and responsibilities of coordinators, student teachers and mentors, and how learning is achieved through pedagogical practice.

The results can also be seen from the perspective of how pedagogical practice is conceived, organised, carried out and assessed. In conceiving a *concept of practice*, competences related to classroom management, planning and designing of teaching, communication and digital activities should be carried out in relation to the theories learned and accompanied by a process of conscious reflection. An appropriate curriculum, gradually structured from activities of observation of the teaching approach carried out by the mentor to those of teaching sequences of lessons and then whole lessons contributes to the formation of the professional identity of the future graduate.

Compared to previous studies, our study contributes to broadening the scope of knowledge in the field of pedagogical practice on the one hand, by looking at practice from the perspective of the triad of practice, and on the other hand, by including pre- and post-pandemic studies focusing exclusively on the pre-school and primary education levels.

In addition to the positive aspects related to the diversity of the topics covered, we also identified the limitations of the studies reviewed. These include the fact that they are

mostly qualitative on small samples of subjects and that they do not address the perspectives of all those involved. The literature review showed the different themes that researchers have looked at when studying pedagogical practice in pre-school and primary education. It also showed that there is a need for studies that look at mentors of practice in pre-school education and practice coordinators in universities, two groups that were not well represented in the studies that were included in the literature review. Also, the review opens up themes to be further explored, as the topics underlined as being less addressed in the research undertaken so far are to be further considered, to come up with solutions for enhancing the quality of ITE practice training. A triad not functioning well hinders the desired quality of teacher preparation.

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Learning in higher education while being at war

[3]

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Abstract

Learning in higher education while being at war is the topic of this paper. The investigation on the management of one's own learning processes by students living war conditions has been addressed through a survey that was conducted on a sample of 1,685 students at the Igor Sikorsky Kyiv Polytechnic Institute in Kiev during February-March 2023, one year after the Russian invasion. The aim is to understand the strategies adopted by students to oppose and counteract the informal learning processes that are produced by the war. Findings of the study show that, although people are immersed in adverse conditions, they can autonomously direct their own learning processes and defend themselves against the learning valencies of the war to counteract its effects. This is a possibility that might depend on the educational quality of social relations and the networks each student has and was able to build. The possibility to be trained represents the most common concern among students. It is more widespread than the precariousness of material living conditions. However, this attitude is not generalised. According to the authors, the different positions expressed by the students could be attributed to the different level of the capacity each student developed to control the learning processes they are exposed to in their daily life. Based on this capacity of control of their own informal learning processes it is possible to activate autonomous self-directed learning and tackle the challenges the war poses.

Keywords: learning in adverse conditions; self-directed learners; learning in war times.

1. Introduction and conceptual framework

Informal learning processes that are being developed while being in war can determine the quality of learning outcomes of any other forms of learning. While formal and non

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formal education may remain the same, informal education is inevitably determined by the conditions of daily life people live. Studies on informal learning processes in the "total institutions" (prisons, hospitals, army) highlighted how informal learning has a decisive influence on learning outcomes. Informal learning in turn depends fundamentally on the educational quality of interpersonal relations and the educational role plaid by people who are present in people's daily lives (prison officers, doctors and care staff in hospitals, etc.). Living in war first reduces the conditions of "freedom to learn" (Rogers, 1969).

Access to formal education opportunities is necessarily limited. Furthermore, collective learning processes of people living in war are determined by the war strategies and the resulting conditions of daily life. These contexts impose extremely adverse learning conditions that can be nonetheless opposed by youngsters and adults themselves. More specifically, our hypothesis is that this is possible as long as people possess the capacity of identifying and oppose positive and negative "learning valencies" that are embedded in war contexts. Learning valencies are meant as the positive or negative *quid* of educational relevance, that is embedded in any experience people live in and produce transformative effects on the individual's growth and development depending on the kind of response and reaction individual takes (De Sanctis, 1976).

In this way people can autonomously direct their own learning processes and defend themselves against learning valencies of war in order to counteract the effects of war (sense of isolation, sacrifice of individual freedoms) and develop their own life and learning paths.

This is the research hypothesis we intend to explore in this essay.

We will start with a short review of the theoretical foundations our approach to learning processes in extremely adverse conditions and specifically self-directed learning are based on (§ 2). The focus is on the meaning of self-directed learning meant as the control over learning processes imposed by pedagogical contexts and powers. We then propose a desk analysis of higher education programmes dealing with conflicts -either armed or not-, prevention, management and historical evolution (§ 3).

This is followed by the presentation of the methodological frame (§ 4) and the results of the survey addressed to students at the Igor Sikorsky Kyiv Polytechnic Institute (Kiev) (§§ 5 and 6). The survey is focused on the challenges Ukrainian students have been facing since the Russian invasion (February 2022). It aims to analyse the informal learning processes that are activated in adverse conditions.

This study concludes with the presentation of indications that emerged from the survey as for the possibility people have to autonomously direct their own learning processes against the learning valencies of war to counteract its effects (§ 7).

2. Literature review

Literature this essay is based on is related to the issues on learning in adverse or extreme conditions, informal learning, total institutions, freedom to learn, capacity of identifying

and oppose learning valencies that are embedded in daily life. We shortly analyse it highlighting elements that are relevant for the survey and our interpretative proposals.

Learning in adverse or extreme conditions.

Consequences on learning processes that take place in extreme or adverse conditions (i.e. COVID-19) are related mainly to the psychological, emotional, cognitive dimensions and the variety of adverse learning behaviours: i.e. anxiety, dysfunctional cognitions, distress, mental wellbeing, etc. (Dinu et al., 2021; Paechter et al., 2022). Educational perspective of learning in "adverse circumstances" (Bethell et al., 2014; Blair and Raver, 2012) still is not investigated enough. Further investigation is needed to analyse how adult education can contribute to oppose adverse learning conditions, meaning the learning experiences of any variety and forms, war included, that prevent people from reaching their development goals and building answers to their own aspirations for growth in a wide sense (Federighi, 2016).

Informal learning.

Informal learning processes refer to learning valencies that are generated while people are engaged in social and productive activities or while being consumers of goods and services. Existing studies are aimed at understanding how intellectual development processes and knowledge and behaviours production processes take place and how the connected educational processes can be intentionally managed, both by the subject and by those who hold and exercise the powers for managing community, even in a covert manner (Federighi, 1997). Hidden curriculum (Jackson, 1968) represents the most pervasive and prevalent part of learning processes people are exposed to on a daily basis, in every moment that feeds their daily routine of educational actions and interactions (including virtual and war interactions). Through the hidden curriculum and the learning processes that are activated accordingly, social control occurs in the proposition of forms of socialisation that are based on dominant ideology and the maintenance of existing social, political, economic hierarchies. Insofar as they are deliberately concealed, informal learning processes can be unveiled and transformed into opportunities for the exercise of individual power for growth and development because not only is informal learning unique to the individual, but control of learning rests primarily in the hands of the learner (Marsick and Watkins, 1990).

Total institutions.

It is meant as "a place of residence and work where a large number of like-situated individuals cut off from the wider society for an appreciable period of time together lead an enclosed formally administered round of life" (Goffman, 1968, p. 11). Those living in conditions of war are subject to rules of operation that are determined by subjects who also exercise pedagogical powers: this is because through these rules they exercise the power to determine the learning conditions and educational contents embedded into the daily life of the country at war. Total institutions, by their very structure, elaborate

control procedures of a punitive character which ultimately have destructive effects on the persons' s self. This is the related educational risk, which can be mitigated by meanings that each person attaches to what Goffman calls "mortification processes" (1968), by the capacity to control the learning processes that are embedded into and induced by those exercising pedagogical power in total institutions and by the management of individual and collective struggles "against the submission of subjectivity" (Foucault, 1982, p. 782).

Freedom to learn.

Education and training represent a field of conflict and confrontation because powers are grafted in them and the development of individuals, subjects, communities, national entities depend on the exercise of these powers. The model is well known and recalls the role of educational and training apparatus (school, university, productive world) within the dominant ideologic apparatus (Althusser, 1970; Bowles & Gintis, 2003) that can be controlled and depowered by the Public of education (Dewey, 1927). Freedom to learn (Rogers, 1969) in war contexts, from the pedagogical perspective is the expression of freedom that is recognised to people to orient their choice towards learning opportunities that are consistent with their own intellectual development goals, without interference, even though the formal education supply is inevitably reduced. Since Dewey wrote "Democracy and Education" in 1916 much has been written about discourses of democracy and education. The question is particularly relevant nowadays where the new doctrines of war have chosen cognitive processes as their battleground (Roncolato, 2022; Clark, 2020; Defence Staff, 2023; Beauchamp-Mustafaga, 2019).

Capacity to identify and oppose learning valencies embedded in life environments.

This capacity can be defined as the combined set of the following capabilities (Dewey, 1938; Freire, 1970; De Sanctis, 1976; Bordieu and Passeron, 1977; Habermas, 1984; Brookfield, 1996; Giroux, 2001):

- *To get awareness of the learning valencies* embedded in life environments, workplaces, and consumption, induced by those possessing powers – also pedagogical ones – that are linked to the war;
- *To acquire the capacity to control powers that educate and miseducate people in their life settings, workplace, consumption of goods and services* as well as the learning valencies that are induced and embedded therein;
- *To exercise the power to respond to learning valencies embedded in war* as to modify intentionally learning meanings of behaviours and actions in which people are immersed (imposed silences that risk fostering low self-esteem, restrictions of freedom, submission, etc.);
- *To settle down the necessary instruments for self-directed learning and directing autonomously and intentionally one's own learning processes* that accompany every moment of social life of people, their social relations, also as an alternative to the dominant pedagogical powers.

3. Learning in adverse conditions in higher education. A desk analysis

The survey deals with the modalities through which university students manage their learning processes in times of war. Research on this specific topic is scarce. There is, however, a significant amount of training programmes offered by higher education institutions that focus on the management of learning processes in conflict situations. To this end, we refer to a selection of higher education activities on the topics of conflict, including armed conflict. It is a broad offer that nevertheless has the limitation of being oriented towards the development of individual, notional, technical and disciplinary learning. The object of the offer we consider is content, topics, techniques and not the exercise of control on behalf of students over the negative learning valencies that are induced by conflicts, including war. It is an offer mainly oriented towards *learning* and not towards *awareness*, *control* and the ability to build up answers, responses and actions that are useful to activate processes enabling the transformation of the sign of war-induced learning valencies. It does, however, provide us with a picture of how higher education institutions today deal with the timing of managing learning processes in conflict situations. Based on the desk analysis we carried out we identified higher education interventions and paths enabling participants to promote tools, mostly cognitive, for dealing with conflict situations, whether or not they lead to armed warfare.

To this end, we analysed higher education programmes related to the themes of war and conflict, which enable the development of different competences. From the multiplicity of the existing offerings, we have selected 22 curricula of degree programmes (master level) from universities in Italy, Europe and internationally. The selection was made on the basis of the recurrence of contents linked to the different types of conflict, to conflict resolution, to conflict management, in the curricula and/or in the title of degree programmes and/or courses. We used web sources available in English as primary data.

The analysis of the second-level curricular pathways was aimed at identifying the characterising elements that qualify the students' learning experience in relation to the acquisition of the ability to understand the different dimensions of war and conflict.

The analysis shows that in the sample considered, academic, second-level education is structured according to three main disciplinary approaches:

1. political-legal linked to a multidisciplinary dimension of war in a context of international relations;
2. sociological and anthropological related to conflict and the causes from which it originates in different forms of social interaction;
3. related to conflict management as a cross-sectional area of personal competence.

We now move on to the analysis of each of these approaches by defining their salient and distinguishing features that help us understand the kind of learning outcomes they

are able to promote, mainly linked to notions and behaviours that are closer to pedagogical approaches of acculturation more than the ones of emancipation, democratisation and construction of possible actions in response to informal education ongoing processes.

3.1 Political-legal approach linked to the conflict and war dimension

Those who attend this type of university course have the opportunity to develop knowledge about war from a semantic point of view through the in-depth study -also in a historical dimension- and the use of the different terms and concepts of war, conflict, armed conflict, which help to frame them within new meanings: "new generation of warfare", "information warfare", "irregular war", "non-military conflict", "non-traditional war", "hybrid war". The subject area of law, political science and international cooperation is where this type of offering proliferates. In the Master's degree courses, war, conflict and conflict resolution are approached from a historical-institutional perspective and treated as state-building, security-building, post-conflict peace-building tools, through which the inextricable links between peace, conflict and development and security are addressed. The economic and legal implications of conflict are also explored.

There are ten degree courses under consideration:

1. Peace Studies and Conflict Resolution at the American University of Rome (USA)[4],
2. Conflict, Security and Development at the University of Birmingham (United Kingdom)[5],
3. War and peacebuilding of the University of Leiden (The Netherlands)[6],
4. Conflict, Security and Development at London King's College (United Kingdom)[7],
5. Conflict and state building at the University of Oslo (Norway)[8],
6. War and Conflict Studies offered by the University of Postdam (Germany)[9],
7. International Security Studies offered jointly by the School of International Studies-University of Trento and the Sant'Anna School of Advanced Studies (Italy)[10],
8. Conflict, Security, State-building offered by the University of Turin (Italy)[11],
9. War and the Military in Society at George Mason University (Virginia)[12],

[44] https://aur.edu/ma-peace-studies-course-descriptions
[5] https://www.birmingham.ac.uk/postgraduate/courses/taught/govsoc/conflict-security-and-development.aspx
[6] https://studiegids.universiteitleiden.nl/courses/111562/war-and-peacebuilding
[7] https://www.kcl.ac.uk/study/postgraduate-taught/courses/conflict-security-and-development-ma
[8] https://www.uio.no/studier/emner/sv/statsvitenskap/PECOS4010/index.html#course_content
[9] https://www.uni-potsdam.de/en/studium/what-to-study/master/masters-courses-from-a-to-z/war-and-conflict-studies
[10] https://www.sis.unitn.it/3321/masters-degrees
[11] https://www.didattica-cps.unito.it/do/corsi.pl/Show?_id=ur9i
[12] https://mais.gmu.edu/programs/la-mais-isin-wms

10. Conflict, Peace and security offered by the United Nations Institute for training and Research (remote modality)[13].

Here the theme of conflict, framed within the framework of Security Studies, is combined with human rights protection and their impact on legal and political systems. Conflict and security represent two complementary aspects with respect to the safeguarding and protection of the rights of individuals and peoples. Interdisciplinary theoretical foundations of security are studied, also through the use of case studies selected from ongoing civil and interstate war conflicts. Security is seen not only as a state-centred issue to protect the territorial integrity but is focused upon human security and defence policymaking. Individuals and peoples have the right to be protected and safeguarded against external aggression, both when access to primary resources (e.g. water) is endangered and when it is the set of identity elements that people intend to preserve that is being challenged by outsiders. Conflict, in addition to being legally set as a defence device in the framework of international law, represents the instrument for asserting threatened human security. Related learning outcomes concern the possibility to develop notions useful to understand the various factors and actors having an impact on the global order and to analyse the dynamics of contemporary security in order to evaluate responses from national and international community.

3.2 Sociological and anthropological approach to conflict and its causes in different forms of social interaction

Students who attend this type of university course have the opportunity to acquire knowledge, including theoretical knowledge, about social conflicts: their origins and the conditions that promote their formation, the participants and the ways in which groups are mobilised within conflicts, the dynamics, i.e. through which processes and with what consequences conflicts begin, develop, abate and come to an end. In these activities, conflict is the object of study, in its various forms and representations that recall inter-subjective and multi-subjective conflicts (with reference also to inter-state and civil conflicts), and conflicts that more generally engage more or less extensive social groups. Conflict or rather conflictuality is explored as a mode of social action and intersubjective exchange, in some cases contextualised within violent conflicts.

We highlight six Master programmes of this kind:

1. Sciences of Administration and Complex Organisations of the Magna Grecia University of Catanzaro (Italy)[14],
2. Science in Conflict and Development Studies offered by the University of Ghent (Belgium)[15],

[13] https://learnforpeace.unitar.org/master-in-conflict-peace-and-security/

[14] https://www.diges.unicz.it/web/wp-content/uploads/2021/07/Format-Syllabus-Sociologia-dei-conflitti-Montesanti-2021-2022.doc.pdf

[15] https://studiekiezer.ugent.be/master-of-science-in-conflict-and-development-KMCODT-en

3. Conflict and Coexistence Studies offered by Osaka University (Japan)[16],
4. Anthropology and History of the Contemporary World of the University of Modena and Reggio Emilia (Italy)[17],
5. International Relations of the University of Perugia (Italy)[18],
6. Peace Sciences: Conflict Transformation and Development Cooperation University of Pisa (Italy)[19].

The educational opportunity to be grasped in these curricular activities is linked to the possibility that students have of also theoretically grounding themselves in the knowledge of conflict as an integral element of the socialisation process, present in every type of relationship - even virtual - and as such to be conceived as part of the social interaction process. Nothing new or unexpected, but a component of social and virtual relationships to be known. Participants develop management competences, out of the academic setting.

3.3 Approach to conflict management as a cross-sectional personal competence area

Conflict is a constitutive dimension of the human condition and concerns every time, space and type of relationship in which the person is involved. This is the basic assumption that inspires the master programmes of this third cluster.

Those who participate in this type of activities have the opportunity to develop conflict analysis skills as a useful competence for the management of relationships within different life contexts: civil, criminal, family, school, community, workplace, web. The study perspective here is focused on the possibility of using conflict management to mediate between different positions and points of view and generate a space for dialogue where people can bring positions closer with the help of a mediator. This can be a specially trained professional mediator or someone who acts as a mediator.

In both cases they are people who are aware of the continuous transversality of conflict and are able to analyse the potential causes of conflict between two or more different positions (of individuals or groups) and devise strategies for a possible mediation considering social and ethical responsibilities, also with a view to win-win negotiation.

University education in the field of conflict resolution and mediation covers a very broad field of activities at the master's degree level, both as individual courses and as a degree course. It encompasses training regulated by national laws (e.g. civil and

[16] https://www.hus.osaka-u.ac.jp/en/graduate/
[17] https://www.dslc.unimore.it/site/home/didattica/corsi-di-laurea-magistrale/antropologia-e-storia-del-mondo-contemporaneo.html
[18] https://www.unipg.it/didattica/corsi-di-laurea-e-laurea-magistrale/archivio/offerta-formativa-2023-24?view=elencocorsi&idcorso=261&annoregolamento=2023&tab=PRE
[19] https://www.unipi.it/index.php/lauree/corso/10976

commercial mediator) and that aimed at the acquisition and development of skills useful in resolving a conflict, wherever the real or virtual forum in which it is likely to occur.

Here are six examples of curricular activities:

1. Conflict Mediation offered by the Universitat de Barcelona (Spain)[20],
2. Conflict Resolution and Cohexistence offered by the Brandeis University (Massachusetts)[21],
3. Negotiation and Conflict Resolution offered by the Columbia University (USA)[22],
4. Mediation of conflicts within the CdL in Clinical and Health Psychology and Neuropsychology offered by the University of Florence (Italy)[23],
5. Workshop of Conflict Mediation in School and Family within the CdL in Developmental Psychology and Educational Processes at the University of Milan-Bicocca (Italy)[24],
6. Mediation and Conflict Management offered by the University of Valencia (Spain)[25].

These training activities range from the theoretical aspects of negotiation and mediation as conflict management practices to the potential of mediation related to specific professional fields. Related learning outcomes concern the possibility for students to analyse the dynamics affecting conflict prevention, acquire methods and techniques for preparing for the negotiation phase, and develop the skills to act in the role of mediator.

Higher education programmes selected highlight the variety of contents and thematic approaches on conflicts, war included. Empirical materials collected do not provide evidence of the possibility for participants to acquire capacity to understand and oppose learning adverse conditions as well as learning warfare induced by contexts where they live and by pedagogical powers managed by others.

4. Methodology

4.1 Statement of the problem

In order to take some steps forward in studying the learning processes of people living in a state of war, we carried out a survey among university students at the Igor Sikorsky

[20] https://web.ub.edu/en/web/estudis/w/masteruniversitari-M2B04
[21] https://heller.brandeis.edu/coexistence/
[22] https://sps.columbia.edu/academics/masters/negotiation-and-conflict-resolution
[23] https://www.unifi.it/index.php?module=ofform2&mode=1&cmd=3&AA=2022&afId=637147&lang=0
[24] https://elearning.unimib.it/course/info.php?id=45085
[25] https://www.uv.es/uvweb/college/en/postgraduate-courses/official-master-s-degrees/official-master-s-degrees-offered/master-s-degree-mediation-arbitration-conflict-management-private-law-1285848941532/Titulacio.html?id=1285860835209&p2=9-1

Kyiv Polytechnic Institute during 2023. The study was guided by the subsequent research question in the field:

Q1. Which kind of responses do university students implement to oppose – positive and negative - learning valencies that are embedded into the war settings where they live. The conflict inflicted substantial educational setbacks, as the deteriorating security situation detrimentally impacted students' psychological well-being, consequently affecting their academic performance. Furthermore, the imposition of martial law curtailed academic mobility prospects for male applicants.

The object of the survey is connected to the challenges faced by Ukrainian students after February 2022 when the war started.

4.2 Sampling

Our study was based on anonymous surveys conducted via the Computer Assisted Web Interviewing (CAWI) method using Google Forms. It involved 1,685 participants from Igor Sikorsky Kyiv Polytechnic Institute's students during February-March 2023 (out of 25 thousand[26]). The sample guarantees the trustworthiness interval that is the level of safety of the results obtained by the survey, equal to 95% (2,31).

The sample is made of students from Igor Sikorsky Kyiv Polytechnic Institute, mostly aged between 18 and 21 (76,26%). Students were 49,26% men and 50,74% women. Their academic background is different: more than half are Bachelor students (87,81%), whilst there are less Master (10,71%) and PhD students (1,49%). Students enrolled in the first and the last year of the Bachelor degree programme are 29,03% and 12,08% respectively. Students enrolled in the first year of the Master degree programmes are 8,63%.

Sampling helped in selecting a number of students from the total population of the higher education Institute in Kiev that were quite representative (ie men and women, Bachelor and Master students). This method of sampling gave every student a fair chance, so the resulting sample was unaffected by the researchers.

Survey includes students who took part in diverse modalities of higher education programmes delivery. Given the persistent jeopardy to the safety of educational participants, the resumption of in-person teaching during the first half of the 2022/23 academic year proved unfeasible. A mere 15% of educational institutions resumed face-to-face instruction, while 33% opted for remote learning and 51% adopted a hybrid approach, combining both in-person and distance education[27].

26 https://kpi.ua/en/university (update 2024).
27 National Service for the Quality of Education in Ukraine (2023).

5. Data analysis

Based on the survey, the most complex challenges for students are related to the capacity to manage their learning processes connected to social isolation (72,1%, n=1,685) and to the conditions for studying (58,6%, n=1,685). On the other hand, the various components of the material sphere of their lives have less impact: i) decline of material conditions, ii) decline of living conditions, iii) need to adapt to new place of living, iv) lack of medical assistance. For each, the figure is less than 50% (out of the total of respondents, equal to n=1,685) (Figure 1).

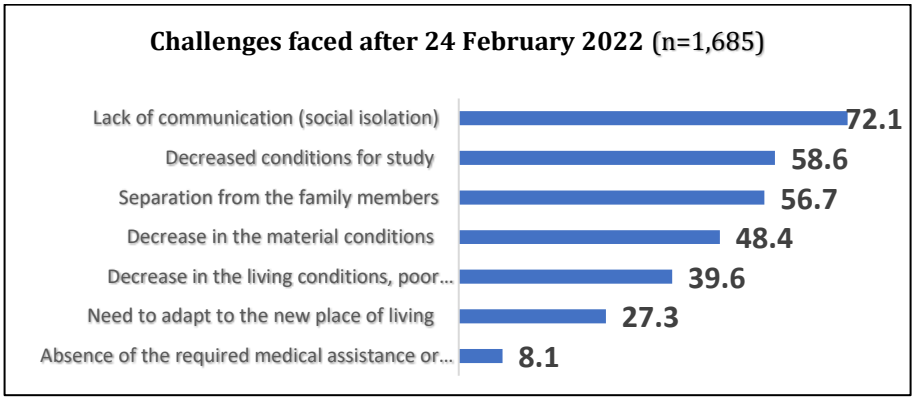

Figure 1. Challenges faced by students after February 2022.

Notably, 72.1% of respondents (out of 1,685) reported experiencing a sense of isolation due to lack of communication. Remarkably, social isolation emerged as the most influential negative factor for students, surpassing elements such as worsened learning conditions (58.6%) and separation from family members (56.7%).

Virtual mobility serves as a crucial tool for bolstering the psychological well-being of students, aiding them in maintaining their concentration on learning and personal growth within a wartime setting. As per the findings from the study participants, the mental state of 42% of respondents declined significantly, while an additional 36% declined somewhat in their psychological well-being (Figure 2). Engaging in communication and studies through virtual mobility not only helps in redirecting students' attention away from adverse external circumstances, which contributes positively to their overall psychological well-being, but also enables them to enhance their focus on learning.

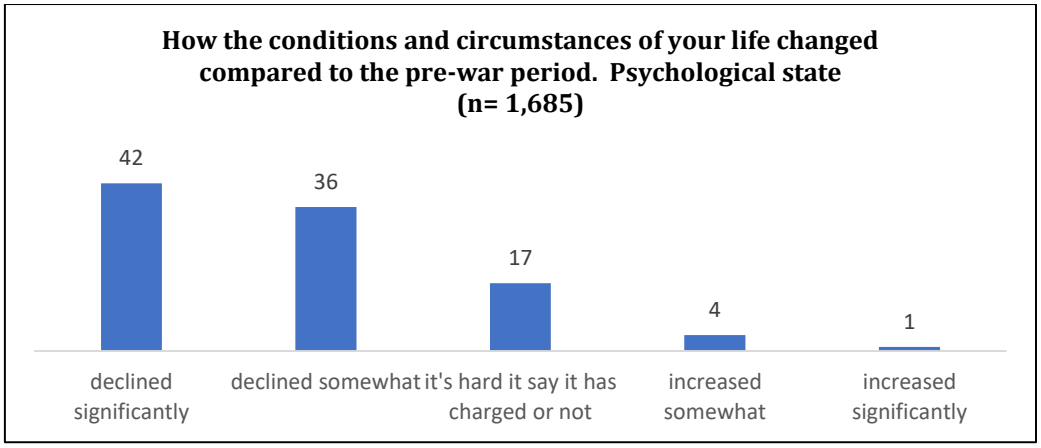

Figure 2. Psychological well-being of students after February 2022.

The necessity for psychological support is particularly crucial, especially considering that 34.8% of the surveyed participants indicated their requirement for such assistance. Additionally, another 22.4% identified a need for increased communication, further corroborating the earlier findings of the study (Figure 3).

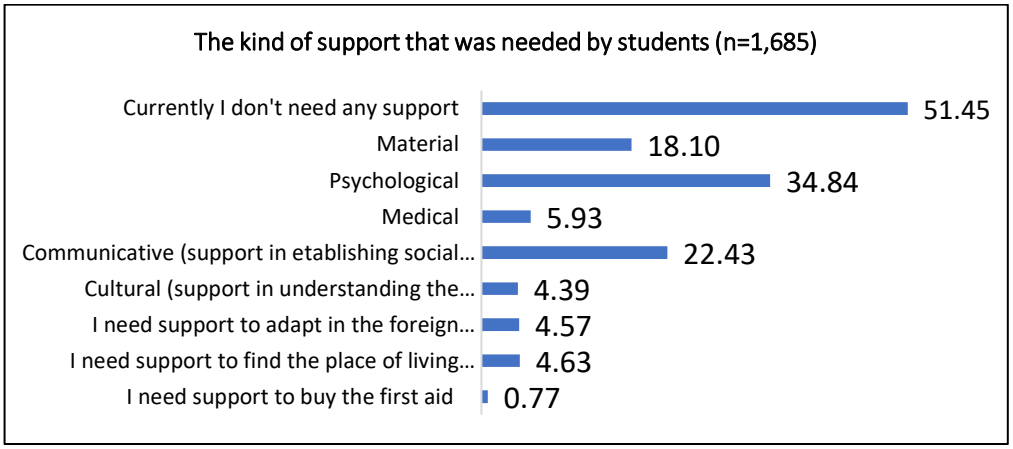

Figure 3. Support needed by students after February 2022.

But while 72.1% suffer from a sense of social isolation, there are 27.9% of the respondents who 'somehow' are able to cope with the adversity of war conditions and overcome the sense of isolation induced by them. During the focus group taken at distance between Italian and Ukrainian researchers the hypothesis that emerged is that these are students who activated individual resources to oppose the sense of isolation induced by the war and modified autonomously the quality of informal education they received in other life settings. The 27.9% constitute the minority, but nevertheless this means that one in three students were able to react to this risk, to have somehow overcome the consequences it may have on their learning conditions.

The analysis of the findings of the focus groups highlighted the role to be assigned to the students' network of personal and professional relationships. Here below we report two quotations from Ukrainian participants:

> *The absolute majority of citizens have experienced direct or indirect consequences of the full-scale invasion. Noticeable for all Ukrainians were health deterioration and income loss, as regardless of how far a region was from the front line, the economic repercussions of the war, power outages, and the stress from anxieties could not go unnoticed. Overall, younger Ukrainians have suffered the greatest losses during the year of war, while older individuals have experienced more health deterioration (P2)*.

> *The most difficult for people were the losses of loved ones, health deterioration, and forced migration, as those who have experienced such events often report having disorders and requiring psychological assistance (P3)*.

An additional finding of the focus groups is the role of being part of structured associative networks. Here below we report two quotations from Ukrainian participants:

> *New prospects of the Nezlamni center are in terms of exploring new or promising methods of psychological rehabilitation of a person. We plan to design that and collectively deliver to ameliorate conditions for working life while being in war (P1)*.

> *The Unbroken foundation has a lot of projects and goals to achieve. […] . The goal is to transform the old building of the polyclinic into a new, modern "Unbroken" Rehabilitation Center. For maximum recovery, rehabilitation halls with ceiling lifts (Guldman), a swimming pool, an occupational therapy apartment with a kitchen, halls with suspension systems (Red Cord), and robotics rooms will be created. Robotic rehabilitation tools, exoskeletons and walking simulators will be used in work with patients* (P5).

Data analysis showed the opportunity to consider differences that are likely to occur between students that had the possibility to share their representation of the armed conflict and the professional actions that could be taken in such a context. This mainly concerned students engaged in health services that are exposed to the consequences of war ("Nezlamni" Rehabilitation Center for victims of war" is an example of this kind of services).

> *For the first time, I interacted with foreign students from a university background similar to ours, who continue to study to work in a country at armed war. I saw how they manage time, internet connection, emotions, fears through the camera. The war they recounted through the analysis of a rehabilitation centre for war victims made me think of professional conditions within care services addressed to soldiers and civilians (P10).*

6. Findings

Some interpretative hypotheses may be drawn by the survey realised.

Although the survey was conducted in a country at war, adverse conditions are firstly of pedagogical kind. Perception of the deterioration of material conditions of life is documented by the survey. Nonetheless what mainly hinders the development of

individual learning processes is the lack of communication, the sense of social isolation (72.1% of respondents out of 1,685).

From the pedagogical perspective students require to reinforce networking (22.43%). They do not ask for better or diverse programmes that are being delivered at distance due to the ongoing war.

The precondition to develop further learning outcomes seems to be the possibility for students from Kiev of networking.

Simultaneously also in war contexts educational differences among adults still remain, according to the survey. Around half of the sample (51.45%) declared not to be in need of any kind of support, and to have personal and social conditions allowing the management of their learning processes in adverse and hostile contexts. We may say that these are persons possessing the capacity of managing their learning processes.

In a war context the whole society takes on illiberal features that belong to total institutions. It seems to be confirmed by the typology of needs of respondents, mainly existential.

We may add to that also the high percentage of respondents that show forms of psychological disorder (78%) asking for psychological support (34.84%).

7. Conclusion and future research development

Within adverse environments informal learning processes are being developed, that determine and hinder learning conditions. They are the condition for the formal learning itself.

Nonetheless people have the possibility to direct autonomously their own learning processes and to defend themselves against the learning valencies of war to counter its effects.

It firstly depends on the educational quality of social relations and networks each student has built up.

We could also hypothesise that this also depends on the ability to activate the skills for life students possessed.

In times of war this is particularly complex. Besides the restriction of freedom of movement and the constant exposure to lethal risks, students are also exposed to the new forms of hybrid warfare, cognitive and learning warfare. These contextual elements emphasise the exposure of individuals to informal learning processes induced and strengthened by the new doctrines of war. This makes persons vulnerable.

We believe the solution is by strengthening individual and collective capacities to control the learning processes everyone is exposed to. The capacity to control learning processes is based on the individual capacity to understand and decode the meanings of what other people intend to make learn, that is the real learning outcomes produced through the exercise of explicit and covert pedagogical powers. Based on these capacities

possessed by individual it is possible to activate effective and autonomous self-directed learning pathways.

Many efforts have been made by adult education research to understand how to improve participation of people to adult learning. Today we have a wealth of research that is continually, expanding, albeit slowly, and mainly covers both the supply side and the learning processes. On the other hand, research on how to strengthen people's response and resistance to learning processes induced by those with educational power through informal education of all kinds is still weak and should be further developed.

Lastly the survey confirms that the benefits of virtual mobility and exchange are truly invaluable. The integration of virtual mobility technologies into higher education brings forth a multitude of advantages, but their true significance becomes most apparent for institutions operating amidst wartime conditions. Virtual mobility provides the opportunity for obtaining a high-quality education while circumventing physical security risks. Undoubtedly, the tumult of war can disrupt the educational process, and even lead to the closure of academic institutions, resulting in substantial losses.

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Postgraduate study and the relationship supervisor-student in West Africa: Dealing with suffering and achievement in Benin.

Elieth EYEBIYI•

Abstract

In the context of an increasing number of doctoral studies on the African continent, there is a paucity of research examining the daily relationship between supervisors and doctoral students in Francophone sub-Saharan Africa. Consequently, the experience of doctoral students in this field is under-debated, under-questioned, under-analysed and under-taken into account. This is despite the fact that it is central to the success or failure of the thesis process. This paper aims to reflect on postgraduate study conditions in the context of the relationship between supervisor and candidate in francophone West Africa. A qualitative study based on conversational interviews with PhD students and supervisors, was conducted at the University of Abomey-Calavi, the main public university in Benin, with 58 doctoral programmes, and statistical data issued by the university analyzed. The paper examines the conditions of suffering at various levels for PhD candidates, the asymmetrical power relation between supervisors and candidates and silo's logics which driven them. The paper demonstrates how the thesis process is complex as asymmetrical, power and conflict-prone. It also point that de the nature of doctoral work, doctoral students are exposes to various psychological, psychic and mental pressures that supervisors have to manage.

Keywords: Postgraduate student, doctoral journey, suffering, supervision relationship, Africa

Introduction

The upsurge in thesis enrolment is not sparing the African continent. Since the adoption of the Bologna Reform as part of a globalisation process that has forced the West African higher education area to align it with the European model (Eyebiyi 2011), itself inspired by the Anglo-Saxon system, the supply of doctoral training has increased and diversified significantly. It is encouraging to note that a number of doctoral programmes have been established within universities, or in the form of co-supervision, co-direction or even programmes involving several universities. However, it is apparent that West Africa is not yet fully integrating its universities into these processes. Indeed, the vast majority of

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doctoral training continues to follow its old internal production channels. In 2010, Bon (2010:43) diagnosed that "In Sub-Saharan Africa, most institutions face a shortage of doctoral teachers. In most countries for which statistics are available, less than 50 percent of the teaching staff hold a doctorate. While the innate talent of teacher-researchers is not in question, the lack of training is a serious obstacle to the implementation of a specific training project. This kind of training project is necessary for students who wish to go on to a master's or doctoral degree"[1].

In addition to the structural and conjunctural dimensions typically considered (equipment, teaching staff, bibliographical resources, etc.), the status of postgraduate students is rarely analysed in depth. Rather than representing a straightforward linear progression in knowledge production and the production of a new PhD holder, the completion of the thesis is perceived as a pivotal relational moment, placing the postgraduate student and their supervisor in a state of tension through a series of challenges.

This paper proposes a reflection on the postgraduate student conditions within the framework of the thesis relationship. It should therefore be considered as a preliminary study for further work. The main objective of this study is to examine the student status of postgraduate students in Francophone West Africa, particularly in the context of their relations with supervisors. This paper proposes a reflection on the postgraduate student conditions within the framework of the thesis relationship. It should therefore be considered as a preliminary study for further, more elaborate work. The main objective of this study is to examine the student status of postgraduate students in Francophone West Africa, particularly in the context of their relations with supervisors. This paper will focus on the case of French-speaking public universities in Benin, where a significant number of unfunded postgraduate students embark on a doctoral programme that can prove to be a perilous adventure. This exploratory study thus questions, on the one hand, the student status of the postgraduate student and, on the other hand, the relations between postgraduate students and supervisors. The study aims to understand the experience of postgraduate students in order to draw some avenues to improve supervision methods and to influence the quality of the PhD holders produced by the public university system.

1. Methodology

This paper is based on a documentary study, the reflexive analysis of experiences and some preliminary interviews conducted with postgraduate students and their supervisors in Francophone West Africa, particularly in Benin. The documentary study consisted of a review of available literature on doctoral training experiences and an

[1] The original version in french : « En Afrique subsaharienne, la plupart des institutions sont confrontées à une pénurie d'enseignants doctorants. Dans la plupart des pays pour lesquels on dispose de statistiques, moins de 50 % des enseignants sont titulaires d'un doctorat. Si le talent inné des enseignants-chercheurs n'est pas remis en cause, le manque de formation constitue un sérieux obstacle à la mise en place d'un projet de formation spécifique nécessaire aux étudiants qui souhaitent s'orienter vers un master ou un doctorat ».

examination of how they influenced doctoral programmes and, above all, the relations between postgraduate students and thesis supervisors. I also analyse figures produced by the university under study. Qualitative interviews I conducted consisted of discussing with ten doctoral candidates, - three enrolled in the first year, three in the second year and four in the third year at the University of Abomey-Calavi (Benin) in the social sciences (sociology, geography and history) -, and two supervisors with extensive experience in supervising theses for at least five years. The interviews were conducted as free, unstructured conversations, with an average duration of approximately 30 minutes. The longest interview lasted approximately 60 minutes, while the shortest lasted 20 minutes. At the outset of the interview, respondents were informed of the purpose of the research and their anonymity was guaranteed. No recording was made of the interviews, which were conducted in a notebook.

The respondents were identified using the snowball method. The entry criterion for the sample was that the respondents were doctoral students at the university or that they had supervised at least one doctoral student, in the case of teachers. All interviews were conducted outside the offices, either in the restaurant or in the campus garden. The identity of the respondents was not essential and they were clearly informed of the aims of my research and could withdraw at any time. In addition, my interviews were facilitated by the fact that I had no relationship of authority, subjection or collaboration with my respondents at the time of my survey. The study is qualitative and deeply based on small sample to guarantee deep analysis. The aim of this qualitative exercise is not to generalise but to highlight some artefacts of the production or manufacturing processes of the mythical figure of the "Doctor" through an analysis of the doctoral candidate's status as a postgraduate student in Francophone West Africa.

However, statistical data produced by the University of Abomey-Calavi in Benin, on which the paper is focusing, allow us to situate the context. All the statistics used in this work come from the "Yearbook of Statistics for the Academic Year 2017-2018"

[1] of the University of Abomey-Calavi (Kpenavoun Chogou 2020). The objective of this study is to identify the characteristics of doctoral studies conducted in public universities in Francophone West Africa. To achieve this, a qualitative approach is employed, allowing for a more nuanced understanding of the perceptions, representations, and specificities of the PhD candidate's experience in these institutions.

In terms of limitations, this reflection would later merit a more in-depth statistical analysis and a broadening of the base of interviewees. All verbatim are translated from French to English by myself. The study specifically and deliberately focused on a sample of unfunded postgraduate students doing their thesis practically alone and without support. It would have been more beneficial to extend the study to encompass all cases, including those of funded doctoral students, doctoral students enrolled in structured research programmes, civil servant enrolled as doctoral students, and so forth.

[11] In French: « Annuaire des statistiques de l'année académique 2017-2018 » elaborated by Kpenavoun Chogou (2019)

Additionally, the sample was limited to the social sciences and humanities sector, and it would be advantageous to consider other departments and educational fields, such as the hard sciences, biology, and medicine, in order to achieve a more representative sample.

2. Literature Study

There is a paucity of social science literature that addresses the experiences of postgraduate students, particularly in their relations with their supervisors. This is the case in Africa as much as in the West or elsewhere in the world. Existing works include Frick and Pyhältö (2020), which offers a comparative perspective between South Africa and Finland to demonstrate that the experiences of postgraduate students are shaped by individual factors as well as socio-cultural contexts. Some papers examine the relations between supervisors and doctoral students in a fairly functional way (Lee 2008), yet fail to provide a voice for the actors. The doctoral requirements contained in thesis charters (where they exist) or the general principles proposed by various institutions are sometimes highly bureaucratic and not particularly operational reference frameworks, despite the ongoing diversification of doctoral offerings for almost two decades now. The increasing complexity of doctoral studies in terms of linking them to market requirements, or the impact of the commodification of higher education (Eyebiyi 2011) through various reforms concomitant with the adoption of the Bologna model, contribute significantly to the interest in the experiences of doctoral students and their supervisors. The subject is a taboo topic, in both the West and Africa, despite the fact that it is a topic of intense debate among Anglophone postgraduate students on various blogs, Facebook and other social networks. Thesis candidates express their difficulties when they can, and this is a topi that is rarely discussed in French-speaking Africa, and even less so on social networks.

The study by Pyhältö, Vekkaila & Keskinen (2015) at the University of Helsinki states that « the fit between the students' and supervisors' perceptions of the supervisory activities in different faculties was related to the students' satisfaction with their studies and the supervisory relationship. ». They also explore "how this perceived fit contributes to students' satisfaction and resilience in their studies". Lee (2008) also notes the functional bias of the scientific literature on the subject, and proposes to examine through a few key concepts the way postgraduate students are supervised. Pyhältö, Vekkaila & Keskinen (2015) point out that « The study focuses on exploring the fit between doctoral students' and supervisors' perceptions of who are involved in supervision, the frequency of supervision and the main task of the supervisor, and further, how the perceived fit contributes to students' satisfaction and resilience in studies». In addition, Mori, Inman & Caskie (2009) provide a cultural analysis of the supervision of international postgraduate students. It should be stressed that international student mobility has created a particularly lucrative market for the economies of host countries thanks to the movement of knowledge but also of students. Many international universities are thus enormously indebted to what Jessop (2008) calls the "knowledge economy", on the one

hand, but also to the monetary economy driven by foreign postgraduate students. However, universities in francophone Africa are far from fully subscribing to this model, which is in force in several Anglophone universities on the continent. By examining the Belgian university landscape, Nizeyimana (2020) seeks to "understand the doctoral experience of assistants and thesis fellows in order to better understand their relationship to work and employment and to examine the issue of suffering at work among postgraduate students".

Larissa Kojoué's collective book entitled " Tu seras docteur.e mon enfant!", is an interesting exception on the African continent. The book shows that African postgraduate students generally engage in doctoral training "without any reference points, no deadlines, no library, no funding, no computers, no effective supervision, no monitoring and above all no means other than the will to get there " (Kojoué 2017). It should be noted that in French-speaking Africa, there is still little freedom of speech, including scientific speech, on the actual training conditions of doctoral students, on negative experiences, and on the obstacle course that postgraduate students may sometimes face. Some doctoral students have expressed concern that they are reluctant to speak out for fear of reprisals. This is because they believe that academic elders and seniority issues can be overwhelming.

The absence of research articles or even reflexive texts on these issues in the Francophone space raises broader concerns about the freedom of academic speech. This aspect of things is not dealt with in this paper. However, it is crucial to comprehend not only the objective of a thesis and the rationale behind a doctoral candidate's pursuit, but also, and most importantly, to grasp how the doctoral programme is conceptualized, constructed, and experienced. This ultimately facilitates a more comprehensive understanding of the underlying logic and practices that punctuate the doctoral program and to situate the balance of power that can emerge.

3. The case study: Postgraduate studies at UAC

This section presents some statistical data to establish the framework for doctoral studies in Benin. The first observation is the non-existence of figures going back further than the year 2011. Secondly, the portfolio of doctoral studies has increased notably.

3.1 Brief presentation of the UAC

The University of Abomey-Calavi (UAC), previously known as the National University of Benin, was established in 1970. It is the principal public university in Benin. The University has experienced an average annual increase in student enrolment of 6.5 % over the past decade, with 74,987 enrolments in 2017-2018 compared with 30,414 students enrolled in 2002-2003. A third of the students enrolled are female (30%), with a parity index is 0.43 in 2017-18. According to data from the yearbook of statistics for the 2017-2018 academic year, the University of Abomey-Calavi has six university centres

comprising 42 training and research entities and offers 363 training courses, including 58 doctoral-level courses. In the 2017-2018 academic year, the UAC has trained 300 PhD holders including 191 university doctoral graduates and 109 graduates of specialised medical studies (DES) in 2017-2018 (p. iv) Of the 865 statutory teachers, 131 are full professors and 213 are lecturers, the two degrees that allow the supervision of theses according to the rules of CAMES. This represents 39.76% of the teaching staff.

3.2 The demand for doctoral training

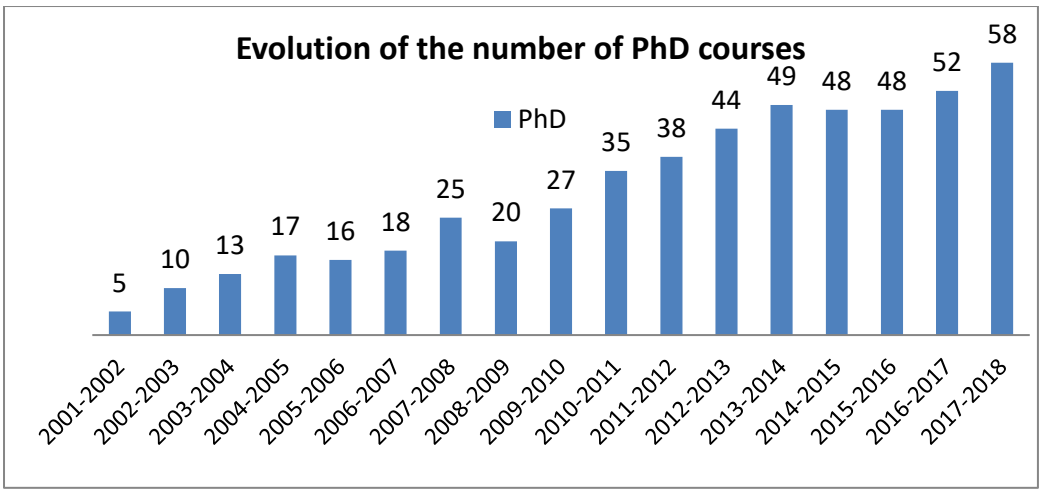

Figure 1 : Evolution of the number of PhD courses offered at UAC

Source : Adapted from *Annuaire des statistiques de l'année académique 2017-2018 de l'UAC* p.8

The portfolio of doctoral courses at the University of Abomey-Calavi has expanded significantly over the apst two decades. In the 2001-2002 academic year, there were only five doctoral programmes, but by 2017-2018, this had increased to 58. This growth in demand for PhDs has led the university to develop a wide range of doctoral programmes in response in response. This illustrates the global trend of increasing doctoral training opportunities, which is also evident at the local level. Figure 1 illustrates the evolution of the number of doctoral programs at UAC from 2001 to 2018. This number has increased by a factor of eleven, from 5 to 58 programmes, in less than two decades.

3.3 Postgraduate students enrolment and trends in doctoral graduates at UAC

A review of the distribution of UAC student enrolment by year and gender in 2017-2018 reveals that the ratio of students enrolled per year of study in doctoral theses is 5.57. This ratio is 5.45 in the first year of the thesis, 5 in the second year and 6.28 in the third year. In other words, 20% of those enrolled are women. Furthermore, an analysis of the total number of students enrolled in 2017-2018 reveals that out of 74,987 students enrolled in 2017-2018 (30.4% of whom are women), only a total of 1,316 students are enrolled in doctoral programmes, representing 1.75% of the year. Of these, 387 are in their first year, 288 in their second year and 641 in their third year.

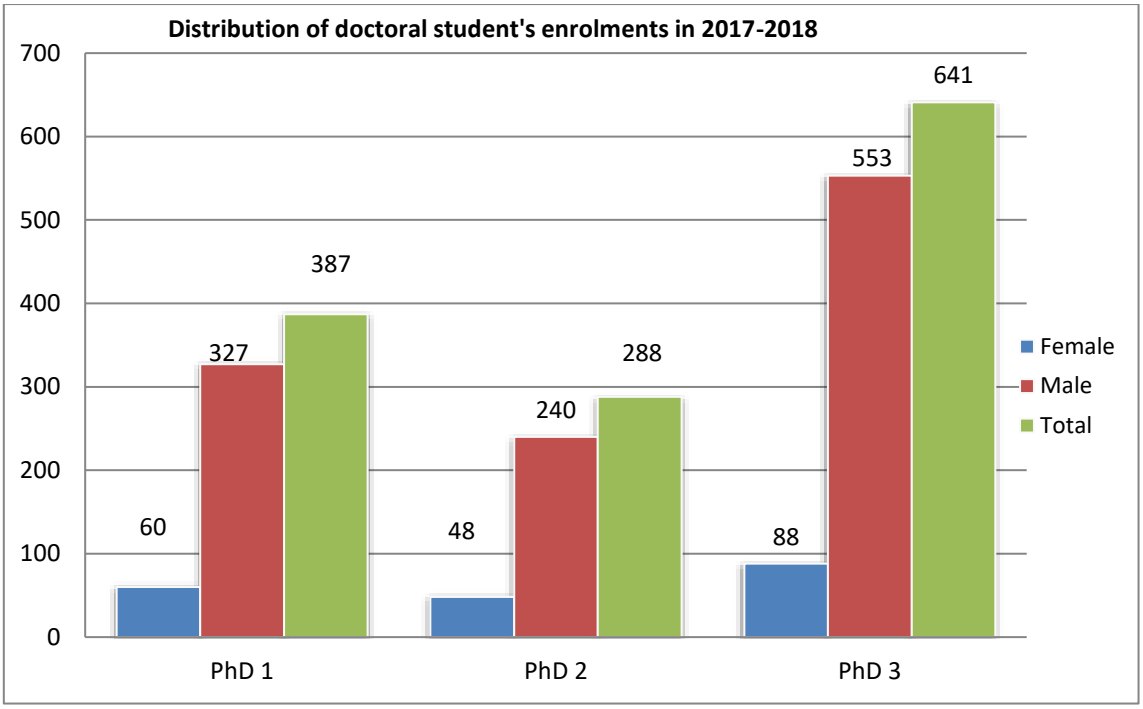

Figure 2 : Distribution of UAC prostgraduate students' enrolment by year and gender in 2017-2018

The PhD graduates are divided into various fields of study, which are embedded into seven doctoral schools. These include the Doctoral School of Physical Education (EDEPSDH), the Doctoral School of Sport and Human Development (EDEPSDH); and the Multidisciplinary Doctoral School "Spaces, Cultures and Development" (EDPECD). All PhD students in social sciences and humanities are involved in this school. The others schools are: the Doctoral school of Agronomic Sciences (EDSA); the Doctoral School of Engineering Sciences (EDSI), the Doctoral School of Hard and Applied Sciences (EDSEA), the Doctoral School of Health Sciences (EDSS) and the Doctoral School of Life and Earth Sciences (EDSVT)[2].

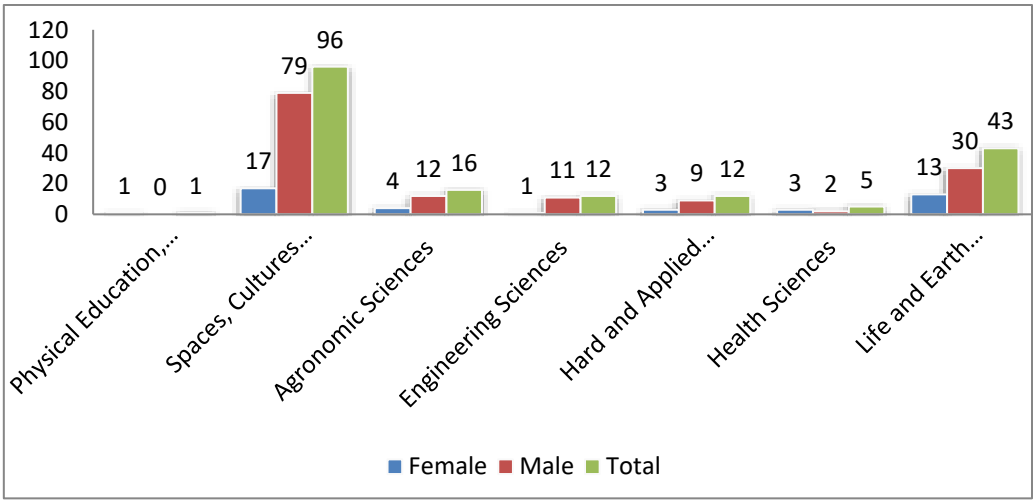

Figure 3 : Gender distribution of PhD students by doctoral schools at UAC in 2017-2018

[2] All translations from French are made by the author.

The data from Kpenavoun Chogou (2019), is presented in Figure 3, which shows the gender breakdown of the number of students enrolled in each of the seven doctoral schools at this public university. In the agronomic sciences, engineering sciences, hard and applied sciences, and health sciences, there is a near-equality in the number of male and female students enrolled at the doctoral level. The greatest discrepancies are observed in the Social Sciences and Humanities, as well as in Life and Earth Sciences, where men are more strongly represented at the doctoral level than women.

Figure 4 illustrates that between the 2011-2012 and 2017-2018 academic years, a total of 1804 doctoral degrees (including university doctorates and specialized medical degrees) were conferred on an average of 257 doctors per year. The 2013-2014 academic year saw the highest number of PhD graduates from the oldest and largest university in Benin, with 312 diplomas awarded.

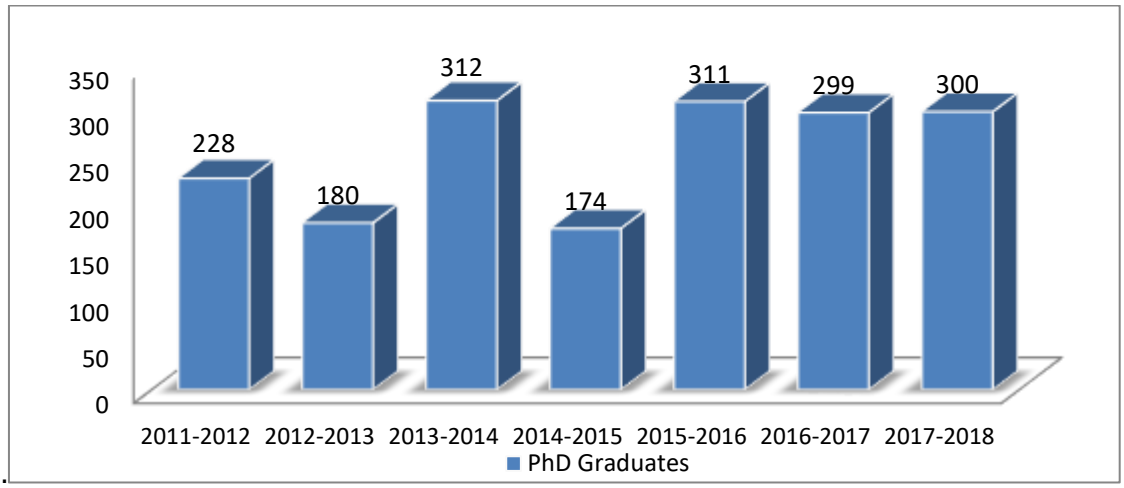

Figure 4 : Evolution of number of PhD graduates
Source : Adapted from *Annuaire des statistiques de l'année académique 2017-2018 de l'UAC* (p113)

4. The PhD candidate condition in public universities

The condition of PhD candidates in public universities is an important variable in understanding not only the production modalities of the intellectual elites that are supposed to be the PhD holders, teachers and researchers in particular This understanding is becoming increasingly important as the number of PhD holders who have converted to other sectors, such as consultancy or work in international organisations, increases. The doctorate is rooted in a set of perceptions that maintain a myth around this highly valued degree, which is paradoxically problematic in terms of production conditions. This examination will focus on the perception of the work of postgraduate students, particularly in the humanities and social sciences. It will also consider the perception of the thesis process in the context of an initiatory test and suffering at work, as well as perceptions linked to the rite of public defence.

4.1 Perceptions of the work of doctoral candidates in the social sciences and humanities

The doctorate is typically regarded as a pinnacle of academic achievement, a completion of the academic career path for candidates. However, it is important to recognise that this is merely the beginning of the academic journey, as it equips students with the skills and knowledge required to engage in various academic activities, including teaching, research, and consulting.. As evidenced by Biggs's (1982) work, understanding the motivations of starting the doctoral journey is necessary to appreciate how postgraduate students thrive into academy. When questioning my interlocutors, I quickly realised that the reasons why the members of my sample start a PhD are varied and sometimes very contradictory: to finish the university cycle, to obtain the highest possible degree, to achieve a certain social consideration, to prepare to become a teacher at the university or a researcher in a laboratory. For those already working as civil servants, obtaining a doctorate is a way of preparing a transition from the administrative civil service to the university. This occurs because generally, in French-speaking countries, the public service does not recruit graduates with a doctorate except at university.

For all, obtaining a doctorate is a matter of prestige. It goes without saying that for a civil servant, obtaining a doctorate while already in office appears to be a way of leaving the administration and entering the university. It is also possible for a civil servant with an acquired doctorate to be eligible for several appointment positions because of the prestige that a doctorate confers, even if it is not recognized and valued in its basic salary. As a transition to a higher prestigious stratum, the doctorate obtained under these conditions remains essentially little devoted to research and teaching.

4.2 The doctoral journey as an initiation test and the suffering of postgraduate students

Perceived as a completion, doctoral journey can then be endured more easily despite the difficulties; the student develops a kind of resilience, even though the price to pay is often very high. It exposes postgraduate students constantly to the regard of seniors and broadly the academic arena. The feeling of enduring an initiation test or even a permanent ordeal due to the glance of others, the university community, parents, society, reinforces this state of things.

> " When the defense is over and you are wearing the toga, you are transported, you forget all the suffering you have lived until D-day, until that very moment... The thesis is a very difficult journey, a struggle " (Interview, UAC, October 2020).

The PhD journey is considered by some postgraduate students (in social sciences, in the case of the people I interviewed) as a battle, an obstacle course. The idea of suffering came back during my fieldwork at several moments as a main characteristic of this path, for most early career PhD holders. This suffering takes place on at least three levels: pedagogical suffering, moral suffering, and financial suffering.

4.3 The suffering of postgraduate students

4.3.1 Pedagogical suffering, suffering at work

The undertaking of a thesis requires significant cognitive and conceptual resources, and their corollary is access to bibliographical resources. In the context of universities without up-to-date or well-stocked libraries, access to books is a significant challenge. Furthermore, the majority of respondents do not have an institutional e-mail address in West Africa, which greatly reduces their chances of accessing paid databases and journal sites where they could consult and download electronic resources. Conducting a thesis under these circumstances, with the exception of rare cases, is a significant pain. Accessing books and articles from reputable journals is a significant hurdle for the majority of postgraduate students in Francophone universities in general on the continent. According to one thesis supervisor we met, very few candidates have "actually read the books they cited". This is a serious concern indeed. According to him, many only mention fragments of citations or mobilise sources cited by others, ignoring the context of these secondary citations. The phenomenon of pedagogical suffering, or more broadly, suffering at work in the context of postgraduate student status, encompasses several forms. These include mental fatigue and tear, work overload, which are linked to the numerous activities specific to the thesis. These activities include, but are not limited to, bibliography, field surveys, seminars, laboratory work, private teaching to meet needs, assistance from one's supervisor in some cases, participation in the administrative tasks of the training unit, supervision of examinations, correction of papers, and so forth. In addition, various jobs are required to support oneself and one's family, which can also contribute to stress.

Consequently, many postgraduate students are thus subjected to burnout syndrome, depressive symptoms, overwork and other processes of psychic degeneration, which are not yet fully understood. All of my interlocutors expressed their desire to benefit from the services of psychologists (which is still largely frowned upon from a cultural point of view), or people who can provide moral support during the most challenging phases of the thesis process.

> " The mental, psychological and psychic condition of students, especially at the doctoral level, should be examined and taken care of", says one of our respondents, a thesis supervisor with some 20 years of experience " (Interview, UAC, October 2020).

It is also important to consider the mental health (Vinet et al, 2003; Morin and Forest, 2007) of postgraduate students. Research indicates that feelings of shame of "not making enough progress" or fear of failing to complete the thesis are processual events that can contribute to the isolation of some postgraduate students, which in turn makes thesis work more challenging.

4.3.2 The rite of public defense and moral suffering

The completion and crowning achievement of the doctoral programme is the thesis defence. As outlined by by Everett Hughes, this is as a "rite of passage during which an individual transitions from the status of an apprentice researcher to that of a fully-fledged

colleague" (Hughes 1995:95). Indeed, this rite of passage symbolizes not only the crowning of a long journey, with its joys and often especially its sorrows, but also the announcement of a supposedly better tomorrow. With the title of Doctor, wearing the toga in universities where this is more and more common, the new doctor enters a body that is symbolically very hierarchical and overvalued. At the same time, however, the defence is a great step into the unknown for most of the people we interviewed. The uncertain nature of the labour market, particularly in the human and social sciences, has led to universities, and thus the civil service in West Africa, becoming the primary destination for PhD holders seeking a stable position..

> " The composition of the jury was not very complicated; my thesis supervisor took care of it. The members of the jury quickly gave their agreement. The most complicated was to get the evaluation reports " (Interview, UAC, October 2020).

Obtaining evaluation reports can be challenging due to communication errors, slow response times from evaluators, and other factors. owever, despite these difficulties, the defence is an important milestone in the thesis process. Its organisation and preparation often involve activities that are stressful, rushed, and increasingly complex. It is evident that negative stress (Pépin 2000) represents a significant challenge for the thesis process, and culminates at the eve of the defence. This stress is often perceived as a crucial factor in determining the outcome of the defence, despite the fact that a thesis is rarely rejected when it has been authorised for public defense. This is a part of a psychological success/failure mechanism. By opening the doors to uncertainty, the rite of passage of the thesis defence paradoxically prolongs the moral suffering that is inherent to the doctoral process.

4.3.3 Postgraduate students and financial suffering

The undertaking of a dissertation is frequently a significant financial challenge for postgraduate students. The majority of doctoral students are reliant on personal funding, which is often unavailable at the outset. Consequently, postgraduate students frequently have to work in other sectors in order to accumulate the necessary funds to pay for their doctoral school fees, finance their fieldwork, purchase books when possible, and finally realise their ambition of becoming a "doctor".. The high symbolic value of the doctorate in Benin justifies for many important sacrifices. These doctoral students spend money either on projects unrelated to their research or on consulting, which has the effect of distracting them from their research and lengthening the time it takes to complete the thesis. These situations are exacerbated by the fact that public funding for research is almost non-existent, particularly with respect to local funding for theses. The few students who are able to benefit from programmes that fund their theses often owe this to their supervisor's personal involvement in international research programmes. Once again, the lack of transparency in recruitment forces them to be very loyal, and to

maintain their embedding into the camps of their supervisors, which can often degenerate into a master-slave relationship between the supervisor and the doctoral student, in order to guarantee that they will receive funding.

It is rare indeed that thesis grant competitions are launched with a wide communication that would have allowed students not inserted in academic networks to apply. Financial hardship thus remains a major parameter of the thesis process. A final category of postgraduate students is that of civil servants; often wishing to obtain a degree as an honorary title or to change departments and reorient their careers, they are among those who suffer little from the financial difficulties inherent in the thesis process. As illustration, they are able to finance their work and sometimes obtain, for some of them, the condescension of certain supervisors in order to complete their degree. This state of things is a cause for concern because the frantic quest for a title can fundamentally vitiate the quality of the thesis by compromising the time devoted to the work to be submitted to evaluation.

5. Relations between doctoral candidates and supervisors

The relationship between postgraduate students and supervisors, which I refe to as the thesis relationship or supervision relationship (Grant & Manathunga 2011), is another crucial aspect of the doctoral journey. Despite its limited discussion in both academic literature and among the individuals involved, it appears to play a pivotal role in the successful completion of the thesis by the postgraduate student, as well as in the supervision provided by the supervisor.. The relationship between postgraduate students and supervisors are subject to numerous dysfunctions. These include an asymmetrical power dynamic, which can manifest as an authoritative stance on the part of the supervisor, and a conflictual dynamic, which can arise from the unequal distribution of power in the academic field..

5.1 An asymmetrical and authoritative relationship

The thesis relationship is by nature supposed to be a two-way relationship. The postgraduate student is required to complete work under the supervision of the supervisor, who is responsible for supervising, orienting, and guiding the postgraduate student along the paths of knowledge production. In essence, it is a collaborative effort between two actors situated on different scales, with the goal of producing a new PhD holder. The thesis relationship is inherently very asymmetrical from the outset, and it is the responsibility of the supervisor to strive for equilibrium in the development of the postgraduate student. Indeed, the postgraduate student - supervisor relationship is typically characterised by an asymmetry of positions, knowledge, and affects. This asymmetry is reinforced by the tradition of training and the highly hierarchical nature of the academic world, particularly the French-speaking world, and integrates diverse cultural and sociological variables depending on the environment.

It is uncommon for postgraduate students to present their relationship with their supervisor as a collaborative one. In practice, the relationship often appears as one of authority and subordination, with the supervisor, who is typically the doctoral candidate's supervisor, occupying the position of authority and the doctoral candidate in a subordinate role. Consequently, this relationship becomes a power relationship, involving various strategies for controlling the academic disciplinary space or the field of research. This is achieved by promoting the supervisor from the driving forces that their postgraduate students constitute, and by negotiating a personal space for the postgraduate student in the academic community.

> "As a PhD student in the lab, I was co-opted as an assistant to the professor, so for several years I gave classes in place of the professor. Sometimes he'd come for the first lesson of the semester and then only come back for the last lesson. Sometimes not at all. I've given entire classes without him being there. Of course it's his class and I'm doing it for him. I don't think I had a choice. It's difficult without any remuneration. In any case, we weren't paid at the time. So I had to try and make a living, continue the thesis and at the same time teach in place of someone who was simply pocketing his salary. " (Interview, UAC, October 2020).

Consequently, affiliations in laboratories may be perceived as a factor of advanced individuation, with the intention of reinforcing the authority of a supervisor's areopagus, rather than as a space of intellectual life. A supervisor elucidates: "A few years ago, there were like camps. You can't be with one teacher [supervisor] and another; everyone was in a kind of camp. With the functioning of the multidisciplinary doctoral school, the professors are brought to interact more and more, so this has erased the camp logic that we were attending" (Interview, UAC, October 2020).

The dissolution of camp logics within the academic community facilitates the integration of postgraduate students into the academic sphere, despite the persistence of encamping or symbolic segregation. From this perspective, the interdisciplinary nature of doctoral schools can facilitate the collaborative construction of the thesis relationship by the various stakeholders.

5.2 A potentially conflictual relationship

The relationship between supervisors and postgraduate students is also a very fragile relationship, unstable and capable of generating constant conflict. Nelson and Friedlander (2001) propose an analysis from the point of view of supervisors. The conflict dimension can be explained by the very nature of the academic field, full of power issues, symbolic struggles, and so forth. In his article on the knowledge production and power issues, Frederic Lesemann states:

> " The academic universe, contrary to most dominant representations, is extremely competitive (see Lesemann 2003), structured by complex relations

between professors and students that can be dynamic relations favouring learning as well as relations of domination and moral and material pressures, to which students motivated by a strong aspiration to access the 'academic world' accept to submit. The power relationship intrinsic to being a thesis student is structurally asymmetrical and can often be very unbalanced, opening the door to multiple forms of abuse "[3] (Lesemann, 2015:2).

It is rare for conflicts to be openly discussed and resolved collectively. A colleague recounted the experience of a postgraduate student who had made some missteps in his relationship with his supervisor. The supervisor was displeased to find that his advice was not being heeded and decided to withdraw his support. When the postgraduate student submitted his chapters, the supervisor did not review them. The situation persisted for almost two years, during which time the postgraduate student was already four years into a relationship that had become irreparably damaged. Dysfunctions in the thesis relationship may also arise due to the general absence of a contractual framework. While a written contract is not typically employed, which may appear overly bureaucratic and tedious, the rules of collaboration are seldom defined at the outset. While there is a thesis charter in place at some universities, few postgraduate students are aware of it, and even fewer have ever had a discussion session with their potential supervisor to agree on the mechanisms of interaction, the frequency of submission of texts or the modalities of meeting, etc. The idea of issuing a Memorandum of Understanding (MoU) is therefore a promising solution to prevent misunderstandings on the way to work. The MoU shall be a truly compass for supervisors at the beginning of their relationship with the PhD candidates, delineating responsibilities, expectations, and other procedures. It will also serves as a memento for PhD candidates.

The majority of postgraduate students embark on the PhD journey with the intention of defending a doctoral thesis at the conclusion, yet often lack a clear understanding of the implications of this process in terms of human and professional relations with their supervisor. These include question such as: what is the mode of collaboration? How often should working sessions be held? Should papers be sent in advance? Do we have to finish writing the thesis block before submitting it to the supervisor? Or should each chapter be submitted to him/her?

Normally, doctoral candidates will limit themselves to contacting a potential supervisor, who will issue them with a letter of agreement. They will then submit their file and that will be the end of it. However, difficulties can arise along the way.

" In my case, I was lucky that my supervisor had made it clear that he didn't have the time to read me too frequently, so I had to send in my theoretical and methodological part first, and then the chapters when they were ready. That's what we did, that's how we worked " (Interview, UAC, October 2020).

For another PhD candidate :

[3] This is my translation. The original version is in French.

" My supervisor required me to read my dissertation, chapter by chapter, so… when I finish writing a chapter I send it to him. Sometimes he reacts quickly, sometimes he doesn't react at all, but I send it to him; later he downloaded everything and we had a session before I finished the draft of the dissertation to submit to him " (Interview, UAC, October 2020).

Furthermore, there are various methods of interacting with supervisors. According to numerous interviewees, there is a set of attitudes to adopt, characterised by a sense of submission and availability at all times. For instance, the postgraduate student may in fact appear to be an assistant in the service of his supervisor :

" I corrected the copies of the lower classes for my supervisor; I also helped him to do his lectures, I was always present when he taught; then I did him favours when he asked... and in all this I had to find the time to work for myself " (Interview, UAC, October 2020).

According to some interviewees, the thesis relationship is effectively based on relational, subjective, and submissive aspects. This meant that postgraduate students and supervisors cannot guarantee that the thesis will take place in a secure relational context. The prevalence of power relationships, structural and symbolic asymmetry, then contributes to distorting in some cases the collaborative relationship that should exist and very frequently turns into a relationship of subordination.

While there are undoubtedly cases in which the relationship between postgraduate students and supervisors seems to work marvellously, but they are not legion. In these cases, several scenarios exist. Firstly, the postgraduate student has a good prior relationship with their supervisor. Secondly, the postgraduate student has personal or family relationships with the supervisor, which acts as a counterbalance when necessary. Thirdly, the postgraduate student is enrolled in a funded research programme which obliges both parties (the postgraduate student and the supervisor) to complete the work within a certain period of time. The existence of an external factor that constrains the relationship between the postgraduate student and supervisor serves to compensate for the absence of clearly established and agreed rules between them. This factor helps to consolidate the thesis relationship for a successful outcome.

Conclusion

This study demonstrated that the thesis process is complex from a relational perspective. The relationship between the doctoral student and their supervisor is crucial to the success of the endeavour. The example of a French-speaking African university illustrates the growth of doctoral training and the sustained increase in the number of graduates, while highlighting the existence of relational difficulties. The thesis relationship is presented as asymmetrical, power and conflict-prone by default. It is therefore necessary for supervisors to rebalance the relationship, particularly in the absence of a memorandum of understanding that allows for a challenging framework for collaboration at the outset. Furthermore, the status of postgraduate students should not

lead us to overlook the mental health dimension of PhD candidates. The nature of their work exposes them to various psychological, psychic and even mental pressures that supervisors are sometimes obliged to manage. These issues deserve further consideration in the future.

This paper demonstrates that postgraduate students generally require accompaniment. This should not be limited to academic support. They may also require mental health support. On the one hand, it appears that supporting doctoral students could preserve their mental health. Strengthening the presence of postgraduate students in activities designed to break the natural isolation to which thesis research and the writing phase can confine a doctoral student is also a need. This study also asserts that encouraging doctoral students to engage in social activities, both professional and non-academic, is a responsibility of supervisors. Conversely, enhancing the training of supervisors will facilitate the development of greater empathy in their interactions with graduate students. Furthermore, it is recommended that academic authorities encourage the establishment of a memorandum of understanding (MoU) to facilitate the relationship between students and supervisors by providing a general framework for interaction from the beginning of the thesis.

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Civic society and education: international teachers' perspectives on the roles of NGOs in supporting youth immigrants, in Hungary

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Abstract

Civil Society (herein NGOs) seem to fall short of improving the education of immigrant youth in Hungary. This failure is significantly attributed to government's immigration policies that perpetually position immigrants at a disadvantage, in terms of equipping them with sustainable educational and socio-economic readiness skills. It appears that immigrants of African, Asian, and Middle Eastern origin, bear the brunt the most. NGOs are expected to defend justice and democracy, develop a language, and empower immigrants with a voice to express their past and present experiences, a possible effective tool in fighting discrimination, marginalisation, stigmatisation, and other forms of racisms, which is a path towards a sustainable future. This qualitative exploratory study that explores the various nuanced opinions of foreign teachers associated with the lack of sustainable educational programmes for immigrant youth, focusing on the intersection of civic society and education against the backdrop of the Hungarian political climate. With immigration posing profound challenges to Hungary's educational system, understanding the perceptions of foreign educators is paramount for extracting the complexities at play. Through qualitative analysis of interviews conducted among foreign teachers, this study uncovers multifaceted challenges impeding the development and implementation of sustainable educational initiatives. These challenges encompass insufficient resources, linguistic and cultural barriers, and institutional constraints. Moreover, the Hungarian political climate, characterised by nationalist rhetoric and restrictive policies, exacerbates these obstacles, creating a hostile environment for immigrant. The findings underscore the urgent need for policy interventions and collaborative efforts to address these challenges and foster a more inclusive and supportive educational environment. This research contributes to a deeper understanding of the systemic barriers to immigrant integration and advocates for transformative change within the educational system. The results reveal a complex interplay of factors that shape immigrant integration within the Hungarian society.

Keywords: International teachers, immigrant youth, sustainable educatio, Hungarian political climate, civil society.

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1. Introduction

1.1 Background Information

Immigration is one of the essential components of neoliberalism and its vices, regional political economies of inequality (Ackerman, et. al, 2000; Milanovic, 2018), which to a large extent are responsible for immigrants' unsustainable future such as economic inequality, job market monopolisation, a lack of job security, the loss of jobs, labour exploitation; (Barrass & Shields, 2017), and an increasing lack of concern for the needs and well-being of individual immigrants, including marginalisation which is a fuelling reasons for immigrants' unstainable future, as suggested by Moreno, et al., (2018). This belief emanates from the fact that in Hungary, like in other post-communist countries, civil society works against the tide of rigorous government immigration policies, Muraleedharan, (2020). This hurdle stands between immigrants and meaningful empowering education. It is important to highlight that the study is focusing on immigrants from outside of the Europe. Studies show that Orban communicates different sentiments for different immigrant groups. *"He portrays refugees from far-off nations in an overwhelmingly negative light ("illegal migrants") while depicting refugees from the neighbouring country – Ukraine with compassion and empathy ("genuine refugees")"* (Syla, 2023, p. 1).

The background information is clarifying the history of civil society. According to Cooper, (2018); the term civil society developed in the 1980s and it became popular, and today is used to refer to a wide range of civic groups, which includes non-governmental organisations, hence the two terms are interchangeably used here. The role of NGOs for the longest time has gained importance and traction due to, in most cases, state decline in addressing developmental issues. However, Vakil, (1997), presents a provisional structural operational definition of NGOs. They are defined as self-governing, private, non-profit organisations that are geared towards the improvement of life of the disadvantage people, and often certain groups of immigrants fall under this category, because of the social ills they have suffered in their home countries.

In addition to the current political motivations for the anti-immigration discourse in Hungary; (Bocskor, 2018) introduces a broader historical context of Hungary. It is important that we also consider this factor because it significantly explains why the anti-immigration discourse seems to be effective among the Hungarian population. This is because it taps on the sad history of the country, where Hungary lost huge territories during the Trianon Peace Treaty in 1920; (Melegh, 2016). This history precipitates the belief that present-day Hungary is largely ethnically homogenous and with immigrants arriving from the European Economic Zone; (Kiss, 2016), and low arriving from other continents. Dating back to the Trianon Peace Treaty, Hungarians have always regarded themselves as a small ethnically homogenous nation; (Juhasz, 1995). Another point to consider is that during communism, Hungarian borders were sealed, and emigration and immigration were strictly controlled; (Bocskor, 2018). Therefore, the fear that the Fidesz

is instilling on the population by portraying immigrants as an economic, social and security threat, appears justified in the eyes of Hungarians, based on this historical fact.

In recent years, Hungary has experienced an influx of immigrants, including school going immigrants. Despite efforts to support these students, sustainable programmes remain a challenge. This pilot study aims to explore the perceptions of foreign teachers working in Hungary on the challenges faced by immigrant youth and the role of civic society in addressing these issues. This study is based on the premise that youth immigrants are predisposed to unemployment or labour exploitation and a general poor quality of life because they are a minority, a situation referred to as the "acquired quality of life" Bălţătescu, (2007). As a minority they are deprived of a sustainable life-long learning in Hungary. Barna, (2019) states that since 2014, the Hungarian ruling party, has been scapegoating immigrants for its political and economic scandals by launching an anti-immigration campaign using the tools of propaganda. It is reported that in 2015, the Fidesz leader, prime minister Viktor Orbán told a reporter from the Hungarian national television channel M1 that 'We [Hungarians] do not want to see minorities of significant size with different cultural characteristics and backgrounds among us. We want to keep Hungary as Hungary;" (Barna & Koltai, 2019, p. 49). Based on such utterances and narratives, this article finds it important to investigate some of the prominent reasons that compel potential collaborations to fail in assisting particularly immigrant youth navigate this political climate so that it can be prepared for employability and other economic requirements. Unlike Hungary, which lacks meaningful educational programmes that have been identified as one of the main causes for unstainable immigrant resettlement; (Hellgren, 2015), Spain is reported to be one of the countries that utilises education to accomplish social cohesion, public anti-poverty, and anti-exclusion programmes for immigrants, argues Jóźwiak, et. al. (2018).

It is therefore against this background, literature review and data that this paper seeks to discuss the lack of sustainably effective NGO education programmes in Hungary in educating immigrant children, against the backdrop of political narrative.

1.2 Research Problem

Despite Hungary's increasing immigrant population, there is a significant lack of sustainable non-governmental organisation (NGO) programmes designed to support the educational and social integration of immigrant youth. Foreign teachers, who often play a critical role in the education of these students, perceive notable gaps in the availability and effectiveness of such programs. There is an urgent need to explore these perceptions to understand the specific challenges and to inform the development of more effective, sustainable interventions or even policy interventions.

1.3 Significance of the study

The views of foreign teachers in exploring the roles of NGOs in supporting immigrants in Hungary are intricately linked to a broader immigration and educational issues in Hungary. Various literature discusses the topic of immigration and civil society against the current

political climate in Hungary, but these studies lack discussing how the current politics starve civil society from effectively supporting immigrant youth education. This study has the potential of enriching future academic research. As an immigrant myself, and a teacher living in Hungary, I was curious if civil society was doing anything meaningful to help immigrants fit into the Hungarian society, considering the anti-immigration government policies.

1.4 Research question

What are the perceptions of foreign teachers regarding the availability of NGOs programmes to support immigrant youth in Hungary?

2. Literature review

2.1 Overview of relevant literature

It is significantly crucial to mention that the literature is largely in unison with collected data from the primary and secondary sources. Teacher's views suggest that organisation that offer educational and developmental programmes should adopt certain specific approaches to empower immigrants so that they can independently secure their futures in host countries. Furthermore, the literature also assists the reader in positioning the effectiveness and failure of the NGOs against the political space of Hungary.

This section begins by discussing the undemocratic politics of Hungary. The discussion is crucial because it informs the reader about significantly necessary roles of NGOs in advancing immigrant knowledge and skills for host country's labour market and social demands, that appear neglected at present. Abiddin, et al. (2022), categorise NGOs into two broad categories; Operational NGOs, whose primary pursuit is to carry out development projects for underprivileged members of society. Another one is Campaigning NGOs, whose primary objective is to influence a country's policymaking process. These roles can be linked with the position of Sweden and Italy and other countries in the EU which receive immigrants. Upon viewing their circumstances, they seem to be better prepared to channel their focus in playing these documented roles to assist immigrants resettle sustainably. This is because of the undisputed role that civil society plays in these countries, additionally the politics of these countries, even though they may have elements of right-wing ideologies, but their approaches are progressive compared to those of Hungary and other Visegrad countries, argues Csanyi, (2020). Existing literature highlights the importance of collaboration between civic society organizations and educational institutions in supporting immigrant youth. However, the lack of sustainable programmes and resources hampers effective integration efforts; (Kiss, 2020).

The challenges that NGOs continue to face in Hungary are also linked to the restrictive immigration policies that are reinforced by the media. The media plays a significant role in the politics of Hungary, especially under Prime Minister Orban Viktor. Present day Hungarian politics appear to use similar machinery as that of Communist

Hungary, characterised by old school propaganda which utilised the media; (Bajomi-Lázár & Horváth, 2013). In the EU, Hungary is an example of how media freedom can be controlled and even assaulted for non-conformity with government agenda. The dismantling of media freedom, pluralism and freedom is a systematic and unprecedented act with the EU; (Griffen, 2020). The Freedom House 2019 survey, suggests that Orban's transformation of the nation's media into a centralised propaganda machine, has seen the Hungarian media being categorised as partly censored; (Haraszti, 2019). The Hungarian government, through its control and influence over media, has effectively promoted its anti-immigration policies. This strategy involves using government-aligned media, state broadcasters, strategic communication campaigns, and suppression of independent media to shape public opinion and reinforce its political agenda; (Szalai, 2017). Media scholars argue that the relationship between politics and media systems in the post-communist countries, although not all of them, is founded on the assumption that political parties seek to have an upper hand over the media to starve the critical voices and amass a wide voter coverage. In Hungary, state media control began in 2010 when Orban won his first term of office. This saw the Christian, national and conservative government using its two third majority to change media laws and adopted a Media Constitution and Multimedia Act that regulate print press, television, radio and the internet; (Sommer, & Fábián, 2023).

Civil society's roles as outlined by Jurgen Habermas and Iris Marion Young; (Locke, et al., 2000) go beyond just addressing democratic crisis, but also assist immigrants develop a language and a voice to express their needs and experiences under prevailing political landscape; (Young, 2010). However, literature also shows that existence and survival of NGOs supersedes the supposedly genuine defence of democracy; (Lang, 2014; Hsu, 2010). It further shows that even in cases where they attempt to advocate for democracy, it is not enough because of the priority they put on complying with government de-democratisation policies, instead of resisting them, a decision that gravely alters their core missions; (Depuy, et al. 2015). One of the goal missions of NGOs focusing on immigrant education, is to bridge the gaps that exists in public education due to instances where there is a neglect of immigrants' educational needs by the host government; (Yamanaka, 2006), which is part of the crux of the matter, raised by one of the participants, who both volunteer in an NGO and teaches full time in a public school in Budapest.

An additional important component that this paper seeks to address is the question that I pose regarding the meaningfulness of the educational programmes in aiding immigrants address the harsh realities of living outside their countries of birth, particularly because immigrants that arrive in Europe are generally young and susceptible to negative changes. The age of immigrants particularly those arriving from Syria are described as skilled and young, an opposite perhaps, for Germany's aging and shrinking labour force; (Csanyi, 2020). While we may argue that many immigrants are well educated or highly skilled, on the other hand data shows that not all are and, more

importantly their arrival is not motivated by economic desires; (Csanyi, 2020), it is all about securing safety and security. OECD, (2015) argues that there is no guaranteed success for them in the job market. This is where NGOs are expected to intervene, according to some participants. They expect the Campaigning NGOs to operate against the odds and influence educational policy, which is responsible for a successful integration of immigrant into labour market. However, if the education system is ignored, continued gaps between the educational performance of native and immigrant children will continue, like in the case of Sweden, Spain, Greece, Belgium, France, Germany, and Finland; (Csanyi, 2020).

This is a concern for participant teachers because from their formal training and teaching experiences, they are aware that education plays a big part in empowering marginalised learners or children, especially in an environment where they are subjected to injustice. It is also noted by Suárez-Orozco, & Suárez-Orozco; (2009), that there is a constellation of factors that make it possible for children to navigate their immigratory transition, and one of them is education. However, I have since observed that the educational programmes primarily lack the ability to counter act discrimination. Systematic discrimination of low status groups by high status groups, for example are visible in education and justice; (Kozol, 1991 & Jacob, 1996). Therefore, to make the plight of immigrants in Hungary to be concretely understood, I present my arguments in the context of the Social Dominance Theory. To understand the theory in the context of immigrants, every year, more than a million immigrants arrive in the EU, some illegally and some legally. Most of them come from poorer countries, in the former Soviet Union, the Middle East, Asia and Africa. These immigrants are often not made very welcome; Küpper, et al. (2010).

2.2 Theoretical Framework

The study is framed by the Social Dominance Theory (SDT, herein) and its derivatives which I shall not detail here. According to the SDT immigrants are often subjected to acts of discrimination and other forms of injustice because of the structures and hierarchies that exist in societies. Sidanius & Pratto, (1999) state that group-based hierarchy is generally a global phenomenal, where society is structured as a group-based entity. Even though these hierarchies can exist in multiple layers, but to the very least, they consist of a minimum of two social categories. The prime group whose members enjoy positive social values such as wealth, power, health, education while at the bottom of the hierarchy, members are disproportionately allocated negative social values, for example, prison, poverty, poor health, illiteracy and many more; Sidanius & Pratto, (2001). Reflecting on the data presented by the participants, evidence shows that immigrant's education programmes largely lack the ability to counter discrimination.

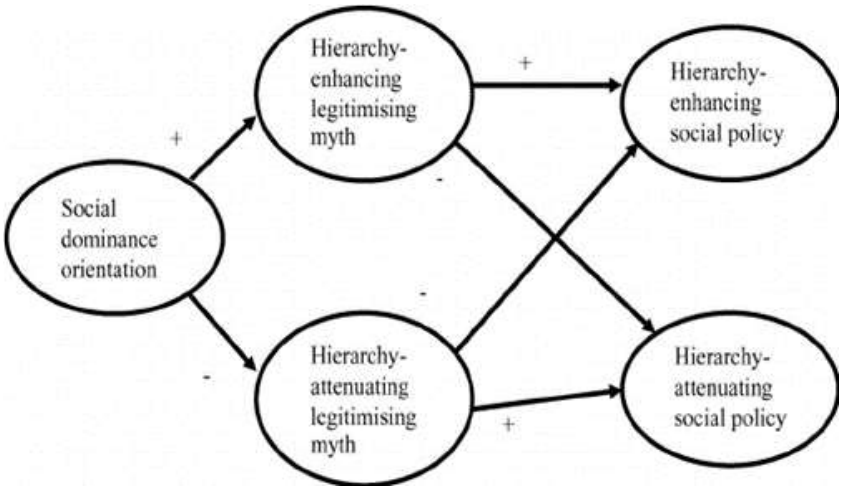

Figure 1: Model of hierarchy-enhancing and hierarchy-attenuating legitimising myths mediating the relationships between SDO and social policies (Source: Sidanius & Pratto, 1999, p. 105).

A couple of countries in Europe are experiencing an unprecedented influx of immigrants due to their geographical location, for example, Italy and Spain. Similarly, Hungary like Italy, is also a destination of choice for immigrants, either permanently or temporarily. Based on the EU laws, Hungary has a legal obligation to protect people who seek asylum. Hungary is also well positioned for those who just want to utilise it as a gateway to Western Europe, hence, a vast majority of asylum seekers, reach western EU via Hungary. Despite an apparent increase in immigrants entering Hungary to seek protection, the Open Society Foundation argues that the Hungarian government made no provisions; to accommodate asylum seekers, it was assistance from the civil society that alleviated the immigration burden. With the outbreak of the Syrian war, Italy began facing a similar situation like Hungary, but on the contrary, NGOs assisting refugees and asylum seekers, have managed to find a way to help refugees against anti-immigration sentiments; (Dickson,2017). One of these organisations is S. Home, located in the Italian coast of Sardinia. Melis, (2021) presents S. Homes as an NGO that is advancing equity and justice for immigrants.

3. Methodology

This qualitative exploratory study has data generated from ten international teachers who live and work or volunteer in schools and educational-based NGOs in Budapest. They were interviewed through both focus group and one-on-one open-ended interviews. The duration of each interview was an hour long, conducted in English. I made use of the tape recorder and handwritten field notes. Their selection was based on the idea that they themselves are not Hungarians, they are probably positioned relate better with the plight of immigrants and their views would be informed by the realities of immigrants in the institutions where they teach. Their views offer a unique and critical perspective that can help NGOs support immigrants effectively and meaningfully. The data was analysed and categorised into thematic blocks.

4. RESULTS AND ANALYSIS

4.1 Results

The research question has been widely answered, both by participants and the literature. The anti-immigration political climate is at the core of the unsuccessful NGO interventions. NGOs are held responsible for a significant role they play in improving the lives of immigrants through education. However, these programmes should have a sense of meaningfulness, such as instilling self-wealth among immigrant children. It is understandable why in the context of Hungary this could be a difficult attempt due to the government immigration attitude, however teachers believe that NGO have a far-reaching influencing in terms of shaping attitudes. The consensus among participants is that organisations, schools, and national institutions all have a duty to fulfil in the educational path of immigrants.

4.2 Discussion

4.1.1 There is no one glove fits-all approach

While immigrants may generally experience challenges, but it is worth noting that they are diverse in nature, they do not possess homogenous set of skills, language, religion and culture, levels of education, or reasons for immigrating, among other diversity traits. Data shows that immigration is a growing global social phenomenon, such that even countries that do not have long histories of immigration, recently, they are inundated by a growing number of immigrants, comprising of children. Teacher 5, lives in Hungary, but she first lived in Italy, so, she can contrast both contexts. She is a Moroccan by birth, and possesses a master's degrees in education, which makes her fully qualified to teach in a secondary school, but she tells me, that she is struggling to find a job that she is qualified to do, apart from teaching in private pre-schools and occasionally volunteering in two different NGOs in Budapest. As an immigrant herself, she has some expectations from the NGO in terms of its programmes in assisting other immigrants who are in worse conditions than her, settle. "*We are all offered weaving lessons, not everyone, wants to be a weaver, some of us, we want to get drivers licenses and other useful qualifications*," she says.

Drawing from Nawyn's, (2010), the role of NGOs also includes advocacy and cultural activities which ideally should create space for refugees to challenge their downward mobility in society, as in the case of the U.S. where welfare NGOs assume this role in gender and racial/ethnic hierarchies. This role can be accomplished by implementing educational programmes that address social and emotional learning; (Suárez-Orozco, & Suárez-Orozco, 2009). However according to some participants' experiences, volunteer teachers in English clubs and camps, teach content that has been just pulled out of the internet and taught to all the children without screening or testing their individual level of language proficiency, which would be English in this case, the immigration category (weather they are asylum seekers or refugees or children of expatriates and students),

age and or other factors that may inform the teacher(s) about the specific needs of each immigrant child. In this case, the spectrum of diversity is ignored.

It transpired during the interviews that NGOs apply a laisses-faire approach in integrating immigrants through education, instead of formulating a coherent immigration policy, in collaboration with the Hungarian immigrations office. A similar situation is identified in the USA, where it has been noted that there is no single national unit that has been set aside to head the creation, implementation, and co-ordination of a federal immigrant integration capacity; (GAO, 2011). This apparent lack of disregard for policies that can meaningfully integrate immigrants, shows some short-sightedness in designing programmes that will consider all present factors, such as diversity so that they can effectively and critically charter a roadmap for a sustainable future.

4.1.2 Beyond formal education

The connection between NGOs and schools, in my view is important because as Suárez & Suárez, (2009) argues, schools are the first point of contact where immigrant children experience systematic processes of the new culture. Therefore, if these Hungarian based NGOs focus on creating a collaboration with schools, that will mean that their education programmes are geared towards facilitating the immigrant children's adaptation in schools and ultimately into the entire society, which is a barometer that will significantly predict the children's future well-being and their contribution to society. I find this approach fundamentally important to consider because unlike other EU member states, according to Langer-Buchwald; (2009), Hungary is not an immigrant friendly country, a situation portrayed by the government funded media, since 2015, Juhász, et al. (2017).

It is also important to acknowledge the disadvantages that immigrant children will generally experience merely because of their immigratory status, and how these impact on their general basic education. These disadvantages sometimes consist of lack or low level of knowledge of the official school language, family, group of origin, and social levels; (Langer-Buchwald, 2009). This begs the question if NGOs are aware of the influence each level of education an immigrant child is enrolled in, has on a particular immigrant student. For example, if an immigrant child arrives in a host country quite early in his or her early years, and enters pre-school or early child development programmes, that child stands more chances of acquiring Hungarian, in this context, as a language of the host country; (Esser, 1990). From the perspective of educational progress, the importance of the language competency cannot be disputed; however, that is not the only factor, the children's background knowledge is crucial to consider as well. Therefore, the education programmes need to be well focused and be extended to really addressing real life situations of immigrant children.

Bălţătescu; (2007) introduces us to the concept of a subjective quality of life and immigrant life. This can be defined as a way in which people develop an evaluation system for their significant areas of their lives, holistically. With immigrants predisposed to the acquired quality of life in the host countries, "*NGOs are thus expected to focus on these*

real-life situations, instead of being preoccupied with nursing political egos" (Teacher 1). The need for NGOs to develop educational programmes that address discrimination was brought up several times. "I understand this because I am an African myself, but I have also seen how Asian and Arabic student at our school are treated by teachers and fellow students, sometimes it is not what the teachers say to the student's face, but what they also say behind their backs. I believe that the legacy of colonialism has a lot to do with this." (Teacher 5). The participant believes that while NGOs such as the one that she volunteers at for weekend English club lessons, should also consider designing real curriculum lessons, for example integrating English and History. "*The Hungarian History curriculum is vague, it doesn't address the topic of colonialism and racism, you can just imagine what our children are learning during History lessons, nothing that will make them critical thinkers and inform the way in which they pave their paths in a foreign land. This is where NGOs need to step in and bridge the gap. Obviously, the Hungarian education system is not going to teach our children that the reason why it is an uphill to get a job that matches your qualifications, and pays you well, is because immigrants, especially non-European ones, are not good enough in this country because of the political propaganda*."

4.1.3 State and NGOs' Progressive Attitudes

Government politics and neglect of immigrants is a long-standing challenge world over. Yamanka, (2006) presents a Hamamatsu situation, a Japanese town, in the late 1980s, where Japan saw more than half a million growth in unskilled immigrants. This was also a time where different non-governmental stakeholders rallied behind the welfare of immigrant children, because of a scenario like that of Hungary, where the newcomers in Japan found themselves subjected to discrimination in various areas, such as in public service, medical care, social-welfare, and political participation. Like Hungary, in those years Japan regarded itself as a homogenous society, with the government maintaining that Japan was not a country of immigration. Iredale & Piper; (2003), state that it was for this reason that the Japanese government refused to endorse the International Convention on the Protection of the Rights of All Migrant Workers and Members of their Families. Furthermore, the government made no effort to establish policies that eradicated discrimination against immigrants in Japan. Similarly, this political attitude is fundamentally responsible for the insufficient political will or lack thereof. This in my view raises and important discussion about the role of NGOs and civil society in general in bridging the gap between government and immigrant's education, and ultimately the realisation by governments that there is a need for collaboration with civil society.

The above begs the question if NGOs can collaborate with schools and teacher training institutions by training teachers on civic education, under the political climate in Hungary. Teachers 8, 10 and 6 argue that this is a possible feat only if civil society tried harder, and resisted government threats. While they these three teachers had varying ideas, but they agreed: "*Collaboration is key, in any situation, different views can enhance how institutions function*" Teacher 8.

An example of a progressive relationship between the state and civil society, is Sweden and NGOs. This relationship has evolved over time, and Valutis, (2013) states that this relationship can be described as one of the trust-based mutual dependency, characterised by consensus. Historically, NGOs did not play the welfare services role, instead they acted as mediators of interests between citizens; (Pestoff 2000; Wijkström 2004), however, recently more NGOs are redirecting their work in advocacy and anti-discrimination campaigns and education. Teacher 10: "*Civil society that is involved in educational programmes should seek ideas from us as well, because we can relate better to the topic of immigration*."

In 2001, the Swedish government integration office, began to make necessary steps in responding to national action plan against racism, xenophobia, homophobia, and discrimination, but initiating a dialogue with NGOs. It is my view that the Swedish government felt compelled to respond positively because of the transformative course that the civil society took. Similarly, the Japanese Government, to manage the crisis that developed due to the neglected needs of immigrant children, began to spearhead collaboration with the local civil society in trying to mitigate the circumstances that were alleged to have developed from the lack of educational programmes for immigrant children, such led to rampant acts of criminal activities alleged to have been committed by immigrant children who decided to drop out of school. Fearing a public embarrassment, the city of Hamamatsu began to focus on teachers and administrators to evidently redirect is political focus on the education of immigrant children. together with civil society, the city endeavoured to support volunteers to teach in Japanese, but also in the languages of the immigrant children, such as Portuguese, for those who came from Brazil.

Evidence shows that the Japanese government's concerns about its political reputation, enabled partnership between itself and the civil society activists, and from this collaboration, in 2005 immigrant children were registered in different institutions of education in Hamamatsu; however, still the aim did not fully materialise because the issue of language barrier was not considered. As mentioned earlier, local language deficiency is one of those factors that can cripple the ability of immigrant children to acclimatise well in new environments;(Esser, 1990), hence it needs to be seriously considered. Reports from Japanese scholars show that language deficits hindered the immigrant children's understanding of instructions of educational materials and teacher instructions; the entire pedagogical approach was unfavourable for them.

It is also recorded that immigrant children in Hamamatsu suffered prejudice, discrimination, and bullying, even from teachers and school administrators, leading to social isolation; (Ota, 1996; Ikegami, 2001(b); Ona, et al., 2001). Seeing the need to address discrimination, more civil groups emerged and among them, to try and supplement these interventions, a group led by immigrant children's mothers, took advantage of the cultural exchange educational programmes, where representatives were involved in seminars and symposiums on building a multi-cultural society. This

collaboration soon gave birth to a growing positive Japanese attitude in including Brazilian children in their programme. It is also important to highlight the role of higher education in sustaining such initiatives. In this case of Hamamatsu, in 2001, the local university students formed the College Student Network to provide tutoring support services to Brazilian children who were enrolled in Azusa elementary school; (Yamanaka, 2006).

4.1.4 Immigrant children's expectations

The participants raised issues regarding injustices that immigrants are often subjected to. "*I find it important to mention in this section that whoever being tasked with the designing or implementation of educational programmes for immigrants, should ponder on the host country's scholastic context and its contribution to the educational ambitions of immigrants' children*, Teacher 7. "*Immigrants also aspire to something, so that should be considered, they are not just at school for the sake of it*" Teacher 3.

A study conducted by Minello, & Barban, (2012), evidently shows that there is a correlation between educational ambition for Italian learners attending each of these schools that were researched and the individual ambition of immigrants attending these schools.

"Our results show that an immigrant child attending a lower secondary school where one-third of the Italians have high short-term educational expectations is more likely to also have high short-term educational expectations. If we look at long-term aspirations, the change happens when more than two-thirds of Italian classmates have high aspirations;" (Minello, & Barban, 2012, p. 22).

While Teacher 4 does not agree with the belief that NGOs should work towards addressing the "acquired" (which in the Bălţătescu's article, "acquired" refers to immigrants being compelled to accept labour exploitation or else suffer unemployment, which to great length affects their s standard of living) with the same passion as the other participants, however, agrees that immigrants should develop a sense of resilience, but they need to be supported along that path. "*Not everyone has the ability to be courageous, they need a little push, and NGOs can actually design programmes for the immigrant youth where their sense of wealth is developed,* Teacher 9." Teachers 2, 3, 7 and 9 raised similar sentiments regarding NGOs being intentional about improving the education of immigrants in Hungary. *"Immigrants should not be used for certain agendas or for symbolic gestures, but this should be a deliberate attempt, to improve the lives of those who find themselves on a disadvantaged side"* Teacher 2.

5. Conclusion

This paper has answered the research question by presenting an interplay of factors within the Hungarian politics, history and education system, that position immigrant youth in a disadvantaged position in the host country. This situation according to the research participants necessitates policy reforms as well as cooperation between civil

society, particularly educational NGOs, schools and teachers, however due to the Hungarian political climate, this is a challenge for civil society, leaving immigrants exposed to meaningless and unsustainable educational programmes. Based on these issues, the study is highlighting a deficiency in research where the components of this article and all the issues raised as well as the synergies that exist between them, should be reconciled, and not studied in isolation. The implication of the study is that NGOs have a role to break all barriers, including political ones, but on the other hand, some participants believe that civil society efforts should inspire immigrant agency and resilience, a skill that is required in attaining quality life, an initiative that should begin in schools and in informal education platforms where NGOs should have a stake.

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Understanding North American curriculum reforms through theory of rationality

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Abstract

The present study aims on the one hand to analyze North American curriculum reforms with a focus on the twentieth century, and on the other hand it aims to demonstrate the implications of Weberian rationality theory for century-specific curriculum theory and practice. At the theoretical level the study shows the implications of Weberian rationality in the work of Dewet, Weber and Tyler. At the practical level, the main findings of the study show that the progressive period was influenced by practical rationality or more specifically instrumental rationality through the social efficiency orientation promoted by Bobbitt and Tyler. Also, the need for post-Sputnik reform of the North American curriculum led to a hyper-rationalization of education towards the imposition of external standards on schools, this trend culminating in the report "A Nation at Risk" (1983) which led to an economic approach to education. The North American curriculum reforms that followed did not abandon this trend of hyper-rationalization and standardization of education.

Keywords: rationality, american, curriculum, reform, weberian

1. Introduction

The present study traces on the one hand North American curricular reforms, focusing on the twentieth century, and on the other hand the implications of the Weberian theory of rationality, both theoretically and practically, for North American curricular developments.

The reasons for choosing the twentieth century for this study are related on the one hand to the fact that it was the period in which the three great curriculum theorists John

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Dewey, F. Bobbitt and Ralph Tyler carried out their work and we wanted an analysis of their theory in their specific context, and on the other hand as Mehta (2013a) points out, this period of educational reforms was the most strongly rationalized in a Weberian sense - that is, curricular reforms aimed at social organization and at adapting educables to the labor market.

On the other hand, the curriculum reforms of the 20th century in the North American educational space are still producing echoes in curriculum theory today, by introducing terms such as student-centered learning, standardization, educational goals, or social effectiveness. Because of these curricular conceptualizations, this paper is also addressed to those who are not directly interested in the North American reforms, since, as we know, these terms have also penetrated the European area.

The introduction of the Weberian theory of rationality is justified in this paper by its implications for the work of Dewey, Bobbitt, and Tyler, but also by the existence in the North American literature of the term "rationalization of education" in the Weberian sense which refers to a top-down organization of curricular reforms where policy makers set external goals and standards (see Wise, 1977).

Thus the research objectives are focused on: how rationalization of education has been understood and unfolded in the North American educational space and the implications of different types of Weberian rationality for North American curriculum theory and practice.

2. Theoretical background

2.1 Weberian theory of rationality

Identifying an exhaustive definition of the term rationality has been and remains a difficult challenge for sociologists and philosophers. This difficulty arises both from the complexity of Weberian terminology and its application in various fields of rationality theory (religion, sociology, politics, economy), as well as from the misinterpretation of Max Weber's text. Some authors have defined rationality by referring to the logical coherence of human ideas and behaviours. For example: "rationality refers to those ideas and behaviours which are logically coherent and consistent and amenable to empirical knowledge" (Mitchel, 1968, p. 142). Other authors refer to individuals' rational choices: "any action, belief, or desire, if it is rational we ought to choose it" (Audi, 1999, p. 772).

These definitions cannot be classified as incorrect but rather incomplete. Analysis of Weberian text over time has shown that rationality is a much broader concept. In relation to social actions, rationality is portrayed in several ways; concerning values or purposes, rationality takes on multiple forms. Another problem that constantly arises in the analysis of Weberian text is the confusion between rationality and rationalization.

Consequently, in the following paragraphs, we intend to describe the types of rationality Max Weber referred to, the types of social actions, and clarify the confusion between rationality and rationalization.

Stephen Kalberg argues that the ambiguities arising from the study and interpretation of Weberian text are caused by some authors not emphasizing the multiple meanings of rationality or limiting their research to specific spheres of life. Kalberg (1980) maintains that the term rationality is polymorphic and underscores this by identifying four types of rationality: theoretical, practical, substantive, and formal (pp. 1146 - 1152).

Theoretical rationality refers to: "conscious mastery of reality through the construction of increasingly precise abstract concepts rather than through action" (Kalberg, 1980, p. 1152). This type of rationality includes cognitive processes such as logical induction, logical deduction, or causal attribution (Ritzer, 2010, p. 137).

Practical rationality refers to identifying the most suitable means to achieve goals and address everyday problems (Kalberg, 1980, p. 1152). Max Weber explains, in this case, the difference from practical rationality: "the systematic thinker" rationalizes through "increasingly precise and abstract concepts," whereas "methodical attainment of a definitely given and practical end by means of an increasingly precise calculation of adequate means" means practical rationality (Weber, 1946, p. 293).

Substantive rationality resembles practical rationality because it involves identifying means to achieve goals, but in the case of this type of rationality, the identification of goals is done within a system of values (Ritzer, 2010).

Formal rationality also concerns the means-ends relationship, but unlike practical rationality, which pursues this relationship by referring to the pragmatic interests of individuals, formal rationality refers to "universally applicable rules, laws, and regulations" (Ritzer, 2010, p. 137).

Although they differ in content, all four types of rationality have the same goal: controlling reality by "dispelling particularized perceptions" (Kalberg, 1980, p. 1159).

These four types of rationality can be analyzed also in terms of their relationship with social actions. Max Weber defined social action as follows: "action is social insofar as its subjective meaning takes account of the behaviour of others" (Weber, 1978, p. 4).

Weber (1978) identifies four types of social action:

1. Instrumentally rational social action (*zweckrational*): "it is, determined by expectations as to the behaviour of objects in the environment and of other human beings; these expectations are used as conditions or means for the attainment of the actor's own rationally pursued and calculated ends " (Weber, 1978, p. 24).

2. Value-rational social action (*wertrational*): "it is determined by a conscious belief in the value." Belief in value can pertain, Weber says, to religion, ethics, aesthetics, or other reasons (Weber, 1978, p. 25).

The distinction between these two types of social action lies in how the individual is guided in their actions. Goal-rational action considers the consequences and their calculation, while value-rational action focuses on the "intrinsic properties of an act," towards values that lead to a certain action (Brubaker, 1984, p. 25).

3. Affectual social action: "it is determined by the actor's specific affects and feeling states" (Weber, 1978, p. 25).

4. Traditional social action: "it is determined by ingrained habituation " (Weber, 1978, p. 25).

This classification of social actions, determined by habit and feelings or by values and calculated goals, actually draws a line between "rational actions" and "irrational actions." Affective and traditional actions do not represent rational actions; they are guided by either habits or feelings, while actions in which the individual engages consciously and deliberately are considered rational (Brubaker, 1984, p. 50).

However, irrational actions can also be rationalized (Brubaker, 1984, p. 50). Weber considers that affective social action can be rationalized, can become rational when emotions or states of tension are consciously released: "it is a case of sublimation when affectually determined action occurs in the form of conscious release of emotional tension" (Weber, 1978, p. 25). Similarly, traditional social action can have rational grounds when "attachment to habitual forms can be upheld with varying degrees of self-consciousness and in a variety of senses" (Weber, 1978, p. 25).

Considering the typology of social actions, Weber considered practical rationality to be representative of modernity. This is portrayed as: rationality in relation to a goal and rationality in relation to a value (Clitan, 2002).

Rationality in relation to a goal (which is "based on estimation and critical deliberation") corresponds to instrumental rationality, while rationality in relation to a value (based on "choice and axiological decision") corresponds to normative rationality and the rationality of choice (Clitan, 2003, p. 14).

The distinction between the terms rationality and rationalization is as follows: rationality is "an attribute that actions and products of human activity can acquire either in relation to a goal or in relation to a value," while rationalization represents "the intelligible mastery of the world" (Clitan, 2003, pp. 11-12).

Mainly, Max Weber associated rationalization with the modernization of the West. This rationalization entails a systemic and calculative approach to thinking and behaviour (Henriks, 2016). Weber describes rationalization as follows: "there are no

mysterious incalculable forces that come into play, but rather than one can, in principle, master all things by calculation" (Weber, 1946, p. 139).

Freund (1968) draws attention to the danger of confusion between "the rationality of history" and "rationalization" and describes the latter as: "the product of scientific specialization and technical differentiation peculiar to Western culture" (p.18). In broad terms, if we were to identify a series of characteristics of rationalization, they would be "efficiency, predictability, calculability, and technologies that control people" (Ritzer, 2003, p. 34).

In addition to these elements related to modernization, rationalization, in Weber's view, leads to the "disenchantment of the world." Essentially, this "disenchantment" comes from technological and scientific progress; people move away from religious values, sacred accents, primordial beliefs in spirits, generally from the spiritual realm, and the world is guided by utilitarian concepts (Freund, 1968, p. 23-24).

Following the exposition of the central elements of Weber's theory of rationality, we can conclude that practical rationality is specific to the modern world, we can identify the distinction between rationality as an attribute of human actions and products of actions and rationalization as a process of mastering the surrounding world through precise means and calculation. Additionally, from the presentation of the rationalization process, we can conclude that it has both a positive side, linked to the progress of science and modernization, and a shaded side of the phenomenon of the "disenchantment of the world," moving away from sacred values.

2.2 The applicability of the theory of rationality in education

About the process of rationalization of education, Max Weber wrote with specialized exams in mind, primarily in European higher education, but mentioning that the rationalization of education also exists at the pre-university level. Weber sees these specialized exams as certifying that an individual can hold a position in a bureaucracy (Weber, 1949, p. 241).

Another important idea that Max Weber introduces here is that of the purpose of education. If in antiquity the main goal of education was the cultivation of the individual, with bureaucratization, the process of education aims more at creating a "specialist" rather than a "cultivated individual" (Weber, 1949).

Rationality is seen as a pillar of modernity. In fact, we are talking about a triumph of reason over all fundamental domains of society. Thus, a distinction is made between an objective and a subjective world/society. The objective world will always be based on rational practices. Modernity seeks to organize social and collective life based on the principle of rationalization. (Pourtois & Desmet, 1997)

Giroux (1988) observes in modern education the same process of rationalization described by Weber: a rationalization that aligns the purpose of schooling with the demands of industrialized society, criticizes this process, and emphasizes the importance of fostering critical thinking in students to lead them towards understanding the individual and collective struggle for social goals (Giroux, 1992).

Today, it is considered that the major implication of rationality in education lies in the transition to the "external efficiency" of the educational system, which involves its relationships with "all systems of society" (Dolska & Lobas, p. 74, 2021). These relationships, as we have observed with Max Weber, are determined by the needs of society, the need to educate individuals fit for the bureaucratic system, in Weberian terms or for the labor market, in contemporary language.

Although at first glance, Weberian rationality theory might seem isolated from curriculum theory, its implications for the twentieth-century progressive view of education are far-reaching. The importance of the Weberian theory of rationality in North American curriculum reform research, but also in curriculum reform in general, is represented by: the understanding in the English-language literature of the standardization of education as a phenomenon of 'rationalization' (see Mehta, 2013a), but also by the implications of rationality in the work of John Dewey, F. Bobbitt and Ralph Tyler.

For instance, at the theoretical level, Dewey's ideas resemble Weber's in terms of instrumental rationality. The relationship between means and ends described by Weber, appears identically in Dewey's works (see Dewey, 1938), also, Dewey promoted a type of education based on the intrinsic values of the educables, which for Weber means value rationality (Weber, 1978).

Bobbitt and Tyler represented the Social Efficiency movement within the 20th century reforms and both were influenced by Taylorism - a movement rooted in Weberian theory which like Weber, advocates social efficiency (Hatch & Cunliffe, 2013). We will detail the implications of rationality in the work of Dewey, Bobbitt and Tyler more in the next section, in which we discuss the three's conceptions of curriculum.

On a practical level, the phenomenon of rationalization of education described by Max Weber marked the North American curriculum reforms of the 20th century in different periods: the period influenced by Taylorism, in which the curriculum was constructed to meet the social purposes of education, in the sense of preparing students for future occupations (Kliebard, 2002) or the standards movement, which in the American literature has even been understood as hyper-rationality, due to the curriculum imposed from the top down by policymakers (Wise, 1977).

In the research section of this paper, we will trace all these implications of rationality in the evolution of North American curriculum, seeking to identify how the

rationalization of education has manifested itself in practice and in what form Weberian types of rationality are found in curricular reforms.

3.3 Dewey, Bobbit & Tyler: curriculum approaches and influence of rationality in their work

It is important to look at the contributions of these three reference figures in the field of curriculum, as their educational philosophies and curricular theories have influenced contemporary educational practice. Whether we are talking about Dewey's progressive education, Bobbitt's modern and socially-oriented concepts, or Tyler's post-modern objectives and assessment-oriented concepts, each of these represents the foundations of what we now call curriculum.

John Dewey laid the groundwork for what we now understand as student-centred learning. The main ideas underlying his educational philosophy and curriculum vision include progressive education, focusing on the educable, and experimental knowledge (Williams, 2017).

In Dewey's view, the principles of progressive education contradict those of traditional education. While traditional education focuses on the subject matter, with the teacher playing the main role, progressive education is based on principles such as "cultivation of individuality," "free activity," and "learning through experience" (Dewey, 1998, p. 5).

Experimental knowledge or experimental education, according to Dewey, aims to connect the study disciplines to students' daily lives: "anything which can be called study (...) must be derived from materials which at the outset fall within the scope of ordinary life-experience" (Dewey, 1998, p. 86). This aspect is also emphasized in *Child and Curriculum*: learning experience and study disciplines should not be viewed separately (Creţu, 2000, p. 15). "Abandon the notion of subject-matter as something fixed and ready-made in itself, outside the child's experience" (Dewey, 1902, p. 16).

To emphasize the importance of learning through relating to everyday life experiences, John Dewey (1902) presents and explains the problems that can arise in the educational process when the study material does not align with the student's experience:

"The lack of any organic connection with what the child has already seen and felt and loved makes the material purely formal and symbolic " (Dewey, 1902, p. 31). What the child "has seen, felt, and loved" refers to the experiences in the students' everyday lives, what we nowadays call informal education, and the mismatch of the "material" - the subject matter to these experiences renders the discipline meaningless for the student, as John Dewey complements: "a symbol which is induced from without, which has not

been led up to in preliminary activities, is, as we say, a bare or mere symbol" (Dewey, 1902, p. 31).

Lack of motivation: "an end which is the child's own carries him on to possess the means of its accomplishment" (Dewey, 1902, p. 33). In other words, considering the intrinsic motivation of the student and emphasizing it in the development of the content to be taught, motivation for learning will be stimulated.

Dewey thus proposes a student-centred learning model, so popular nowadays, but which is still distorted in pedagogical practice, as sometimes student-centred is understood to mean that the student must build their learning processes on their own, with the teacher merely observing. What Dewey actually wanted to emphasize was the idea of the teacher as a facilitator of learning who knows their student, understands their motivation, knows the student's life experiences, and aligns them with the material being taught.

John Dewey promoted mainly an instrumental rationality, which he portrayed, in a pedagogical context, by the term inquiry. The relationship between means and ends that Weber spoke of is portrayed in Dewey's terms by inquiry, i.e. the process by which thinking or logic is used to solve specific problems. The most relevant definition in which Dewey's and Weber's ideas meet is the following: ''rationality as an abstract conception is precisely the generalized idea of the means-consequence relation as such'' (Dewey, 1938).

As shown by Clitan (2002), practical rationality includes both instrumental rationality and value rationality for Max Weber. In Dewey, the idea of instrumental rationality comes from the influence that Pierce's philosophy had on him and represents the relationship between means and consequences (Garisson, 1999), whereas value rationality is potretized in Dewey in the form of the intrinsic and extrinsic values of the educables - he argues that the school must have both a social role but at the same time it must also adapt itself to the soul of the child (Dewey, 1915), but also through the theory that education is not something finite, but is a preparation for life. (Dewey, 1915).

Franklin Bobbitt developed his curriculum theory based on the following central idea: curriculum development should be based on the analysis of adult activities so that the curriculum can contribute to the development of society. This analysis is carried out in several steps: studying the effectiveness of workers in various fields, the stage of observations by curriculum specialists on the aspects that have led to the effectiveness of these individuals, identifying students based on the aptitudes they have for each social role (Null, 2011, p. 49).

Bobbitt defines curriculum using two directions, both oriented towards learning experiences. The first direction refers to the "the entire range, both undirected and directed experiences, concerned in unfolding the abilities of the individual" and the

second direction targets the "series of consciously directed training experiences that the schools use for completing and perfecting the unfolding" (Bobbitt, 1918, p. 43).

In Franklin Bobbitt's curriculum theory, we can identify four approaches to curriculum: the "psychologizing approach" - through consciously directed experiences, the "behaviorist approach" - where the curriculum is seen as a set of experiences, the "expanded approach" - in which the curriculum is seen as the totality of these experiences, and the "social approach" - in which the curriculum must prepare the learner for social life (Ilie et al., 2013, p. 14).

Another important idea of Bobbitt was building the curriculum based on educational objectives: "the first task is to discover the activities that should make up the lives of men and women and along with these, the abilities and personal qualities necessary for adequate performance. These are the educational objectives" (Bobbitt, 1924, p. 1).

Bobbitt, like Dewey, promotes instrumental rationality, but unlike Dewey, he is more focused on the efficiency of the educational process rather than on the instinctual values of the students. As a promoter of social efficiency, Bobbitt advocated Taylorism - which has been associated in the literature with Weberian instrumental rationality. Taylorism has its roots in Weberian rationality theory through its urge for organizational efficiency (Hatch & Cunliffe, 2013).

Kliebard (1979) dubs Bobbitt's conception of curriculum: ''means-end rationality'' and argues that the type of curriculum Bobbitt desired is important firstly because it sets precise goals to be pursued, and secondly because it transforms the subjects of study from being the central element of the curriculum into the means by which the goals are achieved.

Ralph Tyler developed his curriculum theory and educational philosophy based on a series of principles: selection of educational goals - considering students' prior knowledge and development, as well as their interests in relation to society; selection of educational experiences - those that are suitable for achieving the objectives; organization of educational experiences - by choosing the best teaching and learning methods; evaluation of outcomes - conducted at the beginning, during and at the end of activities (Tyler, 1949).

Like Bobbitt, Ralph Tyler emphasizes the importance of objectives in the curriculum development process. An important idea that Tyler advances is deriving objectives from three sources: "learners, society, and the discipline" so that curriculum development takes into account both the learner-centred approach - a progressive approach, and the subject-centred approach - an existentialist approach (Antonelli, 1972, p. 129).

At a theoretical level, considering Tyler's curriculum model, for instance, we can observe the relationship between instrumental rationality and knowledge. Autio (2003) sees a correlation between Tyler's idea and Habermas's opinion on the relationship

between rationality and knowledge (p. 306). Habermas (1984) believed that rationality relates more to how subjects utilize acquired knowledge than simply to the fact that they possess that kn Ralph Tyler's model of curriculum is one guided by instrumental rationality that separates means from ends, argue Laanemetes & Kalamees-Rubel (2013): 'Tyler's rationale is an appropriate example of this approach. Tyler views curriculum theory as technical. Predetermined behavioral objectives serve as a driving force that controls the pedagogical and evaluative efforts that follow" (p. 4).

Thus, the differences in approach between the three curriculum theorists lie both in the educational approach: learner-centered vs. goal-centered, but also in the rational approach: Dewey's rational-practical approach, where education is about the motivations and experience of learners, and Bobbitt and Tyler's rational-instrumental approach, where education is about efficiency and social goals. owledge.

4. Methodology

The research method utilized is a literature review to synthesize subsequent research in the field of North American curriculum reform. Considering that the current paper is an interdisciplinary approach between the philosophy of rationality and Curriculum Theory, this method brings together information from both curricular practice and the applicability of rationality theory in this practice. As Snyder (2019) states: "Building your research on and relating it to existing knowledge is the building block of all academic research activities, regardless of discipline" (p. 339).

As mentioned earlier in this paper, the research focuses on the 20th century for two reasons: to see how the ideas and rationality of Dewey, Bobbitt, and Tyler were implemented in their specific contexts, and because during this period, the rationalization of education produced terms that guide today's pedagogical language, such as: student-centered learning, educational standards, or educational objectives.

For the selection of research studies, we used several criteria to fit these studies within the field of the established research questions.

4.1 Data Selection Criteria

In addition to the foundational works of 20th-century North American curriculum theory by Dewey, Bobbitt, and Tyler, I have selected several books and articles from the specialized North American literature.

For the selection of articles, I accessed several databases including: ERIC, JSTOR, Science Direct (Elsevier), Central Eastern European Online Library (CEEOL), and Directory of Open Access Journal (DOAJ).

The data and information on which this research is based were selected according to the following criteria:

- The books and articles should focus on curriculum reforms specific to the Progressive Era (20th century).
- The books and articles should address the issue of the rationalization of education in the North American educational space.
- The books and articles should belong to the specialized North American literature.

4.2 Research Questions:

The research questions address the implications of Weber's theory of rationality in the context of 20th-century North American curriculum reforms. On one hand, I examined the practical aspect of this theory through the phenomenon of rationalization, and on the other hand, I explored the integration of Weberian types of rationality in curriculum reform movements:

- How is the term "rationalization of education" perceived in the North American specialized literature?
- How did the rationalization of education manifest in the context of 20th-century curriculum reforms?
- Which types of rationality articulated by Max Weber are found in the 20th-century curriculum reforms?

4.3 Literature review

Mehta (2013a) believes that the Progressive Era was the time when the American school was most strongly rationalized. This rationalization was justified in the 20th century by the creation of a rationally organized production system. This idea seems to be a perfect reflection of what Max Weber called the rationalization of education – that is, preparing students in a utilitarian sense, so that they are useful for working in a bureaucracy (Weber, 1949).

An important distinction that must be made in this study is between pedagogical progressives, represented by John Dewey, and administrative progressives, represented by Thorndike. In the first case, there was an orientation towards the needs of the students and naturalistic education, while in the second case, towards the rationalization of education in the Weberian sense, focused on standards and efficiency. The following sections will present both approaches and analyze their impact on the American curriculum and educational system.

In the 1920s, the idea of progressive education and implicitly of a progressive curriculum based on the needs and interests of students began to spread. The concept of progressive education materialized in the United States through the *Eight-Year Study* project, between 1932 and 1940. The project involved 30 American high schools that were to prepare students in the spirit of progressive education through new programs

that encouraged educational values and practices such as "problem-solving, creativity, self-directed study, and more extensive counseling and guidance for students" (Parkay, 1993, p. 319). The main problems of secondary education in the United States identified by the commission in charge of the project were related to the primary purpose of high schools, inadequate preparation of students for future social responsibilities, and the main disciplines included in the traditional curriculum were no longer relevant (Aikin, 1942).

During this period, the influence of John Dewey is observed through the propagation of instrumental rationality, or the term "inquiry" – which Dewey (1938) uses, meaning the use of thinking to solve encountered problems. Thus, the American curriculum moves away from the traditional vision, where the emphasis was on memorization, and shifts towards a modern vision where the focus is on the student. This idea is also found in Max Weber's work *Science as a Vocation* where the author states that the most challenging pedagogical task is to make the student think independently about scientific problems (Weber, 1946).

The main difference between Dewey's approach and the approaches in the movements we are about to discuss is as follows: besides the instrumental aspect of education, namely the relationship between means and ends as defined by Weber, Dewey also considered value rationality – the intrinsic motivations of students. In contrast, the social efficiency movement and the standards movement focused solely on the instrumental aspect – the relationship between methods and objectives in Bobbitt and Tyler's work.

This demonstrates what I presented earlier – Dewey promoted practical rationality (which includes instrumental rationality and value rationality), while Bobbitt and Tyler promoted instrumental rationality, oriented towards efficiency.

Simultaneously with progressive education, the movement called Social Efficiency emerged. This movement was based on Thorndike's idea that there are "scales for everything in human nature" (Thorndike, 1910, p. 4). Thus, by supporting these ideas, along with several curriculum theorists, including Bobbitt and Tyler, state control over education was intensified by establishing objectives that schools had to meet.

In the theory of social efficiency, both Bobbitt and Tyler, who adopted the idea of "scientific technique" from him, argue that educational objectives should be understood as the future social performances of the students. In this sense, the curriculum had to be developed considering the future roles that students would have as adults (Kliebard, 2002).

The influences of this movement can be observed in several legislative decisions and reports throughout the 20th century, such as the *Smith-Hughes Act* (1917) – which supported vocational education, and the *Cardinal Principles of Secondary Education*

(1918) – which supported the idea that students should know their role in society and choose the appropriate career (Raubinger, Rowe, Piper & West, 1969).

During this period, a rational-instrumental approach can be identified, which in the American specialized literature was called scientific instrumentalism – which implied developing the curriculum as a tool working towards its unrelated goals (Schiro, 2013).

In early 20th-century North American curriculum reforms, rationalization appears in the specialized literature in the form of the term Taylorism. "Applied to the school system, scientific management meant an increased focus on cost accounting, empowering superintendents to use their discretion to increase the productivity of teachers and the system as a whole, and using measurement and testing to compare, improve and standardize practice across districts" (Mehta, 2013b, p. 11).

Here, we observe a very important difference between pedagogical progressives (represented by Dewey) and administrative progressives (represented by Thorndike): in Dewey's progressivism, reforms were based on practical rationality, where the focus was on the needs of the students, while in administrative progressivism, promoted by Thorndike, the emphasis was on efficiency, thus on the process of rationalization. In Dewey's progressivism, the real impact in schools was very small, while Thorndike's progressivism or the rationalization of education had a large-scale impact (see Kliebard, 2002).

From 1930 to 1950, the social reconstruction movement emerged in North American education as a result of the Great Depression and World War II. This movement was supported by George Counts, a harsh critic of progressive education. The reconstructivist philosophy of education posited that students should be trained in civic spirit to become competent citizens and contribute to the welfare of society (Kliebard, 2002).

However, the impact of this movement was small in American schools, incomparable to the efficiency-based reforms rooted in Bobbitt and Tyler's theories (Kliebard, 2002).

The period from 1950 to 1960 represented a return to mental disciplines for North American education. During this period, a series of curricular and educational reforms took place. In the context of the Soviet Union launching the Sputnik satellite in 1957, North American curricular reforms needed to respond to the need for disciplines such as "mathematics, sciences, modern languages" (Parkay & Stanford, 1999, p. 362). Several studies published during that period, including one with a suggestive title "What Ivan Knows That Johnny Doesn't," showed that the North American student was less well-prepared than the student from the Soviet Union in terms of "reading, writing, and mathematics skills" (Urban & Wagoner Jr., 2009, p. 336).

Kliebard (2002) observes that in the 20th century, there was a tendency among Americans to believe that any social problem, including the aforementioned inferiority to

the achievements of the Soviet Union, could be attributed to schools and could be solved through a curriculum adapted to the situation.

In this sense, several curricular reforms took place in the following period. The most important document marking the post-Sputnik period is the *National Defense Education Act* (1958), which allocated funds for the development of STEM education (Science, Technology, Engineering, and Mathematics) (Wissehr, Concannon & Barrow, 2011).

The post-Sputnik period is also referred to in the specialized literature as *The Push for Excellence movement*, as the introduction of standards and rigorous disciplines sought excellence, promoting terms such as accountability and standards. In this context, the Rockefeller Report – officially titled *The Pursuit of Excellence* (1957) – created significant reactions, calling for prioritizing scientific education, more rigorous courses for gifted students, and the reorganization of teaching objectives and methods (Herold, 1974).

Wise (1977) observed during this period, with reference to Weberian theory, a "hyper-rationalization" of education. He argued that educational policies based on hyper-rationalization were not effective: school objectives were set politically and imposed on teachers, most teachers did not teach in a way that maximized test results, and they transformed general objectives into personalized ones.

In the traditional vision, the American political factor was limited to setting inputs (school budgets, teacher qualifications, etc.), while in the hyper-rationalized approach, politics also imposed school results, set literacy limits, and defined teaching processes (Wise, 1977).

North American education was thus under pressure to introduce more rigorous disciplines and precise standards and objectives in the curriculum. Following this conclusion, in the early 80s, William J. Bennett, the U.S. Secretary of Education at the time, introduced the idea of a "core curriculum," aimed at introducing "a rigorous academic core curriculum for all students" (Parkay & Stanford 1999, p. 363).

Under this imprint of rationalization or hyper-rationalization described by Wise (1977), the 1983 report *A Nation at Risk* emerged, which was essentially an expression of the introduction of standards in the North American curriculum. The report appeared in the context of the Cold War and, based on statistical analyses, such as those showing that SAT test scores were lower than in the 60s, found that the efficiency of American education was below that of many competing countries (U.S. National Commission on Excellence in Education, 1983).

The report was based on guidelines such as introducing rigorous and measurable standards, comparing school results in the U.S. with those of other countries, and once again, the issue of excellence was addressed in a curriculum reform movement (U.S. National Commission on Excellence in Education, 1983).

A Nation at Risk was essentially an expression of instrumental rationalism, as the report's objectives were primarily based on an economic conception – the school is responsible for the performance of society, and this performance "should be measured by external tests" (Mehta, 2015, p. 20).

Mehta (2015) shows that the hyper-rationalized approach mentioned by Wise (1977) was also present in this report and emphasizes that "policymakers must empower educators to learn and grow rather than seek to control them" (Mehta, 2015, p. 26).

However, American curriculum reforms have maintained this hyper-rationalized approach, based on standards and external objectives to schools, into the following century. Standards refer to both student performance and curriculum content. Several initiatives have been taken in this regard by various American administrations: *No Child Left Behind* (2001) - George W. Bush, *Race to the Top* (2015) - Barack Obama.

The guiding principles of the Bush administration through *No Child Left Behind* included: setting standards regarding what students should know and learn in each state; standardized testing of students; recording annual progress for each state, analyzing differentiated tests of students from disadvantaged groups (economically, racially, or with disabilities); publicly reporting individual school results; and sanctioning schools that fail to make annual progress (Parkay, Anctil & Hass, 2006, pp. 227-228).

Barack Obama's plan, *Race to the Top*, introduced new ideas such as: centralizing teaching through common national standards (including curriculum materials); annual standardized testing; privatizing education through charter schools (Onosko, 2011, p. 2).

All these approaches based on social efficiency, preparing students for future social roles, and standards leading to this efficiency are expressions of what Max Weber called the rationalization of education, meaning that the process of education aims more at creating a "specialist" rather than a "cultivated individual" (Weber, 1949). Thus, curriculum reforms in the second half of the 20th century and those that followed in the next century confirm what Dewey (2001) said: the curriculum model imposed from the top down on teachers is automatically replicated on pupils: "adaptation to external purposes becomes confused if intrinsic meaning is not recognized" (p. 114).

5. Results

Based on the research questions: "how is the term rationalization of education perceived in North American literature?", "how has the rationalization of education manifested in the context of curriculum reforms in the 20th century?", "which types of Weberian rationality are found in 20th-century curriculum reforms?", the literature review yielded the following results:

- Within the Social Efficiency movement, instrumental rationality appears in the form

of scientific instrumentalism or Taylorism.

- During the reforms prompted by the Sputnik moment and the Push for Excellence movement, there was observed a hyper-rationalization of education through the influence of politics on curriculum reforms.
- Within the Standards movement catalyzed by the *A Nation At Risk* report, there was noted the presence of instrumental rationality driven by school accountability aimed at economic development vis-à-vis competing nations.
- Considering Weberian types of rationality, the study of American curriculum reforms in the 20th century indicated a tendency toward practical rationality (which includes instrumental rationality and value rationality) in Deweyan approaches emphasizing efficiency on one hand and intrinsic student values on the other. Subsequently, there was a shift toward instrumental rationality oriented toward educational objectives, social efficiency, and eventually educational standards.

John Dewey's ideas, such as student-centered learning, problem-solving, and inquiry, were largely disregarded in 20th-century curriculum reforms. Instead, emphasis was placed on rationalizing education and the progressivism of Thorndike and Taylorism, which advocated for social efficiency principles.

The Weberian term rationalization of education could be found in the American context in the early 20th century under labels such as scientific instrumentalism or Taylorism. Social efficiency movements established the framework of educational rationalization by introducing external standards and educational objectives. Curriculum became a primary tool for preparing students for future social roles, aligning with ideas promoted by Bobbitt and Tyler. Thus, 20th-century curriculum reforms predominantly featured a top-down organizational approach.

The Sputnik moment sparked new curriculum reforms in North American education. The launch of the satellite by the Soviet Union in 1957 led to curriculum reforms aimed at achieving excellence and establishing rigorous disciplines and standards for American education.

Guided by the hyper-rationalization of education, the American state produced the *A Nation At Risk* report in 1983, which focused more on the social component of curriculum reform rather than on the educational needs of students in a Deweyan sense. The economic conception of schooling and the role assigned to schools to develop society economically are expressions of instrumental rationality and a utilitarian logic.

Reforms based on standards continued in the US into the following century, following the rationalized model from the 20th century.

6. Conclusions

Based on the established research questions, we find that the primary type of rationality guiding North American curriculum reforms during the 20th century and into the subsequent century has been practical rationality. This shift changed the traditional focus of education from rote memorization to education centered around objectives and standards.

Simultaneously, the rationalization and in some cases hyper-rationalization of education have shown that North American education policies have led to the creation of a top-down curriculum with imposed standards, which has not entirely generated the desired efficiency.

These effects of educational rationalization can be considered within any education system, not just the American one, given that current educational policies are based on standardization and the orientation that education must prepare students for the job market.

The differences in approach between Dewey's rationality and that of Bobbitt and Tyler show us that education should not be based solely on standards and the external efficiency of outcomes but should also consider students' motivations.

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An Empirical Investigation into the Utility of Descriptions of Inclusive Vocational Excellence Practices

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Abstract

The present paper investigated how inclusive vocational excellence (IVE) practices specific to vocational education and training (VET) can be described in an effective and transparent manner. A framework for the description of such practices was proposed, and then 44 descriptions of practices were collected with this framework from an international sample of providers of such practices from four countries. Expert raters have rated the quality of these descriptions, in terms of how much they respect the proposed structure, provide relevant information about the proposed practice, provide relevant information about the manner in which the practice was implemented and offers a clear and explicit description, further usable by other interested VET institutions. Statistical analyses have then revealed that the framework generates more consistent descriptions for some domains then for others. Implications for practice are discussed.

Keywords: inclusive vocational excellence (IVE); vocational education and training (VET); practice descriptions; communicability.

An Empirical Investigation into the Utility of Descriptions of Inclusive Vocational Excellence

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This paper focuses on inclusive vocational excellence (IVE) aimed at vocational education and training (VET) institutions and contributes to the clarity and transparency of future descriptions of IVE projects and policies. Empirical research in the domain of IVE is still young, and a multitude of practices that loosely fall into the IVE category are reported in the literature, but often with little systematization in terms of scope, relevance, clarity or sheer transparency of these descriptions. This makes both the accumulation of knowledge in this domain, and the generalization of some of the more effective IVE practices problematic. The current study builds on a European project that described a large number of IVE practices across four countries, proposes a framework and consequent analysis grid for descriptions of IVE practices and empirically evaluates how well the proposed framework works when specialists describe their practices applying this framework.

Rather than being inherently contradictory, the terms "inclusive" and "excellence" can complement each other when utilized for efficiently organizing and managing educational environments. Even apparently these terms seem contrasting, they are not to be treated as mutually exclusive perspectives, as the occurrence of one of them does not supersede the other. A well-integrated perspective – highly advocated in this article – has to acknowledge the contribution of both factors to develop equitable educational and training approaches, where diversity and inclusion are not just accepted but actively leveraged for achieving excellence and collective improvement. Also, because inclusion leads to excellence, inclusion in functional governance is also important in order to have the anticipated processes supported by the diverse stakeholders who may intervene in decisions in educational environments. By fostering an inclusive environment, both in delivery and in governance, the educational ecosystems can tap into a broader range of learners' needs and perspectives, leading to a more robust and successful outcome. Ignoring such perspective and trying to pursue excellence in isolation from considerations of inclusion can perpetuate inequities and can lead, intentionally or inadvertently, to elitist exclusivity, potentially missing out on valuable contributions from a wide diversity of learners and opportunities.

Therefore, inclusive excellence suggests that an educational community develop intentional, complementary strategies that value diversity, equity, and inclusion. The approach is a broad and flexible concept that can be applied across various educational contexts, starting with, for instance, curriculum, desirable fostering an inclusive school culture, continuing with higher education policies regarding student admissions, faculty recruitment or staff composition, with educational leadership and governance or accessible resources and facilities available, research or policies. Certainly, inclusive excellence specific to VET – the focus of this article – can be added to the previous selective enumeration, being a growing area of interest and further research within the academic community, but especially in what started to be generally called Centers of Vocational Excellence (COVEs).

In the attempt to define inclusive vocational excellence, an important limitation has to be addressed: the scarcity of scientific literature and consistent research on the subject. Such a gap has to be firmly mentioned since the insufficient coverage in the literature on the particular topic of inclusive vocational excellence can pose challenges for specialists and practitioners seeking comprehensive insights. In this context, the ambition of this paper is to consistently contribute to expanding the existing knowledge base in this underexplored field.

Even though the richness of scientific literature on inclusive excellence is not consistent, some academic references can be highlighted, mainly referring to additional fields to VET, such as mainstreaming systems, continuous or special education. For instance, Hornby (2020) highlights key points regarding the integration of these two principles in the special education context, taking into account the challenges and potential tensions that may arise in trying to balance equity and excellence. In this regard, he states that focusing on excellence alone without ensuring equity in education systems does not lead to overall excellence. To achieve optimal educational outcomes for all students, it is crucial to combine efforts to promote excellence with a focus on equity

As technology and innovation are increasingly pervasive in education, we can talk about innovative and inclusive pedagogies in VET as well. These pedagogies have as characteristics either elements related to technology (artificial intelligence, augmented reality, virtual learning environments, etc.) or design elements (experiential learning, design thinking, gamification) or skills (computational thinking, learning experiences addressing emotional and social development, etc.). We cannot have innovative and inclusive pedagogies on CoVEs without a governance system also adapted to current times with entrepreneurial, agile and anticipatory characteristics. An ecosystem based on innovative and inclusive pedagogies and entrepreneurial, agile and anticipatory governance system can help today's learners to thrive and shape the world, to create and contribute to a better future. It is important that within CoVE learning takes place in a stimulating and supportive learning environment where good, relevant and robust learning takes place. Inclusion based vocational excellence (IVE) is a complex problem that calls for collective action of multiple actors in addressing solutions – business agents, public administration agents, universities & research organizations, civil society organizations and sustainable development agents (Ciolan et al., 2022).

A similar conclusion about the synergy between excellence and inclusion, seen as mutually reinforcing factors, embraced and integrated into the core values and practices, is strongly underlined in different documents referring to the VET domain. Such strategic and programmatic papers, produced mainly at the European level, can play an important role in compensating the literature and research gap previously mentioned.

Several international declarations and recommendations shape the programmatic directions of the IVE domain; cumulatively, these documents describe VET as an ecosystem aiming to equip learners with practical skills, knowledge and competencies required by particular career paths and occupations, while highlighting the need to promote excellence and inclusion. Many of these international documents highlight the importance of both inclusiveness and excellence in the definition (e.g., World Bank, UNESCO & ILO, 2023), melding the need to zoom in on the marginalized, disadvantaged and under-represented (i.e., "inclusive") with the need to engage in efficient skills development (i.e., "excellence").

In the European Union, the Council Recommendation on VET for sustainable competitiveness, social fairness and resilience defines different key principles to be followed to ensure that VET offers quality opportunities for all learners. The need for inclusive practices leading to fostering inclusive excellence is underlined, as VET systems are requested to "foster inclusiveness and equal opportunities and contribute to achieving resilience, social fairness and prosperity for all" (Council of the European Union, 2020).

Similarly, the Osnabrück Declaration refers directly to "excellent and inclusive European VET systems" as being an enabler of innovation and an essential foundation for sustainable growth. More notably, one of the areas of intervention proposed by Osnabrück Declaration for the years 2021 to 2025 is resilience and excellence through quality, inclusive and flexible VET: "Apprenticeships and work-based learning embedded in a real-life work environment improve employability. VET equips our labour force with knowledge, skills and competencies that are relevant for the ever-changing labour market and offers upskilling and re-skilling for inclusion and excellence" (European Commission, 2021, p. 4).

A comprehensive definition of vocational excellence is provided within the European Training Foundation (ETF) document focused on exploring this challenging topic. From this perspective, inclusive vocational excellence typically denotes high-quality training and education, but also pertains to the relevance of the training to the job market and the appeal of educational programs to both learners and employers. It can also suggest a broader, more inclusive understanding of skills development, encompassing aspects such as innovation, teaching methods, social justice, lifelong learning, transferable skills, ongoing professional development, and the needs of the community (European Training Foundation, 2020).

This approach reconciles, once again, the apparent contradiction between the two concepts in the area of vocational training – excellence and inclusiveness as there is a growing recognition in policy as well as in practice.

The arguments used for constructing this balanced perspective are extracted from Cooper's (1980) opinions, rejecting the possible competition between excellence and quality, in favour of the notion of "acceptable minimum", which according to the European Training Foundation (2020) means that an acceptable minimum for everyone while striving for excellence for some; therefore, it is feasible to highlight good examples of excellence

rather than necessarily focusing on the most outstanding examples (European Training Foundation, 2020, p. 14). A more operational description of the synergy between inclusion and excellence in VET systems is provided when referring to the specificity of the Centres of Vocational Excellence (CoVEs). Such institutions represent collaborative networks aimed at creating skills ecosystems supporting regional development, innovation, and smart specialization strategies. VET collaborates closely with other educational and training sectors, the scientific community, and businesses, and is involved in research, education, and innovation according to European Commission (2019).

Based on these insights, the concept of inclusive VET excellence addresses a wide set of thematic operators, referring to: (a) governance: institutional autonomy, smart specialisation, sustainable financing, sector councils/ alliances, performance-based evaluation; (b) quality: quality assurance frameworks, continuous improvement of VET standards; (c) relevance: sound qualifications, aligned skills and competencies; (d) effectiveness: skills intelligence tools; (e) employability: high-level vocational skills, policy labs (incubators); (f) flexibility: permeability to connect to all possible learning pathways; (g) lifelong learning: comprehensive qualification frameworks; (h) image: VET public recognition as an optimal option for learners and society; career guidance; (i) innovation: value generated, innovation hubs are institutionalised (European Training Foundation, 2020).

By correlating these dimensions, inclusive vocational excellence strives to connect inclusivity and equity with high quality standards, nurturing an environment where all learners can thrive and succeed in their chosen careers. In other words, the approach "ensures high-quality skills and competencies that lead to quality employment and career-long opportunities, which meet the needs of an innovative, inclusive and sustainable economy" (European Commission, n.d.).

CoVEs vary in the degree to which they are 'embedded' in policies for regional development, innovation and smart specialization (European Commission, 2019). Where there are no national or regional networks, there is a risk of a patchy CoVE landscape when viewed across a country as a whole. However, even in such a case, CoVEs develop relationships and networks: partnerships form a central component of CoVE governance, as they ensure shared ownership of goals and activities, and a common commitment to achieving them, by pooling and sharing resources.

Descriptions of current practices are critical in all situations, but especially so in this innovative and emerging domain. Clear and transparent descriptions of practices enable us to analyse them in a systematic way and enable the sharing of practices in both practice communities, policy environments and the scientific literature. Clarity, structure or transparency in the descriptions of practices are critical to the development of the domain,

as knowledge is accumulated and shared with efficiency, while lack of these characteristics may lead to less efficiency and may hamper development.

Description of Current Practices: A Template and Framework

One example of current best practices to be highlighted in this context is the good practice score card (see Figure 1) developed by the ETF (2015), working between 2012 and 2014 with a range of training providers from the EU's 28 member countries and ETF's 29 partner countries, to help them objectively determine the strengths and weaknesses of their training. The ETF score card comprises a set of criteria and an assessment framework that help in the critical review of training provisions by other training professionals working in the same field (also see Table 1).

Table 1: *Excerpt from the ETF Good practices and assessment framework (ETF, 2015)*

Dimension 1: Training Needs Analysis (TNA)				
Rationale A training needs analysis (TNA) ensures that the training programme is designed to meet the specific needs of the target group. A first step in a training programme is to define in concrete terms what the training requirements are of those who will follow a training programme. This information can also assist the training provider in monitoring market trends. Training needs analysis involves an examination of skill gaps and weaknesses. Accumulated TNA intelligence can help policymakers address systemic issues for training. **Objective** The objective of this component of the ETF good practice peer review is to determine how well training needs analysis has been defined as input to the design and execution of a training programme, including the potential for use in wider policy developments.				
Level	**Value**	**Indicators**	**Score**	**Comments - evidence**
Level 1	1	Evidence of proxy - TNA process: data and analysis borrowed from other training environments with risk that training design is less relevant to local market		
	1	TNA tools borrowed and not adapted to local training environment		
Level 2	2	Evidence of TNA is confined to ad hoc or one-off data intelligence gathering related to the training provision under review with no defined plans to update TNA know ledge		
	2	Evidence that TNA is driven by actors external to the training environment (e.g. donors)		
Level 3	3	Clearly defined links between the training provider and private sector for identifying training needs		
	3	At least one TNA tool (e.g. survey, focus group) exploited for purposes of training design and delivery		
	3	At least one example that TNA tools and analysis are sensitive to specific target groups (e.g. exporting SSMEs)		
Level 4	7	TNA reflects scale of training provision in terms of numbers involved in training and geographical spread		
	7	TNA is core feature of training provider's business or organisation plan		
	7	At least one example shared which convinces peer reviewers of innovation in the TNA process. Innovation involves any aspects which brings real added value to the TNA process		
	7	At least one example of an agreement established between training provider and general industry or sector-specific organisation for training development purposes		
Level 5	10	TNA includes analysis of sector trends (trade, turnover, employment, skills) using primary and secondary data.		

	10	Evidence that TNA intelligence from the project has been provided by training provider for wider policy debate e.g. sector-specific, government policies (education, training, employment, enterprise, economic development)		
	10	At least one example shared which convinces peer reviewers of innovative use for technology for TNA process (e.g. e-surveys)		
		Subtotal dimension 1:		
Expert Comments		The most interesting the TNA for me was: My key improvement / recommendation on TNA for the training provider is: My recommendation for ETF for site visit is:		

For example, experienced trainers in youth entrepreneurship critically review the training provided by fellow trainers of youth entrepreneurship. The peer review process involves an in-depth scrutiny of these training practices and identifies strengths and weaknesses as well as opportunities for the training provider to improve the programme. The real value is that the peer review is undertaken by training providers with expertise and know-how in the same field. Equally, the peer reviewer has the opportunity to learn at first hand from the experience, know-how and innovation within the training programme under review.

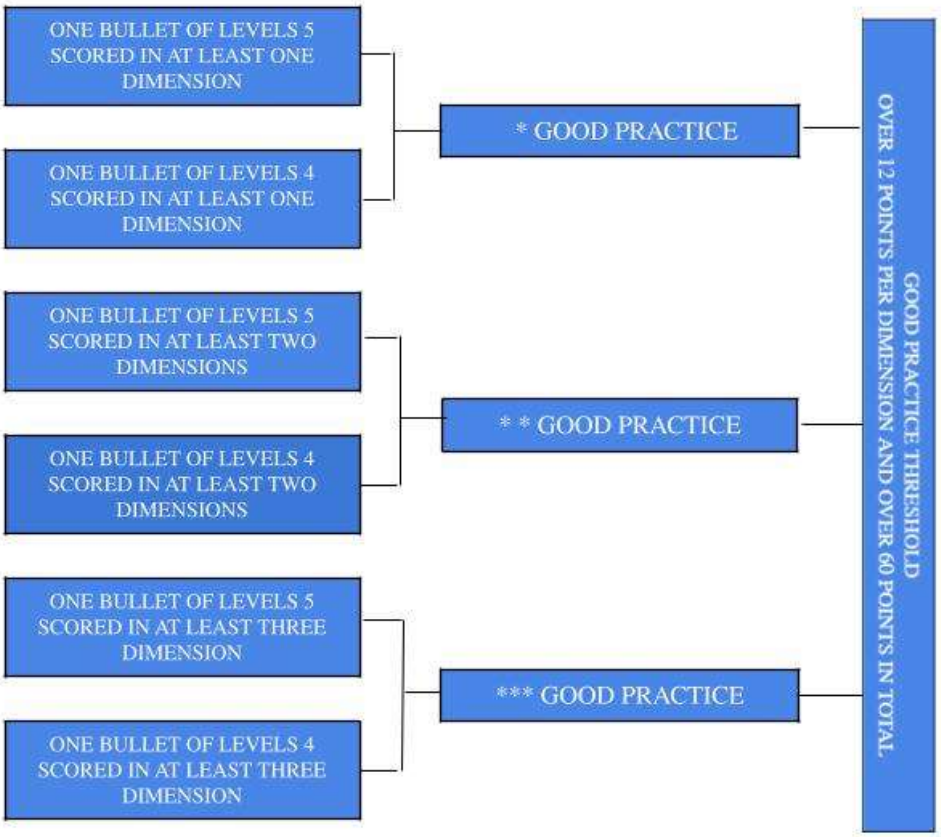

Figure 1: *The ETF Good practice scoring framework (ETF, 2015)*

Training programmes can be peer reviewed with the ETF score card against five good practice criteria: (1) training needs analysis, (2) design of training programme, (3) training

environment, (4) monitoring, evaluation and improvement, and (5) marketing and dissemination. Each criterion comprises more specific requirements to be met within a training programme. The training provider shares evidence to demonstrate that the requirements are met. Each requirement is assigned a numeric value or score depending on how demanding and complex it is. Taken together, the scores across the various criteria allow peer reviewers to arrive at an overall scoring for the training programme. In the ETF exercise, this total result then determined whether the training programme was confirmed as good practice.

Based on the structured approach of the ETF scorecard, and also on a generalized acknowledgement of the need to transparently and effectively discuss, analyse and share practices, CoVEs have begun to offer more structured descriptions of their practices. But even with this explicit effort to structure the descriptions, their utility may be hampered by lack of clarity. Specifically, practices can oftentimes be useful in more than the context in which they were initially developed and applied – for practices that are narrow in scope and clear-cut, the framework is easy and straightforward to apply, but for broader practices, clarity and thus utility may be questionable.

To address this shortcoming, we investigate the way in which descriptions of practices that were developed by CoVEs based on this structured template, fit into the framework categories, and discuss various the ways in which descriptions of practices can be improved in clarity and utility. To this end, we analysed with the help of six experts a number of 44 good practice descriptions produced by a number of 9 institutions: VET centres, an applied sciences university, companies (in a cooperative work of an international partnership) from four different European countries: Spain, Italy, Malta and Finland. We present results regarding the quality of practice descriptions (as rated by the experts), as well as the fit of these practice descriptions with the targeted categories. We then discuss how both these aspects (quality of descriptions and fit with the underlying categories) can be improved.

Method

Participants

The invitation to participate in the current study was addressed to a number of nine national experts in either VET education and/or organizational psychology, all of them having previous experience and being currently active in the field of VET, both IVET and CVET. These experts have had during the past three decades important contributions in the field of innovative and inclusive pedagogies, VET and governance, and have worked in strategic projects of the European Commission, OECD, ETF and UNESCO. Six experts responded to the invitation and actually participated. It is relevant to mention that they worked with ETF, National Centre for Technical and Vocational Education and Training, the International Test Commission (ITC), the Council of the European Educational Research

Association (EERA) and the European Research Network in Vocational Education and Training (VetNET).

Measures

The questionnaire (Section 2 of the Electronic Supplementary Materials) for the present study was developed in order to enable us to analyse practices related to VET excellence. The questionnaire contained three sections: (1) practice identification data, (2) quality of description and (3) assessment of practice.

Practice identification (section 1) referred to the actual practice that was described, and contained the name of the practice, as well as details about the organization that had proposed it, community in which it was implemented and the categories (section 3) in which the proponents thought it should be included.

Quality of description (section 2) contained 4 items through which the quality of each practice description could be assessed. The 4 items were: "Respects the proposed structure", "Provides relevant information about the proposed practice", "Provides relevant information about the manner in which the practice was implemented", "The description is clear and explicit". For each of the 4 items evaluation was requested on a scale from 1 (= low quality) to 5 (= high quality) regarding the verbatim description that had been offered for the analysed practice.

Assessment of practice (section 3) contained 10 categories to which each practice could refer. The 10 categories are comprised of 6 actual focal domains, to which a seventh "undefined" was added; from those 6 focal domains one comprises two subcategories, and another one comprises three subcategories. The 10 actual categories were as follows: (1) Governance, (2) Teaching - a) Inclusive and innovative pedagogies, including the use of technologies, (3) Teaching - b) Competence based supply (Competence & skill-based pedagogical innovation, including context-based / real world pedagogical innovation), (4) Assessment and certification (Prior or at the end of the CoVE training programme), (5) Support services focusing on counselling and guidance - a) Learning support, including special needs support, (6) Support services focusing on counselling and guidance - b) Career, educational and vocational support, (7 Support services focusing on counselling and guidance - c) Work and social related inclusion and transition support, (8) Research & development, (9) VET team professional development, (10) Undefined. Raters used this framework of categories (and the descriptions of each category, see Section 1 of the Electronic Supplementary Materials) to assess each practice in terms of match from 1 (= absolutely inappropriate for this category) to 5 (= perfectly appropriate for this category).

Procedure

The set of 44 practices was initially gathered between December 2021 and February 2022, followed by a period of evaluation and feedback by stakeholders, as well as further

clarifications – final forms of the practices we collected by July 2023. Most of the practices were offered by institutions that provide either professional training or further support services including multi-sector education promoting inclusion, life-skills and well-being, placement of work force or information services related to the labour market. One important aim of these practices was to reorganize functional multilevel governance to be more agile, entrepreneurial and anticipatory, but the final aim of these practices was to generate knowledge and competences related to innovative training services as well as to develop ways to introduce innovative approaches (i.e., challenge or inquiry-based methods) and tools (e.g., virtual reality, gaming) in pedagogies.

The participants (the six experts) were invited to use the questionnaire in order to categorize each of the 44 practices. Practices were presented in a randomized order to each of them; the practice description then remained open and could be browsed and scrolled through while the questionnaire was presented. Instructions called for a quality rating (the 4 items of section 2) and then a request to rate the appropriateness of the presented practice for the category (focal domain) that practice was initially categorized in. Also, the experts were asked to propose where they thought that practice should be categorized in, as well as to offer, in those cases where several categories were available, their second and third best categorization.

Statistical Approach

In this study, we employed descriptive statistics and boxplots to analyse and visualize the distribution of responses across various categories. Boxplots were chosen for their effectiveness in illustrating the central tendency and dispersion of data, providing a clear view of the median, interquartile range (IQR), and potential outliers within each category. For each category, we computed the mean (*M*), standard deviation (*SD*), minimum (Min), first quartile (Q1), median, third quartile (Q3), maximum (Max), and interquartile range (IQR). The mean offers insight into the average response, while the standard deviation reflects the variability around this average. The minimum and maximum values denote the range of the data, and the quartiles, along with the median, help identify the spread and skewness of the data. This approach allowed us to comprehensively understand how different categories performed in terms of 'Respect for structure,' 'Relevance of information provided about the proposed practice,' 'Relevance of information regarding implementation in VET,' and 'Clarity and explicitness of the practice description.'.

Results

In analysing the degree to which the prescribed structure was respected across the various categories (see Table 2, Figure 2a), the data revealed significant insights into how different categories adhere to established standards. Categories 4 (Assessment and certification) and

8 (Research & development) emerged as the top performers with the highest mean scores of 4.33 and 4.67 respectively, indicating a robust adherence to the structure. These categories also demonstrated lower variability with standard deviations of 0.66 and 0.58, suggesting a consistent application of standards across observations. Notably, the lowest scores in these categories were 3 and 4, emphasizing their overall strong performance. Categories 1 (Governance), 7 (Support services - c), and 2 (Teaching - a) also showed high adherence, with mean values consistently above 4.1 and minimal variability. The central tendency of these categories was marked by medians of 4.00, with the third quartile reaching 5.00, highlighting a concentration of higher ratings.

In contrast, category 6 (Support Services - b) and category 3 (Teaching - b) exhibited more significant variations in adherence, as reflected by their higher standard deviations of 1.50 and 0.88 and the lowest scores of 1 and 2 respectively. This variation suggests a more inconsistent application or perception of the structure within these categories. Furthermore, category 10 (Undefined categories) presented a lower mean score of 3.67 and a wider dispersion (*SD* = 1.03), which may indicate ambiguity or inconsistency in how these categories align with the expected structure. Lastly, category 9 (VET team professional development) and category 2 (Teaching - a) maintained good scores with low variability, indicating a consistent understanding and application of the structure across these fields.

Table 2: *Descriptive Statistics for 'Respects the structure'*

Category	Count	*M*	*SD*	Min	Q1	Median	Q3	Max	IQR
1	23	4.17	0.65	3	4.00	4.00	5.00	5	1.00
2	27	4.33	0.62	3	4.00	4.00	5.00	5	1.00
3	44	3.86	0.88	2	3.00	4.00	4.25	5	1.25
4	21	4.33	0.66	3	4.00	4.00	5.00	5	1.00
5	32	3.81	0.82	2	3.75	4.00	4.00	5	0.25
6	25	3.92	1.50	1	4.00	5.00	5.00	5	1.00
7	66	4.12	0.79	2	4.00	4.00	5.00	5	1.00
8	3	4.67	0.58	4	4.50	5.00	5.00	5	0.50
9	20	4.20	0.52	3	4.00	4.00	4.25	5	0.25
10	6	3.67	1.03	2	3.25	4.00	4.00	5	0.75

Note. 1 - Governance; 2 - Teaching - a) Inclusive and innovative pedagogies, including the use of technologies; 3 - Teaching - b) Competence based supply (Competence & skill-based pedagogical innovation, including context-based / real world pedagogical innovation); 4 - Assessment and certification (Prior or at the end of the CoVE training programme); 5 - Support services focusing on counselling and guidance - a) Learning support, including special needs support; 6 - Support services focusing on counselling and guidance - b) Career, educational and vocational support; 7 - Support services focusing on counselling and guidance - c) Work and social related inclusion and transition support; 8 - Research & development; 9 - VET team professional development; 10 - Undefined categories; IQR - Interquartile Range.

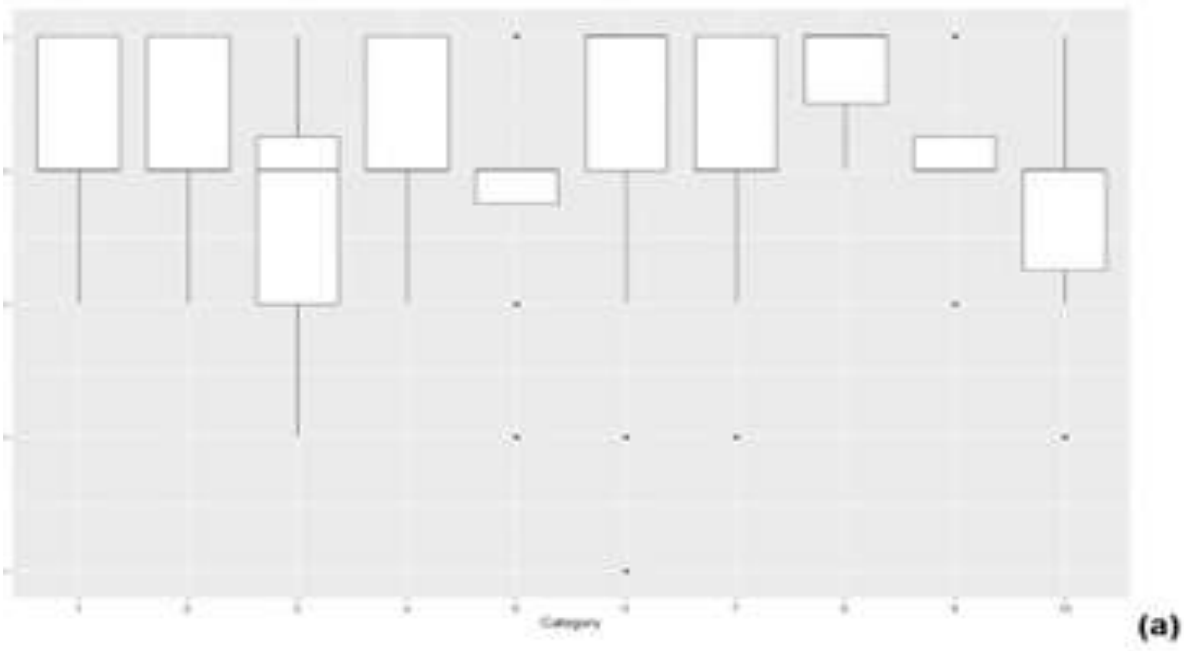

Figure 2a: *Boxplot Showing the Distribution of Ratings Across All Categories for 'Respects the structure'*

Note. 1 - Governance; 2 - Teaching - a) Inclusive and innovative pedagogies, including the use of technologies; 3 - Teaching - b) Competence based supply (Competence & skill-based pedagogical innovation, including context-based / real world pedagogical innovation); 4 - Assessment and certification (Prior or at the end of the CoVE training programme); 5 - Support services focusing on counselling and guidance - a) Learning support, including special needs support; 6 - Support services focusing on counselling and guidance - b) Career, educational and vocational support; 7 - Support services focusing on counselling and guidance - c) Work and social related inclusion and transition support; 8 - Research & development; 9 - VET team professional development; 10 - Undefined categories.

In evaluating how well various categories provide relevant information about the proposed practice (see Table 3 and Figure 2b), distinct patterns and differences in performance were observed across the categories. Categories 4 (Assessment and certification) and 2 (Teaching - a) demonstrated strong relevance, with mean scores of 3.86 and 4.30 respectively; category 4 also showed low variability with a standard deviation of 0.57, and category 2 with a standard deviation of 0.67, also suggested consistent ratings across different instances. The lowest score observed in these categories was 3, underlining

their general effectiveness. Categories 1 (Governance) and 6 (Support services - b) also exhibited good performance, with mean scores of 3.91 and 4.08 respectively. These categories had moderate variability (*SD* = 0.67 and *SD* = 0.81) and a median of 4.00, showing that the majority of ratings were high, though with some variations.

In contrast, category 5 (Support services - a) and category 3 (Teaching - b) presented more variation in the provision of relevant information, as evidenced by their higher standard deviations of 0.92 and 0.77, and the lowest scores of 1 and 2 respectively. This suggests a less consistent application or perception of relevance within these categories. Category 10 (Undefined categories) presented the most notable challenge with a mean score of 2.83 and a wide range of scores (*SD* = 0.98), indicating significant ambiguity or inconsistency in providing relevant information. Lastly, category 9 (VET team professional development) and category 7 (Support services - c) showed moderate relevance, with mean scores of 3.45 and 3.77, and standard deviations of 0.76 and 0.84, respectively, indicating variability in how well these categories provide relevant information about the practices.

Table 3: *Descriptive Statistics for 'Provides relevant information about the proposed practice'*

Category	Count	*M*	*SD*	Min	Q1	Median	Q3	Max	IQR
1	23	3.91	0.67	3	3.50	4.00	4.00	5	0.50
2	27	4.30	0.67	3	4.00	4.00	5.00	5	1.00
3	44	3.77	0.77	2	3.00	4.00	4.00	5	1.00
4	21	3.86	0.57	3	4.00	4.00	4.00	5	0.00
5	32	3.53	0.92	1	3.00	4.00	4.00	5	1.00
6	25	4.08	0.81	2	4.00	4.00	5.00	5	1.00
7	66	3.77	0.84	2	3.00	4.00	4.00	5	1.00
8	3	4.00	0.00	4	4.00	4.00	4.00	4	0.00
9	20	3.45	0.76	2	3.00	3.00	4.00	5	1.00
10	6	2.83	0.98	2	2.00	2.50	3.75	4	1.75

Note. 1 - Governance; 2 - Teaching - a) Inclusive and innovative pedagogies, including the use of technologies; 3 - Teaching - b) Competence based supply (Competence & skill-based pedagogical innovation, including context-based / real world pedagogical innovation); 4 - Assessment and certification (Prior or at the end of the CoVE training programme); 5 - Support services focusing on counselling and guidance - a) Learning support, including special needs support; 6 - Support services focusing on counselling and guidance - b) Career, educational and vocational support; 7 - Support services focusing on counselling and guidance - c) Work and social related inclusion and transition support; 8 - Research & development; 9 - VET team professional development; 10 - Undefined categories; IQR - Interquartile Range.

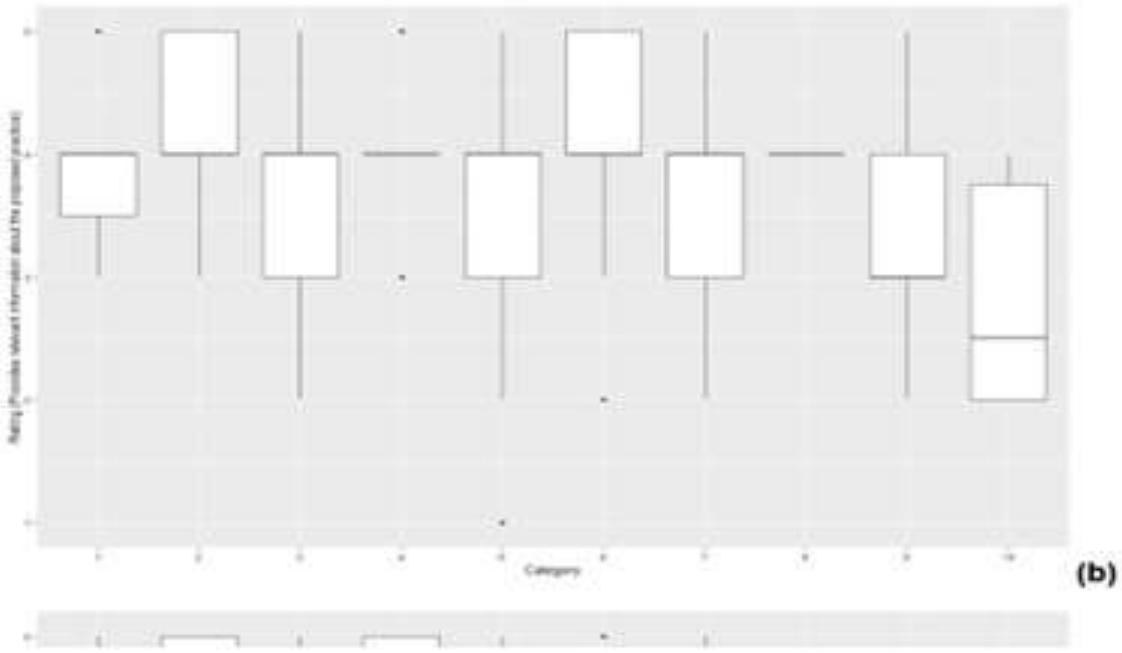

Figure 2b: *Boxplot Showing the Distribution of Ratings Across All Categories for 'Provides relevant information about the proposed practice'*

Note. 1 - Governance; 2 - Teaching - a) Inclusive and innovative pedagogies, including the use of technologies; 3 - Teaching - b) Competence based supply (Competence & skill-based pedagogical innovation, including context-based / real world pedagogical innovation); 4 - Assessment and certification (Prior or at the end of the CoVE training programme); 5 - Support services focusing on counselling and guidance - a) Learning support, including special needs support; 6 - Support services focusing on counselling and guidance - b) Career, educational and vocational support; 7 - Support services focusing on counselling and guidance - c) Work and social related inclusion and transition support; 8 - Research & development; 9 - VET team professional development; 10 - Undefined categories.

In evaluating how effective different categories provide relevant information about the implementation in VET (see Table 4 and Figure 2c), the analysis highlighted notable differences in ratings. Categories 4 (Assessment and certification) and 1 (Governance) demonstrated strong and consistent performance with mean scores of 4.24 and 4.26, respectively. These categories also showed relatively lower variability, with standard deviations of 0.62 and 0.75, and all observations had scores at least above 2 and 3, underscoring robust capacity to provide relevant information. Category 6 (Support services - b) similarly exhibited a strong mean score of 4.24, though with slightly higher variability (SD = 0.78), indicating that while most instances were effective, there were some variations in how information was provided.

In contrast, category 8 (Research & development), despite a smaller sample size, showed a notable dip in effectiveness, with a mean of 3.33 and minimal scores staying around the baseline of 3, suggesting challenges in consistently providing relevant VET information. Category 5 (Support services - a) and category 2 (Teaching - a) showed more substantial variations in their delivery of relevant information, as evidenced by their higher standard

deviations of 1.07. The lowest scores reached 2 and 1, respectively, highlighting inconsistencies in these areas. Category 10 (Undefined categories) faced the most considerable challenges with a mean score of 2.67 and the highest variability (*SD* = 1.63), indicating major inconsistencies and difficulties in providing relevant VET information. This was further illustrated by the broad range of scores from 1 to 5. Lastly, category 9 (VET team professional development) and category 7 (Support services - c) demonstrated moderate performance with mean scores of 3.20 and 3.64, respectively. These categories exhibited some variability, suggesting that while there are instances of effective information provision, there are also areas for improvement.

Table 4: *Descriptive Statistics for 'Provides relevant information about the implementation in VET'*

Category	Count	*M*	*SD*	Min	Q1	Median	Q3	Max	IQR
1	23	4.26	0.75	2	4.00	4.00	5.00	5	1.00
2	27	3.93	1.07	1	3.50	4.00	5.00	5	1.50
3	44	3.75	0.81	2	3.00	4.00	4.00	5	1.00
4	21	4.24	0.62	3	4.00	4.00	5.00	5	1.00
5	32	3.78	1.07	2	3.00	4.00	5.00	5	2.00
6	25	4.24	0.78	2	4.00	4.00	5.00	5	1.00
7	66	3.64	0.99	1	3.00	4.00	4.00	5	1.00
8	3	3.33	0.58	3	3.00	3.00	3.50	4	0.50
9	20	3.20	0.83	2	3.00	3.00	3.25	5	0.25
10	6	2.67	1.63	1	1.25	2.50	3.75	5	2.50

Note. 1 - Governance; 2 - Teaching - a) Inclusive and innovative pedagogies, including the use of technologies; 3 - Teaching - b) Competence based supply (Competence & skill-based pedagogical innovation, including context-based / real world pedagogical innovation); 4 - Assessment and certification (Prior or at the end of the CoVE training programme); 5 - Support services focusing on counselling and guidance - a) Learning support, including special needs support; 6 - Support services focusing on counselling and guidance - b) Career, educational and vocational support; 7 - Support services focusing on counselling and guidance - c) Work and social related inclusion and transition support; 8 - Research & development; 9 - VET team professional development; 10 - Undefined categories; IQR - Interquartile Range.

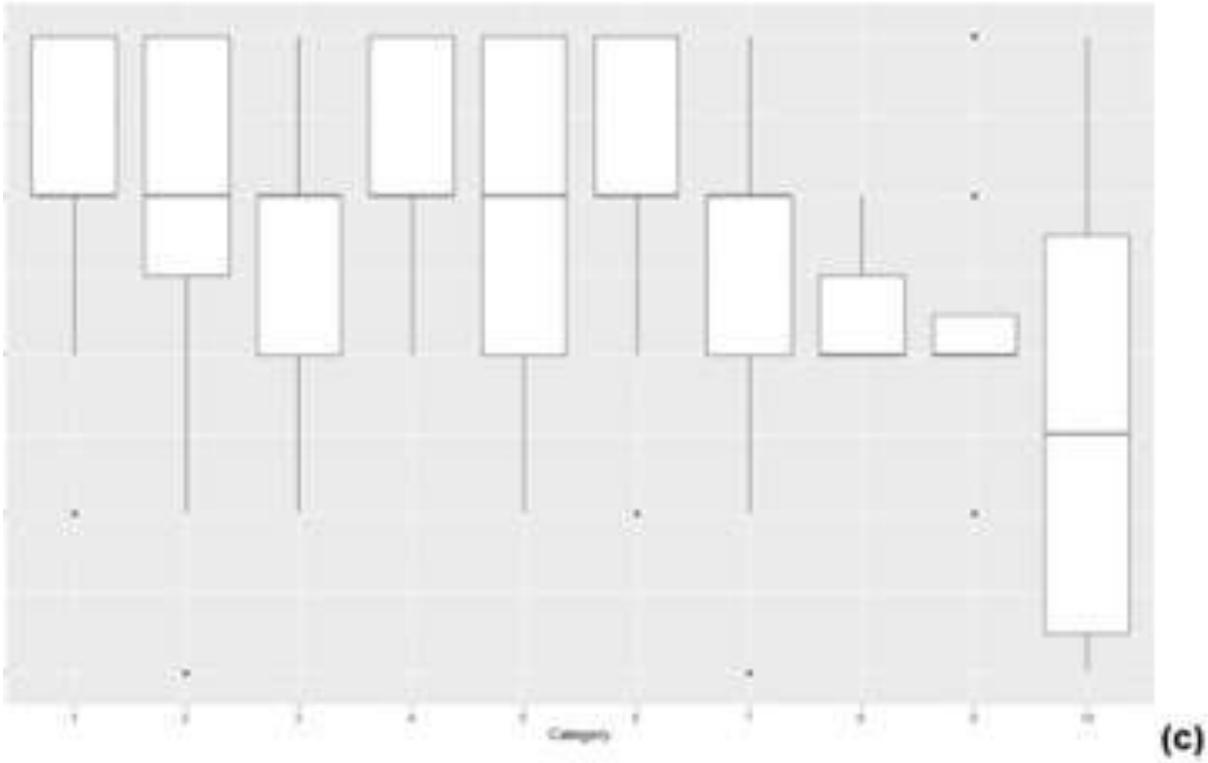

Figure 2c: *Boxplot Showing the Distribution of Ratings Across All Categories for 'Provides relevant information about the implementation in VET'*

Note. 1 - Governance; 2 - Teaching - a) Inclusive and innovative pedagogies, including the use of technologies; 3 - Teaching - b) Competence based supply (Competence & skill-based pedagogical innovation, including context-based / real world pedagogical innovation); 4 - Assessment and certification (Prior or at the end of the CoVE training programme); 5 - Support services focusing on counselling and guidance - a) Learning support, including special needs support; 6 - Support services focusing on counselling and guidance - b) Career, educational and vocational support; 7 - Support services focusing on counselling and guidance - c) Work and social related inclusion and transition support; 8 - Research & development; 9 - VET team professional development; 10 - Undefined categories.

In the assessment of how clearly and explicitly various categories describe their practices (see Table 5 and Figure 2d), a mixed range of performance was observed among the categories. Categories 4 (Assessment and certification) and 8 (Research & development) demonstrated strong clarity in their practice descriptions, both recording a mean score of 4.00. Category 4 exhibited some variability (*SD* = 0.77) with scores ranging from 3 to 5, while category 8 showed no variability (*SD* = 0.00), maintaining a consistent score of 4 across all instances. Category 2 (Teaching - a) also indicated a clear and explicit description, matching the mean score of 4.00 with variability (SD = 0.83) reflecting a range from 3 to 5.

Conversely, category 10 (Undefined categories) faced significant challenges in clarity, with the lowest mean score of 2.50 and a standard deviation of 0.84, pointing to inconsistency in how descriptions are provided. The scores in this category ranged from 2 to 4, underscoring the need for improvements in clarity. Categories 1 (Governance) and 6 (Support services - b) showed moderate performance with mean scores of 3.87 and 3.92, respectively. Both categories had some variability in how clearly practices were described, as evidenced by their standard deviations (0.81 and 0.91) and the ranges of scores they encompassed. Category 5 (Support services - a) and category 3 (Teaching - b) presented more considerable variations in the clarity of their descriptions, with mean scores of 3.56 and 3.66, and higher standard deviations of 0.98 and 0.83 respectively. This indicates a broader spread in the clarity of descriptions within these categories. Lastly, category 9 (VET team professional development) showed a lower mean score of 3.35 and a relatively tight range of clarity (*SD* = 0.59), indicating a consistent but moderate level of explicitness in descriptions.

Table 5: *Descriptive Statistics for 'The description of the practice is clear and explicit'*

Category	Count	M	SD	Min	Q1	Median	Q3	Max	IQR
1	23	3.87	0.81	2	3.00	4.00	4.00	5	1.00
2	27	4.00	0.83	3	3.00	4.00	5.00	5	2.00
3	44	3.66	0.83	1	3.00	4.00	4.00	5	1.00
4	21	4.00	0.77	3	3.00	4.00	5.00	5	2.00
5	32	3.56	0.98	2	3.00	4.00	4.00	5	1.00
6	25	3.92	0.91	1	4.00	4.00	4.00	5	0.00
7	66	3.70	0.86	2	3.00	4.00	4.00	5	1.00
8	3	4.00	0.00	4	4.00	4.00	4.00	4	0.00
9	20	3.35	0.59	2	3.00	3.00	4.00	4	1.00
10	6	2.50	0.84	2	2.00	2.00	2.75	4	0.75

Note. 1 - Governance; 2 - Teaching - a) Inclusive and innovative pedagogies, including the use of technologies; 3 - Teaching - b) Competence based supply (Competence & skill-based pedagogical innovation, including context-based / real world pedagogical innovation); 4 - Assessment and certification (Prior or at the end of the CoVE training programme); 5 - Support services focusing on counselling and guidance - a) Learning support, including special needs support; 6 - Support services focusing on counselling and guidance - b) Career, educational and vocational support; 7 - Support services focusing on counselling and guidance - c) Work and social related inclusion and transition support; 8 - Research & development; 9 - VET team professional development; 10 - Undefined categories; IQR - Interquartile Range.

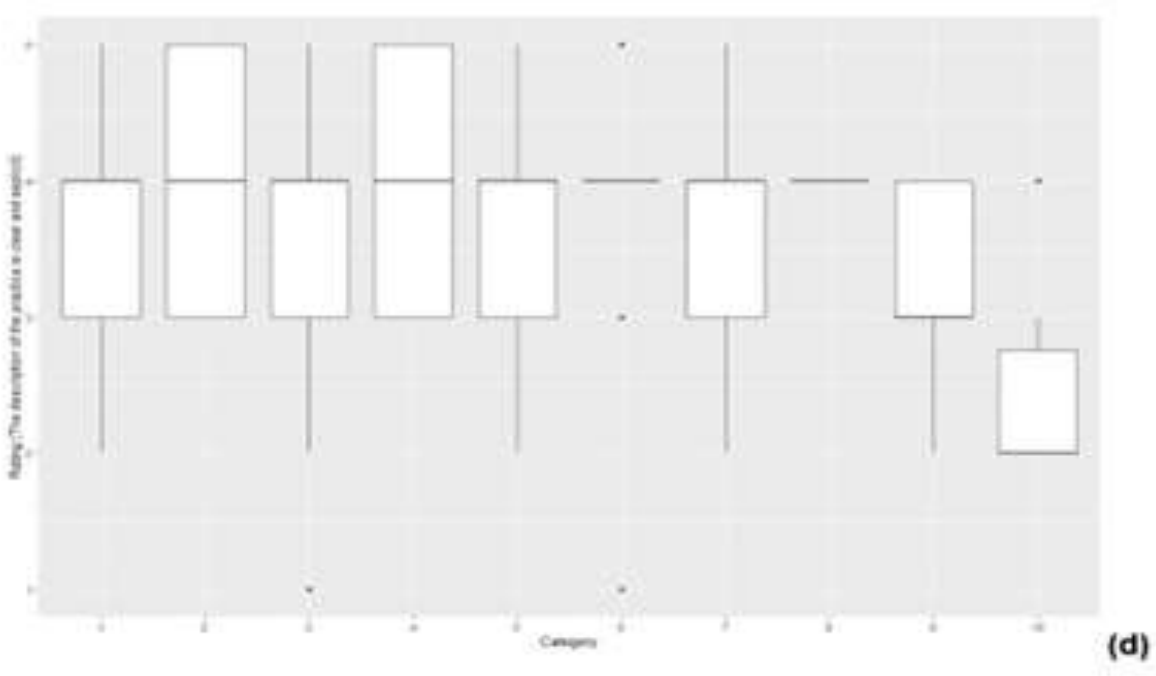

Figure 2d: *Boxplot Showing the Distribution of Ratings Across All Categories for ''The description of the practice is clear and explicit'*

Note. 1 - Governance; 2 - Teaching - a) Inclusive and innovative pedagogies, including the use of technologies; 3 - Teaching - b) Competence based supply (Competence & skill-based pedagogical innovation, including context-based / real world pedagogical innovation); 4 - Assessment and certification (Prior or at the end of the CoVE training programme); 5 - Support services focusing on counselling and guidance - a) Learning support, including special needs support; 6 - Support services focusing on counselling and guidance - b) Career, educational and vocational support; 7 - Support services focusing on counselling and guidance - c) Work and social related inclusion and transition support; 8 - Research & development; 9 - VET team professional development; 10 - Undefined categories.

Discussion

Summary of Findings

The present paper has looked into how practices in inclusive vocational excellence (IVE) can be described in an effective and transparent manner. Specifically, we have proposed a framework for the description of such practices, have collected with this framework descriptions from an international sample of providers and have then rated with the help of a sample of experts the quality of these descriptions, in terms of how much they respect the proposed structure, provide relevant information about the proposed practice, provide relevant information about the manner in which the practice was implemented and offers a clear and explicit description. Statistical analyses have then revealed that the framework generates more consistent descriptions for some domains then for others.

Overall, the evaluation shows that most categories adhere well to the prescribed structure, with some showing moderate inconsistencies. However, there are specific categories with higher variability and lower performance that need attention. This does not suggest the entire evaluation is flawed, but rather that practices that come from certain areas tend to be less coherent and could benefit from targeted attention, as they seem to be more difficult to describe. Specifically, categories 4 (Assessment and certification), 8 (Research & development), and 1 (Governance) generally showed high adherence and low variability. This suggests a robust and consistent descriptions for examples that fall into these categories. Categories such as 2 (Teaching - a) and 6 (Support services - b) exhibited moderate variability with good performance. The standard deviations are slightly higher, indicating some inconsistencies but not to a degree that would suggest the evaluation is fundamentally flawed. Categories 10 (Undefined categories) and 5 (Support services - a) displayed significant variability with lower mean scores. This suggests these practice descriptions that fall into these categories are less consistent in adhering to the prescribed structure, which points to some issues but not necessarily a complete breakdown in the evaluation process. Categories such as 9 (VET team professional development) and 7 (Support services - c) showed moderate relevance and clarity, indicating room for improvement. The variability in these categories suggests inconsistencies in some descriptions.

Theoretical and Practical Implications

This paper and especially the framework that we propose should help in the formulation of future theory regarding IVE practices, providing a glimpse into the domains on which these practices are focused and into the way in which they are usually structured by those who deliver them.

From a practical point of view, the value the present study is twofold. First, it provides practitioners of the IVE/VET domain with a manner in which to structure the description of the practices that they develop, in such a way as to make them communicable and transparent for colleagues who may want to draw inspiration from other experiences, or to simply transfer the success of such completed projects. Second, it provides practitioners with an insight into the domains that are potentially more problematic in the descriptions that can be drawn up - these are domains of practice where special care needs to be given, either to how the description is structured, or to its relevance, its implementation or its clarity.

Strengths and Limitations

This study has a number of limitations. First, descriptions of practices were not collected in a systematic manner. The 44 descriptions were collected as part of a project in which Centres of Vocational Excellence (CoVEs) from four countries participated; these CoVEs described all

their practices. At the same time, it is possible that other countries favour other domains of practice. Second, the study is obviously a preliminary approach to the issue of transparency as a first step in the reproducibility of IVE/VET practices. It relied only on experts to assess how well the described practices were presented and understood, and future studies should take a more diverse path, discussing with various stakeholders if the descriptions provided are sound and applicable. Third, in spite of providing a common template and background to the collection exercise, cultural differences, both national and organizational, might have influenced the team in its approach.

Conclusion

Being aware of all these limitations, we consider the present study a contribution to better understand how we can learn from experience in the newly articulated domain of IVE. Employing a grounded theory inspired approach, we analysed relevant practices and provided a better ground for collecting and structuring practices as they can become part of a relevant body of knowledge for advancing simultaneously understanding (research), systemic interventions (policy) and immediate action (practices) in IVE. If we look to broader implications of this analysis and of future similar research, there are some promising areas for further contributions.

1. Enhanced Understanding: by systematically analysing and categorizing IVE practices, this study helps in consolidating the concept of inclusive vocational excellence. It provides a clearer understanding of what constitutes effective IVE practices and how they can be implemented across different contexts.
2. Consistency and Clarity: the emphasis on clear and consistent practice descriptions can improve the overall quality of VET systems. It ensures that best practices are not only identified but also effectively communicated and implemented.
3. Professional Development: providing a structured approach to documenting IVE practices can support the professional development of VET educators and administrators. It can serve as a tool for training and development, helping practitioners understand and apply the principles of inclusive excellence in their work.
4. Policy Development: the insights gained from this study can inform policymakers about the key elements that contribute to successful inclusive VET programs. This can lead to the development of more targeted and effective policies that support inclusivity and excellence in vocational education.
5. Innovation: by highlighting areas of strength and weakness, the study encourages ongoing innovation in VET practices. It provides a benchmark against which new approaches can be measured and evaluated.
6. Future Research: the type of analysis and findings from this study lay the groundwork for future research in the field of inclusive vocational excellence. It opens new directions for

exploring how different elements of VET contribute to inclusivity and excellence, and how these elements can be optimized for better outcomes.

In conclusion, this study underscores the importance of structured and clear descriptions of IVE practices within VET. By identifying the strengths and weaknesses across different categories, it provides a roadmap for enhancing the quality and consistency of VET practice descriptions, ultimately contributing to the development of more effective and inclusive vocational education systems.

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Declaration of interest

We have no conflicts of interest to disclose.

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Teachers Perception on Digital Technology in Teaching and Learning as a Quality Factor in Ethiopian Universities

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Abstract

In this 21st century, HEIs are experiencing a dynamic change in technology, and they should be responsive to stay in the competition space. A recent phenomenon of the COVID-19 outbreak was an alarm that caused many HEIs to look back at their capacity in digital technology to deliver online teaching and learning. This paper presents technology-based teaching and learning at two Ethiopian higher education institutions. Two research questions were set to guide the study: -how do academics perceive tech-based teaching and learning as an element of quality? Do other Inputs, Processes, and Outputs impact the application of digital technology in teaching and learning? A quantitative research method was employed to assess the case. 188 university teachers were taken from two universities as a sample for questionnaire administration. Jamovi software was deployed for data analysis. The result shows that digital technology-assisted teaching and learning are among the important elements of quality. Teachers believe that technology-based teaching and learning improves quality. Their beliefs were similar across their qualifications, departments, university type, and gender. In contrast, their service years have made a significant difference between teachers of less than five years (5) experience and those between five to ten (5-10) years. Inputs and processes-oriented quality elements significantly affect the integration of ICT into teaching and learning. It is recommended that HEIs of Ethiopia be proactive in planning to adopt relevant and timely digital technologies to deliver quality teaching and learning. Besides this, their openness to cooperate with Ethio Telecom, the Ministry of Education, and other NGOs to work toward capacity building to integrate digital technology into their teaching and learning by minimizing the challenges related to poor digital competency, scarce resources, internet connection, and infrastructure.

Keywords: digital technology; online teaching and learning; digital skill; ICT; quality teaching and learning

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1. Introduction

We live in a globalized era where responsiveness to dynamic changes and challenges is needed. Therefore, being proactive and using new technologies to overcome these challenges is essential. The knowledge and skills youths possess today may be obsolete and out of use for tomorrow's needs and interests. In line with this, (OECD, 2019) described that digital transformation is challenging the traditional ways of thinking, doing, and influencing the policy-making processes in different settings.

The education sector is one of the largest service institutions that employs new technologies and digital systems to stay connected globally and internationalize the teaching and learning system. One of the definitions of quality is fitting for the purposes (Harvey, 2004), digital-based higher education is believed to prepare a skilled and competent future workforce who would contribute to the Labor market demand. In this regard, it contributes to the quality by assisting the teachers, students, curriculum developers, and policymakers with modern technologies to develop relevant educational materials and design in the best way to deliver them. Additionally, to prepare citizens for a knowledge-based economy, digital technology in the education sector is vital (Yigezu, 2021).

As the situations dictate the use of ICT in teaching and learning, promoting digital skills of the teachers and youth would be necessary to deliver quality teaching and learning apart from soft skills. Sá & Serpa (2020) argues that improving digital sustainable development in teaching is needed for higher education institutions if they want to be at the forefront. Higher education institutions produce a prospective workforce with the knowledge, skills, and attitudes. Hence, they need to be familiar with relevant new technologies and infrastructure. In line with this, Stéger (2014) in her review of the European Teachers' Related Policy, identified that teacher educators of this century teach in very dynamic, multicultural settings where using new technologies like digital skills is necessary.

Digitalization can lay the ground for smart education (Dneprovskaya et al., 2018). Digitalizing the higher education system has a paramount effect on marketing their business. In some country's HEIs, digitalization is in its beginning stage of development, even though university teachers are willing to use digital systems and an increasing number of technical tools than ever (Thoring et al., 2017). This study elaborates that the course administration and examination are not well digitized and only the registration of students is well digitized. This case is like the Ethiopian context. As researchers have identified the challenges associated with integrating digital technology into teaching and learning, this study focuses on the teachers' beliefs and understanding of whether digital-technology-assisted teaching and learning improves quality.

Cognizant of the benefits and the expanded usage of digital technology at higher education institutions, this study aims to answer the following research questions:

1. How do university academics perceive the implementation of digital technology as an element of quality teaching and learning?
   1.1 How do they rate the extent to which Digital technology improves quality?
2. Do educational inputs, processes, and outputs impact the implementation of digital technology in teaching and learning at universities?

2. Theoretical background

Nowadays, digitalization in higher education is becoming popular because of the influence of globalization. It is an undeniable truth that higher education institutions of this century apply ICT tools and digital systems to make their education easier, timesaving, easily accessible, standardized as well as internationalized. The difference lies in the extent to which they are used. The theoretical background focuses on the purposes and problems associated with tech-based teaching and learning in Higher Education Institutions and Ethiopian HEIs.

2.1 Digital Technology in Improving Higher Education Teaching and Learning

2.1.1. Improving Quality of Education Through Digital Knowledge and Skills

Connectivism- a recent learning theory developed by George Siemens and Stephen Downes promotes the idea that society learns from one another through online connection (Betsy Duke, Ginger Harper, 2013). According to this theory, learners learn diverse opinions and knowledge through personal networks. Digital skills, communication skills, responsibility, and a positive attitude are essential to realize this kind of teaching and learning.

In addition, Kalman (2019) pointed out that short training like e-learning and teaching is helpful for teachers' professional development. Baimuldina et al. (2019) have also added that smart technology is essential for teachers' professional development as it helps them create educational materials and promote ICT skills. ICT Skilful teachers can design the best and most relevant content and deliver it with quality when they are required to do so. Teachers can solve their teaching and learning problems through discussion and research when their online experience and communication improve. Besides, teachers would develop communication skills and interpersonal relationships through online networks.

Similarly, Hénard (2010), found that digital technology has improved the interaction between students, teachers, and the pedagogy. Samar Hassan (2016) on his hands, mentioned the purpose of flexibility to adopt modern learning technologies to realize quality education.

To sum up, as digital skills are important skills of the 21st century, competency to maintain competitiveness in this industrial revolution (Pacher & Woschank, 2020), through the design and inclusion of educational programs that aimed at the extensive use of digital

technology and the internet (Astratova et al., 2021), as well as the integration of IT for quality teaching Aytaged (2012) are needed to be considered by higher education institutions.

2.1.2 Improving Quality Education Through Digital Resource Accessibility and Internationalization

The implementation of digitalization in teaching and learning of higher education is vital not only to respond to unforeseen problems like Covid-19 but also to meet the demands of this digital age. Integrating ICT in higher education helps to create a network of people around the globe. A study found that digitalization enhances students' relationships, future job search, and employment opportunities (Benedek & Molnár, 2015; Uğur, 2020). Therefore, developing innovative, relevant, and attractive educational content; Implementing innovative information and communication technology, and promoting academic mobilities are essential (Djakona et al., 2021). As Digital technology allows for online storage, retrieval, and use of information and knowledge, learners tend to share their thoughts, and understanding, and learn from each other. There is interdependence, collaboration, cooperation, and global experts' inputs on specific fields of study.

As a study indicates, students are interested and get used to digital technology through online course attendance (Benedek & Molnár, 2015; Uğur, 2020). Based on these scholars' findings, students of this generation are familiar with at least some online platforms and use their phones if not personal computers.

According to the European Union's experience, there is an increased interest in driving Educational Institutions in Europe toward the effective use of technology and innovation. The intention behind this is that it facilitates the students' self-paced learning, the development, and organization of learning content by teachers and students as well as to access them from wherever they are (European Council, 2012). These witnesses how HEIs, which had the digital teaching and learning system managed the educational crisis during the Covid-19 time. According to the OECD (2020), many Countries had planned for an emergency to slow the spread since the first coronavirus outbreak to continue their regular activities.

A large-scale study conducted in about sixty-two (62) countries indicated students' satisfaction with the online shift of teaching and learning as the support provided by universities and teaching staff comforted them (Aristovnik et al., 2020). The availability of the best educational content from experienced teachers around the globe (Frolova et al., 2020) is another opportunity that helps learners get quality education which in turn helps them to compare different sources of knowledge.

From the studies, it is possible to understand that digitalizing the higher education system helps to pool and store educational resources from various experienced and qualified

people online and make it accessible for the needy person wherever they are and whenever they want most probably at a lower cost.

2.2 Digital Technology at Ethiopian Higher Education

When writing about digitalization from the Ethiopian higher education context, it is good to raise the situation during the pandemic. Because it was when the higher education institutions saw their capabilities and deficiencies of digitalization. Ethiopian higher education institutions experienced the lockdown in April 2020. The situation was difficult for them compared to other countries, having sufficient facilities, internet connections, and expertise to respond to the educational crisis. The case has posed a serious condition that ranges from school closure to collapse in schedule, and it created inequality among bachelor students, masters, and PhD students. For Instance, the bachelor students couldn't continue their second semester in the 2019/20 academic year. They couldn't attend online because some students cannot afford smartphones and internet connections on top of the universities' readiness (Reinders, 2020).

Although there is a promising movement in using ICT to prepare Ethiopian citizens for a knowledge-based economy, there are still poor infrastructure and trained professionals (Yigezu, 2021). Moges Alemu (2017) has also argued that lack of proficiency in ICT, in the ability to facilitate consistent and quality training for teachers by public funds as the programs are expensive, are some of the challenges that are the bottlenecks to digitalizing the teaching and learning system.

For instance, according to a study conducted in about six universities in Ethiopia, software applications are poor (Adamu, 2019). Different departments are not supported with useful software to provide standardized services. Similarly, teachers' and students' competence in ICT, the availability and functioning of the internet, the classroom infrastructure, management support, and the nature of the course are the determinants of using ICT for teaching and learning in Ethiopian HEIs (Ferede et al., 2021). ICT is used only for facilitating teaching and learning, but not as an independent and transformative way of integrating ICT into teaching and learning (Ferede et al., 2022). However, COVID-19 has created an opportunity (Tamrat & Teferra, 2020) for higher education to look at their practice of digitalizing the system and plan to work on it. The current Ethiopian government's plan to begin online education is also a good starting point that would lay the ground for a robust digitalization system (MOE, 2018).

To sum up, the integration of digital technologies in Ethiopian higher education is at its infant age. The reasons that many researchers have raised for the underdevelopment of the system are poor internet connectivity, infrastructure, poor ICT competency, lack of management support, and financial constraints (Adamu, 2019; Aytaged, 2012; Ferede et al., 2021; Tadesse et al., 2018; Yigezu, 2021; Alemu, 2017).

However, some promising initiatives and developments are planned to integrate digital technology to transform the education system in general and higher education in particular. The e-SHE (MOE, 2023), which aims at e-learning to support higher education, and the D-TEST (Digital Technology for Education Sector Transformation) are among the projects and platforms that show the Ministry's commitment to digitalize the system which in turn helps to impact the quality of education.

2.3 Challenges of Integrating Digital Technology into Higher Education

The current technology and digital system of information storage and sharing face the possibility of every individual publishing online, and the probability of less quality and cheap information found online (Moser, 2016). Only people who are critical thinkers and who can question and evaluate online information and resources would be able to go for reliable data and information.

Teachers and students' perceptions of ICT use in teaching and learning (Ergado et al., 2022), the weak culture of ICT use, and the lack of change management (Ergado et al., 2021) are among the challenges of integrating digital technology in HEIs teaching and learning.

A study found teachers' positive perceptions toward integrating ICT if there is an encouraging environment (Gebremedhin & Fenta, 2015). Supporting this idea Balić et al. (2024) stated that students perceive the flexibility and time-saving nature of the digital learning system, even though some students raise the low human interaction accorded by online teaching and learning.

Many researchers have stated their findings related to the challenges of integrating ICT into higher education teaching and learning. Teachers digital literacy and ICT competence (Baimuldina et al., 2019), lack of material and financial resources for the creation of the ICT infrastructure (Frolova et al., 2020), lack of training, competency, lack of technical support (Ghavifekr et al., 2016), Digital readiness gap among different departments and gender (Balić et al., 2024), students ICT competence, management support (Ferede et al., 2023), technological, organizational and environmental factors (Ergado et al., 2021), teachers and students ICT skills and negative perceptions of ICT use (Ergado et al., 2022), limited ICT adoption, ICT infrastructure and professional development (Asabere & Ahmed, 2013) and limited access to ICT apparatus (Naqvi, 2018) are happen to be the most challenging issues to integrate or implement digital technology to enhance the quality of higher education teaching and learning.

Generally, the literature revealed both the advantages and obstacles of applying digital technologies in higher education institutions teaching and learning. It is inescapable to digitalize teaching and learning at this time when HEIs are influenced by many digital systems including Artificial Intelligence. Therefore, it seems important to consider the challenges thereby boosting the competencies of the leadership and academics in ICT and

other digital technology systems. If HEIs are not open to considering the timely digital system in their education, their teaching and learning might not be of the required quality, graduates might not be competent enough in the current world of work.

3. Methodology

3.1. Research Strategy

This study deployed a quantitative method. A review of related literature was done to understand the status of the digitalization system at higher education in different countries and contexts and to construct the theoretical basis. The digitalization case in Ethiopia then focused only on two universities. The data was part of the data collected for a dissertation done on quality teaching and learning at Ethiopian higher education institutions. Accordingly, only related questions were picked and analyzed to realize this objective.

A questionnaire was used to collect quantitative data from the university teachers. It was used to reach a large population size. Besides this, questionnaires enable us to collect information respondents do not want to provide through interviews. It was organized focusing on beliefs of quality based on inputs (for example, 'quality teaching depends on universities', 'quality teaching and learning is determined by teachers' professional development', and many more questions), based on process (for instance, 'quality teaching and learning depends on effective management support', 'quality teaching and learning depends on aligning outcome, learning experiences and assessment', and other questions), based on output (for example, quality teaching and learning depends on students' independent learning, quality teaching, and learning is indicated by the graduates' competences and other questions) that are rated on the scale ranges from 1-5 where 1 is for strongly disagree and 5 is for strongly agree.

Finally, the quantitative data from the questionnaire was analyzed using Jamovi. Statistical methods including descriptive and inferential were computed. Therefore, the mean, standard deviation, frequency, percentage, T-test, ANOVA, Factor analysis, and linear regression were employed.

*3.*2. Population and Sample

The population is teachers of two universities comprising 937 of which 188 (M=170 and F=18) samples were taken. The original plan was to choose the universities in the country randomly. However, due to the political instability and COVID-19 influences, the research design and sampling methods were changed. As a result, the study was focused on the case of two Ethiopian universities. Even though simple random sampling based on the stratification of the departments was planned, it was changed to a convenient sampling

method for the above reasons. The characteristics of the sample are summarized in Table 1 below.

Table 5. Background information on the sample

Background variables		Number of respondents (%)
Gender		
	Male	170 (90,4%)
	Female	18 (9,6%)
	Total	188 (100%)
Qualification		
	BA/BSc	7 (3,7%)
	MA/MSc	159 (84,6%)
	PhD	22 (11,7%)
	Total	188 (100%)
Years of service		
	less than 5 years	53 (28,2%)
	5-10 years	75 (39,9%)
	10-20 years	49 (26,1%)
	more than 20 years	11 (5,9%)
	Total	188 (100%)
Disciplinary background		
	Natural sciences	49 (26,1%)
	Social sciences	86 (45,7%)
	IT	19 (10,1%)
	Health	34 (18,1%)
	Total	188 (100%)
University-type		
	Comprehensive	98 (52,1%)
	Applied	90 (47,9%)
	Total	188 (100%)

As depicted in Table 1 the gap between female staff (9.6%) and male staff (90.4%) is big. Regarding their qualification, only 11.4% of the academics were PhD holders and a significant percentage (84.6%) were Masters' degree holders.

4. Results

4.1 How do university academics perceive the implementation of digital technology as an element of quality teaching and learning?

Descriptive statistics were done to summarize teachers' views on the digital technology application for quality teaching and learning in higher education.

The descriptive result depicts that most university teachers agreed (87,23%) that technology-assisted teaching and learning is an element of quality teaching and learning. The following diagram shows the percentage of their responses to the level of agreement.

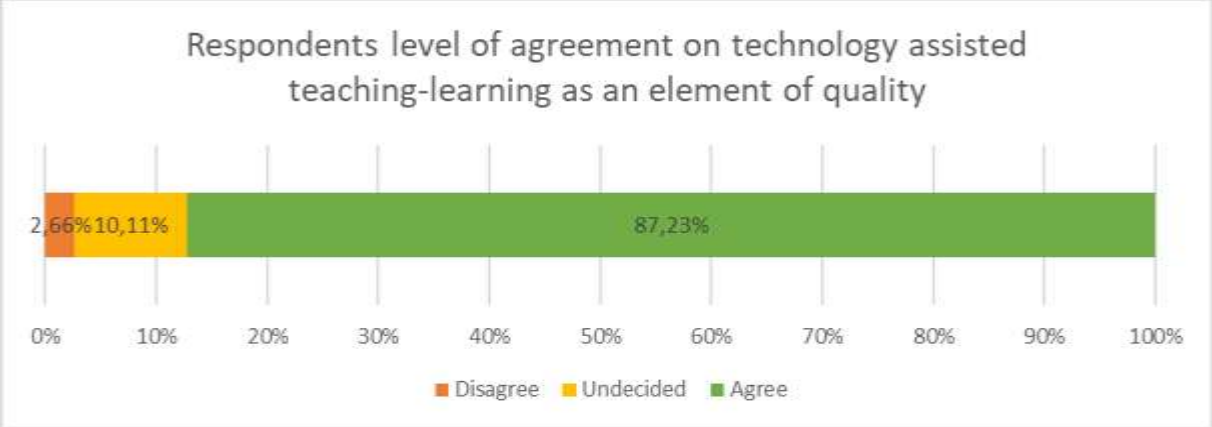

Figure 4. Respondents' level of agreement with the statement "Quality teaching is achieved when technological products are used to support students learning".

This result is like some previous research findings conducted in different contexts. For instance, Dneprovskaya et al. (2018) argue that implementation of ICT lays the ground for smart education. Hénard (2010) has also added that digital technology improves the interaction between students and teachers.

Statistical analysis was done to see if university teachers' perceptions depend on their background variables. Since the dependent variable is not normally distributed (Kolmogorov-Smirnov test $p < .001$), the non-parametric Mann-Whitney U-test was used for independent samples t-test, and the non-parametric Kruskal-Wallis test for the analysis of variance. First, we explore differences related to gender and university type (Table 2).

Table 6. Differences in teachers' perception of technology-assisted teaching and learning in the quality of teaching and learning according to background variables.

Background variables	M (SD)	Test results (Mann-Whitney U)
Gender		
Male (N=170)	4.19 (0.722)	U=1204; p=.102
Female (N=18)	4.44 (0.784)	
University-type		
Applied (N=90)	4.27 (0.716)	U=4097; p=.355
Comprehensive (N=98)	4.16 (0.742)	

As the result of the Mann-Whitney test shows, there were no significant differences between female and male respondents, nor between university types regarding their understanding of digital technology as an element of quality.

Similarly, a non-parametric test was run to see if there are significant differences among teachers' respondents' beliefs of digital technology implementation based on their service years, specialization areas, and qualifications. The following table (Table 3) summarizes the results.

Table 7. Comparison of teachers' beliefs of tech-based teaching and learning based on their departments, qualifications, and service years.

Background variable	M (SD)	Test results (Kruskal-Wallis)
Disciplinary background		
Natural sciences (N=49)	4.43 (0.677)	$\chi^2(3) = 8.91$; p=.031while the Kruskal-Wallis's test is significant, the Dwass-Steel-Critchlow-Fligner pairwise comparisons showed nonsignificant differences between pairs.
Social sciences (N=86)	4.15 (0.695)	
IT (N=19)	4.32 (0.749)	
Health (N=34)	4.00 (0.816)	
Qualifications		
BA/BSc (N=7)	3.86 (0.378)	$\chi^2(2) = 4.64$; p=.098
MA/MSc (N=159)	4.26 (0.698)	
PhD (N=22)	3.95 (0.950)	
Years of service		
less than five (5) years (N=53)	4.00 (0.707)	$\chi^2(3) = 9.41$; p=.024 The Dwass-Steel-Critchlow-Fligner pairwise comparisons showed significant differences between "less than five (5) years" and "5-10 years" (W=3.895; p=.030)
5-10 years (N=75)	4.33 (0.622)	
10-20 years (N=49)	4.18 (0.882)	
more than 20 years (N=11)	4.55 (0.522)	

The output indicates that teachers' qualifications and fields of study did not make a difference. However, a significant difference ($\chi^2(3) = 9.41$; p=.024) existed among teachers of different service years experiences. The Dwass-Steel-Critchlow-Fligner pairwise comparisons showed significant differences between those teachers with "less than five (5) years" and "5-10 years" of service years (W=3.895; p=.030). Teachers of less than 5 years of experience are probably less experienced in teaching in higher education and thus the groups have different perceptions.

4.2. Do educational inputs, processes, and outputs impact the implementation of digital technology in teaching and learning at universities?

Input, process, and output variables have been put into principal component analysis (PCA) to answer this question. Linear regression analysis has been conducted based on the components extracted from the PCA based on digital technology to improve the quality of teaching and learning in higher education.

First, we present the results of the PCA. Initially, we dropped items with low communality values until we arrived at a solution where all the items produced an acceptable level of communality (< 0.4). We checked the Kaiser-Mayer-Olkin measure of sample adequacy (0.736) and Bartlett's test of sphericity ($p < .001$). The preliminary test indicates that it is possible to proceed with the interpretation of the results. Based on the parallel analysis extraction method with a Promax rotation, the results offered two (2) components, explaining 30.8% of the total variance of the 18 items. The following table shows the component structure and loadings of the items.

Table 8. Results of the PCA.

Items	PCA1 – Input- and process-oriented beliefs of quality	PCA2 – Output-oriented beliefs of quality
Teachers' pedagogical knowledge determines the quality of teaching and learning	0.609	
Engagement in research and innovation can lead to quality teaching-learning	0.603	
Quality teaching depends on teachers' qualifications	0.586	
Students' motivation contributes to quality teaching and learning	0.586	
Quality teaching-learning depends on aligning learning activities, assessments, and learning outcomes	0.566	
Quality teaching depends on teachers' lesson plan	0.551	
Support of the university management determines the quality of teaching and learning	0.541	
Quality teaching is about having a relevant curriculum to	0.463	

the needs of the society and country		
Quality teaching and learning is employing active learning/student-centred learning methods	0.458	
The quality of teaching and learning realized when supported by technological products	0.447	
Rules and Regulations of HE are the main determinants of quality teaching-learning	0.432	
Quality teaching and learning depend on teachers' ongoing professional development and learning	0.427	
The learning outcomes and competencies students achieved (Competence test results or exit exam) can tell the quality of teaching and learning.		0.694
Fulfilling stakeholders' (teachers, students) expectations is the indicator of the university's quality		0.633
Graduates' employment describes the quality of teaching and learning		0.585
Students independent learning indicates the quality of teaching-learning the university provide		0.582
Quality teaching and learning is employing active learning/student-centred learning methods		0.479
The number of high achievers determines the quality of teaching provided by the university		0.363

The first component describes input- and process-related beliefs regarding the quality of teaching and learning (ex. Teachers pedagogical knowledge, engagement in research and

innovation, teachers' qualifications, and others.), The second component focuses on output-related factors (ex. The learning outcomes, stakeholders' expectations, graduate employment rates, etc.). We have computed the average ratings of the corresponding items for each component. Respondents rated input- and process-related factors significantly higher than output-related factors. Since the two variables have failed to meet a normal distribution (Shapiro-Wilk test p<.001), a non-parametric Wilcoxon signed-rank test was used (W=11821; p<.001), indicating a significant difference between the ratings of input- and process-related factors (M=4.16; SD=0.415) and output-related factors (M=3.79; SD=0.509). The two measures are not correlated (p=.189).

Linear regression has been conducted to see whether input- and process- or output-related factors can explain teachers' beliefs regarding the role of technology in improving the quality of teaching and learning. The last section of the questionnaire explored participants' beliefs regarding how influential different elements can be in enhancing quality teaching and learning (ex. “Focusing on the technology-based teaching-learning”) rated on a 1-5 scale (1 – very low, 5 – very high). We used this variable as a dependent variable and predicted this with our previously created components. The prerequisites of the linear regression were tested (normality: Kolmogorov-Smirnov test p=.196; heteroskedasticity: Breusch-Pagan test p=.106; autocorrelation: Durbin-Watson test p=.448; collinearity statistics: VIF=1.01 for both variables). The two components explain 20.9% of the variance in the dependent variable (F (2, 185) =25.7; p<.001). The results are presented in Table 5 below.

Table 9. Results of the regression analysis (Dependent variable: Influence of focusing on technology-based teaching-learning on quality of teaching and learning).

	Estimate (B)	**Test results**	**Standardized estimate (ß)**
Intercept	-0.277	t=-0.435; p=.644	
PCA1 – Input- and process-oriented beliefs	0.777	t=6.042; p<.001	0.395 95% CI [0.266; 0.524]
PCA2 – Output-oriented beliefs	0.342	t=3.258; p=.001	0.213 95% CI [0.084; 0.342]

Based on the regression result, the coefficient has been analyzed to identify the impact of independent variables. Input- and process-oriented beliefs have nearly two times stronger impact (ß=0.395) than output-oriented beliefs (ß=0.213) on respondents' perception regarding the influence of focusing on technology-based teaching-learning on the quality of teaching and learning.

This result has some similarities with other researchers' findings. Ferede et al. (2021, 2022) pointed out that inputs and processes like ICT competencies, ICT plans, management support, ICT infrastructure, and professional development are the determinants of integrating ICT into teaching and learning understanding. Moges Alemu (2017) has also mentioned a lack of relevant preparation and low proficiency in ICT as impediments to applying ICT in teaching and learning. Even though the inputs, process, and output in the current study are many and make the findings new compared to these previous findings, they coincide on the side of professional development.

5. Discussions, Conclusions, and Recommendations

Discussions

Even though the Ethiopian Ministry of Education is planning to reach a 0:30:70 ratio of BA/BSC, MA/MSc, and PhD holders respectively until 2030 (MOE, 2018), the current situation might warn the higher education institutions to work on it. As academics' education level elevated it would contribute to the quality of their work.

Teachers have agreed on the tech-assisted teaching and learning for quality. This result is like some findings (see Dneprovskaya et al. 2018, Henard, 2010).

Inputs and processes were more impactful on tech-assisted teaching and learning than the output factors. The input-process elements would probably be the main contributors and accelerators of digital teaching and learning for quality. Because the facilities are mandatory as inputs, and academics' digital competencies, leadership support, and other processes are also important to digitalize the teaching and learning in HEIs. Outputs would be the results and with quality inputs and processes they are more likely to be achieved.

Conclusions

Generally, the results of university teachers regarding their beliefs on the digital technology implementation as a quality teaching and learning element were positive and strong as they agreed with it. The result is like other researchers' findings like Moges Alemu's (2017) "ICT improves the quality of teaching"; Dneprovskaya et al. (2018) "ICT lays the ground for quality"; and Hénard (2010) "ICT improves the interaction between students and teachers." The respondents' beliefs differ based on their service years. However, gender, fields of study, university type, and qualifications did not make a difference.

On the other hand, the influence of other educational inputs and processes on digital technology implementation was almost two times stronger than the output factors. The result has become like other researchers' findings. Ferede et al. (2021, 2022) found that ICT infrastructure, management and technical support, ICT competence, and ICT plan; Moges Alemu (2017) found that lack of relevant preparation to impact and be determinants of ICT use in higher education instruction.

Recommendations

Hence, higher education institutions should build their capacity to digitalize their educational system, equip their learning environment with new technology infrastructures, and look for all possible ways to achieve their main mission of providing quality teaching and learning. The staff's professional development needs considerable attention as well. Collaboration with respective stakeholders like Ethio Telecom, the Ministry of Education, and other NGOs is essential to realize this.

6. Limitations and Future Directions

In this study, the sample selection process had some difficulties since some universities were not accessible due to obstacles that arose from the Country's political instability and COVID-19 by the time the data was collected. The plan to choose universities and samples randomly was not successful. Therefore, the study could not select representatives from all universities. Schedule changes in the universities were another challenge to reach the staff members. Hence, the result has limited generalizability.

As HEIs are in the digital age, they are influenced by AI and many digital systems. For instance, research results indicate there is an increase in innovative HEIs that adopt new technologies (Aruleba, Jere, & Matarirano, 2022). There is an interest in blended teaching and learning as a pedagogical strategy for the future (KARATAŞ AYDIN, 2023). Students are assisted with different kinds of assignments with AI and the learning and teaching can be supported by AI (Singh & Hiran, 2022). Hence, digital technologies play an immense role in teaching and learning. Therefore, researchers might conduct similar research in different settings. A large-scale study would contribute a lot to this field.

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Preliminary Study: Exploring the Perception and Experiences of Using Character Strengths in Student Teachers

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Abstract

In order to empower and well prepare student teachers for their future roles, integrating character strengths into their personal development and academic pursuits is crucial. This will equip them to contribute invaluable knowledge and practice to future generations. Given the absence of character strengths research in Myanmar, the investigation is essential. Myanmar Education Degree Colleges (EDCs) are implementing a 4-year degree program that prioritizes competencies and teaching-learning approaches to encourage student teachers to apply character strengths and make them confident and enthusiastic learners. Character strengths can be defined as an inherent quality that allows individuals to achieve their goals and lead fulfilling lives. Peterson and Seligman identified 24-character strengths that are divided into six virtues: wisdom and knowledge, courage, humanity, justice, temperance, and transcendence, based on significant examination of cross-cultural and numerous research. By following the framework of VIA classification, this study aims to explore the Myanmar student teachers' perception and experiences of using their character strengths thereby raising their awareness and validating the existence of 24-character strengths in Myanmar culture. To achieve this, a qualitative exploratory study was conducted using semi-structured interviews with 18 student teachers (M_{age} = 20.22, SD_{age} = .83). The reliability and validity of the research were confirmed through a pilot, and ethical approval was obtained. Direct content analysis and framework analysis were performed by using the VIA classification. The findings showed that 24-character strengths related to Buddhist beliefs were recognized by the participants. When they use their creativity, curiosity, judgment, cooperation, and leadership, they perform better in class and feel more productive. They became more conscious of the value of character strengths as a result of the interview. Their plans for enhancing specific character strengths in EDC provide valuable insights for scholars, educators, and curriculum developers.

Keywords: positive psychology, character strengths, perception, experiences, student teachers

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1. Introduction

The study of character strengths evolved in the early 20th century and over 25 million surveys have been taken around the world using the VIA Classification of Character Strengths and Virtues (Peterson & Seligman, 2004). A wide range of literature search and practice has shown fruitful results in various areas and cultures, including intervention and counseling programs and character strengths initiatives incorporated into the existing curriculum in some Australian schools (White & Waters, 2014). Character strengths help to look for what is strongest and best in people. It is a widely recognized practice in education since it enhances positive outcomes and reduces negative aspects.

Character strengths have been linked to an increase in academic achievement (Choudhury & Borooah, 2017), self-efficacy (Weber, 2013; Lim & Kim, 2014), high life satisfaction (Harzer, 2016), positive adaptation to stress (Lee et al., 2019), an improvement of psychological capital which strengthens the people's ability to cope with stressful situations (Hou et al., 2022), and the practice of character strengths provides a positive contribution to both physical and mental health by bringing happiness, meaning of life and purpose, with a fulfilling relationship of decreasing depression (VanderWeele et al., 2019; Seligman et al., 2005). Student teachers' character strengths are positively related to psychological well-being (Gustems & Calderon, 2014) which is particularly important for preventing mental illness.

Gradišek (2023) found that students in teacher education showed Fairness, Kindness, Teamwork, Leadership, and Gratitude as signature strengths. Moreover, they hoped to develop Creativity, Perseverance, Courage, and Self-regulation for future goals. Student teachers frequently applied civic strengths and interpersonal strengths in their daily lives. There should be more support for student teachers to achieve their plans for improving their target strengths that are somehow related to academic activities. Furthermore, the teacher education context needs more attention to study character strengths as there are only a few research can be found within this context and there is no qualitative study that can highlight the deep insights into the usefulness and practices of student teachers' character strengths.

Another point that needs to be considered is that studies investigating the perception and experiences of character strengths are rare and most studies implemented intervention programs using different experimental designs. While prior research has examined the validation of character strengths through adaptations of the VIA classification questionnaire in various international contexts, such investigations have not yet comprehensively explored the practical utility of character strengths in everyday life. Consequently, a more in-depth

examination of this topic becomes imperative. As such, the primary objective of this study is to undertake innovative scrutiny to describe character strengths among student teachers and their usefulness in college students' lives – how they apply their strengths in different situations, advantages of using strengths, feelings, and satisfaction when they reach their goals because of these strengths. It is worth researching as previous empirical studies highlighted the importance of character strengths in promoting well-being (Koydemir & Sun-Selışık, 2016); a decrease in depression, and an increase in life satisfaction and happiness (Schutte & Malouff, 2019).

Character strengths are important for teacher education, for instance, they are positively related to life satisfaction, college satisfaction, and GPA (Lounsbury et al., 2009); psychological well-being (Linley et al.,2010); personal well-being (Hutcherson et al., 2008; Park & Peterson, 2008). Using character strengths had impacts on those variables: fewer symptoms of depression and anxiety (Gillham et al. 2011; Schmid et al., 2011; Park & Peterson 2008), fewer externalizing problems (Park and Peterson, 2008), and internalizing problems (Beaver, 2008). Moreover, scholars found that fairness (78%), creativity (68%), a love of learning (61%), humor (53%), perseverance (45%), and leadership (40%) were considered top character strengths to be a good teacher (Arthur et al., 2015). Student teachers at the Education Degree College (EDC) in Myanmar are trained to become effective and skilled educators who can make valuable contributions to the field of education. Therefore, it is important to explore their character strengths, related experiences, and perceptions. This exploration will contribute positively to understanding how these student teachers operate within their tasks and can provide valuable insights into their overall performance and development within the education system.

All in all, character strengths research in teacher training programs can bring effective awareness of the application of strengths and promote student teachers' qualities in this twenty-first-century challenging world.

Aims

i. To examine how student teachers perceive and experience character strengths.
ii. To explore the underlying philosophical beliefs that shape student teachers' perceptions of character strengths.

Research questions

i. What are student teachers' perceptions of their character strengths?
ii. How do student teachers describe the experiences of using 24-character strengths in Education Degree College?
iii. What are the underlying philosophical beliefs that shape student teachers' perceptions of character strengths?

2. Theoretical Background

In this study, student teachers' character strengths will be classified using the framework of VIA Classification of Character Strengths, which is based on trait theory (Niemiec, 2020). The classification system draws its origins from historical analysis and the application of specific criteria, further bolstered by cross-cultural investigations. Subsequent to its inception, the VIA Classification has undergone meticulous refinement, substantiated through rigorous reliability and validity studies, including multiple factor analyses. The classification's scientific rigor is evidenced by its extensive peer-review process. The essential intent of this classification is to facilitate the betterment and empowerment of human beings, thereby making a meaningful contribution to the greater welfare. It accomplishes this objective by presenting a user-friendly framework suitable for practitioners.

Character strengths are positive aspects of personality that reflect the fundamental identity of individuals and produce positive outcomes for themselves and others, as well as contributing to the collective good (Niemiec, 2018). According to Peterson and Seligman (2004), there are 24-character strengths that make up the six virtues – (1) Wisdom and knowledge (*cognitive strengths* - creativity, curiosity, open-mindedness/judgment, love of learning, and perspective), (2) Courage (*emotional strengths* - (bravery, persistence, integrity, and vitality), (3) Humanity (*interpersonal strengths* - love, kindness, and social intelligence), (4) Justice (*civic strengths* - teamwork, fairness, and leadership), (5) Temperance (*temperance strengths* - forgiveness and mercy, humility/modesty, prudence, and self-regulation), (6) Transcendence (*transcendence strengths* - appreciation of beauty and excellence, gratitude, hope, humor, and spirituality).

3. Methodology

3.1. Participants

18 student teachers (Year 1 and Year 2) from one of the Education Degree Colleges (EDCs) in Myanmar participated in this study. The curriculum reform in EDCs started in 2019 and is still in process so the data can be collected only from those participants.

3.2. Research Design

This qualitative study was designed to investigate the perceptions and experiences of using character strengths in student teachers, as it is the most effective method for providing a deeper understanding of the nature of the related variable (Creswell, 2015). The exploratory approach was used to uncover vital information that will contribute to the achievement of the primary goal of the study. The semi-structured interviews were conducted to gain a deeper insight into their actual experiences and perceptions of character strengths.

One-on-one interviews were employed by using the virtual platform (audio call) to allow the participants to share their ideas and experiences comfortably. The researcher used the purposive sampling method and the data collection process was terminated when the

saturation point was reached, which meant that it was possible to make sense of the phenomenon without further information from new participants. 18 student teachers took part in this study. The criteria for participant selection are made based on the purpose of the study to explore the perception and experiences of character strengths, so the participants are those who (1) have completed Year 1, first semester; (2) are interested in exploring their character strengths; (3) are willing to participate in the study and provided informed consent; (4) believe in Buddhism (according to the VIA framework, character strengths are based on the traditions of Buddhism for South Asia; Peterson & Seligman 2004).

3.3. Data Collection

Informed consent was obtained from all the participants through the provision of the consent form. A demographic data sheet and a semi-structured interview guide were utilized in this investigation. These two instruments were reviewed by experts in the respective field and ensured validity and reliability by conducting a pilot with 3 participants from the targeted population.

The first instrument was specifically crafted to acquire pertinent information regarding participants' age, gender, streams, and educational level (Year 1/Year 2). The second one, the interview guide was carefully informed by the positive psychology of character strengths and previous literature. Each interview commenced with a brief introduction to the topic (3-4 minutes), elucidating the construct of character strengths. Subsequently, a series of 7 meticulously designed questions were employed to incite fruitful discussion about perceptions and experiences of character strengths. The entire interview spanned a duration of approximately 30 to 45 minutes while the demographic data sheet required approximately 3 minutes to complete.

The recruitment of participants and interviews transpired in May 2023 at Myanmar EDC. All interviews were exclusively administered by a single researcher to ensure uniformity and consistency throughout the data collection process. Furthermore, participants were invited to check reflections and conclusions, thereby mitigating any potential misunderstandings or omissions that may have arisen during the interview. Phone recordings were employed for data collection and deleted after transcribing the data. The subsequent section exhibits the interview guide.

Semi-structured interview guide

1. What is your understanding of character strengths?
2. How do you use your character strengths?
3. Why do you use your character strengths?
4. Please, share your philosophical beliefs that you think influence your perception of character strengths.
5. What character strengths do you often use in college?
6. What are the benefits of using character strengths?

7. How can you improve your character strengths?

3.4. Data Analysis

The data analysis component was directed under the supervision of a proficient qualitative research expert. The operational framework for this analysis was informed by the VIA classification of character strengths, serving as the primary guiding structure. The present qualitative investigation employed the directed approach to conduct content analysis. This method entails the analysis being executed in alignment with pre-existing theory, framework, and pertinent literature, which served as guiding principles for the formulation of initial codes. The utilization of direct content analysis predominantly centered on the interpretation of textual data and the deductive approach. Grounded within the naturalistic paradigm, this analytical approach was employed to substantiate the presence of character strengths among Myanmar student teachers.

The direct content analysis consists of three phases (1) preparation phase: This initial task includes familiarization with the transcriptions through an immersive engagement of the data and the comprehension was concurrently documented through meticulous field notes, yielding a comprehensive grasp of the data; (2) organizing phase: The second stage shifted toward the analytical framework by identifying and exploring prevalent themes within the data set, developing a thematic framework, resulting in the amalgamation and enrichment of themes and subthemes; (3) reporting phase: a summarization was created by the systematic incorporation of data into the VIA framework, a rigorous evaluation of the analysis results concerning the original dataset was undertaken and provided the explanation of the subthemes, and themes (Hsieh & Shannon, 2005).

4. Results

4.1. Demographic Characteristics of Student Teachers

The demographic information of the study's participants is comprehensively delineated in the following Table.

Table 1 : *Demographic Information of the Participants (n = 18)*

Characteristics	***Number***	***%***
Age (years) Mean ± SD	20.22 ± 0.83	
Gender: Male	10	55.6
Female	8	44.4
Educational level: Year 1	2	11.1
Year 2	16	88.9
Streams: Arts	1	5.6
Science	13	72.2
Arts-Science	4	22.2
Religious & Ethnic (Buddhism & Burmese)	18	100

4.2. Exploring Character Strengths of Student Teachers in the Myanmar Context Using the VIA Framework: Perceptions and Experiences

To address research question 1, the findings were similar to those of Linley (2008) which highlighted that around two-thirds of individuals are not aware of their own strengths. People lack self-awareness in considering their positive characteristics and they tend to focus more on their weaknesses. This lack of awareness can take various forms: general unawareness, not connecting with how they use their strengths, considering their strengths as something ordinary, etc. Based on the findings from this study, it has come to light that a considerable majority of student teachers exhibit a lack of recognition concerning the presence and significance of the 24-character strengths, despite manifestly engaging certain of these strengths in their personal lives. Partial acknowledgment is only extended to a few of them, namely, creativity, teamwork, leadership, and bravery. Hence, it is reasonable to posit that student teachers perceive strengths as commonplace or ordinary and an optimistic viewpoint emerges in the form of their endorsement of the applicability of the 24-character strengths in their daily lives. The sample quotes from participants are described below.

> Year 1 Semester 2: "People have different abilities and personalities. Each person is special in their own way. This means that each person's good qualities can be different. I think I have some good strengths too, but I didn't know about most of these 24-character strengths until I joined this interview."
>
> Year 2 Semester 1: "I think that character strengths are good qualities that people have. I don't believe I possess all 24-character strengths. I have certain strengths I know about and use regularly in my daily life."
>
> Year 2 Semester 2: "I am aware of a few of my strengths, although not all 24. I believe these strengths can be helpful and effective for individuals in their lives."

Owing to a lack of awareness concerning the 24-character strengths, student teachers tend to believe that they possess and apply only some of these strengths. However, in reality, they possess experiential familiarity with all 24-character strengths within their surroundings. The utilization of these strengths takes place even without their conscious recognition of them as strengths (Linley, 2008). Upon an in-depth exploration of how student teachers apply character strengths within the educational context (EDC) to answer research question 2, it was revealed that these individuals can readily recall instances from their experiences and acknowledge their consistent utilization of the entire gamut of strengths in response to the demands posed by their environment.

Consequently, the description of 24-character strengths (subthemes) under six virtues (themes) harmonizes cohesively with the tenets articulated within the VIA framework. No new themes were found in this study. Student teachers' perceptions and practices of character strengths can be found in the accompanying tables with their anonymous code numbers.

Theme 1: Wisdom and knowledge virtue (**cognitive strengths** – *creativity, curiosity, judgment, love of learning & perspective*), student teachers applied these strengths both

within and beyond the classroom context – posters creation, project implementation, lesson planning, microteaching, peer group teaching, and social life. According to the data, the majority of the participants are active and interested in showcasing their cognitive strengths within the college environment.

Table 2*: Cognitive Strengths*

Character Strengths in Education	***Personal Experiences***
Creativity – think in innovative ways to make learning fun and facilitate students' understanding	I often apply creativity when engaging in microteaching, peer group teaching, projects, and preparing lesson plans at EDC. (ST 4, 7, 10,12, 13)
Curiosity – have an interest in all experiences, keen to learn new objects and from others	I am very curious about new things because I want to have different experiences and feelings. (ST 10, 15, 16, 17)
Judgment – analyze and evaluate systematically to create a good conducive learning environment	I use my judgment in social situations. Moreover, I apply it in the classroom to decide whether others' presentations are good. (ST 11, 18)
Love of learning – devote to pursuing new things of respective subjects	Learning my favorite subjects makes me happy. (ST 2, 5)
Perspective – provide wise counsel to others	I'm good at explaining difficult lessons to my friends and providing ideas and advice about their social lives, especially to my close friends. (ST 3, 6)

Note. ST = Student Teacher

Theme 2: Courage virtue (**emotional strengths** – *bravery, perseverance, honesty, & zest*) was essential in their relationship with classmates, roommates, teacher educators, and administrative staff. Besides they incorporated these strengths into academic activities. The following descriptions indicated that the student teachers possess a degree of freedom to articulate their rights and are willing to openly express their attitudes.

Table 3: *Emotional Strengths*

Character Strengths in Education	***Personal Experiences***
Bravery – are not afraid of communication to others and take action immediately	I'm confident when it comes to public speaking, and enjoy showcasing my group's learning to the entire class. I don't feel scared to communicate with my teacher educators when discussing various matters. (ST 2, 3, 4, 9, 13, 14)
Perseverance – do not give up halfway and find new ways to finish things	I enjoy finishing tasks in my favorite subjects, but for the others, I have to do all the assignments and homework to achieve a good grade. (ST 1, 3, 13-17)
Honesty – always behave openly and truthfully to others	Honesty is paramount; I treat everyone with sincerity and integrity. (ST 1-4, 10-16)
Zest – reveal enthusiasm in activities with reflective practices to gain essential competencies	Zest energizes me, particularly when I'm engaged in academic tasks. (ST 1, 12)

Note. ST = Student Teacher

Theme 3: Virtue of Humanity (**interpersonal strengths**) was evident as student teachers emphasized the importance of both giving and receiving *love* while a few found it challenging to openly express love within their families, they consistently supported their loved ones when needed. *Kindness* was displayed in various situations, including social gatherings, studies, and times of need with a focus on empathy and helping others through acts of charity. Student teachers' *social intelligence* was demonstrated by providing support and adapting their communication to different situations. Even though they may struggle at

times to predict others' feelings, they are comfortable with socializing, making friends easily in new environments, and focusing on others' feelings when interacting.

Table 4: *Interpersonal Strengths*

Character Strengths in Education	***Personal Experiences***
Love – create a friendly environment that shows mutual respect, shares constructive feedback, and provides support	I hold the belief that love is significant in this world. It's essential for everyone to both receive and give love. I make an effort to spend time with those dear to me, and I consistently express my feelings of affection. (ST 3-7, 10-12)
Kindness – help others who have difficulties in studying, and emphasize mutual understanding	I support those who struggle in social gatherings or studies. I consistently consider the perspectives of others when they make mistakes and propose that there might be reasons behind their actions. This is how I spread my kindness to other people. (ST 1, 8, 12)
Social Intelligence – sensitive to others' feelings, make new friends and enjoy group's work	I provide support and encouragement to my friends when they're feeling down, and I know how to adapt my communication based on the situation. (ST 6, 1, 2, 4, 5)

Note. ST = Student Teacher

Theme 4: Justice virtue (**civic strengths**) was prioritized by valuing *teamwork* and *fairness*. They believe in contributing effectively to a team and upholding principles of equality and justice. They excel at cooperating in the classroom and prioritize fairness in group work. They also possess strong *leadership* qualities, guide others effectively, and set an example through ideal behavior.

Table 5: *Civic Strengths*

Character Strengths in Education	***Personal Experiences***
Teamwork – have the ability to work with teams for the best results	I work with others by listening to their ideas and expressing my thoughts. I believe I can contribute effectively to a team. (ST 3, 6, 7, 13)
Fairness – respect others' opinions and treat everyone the same	I'm fair when assigning tasks in group work and prioritize justice. (10, 1)
Leadership – focus on team harmony by knowing the needs of the individual members	As a class leader, I prioritize being a good leader by addressing my classmates' needs, valuing their ideas, and working for the collective welfare. (ST 4, 5, 2, 12, 16)

Note. ST = Student Teacher

Theme 5: Temperance strengths appeared when student teachers demonstrated *mercy* by not dwelling on negativity from others and forgiving others. They also exhibited *humility* in their academic and social interactions, avoid arrogance, and prioritize helping others. They possessed the strength of *prudence* in handling significant situations but acknowledged challenges in maintaining calmness. Additionally, they practice *self-control* through meditation and listening to music.

Table 6: *Temperance Strengths*

Character Strengths in Education	*Personal Experiences*
Forgiveness – considerate and prioritize empathy to maintain relationships and learning opportunities	I forgive people when they apologize, or even if they don't, I try to move on considering their perspective. (ST 5, 4, 14, 17)
Humility/modesty – value strengths and weaknesses of others and help each other	I demonstrate humility in both academic and social contexts. While I excel in my studies, I avoid being overly proud and instead help classmates who struggle with their learning. (ST 6, 1-5, 10, 13)
Prudence – take time to think from multiple perspectives and make careful decisions	It is a strength I use when facing significant situations in my life. I remain calm when important matters arise, and I'm able to think carefully and logically in a systematic manner. (ST 3, 5, 9, 11)

Note. ST = Student Teacher

Theme 6: Transcendence strengths (*appreciation of beauty & excellence, gratitude, hope, humor, & spirituality)* highlighted the fact that student teachers value the beauty of the mind over physical appearance and strive to recognize and learn from the strengths of others without envy. They also appreciate the beauty in nature and people, acknowledging their strengths and expressing gratitude in alignment with Buddhist teachings. They remember and reciprocate kindness from those who help them during tough times. They hold long-term academic aspirations and short-term motivations for life, fostering a positive mindset, and aspiring to become a capable teacher and supportive family member. They find happiness in chatting with friends, incorporating humor into presentations, and adhering to Buddhist teachings and principles.

Table 7: *Transcendence Strengths*

Character Strengths in Education	*Personal Experiences*
Appreciation of beauty and excellence – recognize the good things in others and be happy to appreciate them	I value the beauty of the mind over physical appearance. I make an effort to recognize the strengths of others and aspire to learn from them without feeling envious. (ST 3, 9, 12)
Gratitude – thankful for the good things in life and don't hesitate to respond to others' help	I express gratitude aligns with Buddhist teachings; reciprocating kindness by performing good deeds for those who help us. (ST 4, 6, 13)
Hope – have the best wishes and goals for future works relating to teaching and learning	I hold both long-term academic aspirations and short-term motivations for daily life, fostering a positive mindset. (ST 4, 18)
Humor – a thoughtful action to keep the students' attention and make the activities alive	I use humor in my presentations to keep my classmates engaged and alleviate stress, recognizing its importance in college life. (ST 13, 15, 4, 11)
Spirituality – believe in religion, follow good principles, and have high ambitions in teaching-learning situations	I adhere to Buddhist teachings and principles, integrating them into my life. (ST 18, 2, 9-11, 13-16)

Note. ST = Student Teacher

4.3. The Underlying Philosophical Beliefs that Shape Student Teachers' Perceptions of Character Strengths

The primary objective of this study is to delve into the perceptions and experiences of student teachers' character strengths. Through this investigative pursuit, it is crucial to uncover the underlying philosophical beliefs that shape the perceptions of character

strengths and address the gap in the literature. Although the character strengths are based on virtues of different cultures, the previous studies did not sufficiently emphasize the background philosophy of participants' character strengths. In this study, the researcher has gained insight into the manifestation of a comprehensive collection of 24-character strengths within the context of Myanmar. The outcomes of the study affirmed the presence of these 24-character strengths within the teacher education area and underscored their potential significance in shaping the experiences of student teachers. Notably, to address research question 3, participants in the study have drawn parallels between these character strengths and Buddhist philosophy, highlighting a perceived relationship between the 24-character strengths and the teachings and foundational principles of Buddhism.

These strengths encompass attributes such as judgment, perspective, perseverance, love, kindness, fairness, humility, forgiveness, self-regulation, spirituality, and hope, etc. The findings align with Peterson and Seligman's (2004) conceptualization of character strengths in Buddhism. Various opinions concur that these character strengths are close to the teachings of Buddha, suggesting a harmonious compatibility between these strengths and Buddhist philosophy. The sentiment prevails that the practice of these strengths has the potential to contribute positively to individuals' lives by promoting fulfillment, peace, and alignment with the tenets of Buddhism which focuses on inner awareness and virtuous dispositions.

> Year 1, Semester 1: In my opinion, these 24-character strengths are consistent with the teaching of Buddha, for instance, ways to live as a good person by contributing loving kindness, honesty, perspective, judgment, etc.
>
> Year 2, Semester 1: 24-character strengths are related to the teachings of Buddha. I agree that these positive constructs lead to a fulfilling and peaceful life.
>
> Year 2, Semester 2: I think character strengths are connected to the teachings of Buddha. 24-character strengths are consistent with the living styles of Buddhists (Noble Eight-Fold Path).

In Buddhism, Mudita (Sanskrit and Pali word) or unselfish joy is taking delight in the good fortune of another and sharing in the joy of others (Kornfield, 2019). For instance, a person feels joy in the success of others or overcomes obstacles with courage and determination. This highlights the appreciation of beauty and excellence strengths of character. Furthermore, all practicing Buddhists are expected to observe Five Virtues or Percepts in fulfilling the primary conditions of Right Livelihood: (1) to abstain from killing any living creature; (2) to abstain from stealing; (3) to abstain from sexual misconduct; (4) to abstain from false speech or lying; and (5) to abstain from intoxicants (Khin Zaw, 2001). One can see notions of humanity (interpersonal strengths) and justice (civic strengths) in the first, second, and fourth percepts, and strong directives toward temperance or self-restraint in the third and fifth percepts (Peterson & Seligman, 2004). Hence, it is evident that the philosophical beliefs of Buddhist practitioners significantly influence the student teachers' perceptions of character strengths.

5. Discussions

The interview data provided the positive impact of applying character strengths in various aspects of the individual's life. These strengths are seen as tools for personal growth, effective communication, achieving goals, and improving overall well-being. The environment, circumstances, and mood play a role in when these strengths are applied. The participants acknowledged that they often use some strengths unconsciously, benefiting from them even in everyday situations. The main information is that by recognizing and leveraging their character strengths, the individual experienced increased self-confidence (Ferguson & Lockman, 2024), better relationships, expanded social connection (Xie et al., 2020), enhanced skills, and overall high quality of life (Zhang & Duan, 2023).

The top strengths that student teachers frequently use in the college setting emerged and it can be said that EDC is a place that encourages student teachers' strengths to get a satisfying life. The EDC offers students a wealth of options for learning more and growing intellectually and physically, including the opportunity to improve their values, talents, attitudes, and character strengths (Hamrick et al., 2002). The most prevalent strengths were teamwork, judgment, leadership, curiosity, creativity, appreciation of beauty and excellence, love, and social intelligence. Drawing upon the top strengths exhibited by student teachers, the subjects encompassing their curriculum, the teaching methodologies they learn, the way teacher educators imparted knowledge to them, and the student-centered new curriculum collectively foster an environment that encourages and motivates student teachers to actively employ their *cognitive strengths* such as creativity, curiosity, and judgment – alongside their *civic strengths*, which encompass the domains of teamwork and leadership. Moreover, *interpersonal strengths*, inclusive of social intelligence and love, are brought to the fore, complemented by *transcendence strength*, characterized by an appreciation for beauty and excellence.

The practice of leveraging one's character strengths offers a multitude of positive outcomes. These benefits encompass personal development, enhanced well-being, and improved interactions. By utilizing strengths, individuals experience personal growth, satisfaction (Lounsbury et al., 2009), and a more positive self-perception. This, in turn, fosters increased confidence, happiness, and a sense of accomplishment (Smith et al., 2021). Furthermore, they have plans for the improvement of various character strengths. The overarching theme involves acknowledging areas for enhancement and implementing targeted strategies to bolster these attributes. Social intelligence, self-regulation, perseverance, creativity, judgment, humility, and forgiveness emerge as recurrent focal points. A notable sentiment expressed is that of utilizing past experiences for learning and adjustment, seeking guidance from knowledgeable sources, and experts, and engaging in practices such as mindfulness.

Overall, the findings of this study offer a detailed insight into how student teachers perceive and utilize character strengths within the context of teacher education in Myanmar. In comparison to the existing literature on character strengths in teacher education internationally (Gradišek, 2012; 2023), university students (Listiyandini et al., 2017), and the general population (Zábó et al., 2023), this study delves into the philosophical underpinnings that shape the understanding of character strengths. It emphasizes the importance of considering philosophical beliefs when applying constructs from one country to another with different participants. Furthermore, the study's results highlighted the usefulness of character strengths in Myanmar teacher education and its potential contribution to the global landscape of teacher education, particularly in a curriculum focusing on the student-centered approach.

The recognition of this discovery highlights a crucial aspect that warrants attention in future research pursuits. The potential implementation of an intervention program or counseling session emerges as a promising strategy to facilitate the improvement of character strengths (top strengths or lesser strengths), with the overarching goal of bolstering the overall state of individuals in the college environment. This endeavor could be effectively undertaken through a collaborative partnership involving teacher educators and experts. Strengths-based practices should be developed systematically according to the nature of the Myanmar teacher education setting.

Strengths and Limitations of the Study

The outcomes derived from this study substantiate the theoretical comprehension of character strengths within the specific context of Myanmar, particularly student teachers from EDC. The open-ended interview explored how they applied character strengths in teacher education, thus enhancing their awareness of the presence and significance of character strengths. A noteworthy observation is that character strengths are subject to transformation, with participants perceiving these strengths as not inherently fixed but rather susceptible to alteration based on the nature of practical application. The process of identifying and acquiring knowledge about these strengths holds considerable significance for student teachers, representing a fundamental psychological construct that equips them with the means to lead a gratifying and flourishing life. This, in turn, empowers them to confront challenges resolutely and embrace success as prospective teachers.

Several limitations necessitate acknowledgment in the scope of this study. To attain a more comprehensive and insightful perspective of character strengths, future researchers should encompass student teachers from alternate EDCs and diverse racial backgrounds. The current study's restricted participant pool raises concerns regarding the extent to which its findings can be extrapolated to a broader population. Moreover, the exploration of

character strengths was exclusively reliant upon participants' responses, which might introduce subjectivity and response bias. To enrich the study's validity and encompass a more extensive array of perspectives, it would be prudent to extend the interviews to include teacher educators. Their input could shed light on whether EDCs effectively facilitate the application of character strengths and enable an evaluation of the character strengths they perceive within student teachers.

6. Conclusion

This research makes a substantial contribution to the comprehension of the character strengths displayed by student teachers in Myanmar, with a particular focus on Buddhism. The application of character strengths reflects the nature of student teachers and the teaching-learning environment in Myanmar EDC. The implications of the findings extend beyond the present research setting, with potential applications in both national and international teacher education. The philosophical beliefs held by the participants significantly support the literature on character strengths within the context of Buddhism in Southeast Asia. Furthermore, the study's contributions are particularly relevant for educational practitioners, teacher educators, and curriculum developers. Armed with the insights generated, these stakeholders can better formulate strategies aimed at fostering the integration and practical application of character strengths among student teachers. As such, this study has the potential to positively contribute to the ongoing discourse of teacher education, ultimately nurturing a more comprehensive development pathway for aspiring educators.

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Resistance to Change in the Romanian Educational System: Challenges and Opportunities

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Abstract

The traditional perspective on education, teaching, and learning is no longer sufficient in fluid societies exposed to dramatic and rapid changes. The need for continuous educational reform is evident. However, recent paradigmatic societal shifts, extreme events, and extraordinary scientific and technological advances underscore the urgency of these changes. These developments highlight the necessity for innovation and the reduction of intergenerational gaps in educating new generations. By embracing these changes, we can create a more inclusive, adaptable, and innovative educational environment for all. *While the Romanian educational system, like many traditional systems, is extensive in its spatial coverage, material resources, human resources, and the number of beneficiaries served, it also presents an opportunity for positive change. Its highly centralized, over-normative, and strictly structured nature, with a top-down control approach, has fostered systemic inertia and resistance to change.* However, this also means that with the right strategies, the system can be transformed into a more dynamic and adaptable one. *Effective and sustainable reforms are not just the responsibility of policymakers and educational leaders. They require initial assessments of the status quo to identify genuine needs for change and to determine possible obstacles and available resources. Real change and innovation are promoted and supported by a clear definition and understanding of the factors that generate and maintain inertia and resistance to change. Identifying and understanding these complex mechanisms at both the organizational and individual levels should precede any change plan, emphasizing the crucial role of each individual in the process. To identify individual motivations that can generate opposition or resistance to potential change requests within the educational system, we conducted a study involving 293 in-service and pre-service teachers from the Department of Educational Sciences at the West University of Timisoara. The study utilized the Resistance to Change Scale developed by Oreg (2003), a widely recognized and validated tool, which evaluates the primary factors determining resistance to change: routine seeking, emotional reaction, short-term focus, and cognitive rigidity.* This scale was administered through a structured questionnaire and the data was analyzed using statistical methods. *This study revealed notable variations in attitudes toward change based on gender, residency, and professional status (in-service and pre-service teachers). These findings*

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underscore the importance of addressing both systemic and individual factors to facilitate meaningful and lasting reforms in education. By understanding and mitigating the sources of resistance, educational leaders can implement strategies such as fostering a culture of innovation, providing professional development opportunities, and involving stakeholders in decision-making, that foster a more adaptable and innovative educational environment.

Keywords: resistance to change, educational system, pre-service teachers, in-service teachers.

Change - what is it good for?

Change, a catalyst for progress and personal development, plays a pivotal role in our lives and society.

Change is vital for adaptation, even survival in critical circumstances. Change allows individuals and societies to adapt to new circumstances, environments, and challenges. It enables us to evolve and thrive in ever-changing conditions. Positive stress nurtures the motivation to learn and grow.

In a rapidly changing, fluid society, we face new opportunities and obstacles and must be insightful and creative. Change fosters innovation and progress. It drives us to explore new ideas, technologies, and methods, leading to advancements in various fields such as science, technology, medicine, and culture.

Individually, survival, adaptability, and efficient and successful functioning build on self-developing, learning, and growth. Change provides opportunities for personal and collective learning and development. It encourages us to step out of our comfort zones, acquire new skills, and develop resilience and tolerance to uncertainty.

Global society is diverse, and to ensure inclusion, it requires understanding, acceptance and tolerance, empathy, compassion, and collaboration. Change promotes diversity and inclusion by challenging traditional norms and structures and fostering acceptance and appreciation of different perspectives, cultures, and identities.

Change often arises from addressing problems and inefficiencies. It prompts us to identify issues, brainstorm solutions, and implement necessary reforms for improvement. So, change promotes and requires developing critical and creative thinking, communication, and problem-solving competences.

Change is a constant in our lives, and it builds resilience by testing our ability to adapt and overcome obstacles. It teaches us to be flexible, resourceful, and persistent in adversity, making us more robust and capable.

Change offers opportunities for renewal and refreshment. It prevents stagnation and monotony by introducing new experiences, ideas, and opportunities for exploration.

In essence, change is a fundamental aspect of life that drives progress, innovation, and personal development. Embracing and managing change effectively can lead to positive outcomes and contribute to a more dynamic and resilient society.

Educational systems are one of the most sensible and reactive to unavoidable changes, and they have to adapt and progress continuously to remain relevant and efficient.

Should I stay or should I go? Forces of change

Lunenburg & Ornstein (2008, quoted in (van Wyk, C. van der Westhuizen, & van Vuuren, 2014)consider that the most potent and relevant forces that can demand and sometimes impose change are government interventions and requests (especially in the case of highly centralized and authoritarian education systems with top-down governance), the needs of society, and employees needs.

However, several inertia forces, such as the fear of the unknown, ineffective or insufficient communication, and employee non-involvement, exert a significant influence in preserving the current condition.

Lewin (1947, cited by (van Wyk, C. van der Westhuizen, & van Vuuren, 2014) indicates that the main dimensions impacting change processes in educational institutions are systemic, environmental, personality, process, work, and management.

The primary causes for resistance to change in the educational environment are the sudden and unannouncedness of the requested change, the excessive degree of uncertainty generated by the change, feeling out of control, discomfort generated by the loss of routines and familiar habits, distrust in the permanence of change, feeling being told that his previous strategies were wrong, fear of proving incompetent to learn new skills, fear of proving incompetent to learn new skills, the butterfly effect of the change in one range, affecting all others, overload in work, fear of being the failure of the group at the end of the change process, insufficient funding, fatigue that accompanies change efforts (Rehman, 2021).

The most frequent forms of resistance to change are aggressive, passive-aggressive, and passive (Darjan et al., 2017; Long et al., 2017).

The most effective strategies to combat resistance to change in the educational environment are education and communication, participation and involvement, facilitation and support, negotiation and agreement, manipulation and mutual deception, and explicit or implicit coercion. (Darjan & Predescu, 2024; Darjan & Tomita, 2014; Long et al., 2014; Predescu & Darjan, 2008).

The change: Driving and opposing forces

As a vital factor of evolution, change is inevitable at all levels. A simplified organizational change is a three-step model: unfreeze (from the current state), move (transition), and freeze (Lewin, 1947). The significant steps from the current state to the future state are formulating

the desired change (setting tangible goals required by the needs and expectations of the beneficiaries), realizing the change plan (what?, how? – people, processes, technologies, structure, cultural aspects), implementing the change, and managing the transition and maintaining change (Lewin, 1947).

The forces that can demand organizational change can be external or internal. The goals and reasons that trigger and require these processes of adaptation/adequacy or growth/evolution may be diverse, from the necessity/usefulness of assimilating new roles and tasks, the emergence of new material or financial or the possibility of acquiring new strategies or technologies, until expanding areas of interest or influence, with corresponding changes in visions or goals and assuming new missions and roles (Swaim, 2014).

The forces that can demand and impose changes in educational institutions are diverse: governmental decisions, social changes, the pressure of new technologies, and administrative or personal needs and processes (Dârjan, 2018; Yılmaz & Kılıçoğlu, 2013).

The need for change felt in organizations or at the individual level reflects the need for continuous development and professionalization, expressed by enriching knowledge and improving strategies. Periodic change in education understood as sensitivity, flexibility, and adaptability to the realities, requirements, and challenges of a dynamic society of fluid realities, is a vital and critical necessity of any educational system. Otherwise, education, as an aims-oriented process, becomes inefficient and obsolete.

From an individual perspective, Piderit (2000) conceptualizes resistance as a three-dimensional attitude towards change, composed of cognitive, affective, and behavioral aspects, reflecting the different results of evaluating an object or a situation by a person (McGuire, 1985).

The cognitive dimension refers to the interpretation and the meaning that a person gives to change (is it necessary? Is it helpful?). The emotional dimension represents the responses to the potential change (anxiety, anger, excitement, etc.).

The cognitive and affective dimensions will influence the behavioral dimension, which is the person's actions or intentions in response to the requested change (either an attempt to oppose the change or plans to support the change).

These dimensions are interrelated, but they are distinct components and emphasize different aspects of the phenomenon of resistance to change.

This multidimensional view of resistance to change as a trait involves investigating the antecedents and consequences of behavioral decisions.

Also, identifying particular resistance components associated with different antecedents or consequences can differentiate between variables influencing the interpretation of the change and those generating a specific emotional experience. The individual understanding of the change and experienced emotions will determine specific decisions and behavioral reactions.

Whatever forces call for change, this process creates ambiguous feelings and can generate behaviors of opposition and resistance. Change is simultaneously an opportunity and a threat.

Scheidies (2017) believes that, at the organizational level, the most common obstacles to change are employee resilience, communication management, inability to adapt, and insufficient resources. Harkin (2017) also believes that the most critical challenges to organizational changes are the degree of employee involvement, the power of habit, and the confusion and uncertainty generated by the imposed modifications.

Among the most critical factors that can accentuate the resistance to change of education professionals are the sudden and unforeseen character of the requested change, the excessive degree of uncertainty generated by the change, the feeling of loss of control, combined with the discomfort of losing/giving up familiar routines and habits, the sense of involving a reproach/criticism of their previous strategies or performance, fear of not being able to acquire the new skills required, overload in work, etc.(Predescu & Dârjan, 2017; Yılmaz & Kılıçoğlu, 2013).

Also, insufficient funding, fatigue, and consumption accompanying change efforts can negatively affect the change process. Given the above reasons, staff resistance is more significant than management, and managers' orientation towards change is more optimistic than staff (Van Wyk et al., 2014).

The literature began to distinguish two types of reactions to change: reactions to change outcomes (power and prestige, job security, intrinsic rewards, etc.) and responses to the change process (trust in management, social influence, information about change, etc.). So, resistance to change is a multidimensional construct. Although potential outcomes and the change process influence people's reactions, studies suggest procedural aspects have a more significant impact (Robbins et al., 2000).

Oreg (2017, 2006, 2003) looked at possible reasons why some resist changes, even when they would prove beneficial. Using an empirical approach and different theoretical perspectives on this mood, Oreg proposes an individual dispositional structure consisting of four factors: orientation towards preserving routines (searching for routine), emotional reactions triggered by the requested change, irritation, and discomfort felt during the implementation of a change (short-term focus) and stubbornness and opposition to changing one's own opinions (cognitive rigidity).

Method

The present research is investigative, aiming to assess the degree of individual resistance to change of teachers within the Romanian educational system, as well as its main obstacles and individual factors.

The working hypothesis states that Romanian teachers tend to show a high degree of resistance to changes required in the educational environment. The research question asked was: What are the most pronounced dispositional features that determine the manifestation of resistance to possible requests for change at individual, institutional, or system levels?

Instrument

Oreg (2003, p. 682) developed an individual measure of resistance to change. This tool directly measures an individual's tendency to "resist or avoid making changes, to disavow change in general, to consider aversive change in different contexts and to different types of changes" (Oreg, 2003, p. 680).

Consistent with Purerit's (2000) multidimensional conceptualization of the construct, Oreg proposes evaluating four factors that, even if not entirely independent, represent distinct dimensions, reflecting the scale's cognitive, affective, and behavioral aspects. Thus, the scale developed by Oreg (2003) focuses on an individual's dispositional resistance to change as an aspect of personality, not an attitude towards a particular change situation.

According to Oreg, people differ depending on their internal inclination to resist or accept change, thus having different attitudes towards change, both voluntarily chosen and imposed. People with a high predisposition to resist change are considered to have a stable personality trait, are much less willing to accept change voluntarily, and are more likely to experience adverse emotional reactions when change is imposed on them.

The Change Resistance Scale, a comprehensive tool, has the potential to reveal inter-individual differences and their consequences in the context of institutional changes necessitated by various circumstances. It consists of 17 items, each with multiple answers on a 6-step Likert scale (1 = strongly disagree, 6 = strongly agree). The scale provides a total change resistance score and scores on four subscales, each measuring a different factor contributing to resistance to change.

The Routine Seeking (RS) subscale targets the behavioral dimension of resistance to change, focusing on the trend and preference for adopting and preserving routines;

Subscale Emotional reaction (ER) assesses the affective component of resistance to change, expressed by the level of stress and anxiety caused by the prospect of change;

The Short-term focus (STF) subscale also measures the affective component of resistance to change but aims to identify the degree to which individuals are worried and demotivated by the prospect of short-term inconveniences generated by change, which may outweigh the potential long-term benefits;

The Cognitive rigidity (CR) subscale investigates the cognitive component of resistance to change, measuring the frequency and ease with which individuals change their beliefs and opinions.

Participants

Our group consisted of 293 subjects, 214 in-service teachers, and 79 pre-service teachers, of whom 28 (9.6%) were male and 265 (90.4%) were female. Of the total number of those working in education (233), including some of the students, most worked in urban areas (182, 78%), and the rest in rural areas (51, 22%).

The length of service in the educational environment varies from 0 to 5 years (42, 18%), 6 to 15 years (77, 33%), 16 to 30 years (95, 40.8%), and over 30 years (19, 8.2%).

Results presentation and discussion

Statistical processing of the obtained results showed good internal consistency of the scale (Alpha Cronbach's .80), consistent with those obtained in previous studies (Oreg et al., 2008, p. 940). Good consistency also exists in the routine search (.70), emotional reaction (.87), short-term focus (.82), and cognitive rigidity subscale (.70).

The total score (m = 3.19) obtained on this scale by our subjects (Fig. 1) is significantly higher than other scores reported in previous studies (Oreg et al., 2008), which means that the tendency to resist change is higher in our subjects.

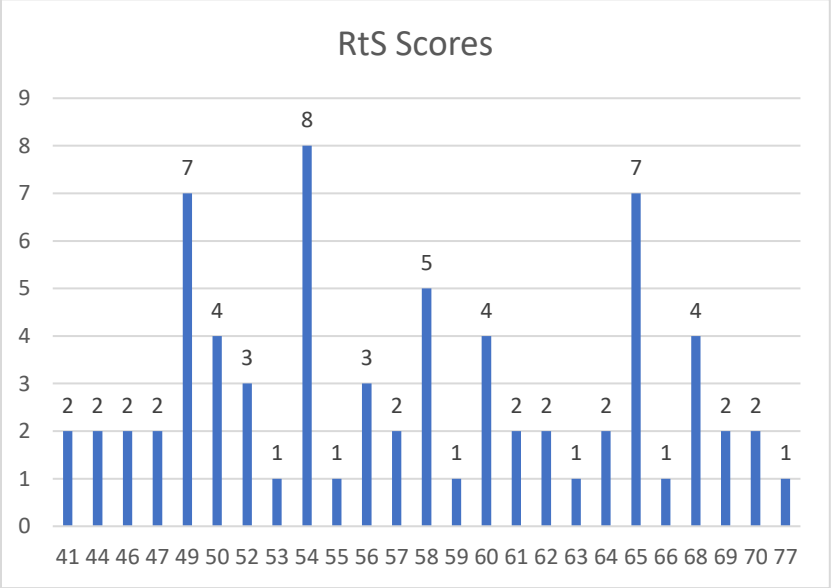

Figure 1: Scores distribution on RtC (Skewness = .33, Kurtosis = .28, std. error = .28)

Although the average obtained by our group of participants is higher than the averages reported in previous studies, this is most likely due to the small number of participants and the unequal ratio between female and male subjects (due to the actual reality in the educational system). This reason may explain the nonparametric distribution of the scores (Fig. 1).

Table 1: Descriptive Statistics

Measure	N	Minimum	Maximum	Mean	Std. Deviation
Resistance to change	293	1.65	5.59	3.1853	.59414
Routine seeking	293	1.00	4.80	2.5311	.75979
Emotional reaction	293	1.00	6.00	3.2722	1.08832
Short-term focus	293	1.00	6.00	2.9667	.97834
Cognitive rigidity	293	1.50	6.00	4.1348	.88374
Valid N (listwise)	293				

According to the results obtained, cognitive rigidity (m = 4.13) has the higher score an dis the most prominent dimension influencing the resistance to change, followed by emotional reaction (m = 3.27), short-term centering (m = 2.97), and routine search (m = 2.53) (Tab. 1).

Differences between in-service and pre-service teachers (Tab. 2) were significant for overall scores related to resistance to change, emotional reactions, and short-term focus. These findings can be attributed to the varying levels of experience between the two groups. In-service teachers, having already adapted to the demands and routines of their profession, may exhibit lower resistance to change due to their established familiarity and confidence in handling job-related challenges.

Tabel 2: Comparisons by professional status

Measure	In-service teachers		Pre-service teachers		t-test for Equality of Means	Sig. (2-tailed)
	M	SD	M	SD		
Resistance to change	3.1442	.56581	3.3352	.67158	-2.276	.024
Routine seeking	2.5139	.74954	2.5937	.79917	-.737	.461
Emotional reaction	3.1598	1.00803	3.6825	1.26778	-3.440	.001
Short-term focus	2.9033	.93491	3.1984	1.10000	-2.134	.034
Cognitive rigidity	4.1576	.81498	4.0516	1.10274	.843	.400

In contrast, pre-service teachers, who are still in the process of training and have not yet fully entered the professional environment, may experience greater anxiety and uncertainty about their competencies and their ability to adapt to their future roles. This uncertainty can

heighten their emotional reactions to change and lead to a more pronounced focus on short-term goals, as they might feel unprepared to plan extensively for the future without a clear understanding of the job's expectations and requirements.

The lack of concrete professional experience can make it difficult for pre-service teachers to foresee and prepare for long-term career developments, reinforcing a more immediate and cautious approach to their professional planning and response to change.

Regarding gender, males exhibited a higher resistance to change (Tab. 3), although these differences were not statistically significant. However, males did demonstrate statistically significant greater cognitive rigidity, indicating a stronger tendency towards inflexible thinking patterns and resistance to adapting their cognitive frameworks.

Tabel 3: Comparisons by gender

Measure	Masculin		Feminine		t-test for Equality of Means	Sig. (2-tailed)
	M	SD	M	SD		
Resistance to change	3.2836	.46705	3.1749	.60581	.920	.358
Routine seeking	2.6643	.78703	2.5170	.75702	.976	.330
Emotional reaction	2.8750	1.00577	3.3142	1.09000	-2.042	.042
Short-term focus	3.1786	1.01803	2.9443	.97335	1.206	.229
Cognitive rigidity	4.5714	.78131	4.0887	.88263	2.780	.006

On the other hand, females reported experiencing more intense emotional reactions when confronted with change, suggesting that while they may be more emotionally affected by change, this does not necessarily translate into cognitive or behavioral resistance.

These findings highlight the complex interplay between gender, emotional responses, and cognitive flexibility in the context of change.

More statistically significant differences were found between urban and rural contexts (Tab. 4).

Subjects from rural backgrounds tend to exhibit greater resistance to change, showing a stronger preference for routine, heightened emotional reactions, and a focus on short-term outcomes. Interestingly, there were no statistically significant differences in terms of cognitive rigidity between urban and rural respondents.

Tabel 4: Comparisons by residency

Measure	Urban		Rural		t-test for Equality of Means	Sig. (2-tailed)
	M	SD	M	SD		
Resistance to change	3.0887	.56022	3.4107	.59271	-3.662	.000
Routine seeking	2.4612	.76530	2.7630	.71541	-2.583	.010
Emotional reaction	3.0984	1.03504	3.5463	1.04732	-2.787	.006
Short-term focus	2.7664	.89818	3.4676	.99651	-4.915	.000
Cognitive rigidity	4.1858	.83595	4.0278	.93247	1.188	.236

These results may reflect the greater conservatism and traditionalism characteristic of rural areas. The lack of significant differences in cognitive rigidity suggests that while rural individuals may be more resistant to change emotionally and behaviorally, their cognitive flexibility or openness to new ideas may not differ significantly from their urban counterparts.

Conclusions and recommendations

The obtained results confirm the existence of a high degree of resistance to change among teachers, which can be explained both by the system's characteristics—such as centralization, normativization, implicit conformism, and top-down decision-making—as well as by a collective and individual mentality marked by decades of dogmatism, rigidity, forced conformism, and discouragement of individualism, self-reflection, self-determination, and critical thinking. This combination of systemic and cultural factors has ingrained a marked cognitive rigidity among educators.

Developing critical thinking, assuming responsibilities, and maintaining the cognitive flexibility of those involved in change are essential objectives in change management. Effective change management must consider the opposing forces of change and employ appropriate techniques to counteract them to achieve accurate, effective, assumed, and sustainable change (Dârjan, 2020).

In cases where there is fear of self-change, loss of familiar rituals, or difficulty in predicting the post-change situation, it is crucial for management to engage in permanent dialogue with the individuals involved. This dialogue should demonstrate concern, care, empathy, and compassion, possibly facilitated by resource persons or groups trusted by their colleagues. Confusion, inherent uncertainties, and fear of not meeting new standards must be recognized and addressed through ongoing communication. This involves providing

precise and detailed behavioral frameworks and expectations, as well as comprehensively specifying goals and deadlines (Harkin, 2017).

The traditional educational paradigm has become obsolete, inefficient, and sometimes harmful. It can no longer be merely updated or cosmetically altered to maintain a state of subsistence, as this approach generates material costs (inefficiently used) and, more importantly, costs and losses in human resources (insufficiently supported, valued, and utilized). The industrial model of education, which emphasizes uniformity, conformism, and the flattening of individual differences, must be replaced with an "agricultural" model (Robinson, 2015). This model emphasizes diversity, creativity, and innovation, allowing individuals to flourish.

A transformative approach to schooling is necessary for a society that aims to progress. These paradigm shifts will enable schools to provide relevant education aligned with new societal transformations. Actions such as updating and responsibly assuming new roles for teachers (as mentors, facilitators, and counselors), focusing on developing key and transversal competencies, and changing the teacher-student relationship paradigm and discipline practices are crucial steps in modernizing the educational offer (Darjan & Predescu, 2024).

Educational institutions have the potential to drive development and innovation in a fluid, constantly changing society. This society is, and will continue to be, confronted with new problems whose solutions lie not only in previous content and knowledge but in their creative use and combination. Critical and reflective problem-solving thinking, collaboration, empathy, and compassion are essential skills that need to be fostered to address these challenges effectively.

By embracing these changes, educational systems can better prepare students to navigate and contribute to an ever-evolving world. Schools must move away from outdated practices and towards an educational model that supports individual growth, creativity, and adaptability, ensuring that learners are equipped with the skills necessary for the future.

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Constructing Ability in the Classroom: A Descriptive Analysis of Pedagogical Practices in Primary Education

Elena UNGUREANU •

Abstract

In this article I explore how certain pedagogic practices construct students' ability as visible. The concept of ability is viewed as constructed, put into place by specific educational practices, rather than a fixed traitof the students. Conducted in two primary classrooms, this study employs observational methods complemented by audio-video recording. Through the analysis of the recordings and transcripts, I identify and thematize several pedagogical practices, used to organize learning activities. The analysis is framed by Basil Bernstein's concepts of visible pedagogy and framing, complemented by Rosenholtz and Simpson's (1984) view of ability as a socially constructed phenomenon. The findings are organized around two main themes that align with Bernstein's concepts of visible pedagogy: (1) Practices that make visible the means for ability development, and (2) Practices that make visible the rhythm of ability. The study aims to contribute to our understanding of how ability, a central concept in education, can be viewd as socially constructed by pedagogical practices, understood as an alternative to the developmentalist view that sees the same concept as fix, normally disperesed and liniearly developed.

Keywords: Ability, Bernstein, social constructionism, primary education, pedagogic practices

Introduction

Over the past 50 years, different studies have explored the relationship between instructional contexts, teaching practices, and effective learning. This research has evolved from observational studies, such as those by Flanders (1970), to encompass sociological perspectives from Bossert (1979) and Rosenholtz & Simpson (1984), as well as sociocultural approaches by researchers like Ames (1992), Meyer & Turner (2000), and Turner & Nolen (2015). These studies collectively emphasize the critical role that the characteristics of

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instructional contexts, like organization of activities, and pedagogical practices in general, play in shaping not only educational outcomes, but also the way students and teachers define ability.

In the context of this research, the concept of "ability" within classroom settings continues to be viewed as significantly shaping the pedagogical practices and student experiences, influencing academic outcomes and perpetuating inequities that affect diverse student populations (Parekh, 2024). The prevailing methods of assessing and recognizing ability in educational settings often reinforce traditional hierarchies and exacerbate disparities among students. Practices such as standardized testing, streaming, and ability grouping underscore a rigid interpretation of ability that disproportionately impacts students with ethnic backround, economically disadvantaged, or have limited access to resources. This approach to education raises critical questions about the effectiveness and fairness of pedagogical strategies that prioritize inherent abilities over equitable opportunities for learning and development.

This paper seeks to describe the pedagogic practices that teachers, in two primary classrooms use, from the perspective of visible pedagogy as theorized by Bernstein (1990) and Rosenholtz & Simpson's (1984) framwork. By employing Bernstein's framework, this study explores how the concept of ability is made visible and enacted in everyday classroom interactions. Further, the analysis is enriched by incorporating Rosenholtz & Simpson's view of ability as a socially constructed phenomenon, allowing for a deeper understanding of how the representations of ability can be viewd as embdded in the organization of learning activities. Through detailed observations and thematic analysis of audio-video recordings, this study aims to provide a description of how ability is contextualized within the pedagogical practices observed.

1. The notion of ability

In recent educational discourse, the prevailing notion of "ability" has been examined for its role in perpetuating inequities within the classroom. Parekh (2017) critiques this concept, highlighting how ingrained practices such as grading and testing ensure that some students will inevitably fail, thereby reinforcing a hierarchy in educational settings. This interpretation of ability disproportionately affects some students, often directing them towards special education programs or lower academic tracks. Parekh suggests that ability is not only a narrowly defined construct, but is also interwoven with racial and socioeconomic biases. The same author, further develops the concept of ableism in educational settings which is deeply interwoven with the foundational structures and principles of contemporary schooling, influencing notions of meritocracy and competition based on ability (Parekh, 2024). As described by Goodley (2014 apud Parekh), ableism

shapes our intrinsic fears about adequacy and worthiness, driving the cultural fears of not measuring up or fitting in within societal and educational communities.

In schools, this manifests as a preference for rewarding demonstrable abilities, assigning the most stimulating opportunities and elite programs to those who exhibit higher abilities, and even placing the most skilled educators with the most capable students. Such practices promote an ability-based hierarchy that is both nonreflexive and rigid. Moreover, structural ableism, as detailed by Dolmage (2017), refers to the embedding of ableist norms within the very systems and policies of educational institutions, creating disparities in access to resources and opportunities. This structural aspect of ableism not only perpetuates ability-based hierarchies but also intersects with other forms of discrimination, such as racism and classism, further complicating the dynamics within educational settings. Thus, while ableism primarily concerns the privileging of ability, it is crucial to consider how educational structures, through programs and placements, formalize and perpetuate these biased notions of ability.

On the same line of thinking, Ladwig & McPherson (2017) challenge traditional views of ability as a fixed and innate attribute of students. Their empirical investigation into how teachers perceive and operationalize ability highlights systemic issues where ability is often misconstrued and misapplied, reinforcing educational inequities. By understanding the 'anatomy' of ability, educators and policymakers can begin to address the limitations imposed by traditional ability grouping and tracking systems, fostering more inclusive and equitable educational environments.

Taking the discussion even further, Hart (1998) contributes to the argument, by exploring the impact of fixed abilities on educational reform. Hart argues that many reforms aimed at raising standards inadvertently solidify beliefs in inherent intellectual limits without challenging these underlying assumptions. This manifests in practices like standardized testing and streaming, which can demotivate students and restrict their learning potential. Hart advocates for a shift towards more inclusive educational frameworks, such as mastery learning which focus on enhancing student engagement and accommodating diverse learning styles.

These ideas are in line with Rosenholtz & Simpson (1984) notion of dimensionality and the constructed nature of ability (Rosenholtz & Wilson, 1980; Rosenholtz & Rosenholtz, 1981; Simpson, 1981). They argue that schools shape students' perceptions of their own and others' intellectual abilities more through a social construction than developmental stages. The authors propose that rather than naturally maturing over time, children's understanding of ability is actively constructed through specific classroom interactions and organizational structures. This perspective can help us understand how teacher practices and classroom norms contribute to the formation of ability conceptions, emphasizing the educational environment's role in shaping how abilities are perceived and valued.

At the same time, very relevant are the ideas of Bernstein (1990), from a sociological perspective. He proposes a distinction between visible and invisible pedagogies based on how message systems and modes of control are regulated in the educational settings. Visible pedagogy is characterized by clear sequencing rules, and specific criteria for evaluation, focusing on external performance and differentiation among students. In contrast, invisible pedagogy presents these criteria implicitly, focusing on students' internal cognitive and linguistic development, viewing differences as unique rather than a basis for comparison. Bernstein emphasizes that these pedagogical types are influenced by social and economic structures, contributing to educational inequalities. Visible pedagogies create rigid hierarchies through explicit sequencing and pacing rules, often causing students who do not conform early to fall behind. These rules set clear benchmarks for knowledge acquisition and progression, contributing to stratification among students based on their ability to meet these criteria.

Educational codes, like the two types of pedagogies are strutured by what he calls framing and classification procecess. In this study, of interest is the concept of framing, that refers to the degree of control the teacher and pupil possess over the selection, organization, pacing, and timing of knowledge in the pedagogical relationship. Strong framing entails reduced pedagogical options, while weak framing provides a range of options. Visible pedagogies use strong framing to make explicit what must be learned and the pace of learning, contributing to a standardized but stratified educational experience. Visible pedagogy involves explicit sequencing rules that construct a clear and public temporal project for students. This approach ensures that both teachers and students understand the educational objectives and the pace at which these should be achieved. However, it also leads to stratification, as not all students can keep up with the pace, necessitating remedial programs, retention, or adjustments in content complexity.

The literature review has identified several central issues pivotal to current educational debates. Among them is the equity of ability-based educational practices, which critically examines the fairness of methods that prioritize inherent abilities over providing equal learning opportunities. These methods, including standardized testing, streaming, and ability grouping, often exacerbate disparities among students, especially impacting those who are racialized, economically disadvantaged, or have limited access to resources. Another significant debate revolves around the cultural construction of ability as a socially and culturally constructed identity rather than a fixed trait. This perspective highlights the influence of societal norms and educational practices on the perception of intelligence. Additionally, the social construction of ability, informed by theories such as Rosenholtz and Simpson's "dimensionality" and Bernstein's visible pedagogy, suggests that perceived abilities are can be unerstood in the context of educational environments.

Despite extensive scholarship, a significant gap remains in our comprehensive understanding of how pedagogical practices relate to ability construction in classroom settings, particularly within the Romanian educational context. In response to these scholarly discussions and recent developments in the Romanian educational system—including curricular reform and initiatives for continuous teacher training—this study is dedicated to describing and analyzing the specific pedagogical practices that teachers employ in classroom settings to emphasize ability as visible. Observational research into the instructional context will provide valuable details about pedagogical practices, representations of education, and the teaching process. Utilizing observational data from two primary classrooms, including audio-video recordings, the research focuses on thematizing pedagogical practices. Each identified practice is analyzed through the theoretical lenses provided by Basil Bernstein's concept of visible pedagogy and Rosenholtz and Simpson's perspective on ability as a socially constructed phenomenon. Importantly, the scope of this study is confined to the pedagogical practices themselves rather than their effects on students' perceptions or experiences of ability.

The data collected offers a perspective of teaching practices, which are interpreted by the researcher and organized into themes related to how ability is operationalized and highlighted within the classroom context. This thematic organization is an analytical categorization by the researcher, aimed at understanding how ability is pedagogically constructed. The findings of this study aim to enrich our theoretical understanding of how ability is represented and enacted in educational practices, offering insights that could inform more inclusive and equitable teaching strategies. This research addresses the overarching question: What pedagogical practices are employed by teachers in primary classrooms to construct and communicate the notion of ability?

Metodology

2.1. Research Design

For the study presented here I used a descriptive exploratory design, that is being part of a broader ethnographic research conducted my doctoral dissertation, between 2018-2019 (Clarke& Braun, 2013; Bloome et al, 2004). Data were collected based on classroom observations and audio-video recordings in two instructional contexts. The data thus obtained were analyzed thematically, in light of a constructivist approach (Burr, 2015). The design allowed me to document and understand specific pedagogical practices within instructional contexts, subsequently enabling an exploration of the the practices used to construct ability as visible.

2.2.Collection of the data

Throughout the 2017/2018 school year, bi-monthly observations and audio-video recordings were conducted during Romanian language communication classes at the preparatory level. In total, approximately 25 hours of audio and video material were collected from the 36 hours of class observed. These data were gathered from two general schools selected through convenience sampling: one located in Bucharest and the other in a rural, yet urbanized area near Bucharest, in Ilfov County. In each school, the principal recommended a primary education teacher to participate in the study. I did not consider the demographic or professional characteristics of the teachers, as the purpose of the study was not to explore correlations between the practices used and contextual or professional variables, but to describe and conceptualize a set of educational practices to create a useful inventory for subsequent correlational research.

Written consent was obtained from the students' parents. The camera was placed at the back of the classroom whenever possible to avoid capturing the children's faces. The video data collected are intended solely for research purposes and will not be published. The audio recordings were made using a mobile phone. The identifying details of the schools and their locations will remain confidential, with the data being anonymized in the reporting of the research results.

2.2. Data analysis

In my study, I employed a descriptive qualitative approach, conceptually based on the model proposed by Rosenholtz & Simpson (1984), to analyze classroom pedagogical practices using both deductive and inductive methods. This methodology allowed me to examine how differentiated instruction is defined and applied in the classroom, considering various aspects of classroom activity organization. I obtained the results - categories of pedagogical practices - through thematic analysis, according to the methodology proposed by Saldana (2009), which included successive stages of coding and thematizing the data, represented by audio-video recordings and their transcripts.

After collecting and familiarizing myself with the audio and video data, through listening, viewing, summarizing, and transcribing selected lessons, I began the coding process using the Dedoose software. I adopted a deductive-inductive approach (Braun & Clarke, 2006), initially developing a set of codes based on the Rosenholtz & Simpson model, which allowed me to classify classroom activities according to four dimensions: the structure of tasks and activities, student autonomy, grouping patterns of students, and the importance given to formal assessment. Based on these initial categories, I expanded the coding in an inductive manner to capture more detailed dynamics observed in the classroom. In the final phase of

analysis, I organized the codes into themes, considering the conceptual framework of the study, but allowing my interpretations to extend beyond this framework, toowards Bernstain conceptualisations on visible pedagogies.

3. Results and discussions

I organized the identified practices into two general themes, each organized into subthemes: 1. Practices that make visible the pace of ability development: 1.1. Practices of Time Management; 1.2. Communication Practices, and 2. Practices that make visible the means of ability development: 2.1. Use of Texts; 2.2. Use of Classroom Space; 2.3. Communication and Interaction Practices.

Next, I will present each theme in relation to the theoretical concepts used: strong framing, visible pedagogy, and the perspective on the social construction of ability by Rosenholtz & Simpson (1984).

1. Practices that make visible the pace of ability development

I conceptualized this theme starting from the idea of learning rhythm (Bernstein, 1990), in the form of the sequencing rules of pedagogical practices within what he calls visible pedagogy. In this case, the sequencing of pedagogical practices is explicit, meaning that not only the teacher but also the student knows the educational temporal project they need to follow. The explicit sequencing rules "construct the child's temporal project" (p. 59), a project that is known and public. It is very clearly stipulated what the child needs to know and be able to do at certain ages, and the development rhythm of the expected competencies is very clear. Within visible pedagogy, what is called framing is strong. This refers to the degree of control the teacher and pupil possess over the selection, organization, pacing, and timing of the knowledge transmitted and received in the pedagogical relationship, which in this case is limited. At the same time, in Ronseholtz & Simpson (1984) terms, we are taking about specific classroom structures that can facilitate the formation of the institutionalised ability conception, which the authors describe as being normally dispersed, general, stable, and consensual. In their view, as students try to make sense of the school experience, their interpretations will be influenced by the structure of their daily classroom activities, indicators from the pedagogic context like using of time, uniformity of activities, visibility of the results.

1.1. Practices of Time Management

The subtheme of time management refers to those practices through which teachers in the study contexts managed the time allocated to tasks in the classroom, thereby contributing to the construction of the rhythm of students' skill development. These practices range from imposing a uniform work rhythm to adapting the pace to the individual needs of student, limiting thinking time and requiring all students to start and complete tasks simultaneously. This practices observed in the study contexts, not only standardize the learning process but also makes performance visible, creating a common rhythm that students are expected to follow. Another practice involves having a functional clock on the wall, which allows for a certain degree of student autonomy and the public measurement of time, thus maintaining the rhythm. In our case, time management practices can be understood from the perspective of visible pedagogy, where there is strong framing, which mwans that in general students do not have control on teh pacing of activities, but they are made aware of the pedagogic temporal project, which reinforces and help teachers maintain, again the pace.

1.2. Communication Practices

The subtheme of communication practices includes practices such as chain reading and public praise of students. Through such practices, teachers not only recognize and validate individual performance but also construct a social context in which learning rhythms are publicly evaluated and standardized. These interactions, by their visible and explicit nature, exemplify the application of visible pedagogies where the rhythm of skill development is clear and constantly under observation. From the perspective of rhythm, chain reading makes the reading pace of students visible, against the background of pressure from other students who hear the reading rhythm and await their turn. Public feedback—in the form of praise—provides explicit public information about student performance. In this regard, the conceptual model proposed by Rosenholtz & Simpson (1984) is relevant, showing that schools shape students' perceptions of their own and others' intellectual abilities through specific classroom interactions and organizational structures that make relevant information public.

2. Practices that make visible the means of ability development

This theme refers to how the pedagogical context allows abilities to be acquired and developed through strong framing, specific to visible pedagogy. Again, frame refers to the degree of control the teacher and pupil possess over the selection, organization, pacing, and

timing of the knowledge transmitted and received in the pedagogical relationship. In the case of the pedagogical contexts I studied, the teacher is the one that controls the selection and organization of the knowledge. In this theme, I included practices that make visible the means for ability development, including interaction patterns, individually assisting children with learning tasks, and proposing content and learning activities.

2.1.Use of the text

To make the development of ability and progress visible and valid, the pedagogical context provides certain resources and tools, controled by the teacher. These are generally the same for all students, but when they differ, they are used to visibly highlight the developmental differences among students. This characteristic, of the uniformity of resources, can be also understood in relation to strong framing and visible pedagogy, because strong framing entails lack of options. Bernstein explains that frame "refers us to the range of options available to teacher and taught. Strong framing entails reduced options" (p.20). The use of text in the classroom, broadly understood, entails that the teacher proposes the types of text-related activities, from exercises to activities, which are the same for all students. This also means that the discussion topics are often those found in textbooks or other materials provided by the teacher. Additionally, the teacher always explains the requirements. There are also categories of texts that are memorized individually or collectively, but they are always the same for all the students. When referring to identical tasks, I mean tasks involving text in various forms, whether written, verbal, drawn, on paper, or on the board.

In the studied contexts, the practice of using identical study materials and tasks for all students was used, except when they finish early. Practices varied: sometimes the teacher provided a different task prepared for students, while other times, the teacher asked students to rest with their head on the desk until everyone finished. In the same context, the student's body becomes a text interpreted by the teacher, who imposes attention/physical exercises to help students relax or, at times, as a form of punishment.

The practice of using the same resouces for all studentsm can also be understood from the perspective of Rosenholtz & Simpson (1984). In their terms we can talk of a unidimensional organization of classrooms, where tasks and evaluations are standardized and consistent, tends to create a more stratified perception of ability among students. In such environments, students are more likely to internalize their abilities in a manner consistent with institutionalized norms, seeing ability as stable and general.

2.2. Use of Classroom Space

Another practice included in this theme is the use of resources within the classroom space. The practices gathered in this category center around the concept of autonomy (Rosenholts & Simpson, 1984), or in Bernstein's terms, the presence of options in pedagogical contexts. For example, the teacher allows students to sit where they want, alongside the practice of moving students from their seats as a form of punishment during lessons. Additionally, I added the practice of displaying educational materials on the classroom walls, selected by the teacher, which students use during activities.

2.3. Communication and Interaction Practices

The communication and interaction practices form another sutheme included under the umbrella of practices that make visible the means for ability development. This subtheme is organized around the concept of strong framing specific to visible pedagogy. With strong framing, there is a clear and well-maintained boundary between what may and may not be transmitted, a boundary maintained by the teacher. The practices in this category refer to the direction of interactions by the teacher, the establishment of groups and pairs by the teacher, and the use of certain participation structures.

The use of certain participation structures by the teacher to communicate with students can be understood as pedagogical means through which students develop their abilities. The communication means made visible by the participation structures in the studied contexts highlight the teacher's monologue. This means that what is permited to be transmited generally has to come from the teacher. So, the classroom discourse is dominated by the teacher's interaction with the whole class or with a single student, interactions between students being absent, or not ratified - they are considered as disturbing. This dominance of teacher-led interactions can be interpreted in terms of the teacher's epistemic authority. Participation structures used include:

1. The teacher addresses all students, allowing free interventions without raising hands or waiting to be called.
2. The teacher addresses all students or a single student, allowing interventions only if they raise their hand and/or are called.
3. The teacher addresses a single student, with free interventions allowed for requesting help during individual practice activities.
4. The teacher addresses all students, with no interventions allowed during reading.
5. The teacher addresses students or a single student, allowing participation if they are called or if they raise their hand and are called.
6. Students address the teacher, individually or in unison, without being called or raising

hands during teaching.

7. Students address the teacher individually, raising their hand and/or waiting to be called during practice and verification.

3. Conclusions

This study underscores the importance of further research on concepts related to ability, such as intelligence, smartness, and competence, and their embeddedness in pedagogical contexts. It aims to broaden the definition of these traits beyond their narrow, intrinsic characteristics.

The study highlights the pedagogical practices employed by teachers in primary classrooms to construct and communicate the notion of ability. These practices were categorized into two main themes: those that make visible the pace of ability development and those that make visible the means of ability development. This categorization addresses the question of what specific pedagogical practices are used by teachers to shape and convey the concept of ability.

From a theoretical perspective, the practices reflect a visible pedagogy characterized by strong framing, where explicit guidelines and expectations are established by the teacher. This structured approach to teaching and learning shapes students' perceptions of their abilities, contributing to the construction and communication of ability within primary classrooms. Bernstein's framework provides insight into how these practices influence the construction of experience, identity, and relationships within the educational context. The explicit sequencing and pacing rules in visible pedagogy often lead to stratification among students, with some falling behind if they cannot keep up with the set pace. Strategies to address this include remedial programs, relaxation of sequencing rules, or adjustments in content complexity.

Visible pedagogy with strong framing often compensates for differences in student outcomes across various categories, especially between rural and urban areas. However, the standardization of tasks and assessments tends to create a stratified perception of ability among students, reinforcing social inequalities. Differences between students are often seen as problems to be remedied, focusing on homogenizing the classroom to avoid challenges to social equity.

The study emphasizes the importance of understanding how educational practices and the theoretical concepts of framing and visible pedagogy shape students' educational experiences and outcomes, potentially perpetuating social stratifications and inequalities. By describing these practices, we can better address Bernstein's question: How are forms of experience, identity, and relation evoked, maintained, and changed by the formal transmission of educational knowledge and sensitivities? The practices identified situate us

within a visible pedagogy with strong framing, impacting students' perceptions of their abilities and educational trajectories.

This study was limited to two specific pedagogical contexts in the early years of primary school. Expanding this perspective to include higher grades, even beyond primary education, would provide a more comprehensive understanding of how ability is socially constructed through various pedagogical practices across different educational levels. Additionally, the study could be enriched by further developing the themes through an analysis of curricular materials and interviews with teachers, a research endeavor currently in progress. Future studies might also explore the interactional analysis of the practices discussed here to better highlight the social processes that construct ability.

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The 3PT & Ii model - of the teacher-student relationship

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Abstract

The research is conceptual, introducing a synthetic picture of the teacher-student relationship with the environment in which they develop throughout their lives. Starting from the conception of cognitive and social constructivism (Piaget, 1952; Vîgotsky, 1978) and the alternative Reggio Emilia pedagogy (Hewitt, 2001; Moss, 2019), we use the TPACK model (Mishra & Koehler, 2006). On their foundation, we build a new integrative model in which the development of the professor, the student, and the environment support and influence each other. The model enables understanding of the role of the means and the prioritization of the unity of interests and ideals of the people who relate. The TPACK model serves as a relevant example to illustrate the benefits of technology and its relationship with pedagogy. The 3PT&Ii model situates technology as both a source of teaching tools and a mediator of relationships with other established discoveries in human and societal development. 3PT&Ii eliminates the error of an obsessive demand for schools to solely adapt to new technologies, arguing instead that humanity constantly refines and adapts means according to evolving needs and expectations. Technology and its tools have consistently played integral roles and meanings. The model emphasizes that humans produce everything, including innovative technologies, with decisions resting within individuals, communities, and society. The 3PT&Ii model is explanatory and illustrative, providing a framework for understanding individual, group, and societal development. Definitions of communication often oversimplify the relationship between Sender - Channel - Receiver and Feedback; digitization allows for dynamic imagery, and we aim to present the model accordingly. Explanations of the 3PT&Ii model are rooted in the T-time axis and directed towards the educational ideal represented by I.

Keywords: integrative model; professor-student relationship; constructivism; Reggio Emilia; educational ideal; interests.

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1.Introduction

In the past few decades, rapid advancements in technology have significantly transformed various sectors, including education (Koehler, Mishra, & Cain, 2017; Willermark, 2018; Ertmer et al., 2020). Missing, however, are firm emphases on the specifics of education (Burnett et al., 2019; Pink, 2022; Stan, 2022). "The engineering of learning" has advanced faster than the updating of explanations of the motivation of education, the importance of professor-student relationships in the formation of personality" (Postman, 1992). "The idea that the environment contains objects is wrong. It contains relationships" (Clear, 2019, p. 84), and these are always in demand to be studied in any context. The continuity of pedagogical principles requires to be supported by arguments specific to each period of civilization development. The emergence of new means of mediation and the facilitation of knowledge, as well as new meanings, meanings and content, are all new. Despite the growing use of educational technologies, there remains a significant gap in understanding their effectiveness in enhancing professor-student relationship. This is where the contribution of the 3PT&Ii model comes in. It provides a comprehensive picture of the processes of decantation and anchoring of knowledge both at the level of each generation and on the coordinate T, unlimited time.

The aim of the model is to emphasize the responsibility, unlimited in time, of each individual for the relationships that are established between professors - students - environment, regardless of their stage of development.

The article presents the premises of the proposed model, drawn from the TPACK model and the pedagogical ideas of the Reggio Emilia alternative. Through TPACK we recognize the potential of technology to provide teaching tools as well as content, through the Reggio Emilia alternative we emphasize the student- professor-media interdependence. The model foregrounds interdependencies on the T-coordinate of unlimited time - neither upstream nor downstream - as a perspective of intergenerational development.

The discussion part follows the chapter on the applicability of 3PT&Ii for professors, students and any person aware of his/her psycho-socio-cultural evolution in an environment equipped with new technologies.

The history of communication media—as participants in the growth of generations of children, young people, and adults—shows that the transition from one era or galaxy (Luhan, 1975; Tofler, 1973; Prenski, 2001) to another has been shortened, but they have not affected the direction of human evolution, only the pace. The tendency to prioritize tools in children's development has been favored by new digital technology "in which the functional and the quantitative are paramount" (Bell, 1976), as well as the Covid-19 pandemic. The surprise of the events, the need to quickly ensure the functioning of the school have allowed the careless use of the language of education - with implications for the behavior of decision-makers, professors, students, parents. Our concern is to offer coherent explanations in the face of

media centrism - capable of generating unfavorable perceptions and confusion between the roles of actors and technology. The complexity of the means and content of learning does not ignore the laws of human evolution, so much so that it is necessary to respect them in explaining the context and conditions of the process of person's development.

2.Premises of the new model

Among the explanatory models of how new "intellectual technologies" influence development, TPACK (Technological Pedagogical Content Knowledge) as conceptualized by Mishra and Koehler (2006), along with subsequent iterations (Koehler & Mishra, 2009; Mishra, Koehler, & Henriksen, 2011; Koehler et al., 2014), enjoys high praise. The most recent review by Koehler, Mishra, and Cain (2017) focuses primarily on applications in education. We make use of the TPACK image on interactions with digital technologies, the constructivist paradigm with the acceptance of the together growth (Şoitu, 2019) and the Reggio Emilia alternative. In our acceptation, the maximum importance of the TPACK model is its applicability to any period in history - past, present, for which it is built, but also future.

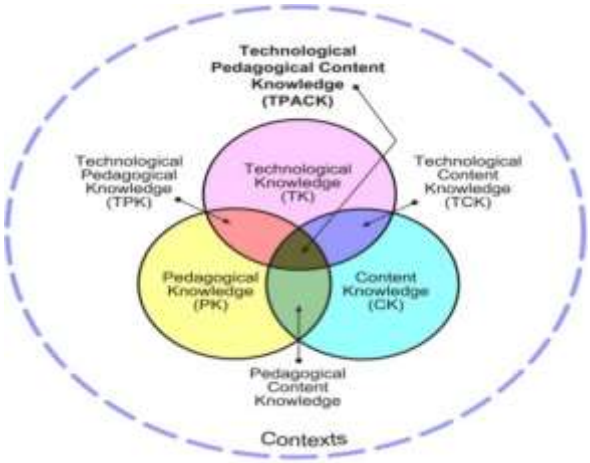

Figure 1. TPACK model, variant Mishra, P., & Koehler, M. J. (2006), p. 3.

An analysis of the image situated in the most diverse contexts highlights:

- TPK - Technological Pedagogical Knowledge - situated at the intersection of TK (Technological Knowledge) and PK (Pedagogical Knowledge) describe the pedagogical virtues of technological tools. In an explanation, which we consider much more appropriate, TPK would mean "pedagogical technological knowledge". In fact, it is the ability to produce and use pedagogical tools in favor of the achievement of the objectives by referring appropriately to students, professors and the training environment.

- PCK - Pedagogical Content Knowledge - situated at the intersection of PK (Pedagogical Knowledge) and CK (Content Knowledge) - expresses interactions between pedagogical practices and content for learning. By PCK we mean pedagogical content knowledge, in other words, knowledge of the virtues conferred on content by new technologies.

TCK (Technological Content Knowledge), situated at the intersection of TK (Technological Knowledge) and CK (Content Knowledge), describes the relationship between technologies and learning objectives. When used as means in the didactic process, technologies become carriers and mediators of messages (Luhan, 1975), imbuing significant meaning (Şoitu, 2001; Neacşu, 2020). The professor selects tools capable of faithfully conveying the message that "has the audacity to offer something that no one asks him" (Serres, 2012). At this juncture, technologies enable both the professor and the student to exceed expected boundaries.

Most reviews of the TPACK model focus on empirical studies and their implications for educational practice (Chai, Koh, & Tsai, 2019), the model's implementation in teacher education programs (Phillips & Harris, 2018; Janssen & Lazonder, 2019; Hsu & Yang, 2021; Mouza & Cavalier, 2020), its exclusive influence on instructional technologies and learning (Ertmer et al., 2020; Dong, Xu, & Zhang, 2022), and trends in model-based research (Willermark, 2018). We note that the TPACK model prioritizes technology, endowing it with pedagogical virtues. The discussion is lengthy, if we consider that every piece of wood fitted together was a horse-riding training, every carpet became a vehicle for supersonic flight. That potential does not belong to the objects themselves, but to the person who endows them with powers through imagination. Now we are witnessing the ennoblement of technology with the power of the professor, of real friends, of the socio-cultural universe populated by augmented reality of virtual reality sometimes designed for the metaverse. Projections will multiply and renew. The sine qua non condition is the existence of the creative human being who is responsible for himself, for all that is and is to come.

The second premise, the Reggio Emilia pedagogical alternative, holds importance due to its early emphasis on the interaction between space and the educational process (Ceppi & Zini, 1998; Vecchi, 1998; Hewitt, 2001; Moss, 2019), as well as through broader approaches offered by seminal works (Hall & Rudkin, 2011; Edwards, Gandini, & Forman, 2012). Such an approach makes it possible for schools to increase the school's interest so that students can discover the joy of success together, of growing together and continuously. The presentation of the roles assigned by Reggio Emilia to all the actors and the graphical representation are in the description of the proposed model.

3.Presentation of the 3PT&Ii Model

If PCK - Pedagogical Content Knowledge - and TCK - Technological Content Knowledge - are content of learning, then what should be known about the technology used? First, it will be important to understand and use it only as a means, never more. We will look at the picture made up of the three components, as having only a quantitative growth, the quality being given by the elements in the area of common intersection. For these reasons, the importance of the TPACK model is given by the size of the common area, but that will always be dependent on its users. The picture is that of Venn circles / Venn diagrams, in which the

common areas are of interest, either as a result of encounters or as a potential for increasing the common intersection area. This is because, in education, a single point of the tenge of meaningful encounters between professor and student can become an ever-expanding territory (Şoitu, 2019). A simple idea, astonishment, reaction of the professor or colleague turns into a field of research and affirmation for one or more. The circles themselves can have different dimensions, or they can be denser, richer or more rarefied. Their role is revealed when users emerge who are willing to use them for their own growth, the growth of others and the growth of the learning environment.

Two other pairs of two circles move vertically along the development of each individual and groups, making it possible to increase the level of CK, PK and TK over time. We observe that the various forms of knowledge become dependent on their intense, continuous, effective use by each person, each actor in the educational process: professor and student. The image offered by the TPACK model we have fixed on the axis of time, as one of the elements on which the student's development will be shaped. Before deciphering the higher meanings of other dimensions, the student will make use of the means, the tools at his disposal. Now he will learn that he is never alone; he grows together with his professors in an environment that also does not remain unchanged" (Rytivaara et al., 2019).

Thus, we constructed the 3P&T model by which we represent the simultaneous becoming of the S-student, P-professor, E-environment placed on the T - time vertical. S-student, P- professor, E-environment are supported by specific forces - resulting from their intersection/relationship, from their congruence/incongruence, at any moment of the evolution of the individual, group and/or society. This living spring/mechanism made up of S-P-E has a simultaneous, continuous, multidimensional and complex dynamic - often impossible to grasp in its ever-changing wholeness.

The P-E-P and S-E-S relationships are important because they lead back to the (re)established relationships between S-P-S, to what is to be improved by each. The improvements will be for both of them and for the self - in order to continue the (professor-student) relationship. Consistent with the idea of the professor's responsibility for the student's good development, in the review, first of all, we named the student - to whom the development projects through the school are subordinated. Essentially, we are talking about a simultaneous unfolding of P-S-E, S-P-E, P-E-S, where each occupies a central place, but with the aim of joint development. The student and the professor become either the main elements, or those concerned with developing together an improved environment, adapted to the interests of their generation, but also transgenerational.

Separate analysis of the P-S-E, P-E-S, S-P-E interdependence has integrated the perspective offered by the Reggio Emilia pedagogical alternative (Hewitt, 2001; Moss, 2019). In Reggio Emilia, both the professor and the student engage with the environment as a facilitative element for growth and mutual interaction. Thus, the environment becomes the

"third educator" (Strong-Wilson & Ellis, 2007), influencing each student and professor continuously across different stages. The environment, viewed as a partner and educational resource, supports ongoing learning and maintains a stable equilibrium for educators. Recent literature underscores the environment's pivotal role as the "third educator" in contemporary educational contexts (Strong-Wilson & Ellis, 2018; Malaguzzi, 2018), particularly emphasizing its significance in early education (Turner & Wilson, 2019; Gandini, 2019; Rinaldi & Moss, 2019; Nimmo & Park, 2021).

P1 - the student, who is his own professor - takes from everyone in his own way only what he understands, feels and can use;

P2 - the professor is the student-professor, but also himself, aware of the influence of the student and the environment on himself, but also vice versa, of himself on all. The professor's action is the only one charged with responsibility for the becoming of the student, the environment and himself (Nimmo & Park, 2021). It provides continuity between the past (the roots of growth), the present with its imperatives and the desirable future.

P3 - the environment, is the one that everyone is obliged to take into account because it encompasses time and space with the bio-psycho-socio-cultural of all the stages traveled. In the environment the professor and the students will discover favorable and unfavorable influences, the causes and the desired or unfavorable variants for the proper development of the instructional and educational process (Hall & Rudkin, 2020, Vecchi & Giudici, 2020).

If we look at this relationship in the announced sequence, then we notice that we start from the now axiomatic situation of mutual influences between P-S and S-P. It is a relationship not fully contested by anyone and never, because, in the end, it is the common goals and compatibility between the participants in the process that matter (Härkki et al., 2021).

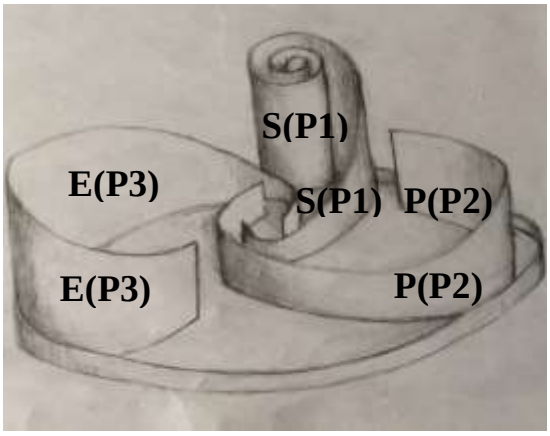

Figure.2. 3P&T Model. Student growth at the intersection of professor and environment.

The 3Ps are seated on an imaginary surface, but not necessarily on the same level, which is pushed from the bottom up through time. Each P and each S is loaded with different

background elements and interests, possibilities. In the context of each stage of development the student, the environment and the professor intersect simultaneously with the particularities of that particular moment of their own development. Each comes with a larger or smaller, broader or narrower base than the other expects, with the roots of person's development. At any moment of the meetings, compatible elements are selected, which will define the person of each one in his growth.

The meeting place of the 3P, located at the center of the T-platform, is equally everyone's and everyone's. Each relies on and counts on the specificity and potential of the other, but also has its own freedom of movement and motivation - including the environment through its tendency to conserve. Motivation, interests, some contrary, become forces, which give speed, dynamics to the movement of all the 3P on the vertical of time - T. The message is one of assuming the role for one's own growth projected permanently between a multitude of factors, if not determining, always influential. Everyone will take all into account in order to learn from everyone and everything (Kipling, Learn from all). The professor and the student are accountable for the results, first and foremost for themselves, then for those entrusted to them and for the state of the environment, which is reserved for other generations.

The relational competence between P and S energizes that which unites them - their interests, in the end, the educational ideal, making the most of the skills and K-knowledge acquired, supporting the V-values and particularities of each in favor of their mutual growth. The dynamism of growth is given by the continuous approach and distance between the participants in the process, always carried out in specific environmental conditions. Unity and diversity, the specificity of the participants and of the environment generate the same motivations for continuous growth, both together and on their own.

From this balance of interests, sometimes contrary, is born the common motivation, which guarantees the permanence of the process and growth based on the subjective and objective elements involved.

A complete representation of this permanent relational process becomes much more difficult because the intersection of Environment - Knowledge - Values applied to each of the 2P, but also to T becomes a new platform, a new spring, which makes possible the intersection with the space occupied by P-S-E and rests on what will always be the necessary means and resource, on TPACK. We get a much more complex picture, set in a "time tunnel", since each element of the professor-student relationship goes through the durations accompanied by a common set of supporting components, but also by different expectations. For these reasons, the surface on which the 3P are placed does not keep them at the same level, allowing each to leapfrog the others or fall behind. They can remain at the TPACK level - making an effort to accommodate, because "the ultimate realizations of learning are new states of the person" (Hirst, 1971, p. 12). What will encompass and accompany their upward

movement will be the environment, the knowledge (the contents of learning), the values oriented towards the height of the Ideal.

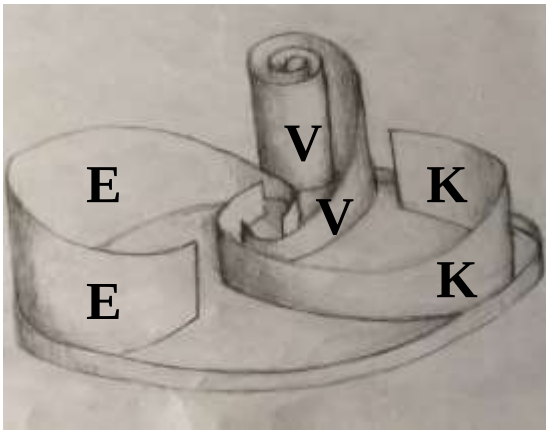

Figure 3. Environment-Knowledge-Values on the T-axis

We imagine the classic spiral, on which P and S climb up with - side, front and back - common and specific elements. They will be concerned that these do not remain unused in order to become themselves and to improve the environment necessary to cultivate the skills, behaviors and values of strong characters.

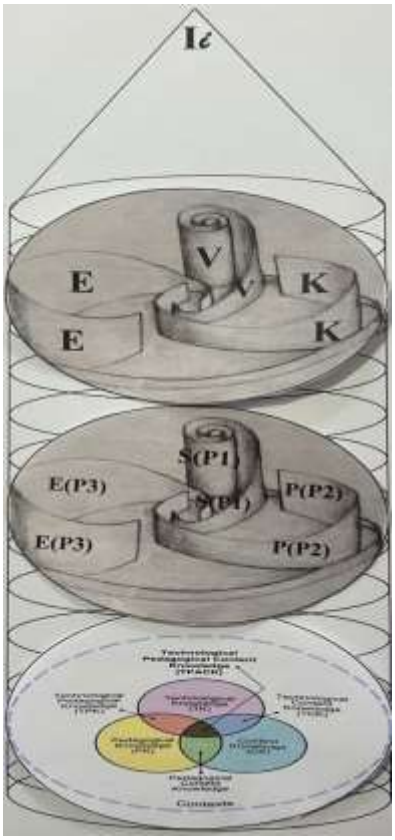

Figure 4. 3PT&Ii Model

The real picture is a different one, of a permanent anticipation of the elements in the process, because in it there are agglomerations and rarefication - of common and different elements. There are speeds, rarely equal, milestones marked unitarily, but with particular meanings, rare satisfactions - enough or too little - coordination accepted and postponed (Illeris, 2014). What will unite them, what they build together becomes the central axis on the basis of which other generations will continue their ascent.

The central axis - made up of the common intersections of the two ascending platforms, P-S-E and E-K-V joins with TPACK giving the imprint of the educational system's capacity. The harmonization of all the elements involved in the process and the pursuit of the Ideal transcend epochs and weigh the interests of individuals, groups, epochs. The E-environment itself, which is a constant element, entering into the composition of both platforms (with multiple intersections), will influence the axis - in dimension and quality. Of course, we will not ignore the importance of the means, the tools offered by TPACK, they are taken as from a device (warehouse) with an increasingly adequate equipment. On the other hand, we can imagine the ascension traces as a helical channel marked by crises, deviations and, quite rarely, uniform rhythms. It is like the trunk of a tree, in the section of which specialists can also decipher the climatic values of its growing years. This time, the development is not only based on minerals, water, light, temperature, it adds the professor's and student's own connection with the Ideal and higher interests.

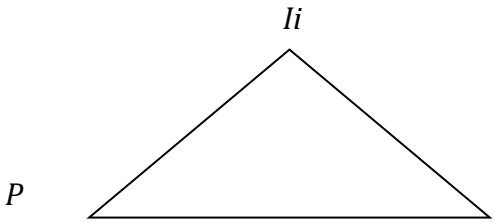

Figure 5 . Stone at the Head of the Angle created by P and S growing together

The Stone at the Head of the Angle will be the Common Ideal and the part of it taken by each as a model through interests. *I*- the Ideal and *i*- interest, *Ii* is established as the central element of attraction motivating the search for the good use of knowledge and environment - as present and past. Finally, there remain P and S accompanied by K - new knowledge and V - perennial values oriented towards Ii. *I* - the Ideal is the guarantee of transcendence, of continuity, *i* will ensure the moment, the stage. The advantages provided by the continuity of the team, learning continuously and together, reflect and develop the assumed goals (Pratt, 2014; Rytivaara, A. & al, 2019).

4.Applicability of the model in school practice.

a. The model provides a dynamic picture of all the constituent elements of the learning and development environment of the individual, communities and society. It is useful at all school

ages and throughout life. The simple observation of the three platforms integrated in a space of the flow of time creates an image of intersections both horizontally and vertically. It is an opening towards "infinite games" through which all actions have meaning, are guaranteed that nothing is lost. At the same time, it also reveals the meaning of the interest-supported actions of each stage of the development of the person, society and technology, makes it possible to eliminate the simplistic understanding of any dependencies.

b. It favors the understanding of the coexistence of older and new knowledge, emphasizing the role of each element and their hierarchy - given by the meaning, direction and motivation of development.

c. Explains the inseparable presence of the ideal and interests for any stage of evolution of human society and the individual. Encourages and motivates people throughout their lives, emphasizing that the journey, not the goal, which will remain the responsibility of all generations, is of paramount importance.

d. In the context of the impressive development of the means offered by Artificial Intelligence, the 3PT&Ii model shows that technology can be excluded from the relationship with the social environment. But society is governed by contextual interests and values of the educational ideal.

e. The multiple interdependencies, placed on the coordinate of time, emphasize how elements in deep layers become current in future stages. The past influences the present and any future, and the thehnoogies develop to become useful to all the 3Ps - professors inseparable in their evolution.

The 3PT&Ii model has strong symbolic value. P1 - the student learns from an early age - through family and early education - that he/she is responsible for his/her development in terms of pace, direction, quality, finality. He learns from the picture that his professors are not only his professors. There is another permanent one, the environment, which seemed inert, passive. P2, the professor himself also changes his self-perception. He is no longer alone, there are two others with the same name, but with separate roles, which do not cancel or diminish his own. Neither P2 nor P1 addresses a person without an awareness of their value and roles. The environment itself, which has been understood as a repository of diverse products (knowledge, means, values, interests) is perceived as the equal of the two. It is equal in terms of its influence, its capacity for limited acceptance of interventions, but the responsibility for preserving, molding belongs to the professor (P2) and the student (P1). The full significance of the model is realized when symbolic power is attributed to each of the three P's - even if it will not be equal. The hierarchies will be episodic, the process increases in dynamism, the rules become firmer and assumed by P1 and P2 for the favorable and permanent evolution of all.

The 3PT&Ii model, by emphasizing the role of the interests of the individual and those of the group, then the motivation to approach the educational ideal, underlines the

importance of effort. The desire to perform, to move from the mere use of technological tools to the ability to be a partner in the relationship with the professor and the environment, requires maximum and permanent involvement. The confirmation acquired in the 3P stage will generate the understanding of the need to continue the approach to values through new knowledge and meanings given to the environment and to oneself in the ascent towards the I - ideal, the model of the perfect personality.

The 3PT&Ii model based on the pedagogical content of technology demonstrates that digitization does not offer any break steps for the professor, the student or the specialists. TPACK is a stage that requires more knowledge and much more rigorous criteria for extracting pedagogical content from everything.

5.Discussion

The proposed integrative model is like a section in the long history of the growth of generations, which have made their way through dense layers, chasing that "I" = the Ideal. The human ideal is the benchmark towards which generations will continue to strive. We also felt it necessary to say that not everyone is committed to climbing the steps, but that some will stand in front of them. By the time that one has decided, another will have turned his back, and the others will rarely be on the same step of time - historically and generationally.

The means of communication will constantly and sometimes unpredictably evolve, but the relationships between professor, student and environment have the same meaning and significance. The motivation for the effort to preserve the relationship is its continuity - subordinated to the educational ideal common to all generations of professors, students and graduates. Discontinuity is given by the interests of the stage of historical development and/or of the individual, but the T-coordinate of duration preserves the meaning oriented towards higher, perennial values. This is how the 3PT&Ii relationship model has taken shape, through which it is possible to analyze longitudinally and transversally the relationship between the educational ideal and the actors in the process, their relationship with the environment and technologies.

To a possible question whether the image of the model could look different, we will answer: maybe. But the shape given is to suggest that we are in a 'time tunnel', through which the three plates ascend. Each element on them can go forward or fall behind. The important thing is what reaches the last plateau, the top one. There we have C (viable knowledge, content that has endured), V (enduring values), and M (environment) still favorable or better than previous stages. Finally, it is important if people have not forgotten their (human) Ideal, even if besides that big "I" (The Ideal) there is also the small "i", interests. All these are concentrated in the "Stone at the Head of the Angle", in which they are all found, both the

cornerstone and the stone to be reached, coveted, desired. It is so valuable that it is hard to achieve alone, by oneself, in one generation or only in a few. The unanimous conclusion is that, in education, it is more important to have traveled a meaningful path than to have reached the target!

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The graphic representation of the model is realized by prof. D. D. Ionescu, member of the Romanian Union of Fine Artists, professor at the Students' Club in Iaşi.

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Music and children with autism spectrum disorder: A case study

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Abstract

Autism spectrum disorder is a complex neurological disorder characterized by impairments in communication and social interaction, limited patterns of behavior, interests and activities. Given the different forms of autism spectrum disorder and the fact that no two people are the same, an individual approach to each individual is required. Musical ability is one of the special talents that a child with an autism spectrum disorder can have. Such a child should be allowed to practice music. As a therapy, music therapy has proven to be effective in working with children with autism spectrum disorder, i.e. it has a positive effect on communication, vocalization, joint attention, eye contact, concentration, cooperation, cognitive functions, social skills, etc. This paper presents the observations obtained through the study case. The aim of the research was to show the behavior of students with autism spectrum disorder in the Music culture class and the impact of music therapy on their behavior. For the purposes of the research, two interviews were conducted, i.e. with a teaching assistant who worked with a student with an autism spectrum disorder and with the student's parents. The case study showed that the student has a developed musical ability, that he participates actively, with reserved attention, only in the Music culture classes, and that music therapy helped him in his expression and speech. It is essential to give these kids the tools they need to further develop their musical abilities. It will contribute to children with autism spectrum disorder feeling safe, happy, and accepted in their environment.

Keywords: children with autism spectrum disorder, teaching of Music culture, music therapy, musical ability, case study

1. Introduction

Autism spectrum disorder is a complex neurological disorder that affects the functioning of the brain and prevents a person from understanding what s/he sees, hears, or feels. About

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50% of people with autism spectrum disorder cannot develop functional speech, and for those who can, speech may have limited communicative functions and may be unusual in terms of quality. In addition to speech difficulties, there are also difficulties in social interactions and behavior. On the one hand, there are individuals who are extremely reticent, and on the other hand, there are those who are excessively active. Also, people may develop unusual preferences for objects (AZOO, 2008). Children with an autism spectrum disorder do not have the ability to direct attention to more areas than a healthy person (Bujas Petković, 2000). Some common characteristics of people with autism spectrum disorder are communication, social interaction and learning, and unusual behavior (AZOO, 2008). Autism spectrum disorder is specific disorder because the child seemingly develops properly until the age of 18 to 20 months, i.e., speaks the first words, plays, and communicates with the environment. Around the second birthday, changes occur in the child, i.e., s/he stops talking, is no longer interested in the environment and people, has no eye contact, and does not respond to her/his name. Bizarre behaviors also begin: for example, the child twirls his fingers in front of his eyes, spins around herself/himself, runs from one end of the room to the other, continuously spins wheels on toys, holds oblong objects such as shoelaces, ropes, or shakes them continuously (Kardum, 2021). The disorder is three to four times more common in boys than in girls (Bujas Petković, 2000).

There are different forms of autism spectrum disorder, and they are: Kanner syndrome, or autistic disorder; Asperger syndrome, or autistic personality disorder; Atypical autism, or unspecified pervasive developmental disorder; Rett syndrome; Heller syndrome, or disintegrative disorder. Each form of autism spectrum disorder is characterized by specific symptoms. Kanner's syndrome (autistic disorder, infantile autism, autistic syndrome, autism) is diagnosed when six symptoms from the following areas are present: a) qualitative impairment of social interactions; b) qualitative impairment of communication; and c) limited, repetitive, and stereotyped patterns of behavior, interests, and activities (Smolić-Ročak, 2013). Children and young people with Asperger's syndrome (autistic personality disorder) have less pronounced deficits in social interaction and have pronounced average and above-average intelligence. Psychotic episodes are possible in adolescence and later (Bujas-Petković, 2000). Asperger's syndrome most often occurs and is diagnosed between the ages of five and nine (Smolić-Ročak, 2013). Atypical autism (unspecified pervasive developmental disorder) is a disorder when there is a pervasive developmental disorder due to its appearance after the age of three or when the disorder does not meet the criteria for an autistic disorder in all three areas. Children with this disorder usually have reduced intelligence with autistic characteristics (Remschmidt, 2009). Rett syndrome is characterized by the fact that it almost always leads to regression, i.e., to dementia (Remschmidt, 2009). Heller's syndrome (disintegrative disorder, childhood dementia, psychosis, and symbiotic psychosis) is a progressive impairment of language understanding

and expression and intellectual, social, and communication skills in children (Remschmidt, 2009). This disorder appears in a child between two and ten years of age after completely normal development, and at the beginning of the disease there is a sudden and permanent loss of already acquired skills in all developmental areas over several months (Bujas-Petković, 2000).

Autism spectrum disorder has been increasingly present since the beginning of the 21st century. Table 1 shows the prevalence of autism spectrum disorder in some European countries.

Table 1. Prevalence of autism spectrum disorder (Kardum, 2021)

Country	per10,000 children	1 child on
Poland	3	3333
Germany	38	263
Netherlands	48	208
Norway	51	196
Finland	54	185
Estonia	60	167
Belgium	60	167
Denmark	69	145
Croatia	100	100
Switzerland	145	69
Ireland	153	65

In the continuation of the paper, the influence of music on children with difficulties on the autism spectrum disorder will be presented, and in the research part of the paper, the observations obtained through a case study, i.e., through two structured interviews, will be presented. The first interview was conducted with the teaching assistant of a student with an autism spectrum disorder, and the second was conducted with her/his parents.

2. Theoretical background

Music, music therapy and children with autism spectrum disorder

Musical ability is one of the special talents of children with autism spectrum disorder. Some people with autism spectrum disorder like to listen to music, feel the structure of music, and recognize melodies. Some of them can remember and sing long melodic phrases; sometimes they have the ability to remember and play melodies they have only heard once; and they can have perfect relative or absolute pitch (Baron-Cohen & Bolton, 2000). Students with some of the disorder on the autism spectrum disorder can be included in regular elementary

schools. Therefore, in a regular class environment, they also attend Music culture classes, in which some children with autism spectrum disorder are happy to participate. Thus, in the research carried out by Zrilić et al. (2022), it was shown through a case study that the third-grade student with a diagnosis of autism spectrum disorder enjoys the teaching of Musical culture and that he is happy to participate in it. At the beginning of learning to sing a new song, he showed difficulties, but after listening to it several times, he remembered the melody. He sang the song he adopted softly and the words as he heard them, i.e., he often sang them wrong. He has a developed sense of rhythm and likes to dance (Zrilić et al., 2022). Kardum (2008) emphasizes that for students with autism spectrum disorder, music serves as a medium rather than a goal in itself. She believes that for the benefit of the child, we must give up the methodical thinking that is the starting point when it comes to regular music lessons in elementary general education schools. Program music (for example, the composition of Vltava (B. Smetana) can be a stimulus for students with autism spectrum disorder because some of the autistic children have a very pronounced sensibility and associative potential, and some of them also express manifestations of synesthesia as they "see" music in colors or experience it as a taste. Therefore, they are very happy to participate in conversations about music, while for analysis (melody, rhythm, etc.), they generally do not have sufficient perceptive abilities and refuse it (Kardum, 2008). Also, the author believes that it is useful to use popular music because we do not evaluate the artistic value of pop music but rather its role in creating an atmosphere of relaxation and trust, getting rid of stereotypes, creating meaningful movement, awareness of the sense of rhythm, and adequate motorically response (Kardum, 2008). Musical games are also useful for acquiring concepts related to self-care, understanding one's own body and creating an image of oneself, understanding one's own behavior, and for the purpose of acquiring elementary concepts about nature, people, and relationships. Children are taught to interact with other children, to participate together, and to take turns participating (Kardum, 2008). Simpson (2013) points out that the activity of playing, i.e., the exchange of instruments during group class music, develops the skill of exchanging and sharing instruments because, while some students play, for example, a solo drum, others wait and thus learn how to participate jointly and alternately.

Unlike music lessons, which may or may not have a therapeutic purpose, music therapy implies the therapeutic use of music and its elements (melody, rhythm, harmony, etc.). Music therapy was initially used for people with traumatic brain injuries, neurological conditions, and fatigue. It was later concluded that the therapy has a good effect on stress disorder and psychological trauma and on children and youth with difficulties in emotion regulation, behavior, concentration, and verbal expression (Sausser & Waller, 2006). It has been shown that music therapy has a positive effect in children with autism spectrum disorder on their social communication, vocalization, attention, eye contact, concentration, cooperation,

interactive behavior (Bujanović & Martinec, 2019), participation in games and playing together, speech (Yılmaz et al., 2014), intelligence (Goldstein, 1964), and expression of feelings (Zorba, Akçamete & Özcan, 2020), language skills, i.e. verbal and non-verbal communication (Hanser 1999 according to Burić Sarapa & Katušić, 2012) and reduces undesirable forms of behavior (Pasiali, 2004), negative emotions and obsessive behaviors (Jagudina & Johansson, 2011 according to Burić Sarapa & Katušić, 2012).

Goldstein (1964) conducted one of the first studies on the effects of music therapy on the cognitive functions of a child with autism spectrum disorder. He examined the impact of music therapy on attention retention and intelligence. After three months of music therapy, a significant improvement in intelligence was recorded. He believes that the increased interest in dancing, movement, and singing is connected with the inner experience of the outside world of a child with autism spectrum disorder (Goldstein, 1964). Vocal improvisation, which is a combination of vowels and consonants, can help improve prosodic forms of speech and serves to stimulate or shape vocal expression. Children who communicate through non-verbal communication through music therapy express feelings and thoughts (Hanser, 1999 according to Burić Sarapa & Katušić, 2012). Edgerton (1994) conducted research on the effects of musical improvisation on communication skills. Children with autism spectrum disorder between the ages of six and nine participated in the research. Children came for treatment once a week for ten weeks. Research has shown that musical improvisation can have a positive effect on the development of communication skills, and changes in the social behavior of children with autism spectrum disorder occur during the music therapy process. Researchers believe that the continuous adaptation of the therapist to each individual is an important element of music therapy. Wimpory et al. ((1995) conducted a study showing the effect of music therapy on the social skills of a child with autism spectrum disorder. Namely, they monitored the interaction between mother and child, i.e., different games were used between mother and child, including singing. The result of the therapy was manifested in the improvement of the child's eye contact and interaction with the mother (teasing) during symbolic play. The social skills that were developed through music therapy remained twenty months after the treatment. Research conducted by Pasiali (2004) studied the effect of individualized therapy songs on the development of social skills and the reduction of undesirable behaviors in children with autism spectrum disorder. The researcher created the lyrics of the song following the current guidelines for writing the lyrics of social stories developed by special education teachers to modify the barriers in functioning of children with autism spectrum disorder. Then the text of the song was set to music with the melody of the child's favorite song. The research results showed that individualized therapeutic songs can reduce undesirable forms of behavior even after three weeks of music therapy. Research conducted by Jagudina and Johansson (2011 according to Burić Sarapa & Katušić, 2012) showed that, under the influence of music, negative emotions

and obsessive behaviors are reduced and the creation of social relationships is encouraged in children with autism spectrum disorder. Sila Zorba et al. (2020) conducted a study to examine the effect of music therapy on two specific skills of an eight-year-old child with autism spectrum disorder: 1) exchange-sharing of feelings; 2) expressing feelings. Music therapy had the effect of improving both skills during therapy and monitoring the classroom teaching in which the child was involved. Mamić et al. (2010) conducted research in which Tomatis therapy was applied. The music of W. A. Mozart was used, which had the effect of raising the threshold of tolerance to sounds, better attention, greater social interaction, and greater willingness to engage in activities in students with autism spectrum disorder.

We can conclude that numerous studies show that music has a deep meaning and influence on some children with autism spectrum disorder. Therefore, in the continuation of the paper, research, more precisely a case study, is presented that aims to contribute to the mentioned topic, i.e., show how music and music therapy can help children with autism spectrum disorder overcome difficulties.

3. Methodology

Case study description

This paper will present the observations obtained through the research through a case study. For the purposes of the research, two structured interviews were conducted with predetermined content and a list of questions asking for specific information. The first interview was conducted in 2021 with a teaching assistant who worked with a student with autism spectrum disorder in an elementary school for two school years. In 2023, a second interview was conducted with the student's parents because the student underwent music therapy treatments in Croatia and Belgium in the period from 2014 to 2023, and the treatments were also performed at home. During the interview, the teaching assistant and the parents answered questions regarding the following topics: a) development and symptoms; b) a student in a school environment; c) music and music therapy. The aim of the research was to show the behavior of students with autism spectrum disorder in the Music culture class and the impact of music therapy on their behavior.

Research participant

The participant in this research is a student with an autism spectrum disorder who has a pervasive developmental disorder and, in addition, a hyperactivity disorder. During kindergarten, the teachers pointed out to the boy's parents the changes in his behavior compared to before. The boy's parents also noticed the same, i.e., that he stopped playing

with the toys he had loved until then. As an example, the parents state that until then he liked to play with toy cars, but that they no longer interested him, and he became interested in unusual objects such as candles. The educators also noticed his stereotypical play and the absence of social interaction, i.e., the absence of appropriate socializing with peers and an unusual way of communicating. The boy was then four years and six months old. Because of the above, the parents took the boy for detailed specialist treatment, which confirmed a developmental disorder on the autism spectrum.

Due to the diagnosis, the student's enrollment in the first grade of elementary school was postponed for one school year, i.e., he started the first grade at the age of eight. Upon starting school, the boy was assigned a teaching assistant. From the first grade, he attends classes partly in a special department and partly in the regular one, i.e., in the special department he takes the subjects Croatian language, Mathematics, nature, and Society, and in the regular class he takes Music culture, Art culture, Physical and health culture, and Religious studies, while a foreign language enters. In the special department, there are about 10 students with different diagnoses, from mild to severe, and in the regular class, there are 21 students.

4. Results

First interview: interview with the teaching assistant

The interview with the teaching assistant was conducted in 2021. The teaching assistant worked with the boy during two school years, i.e., she was his teaching assistant in the second and third grades (school years 2017/18 and 2018/19). At that time, the student was between 9 and 10 years old.

a) Development and symptoms

According to the teaching assistant, symptoms that indicate a disorder on the autism spectrum are: lack of social eye contact, attention deficit disorder, easy loss of attention, sensitivity to stimuli, difficulties in longer communication and understanding, misunderstanding of social rules, etc. The student has developed speech and language, has social and emotional skills, and achieves short communication. In addition to autism spectrum disorder, he is also hyperactive, has a need for constant movement and going out to the school yard without prior notice, and requires constant supervision due to the possibility of running away from the classroom and the school building. Also, the boy easily and strongly connects with things and people, so if any change happens by chance, he starts to cry uncontrollably. When his condition worsens or when he gets upset, he starts screaming, crying, punching his head, and throwing himself on the floor. What distinguishes him from most children with autism spectrum disorder is that he is never aggressive towards others but only self-harms. The specific actions of the boy are that he

always has a toy in one hand, and in the other hand, he holds a straw that he keeps spinning. The student is very picky when it comes to food; he only eats certain dishes, he hardly eats fruits and vegetables, and he eats the same food and drinks the same juice every day at school. The aforementioned characteristic of all people with autism spectrum disorder is that they do not like change.

b) A student in a school environment

The assistant supports the student from the beginning to the end of the school day, especially in tasks that require communication, sensory, and motor activity. In addition, she helps him with his hygiene needs when taking food and drinks in the classroom and during extracurricular activities. As for the respective teachers, each teacher has an individual approach to the student. Some subject teachers who are trained try to choose the best methods of work and have understanding and empathy for the boy. Subject teachers who do not understand his difficulties are in the minority. The professional service (pedagogue, psychologist) is very understanding towards the student. Non-teaching staff have unrealistic expectations and do not understand his behaviors or the general needs of children with autism spectrum disorder. All subject teachers have criteria for evaluation according to a special program. Nevertheless, the assistant concludes that it is difficult for the subject teachers to be objective, so sometimes they only reward the effort and not the knowledge of the students. The student answers orally and in writing, depending on the subject. During the written exam, the assistant helps him understand the questions and continuously directs his attention. She believes that the student is extremely smart and knows a lot, but his short attention span creates a problem.

Given that the student has developed speech, he occasionally communicates with other people in a way that is specific to him. For example, he approaches the other students and subject teachers, tells them what he has in mind, and immediately runs away without waiting for the reaction. Also, the student knows the names of all students from both classes, addresses them by their first name, and calls them to come and play "hunting" with him. From the above, it can be concluded that the student has developed social skills. As for emotional skills, the student constantly follows the facial expressions of the teaching assistant and recognizes whether she is happy, smiling, sad, or ignoring him due to undesirable behavior. When the assistant is dissatisfied about his undesirable behavior, he asks her the question, "How are you?" and apologizes for his behavior. Also, he often "gets it in her face" and smiles to make her smile too. Likewise, the student is very sensitive and reacts to the emotional states of other children. For example, if he sees one of his friends crying, he immediately starts crying too. On the other hand, what he doesn't like is other children screaming. When they do, he covers his ears with his hands.

c) Music and music therapy

The teaching assistant states that the student's favorite subject is Music culture. During these lessons, he manages to keep his attention; he is focused on the teacher and on the musical activities they are currently doing. His favorite activity is singing, and the student knows a lot of songs by different artists by heart and often performs them. The written exam in the Music culture class is the same as for regular class students, only to a reduced extent. For the written exam, he must learn to recognize several compositions by ear, i.e., after listening to the composition, he must write the name of the composer and the name of the composition, and recognize and name the instruments. He always solves such tasks with the maximum number of points and with satisfaction. During the Musical culture classes, he sits quietly, listens and enjoys all the musical content.

The teaching assistant knows from the conversation with the parents that he has been going to Tomatis therapy in Croatia and Belgium for a long time (there will be more about this therapy in the rest of the paper). The teachers, parents, and teaching assistant have noticed a great improvement after the therapy because the boy is much calmer, has significantly greater attention and concentration, is in a better mood, and, most importantly, self-harm has decreased.

Second interview: interview with the parents of the student

In the 2022–23 school year, immediately after the end of the school year, an interview with the parents was conducted, i.e., when the student finished the seventh grade and was 14 years old.

a) Development and symptoms

The boy's parents state that the symptoms of autism spectrum disorder are as follows: repetitive actions, desire for everything to happen in a fixed order, difficulty accepting changes, inability to understand the conveyed meaning, etc. Specific and undesirable actions change in phases over the years, and there were many of them. Some of them were throwing different things out the window, tearing leaves from flowers and plants, tearing pages from school notebooks and books, and opening products in shops, for example, puddings and chocolate bars. Because of some of the aforementioned actions, the mother used to have problems, for example, in the store, and she had to explain that he was a child with an autism spectrum disorder and that she would pay for everything destroyed. Today, when the boy is in puberty, he often speeks ugly and inappropriate words (swear words). Similar to this, he experiences times throughout the day when, as a result of his inner world, he starts shouting loudly and talking about things that did not actually happen. Then his mother talks to him, distracting his attention and thoughts.

b) A student in a school environment

The mother believes that not everyone at school has enough understanding of the specific needs of children with autism spectrum disorder. She states that the behavior of such children is very specific and that they often have undesirable behaviors that are part of their diagnosis, but that such children are often stigmatized as disobedient and naughty. She also states that there are teachers who really try to gain the trust of the boy, so she points out the boy's current teacher. Likewise, she believes that our educational system is not sufficiently developed and adapted to children with disabilities. In terms of teaching and evaluation, the student's mother believes that the teachers adapt as much as possible to each individual student's difficulties. An individual program is made for each student, according to her/his possibilities and abilities. Knowledge is mostly tested in writing, except when it comes to reciting songs. If the student has not mastered the teaching content, the teacher will not start with new content but will try to get the student to learn everything.

c) Music and music therapy

The mother states that the boy loves music very much and that he could listen to it all day at home, and that he wants that the TV or YouTube channel where he listens to music is always on. In addition, the boy recognizes the songs already after the first few bars and can often interpret the songs correctly. The mother often uses listening to music as a reward for a task well done.

In addition to the music he listens to in his free time, the boy goes to Tomatis therapy treatments.[33] The mother states that when the boy was younger, he listened to her voice, the way he heard it while he was in her womb. For the purposes of therapy, the mother recorded herself telling a certain story that the boy was listening to. According to the instructions she was given, the mother would change the frequencies on the device and the boy would hear the sound of her voice as he did when he was in her womb before birth. This method within the framework of Tomatis therapy is used in children of preschool and early school age. For older children, Tomatis therapy is based on listening to artistic music at different frequencies that are determined individually for each child. It is based on brain mapping, i.e., imaging of the brain, and therapy is determined according to the results of

[33] French otolaryngologist Alfred Tomatis (1920–2001) is the founder of the Tomatis method. The Tomatis method is a discipline that studies the relationship between the ear and the voice and between the ear and spontaneous mental activity and helps people who have various hearing difficulties, i.e., attention and learning dissabilities, barriers in functioning in the area of speech and language. It also serves to improve emotional control, coordination, and motor skills in people with autism spectrum disorder (Šarić, 2020). The Tomatis method is also known as auditory training, auditory stimulation, and listening therapy. Alfred Tomatis observed how different frequencies and sound rhythms can have an impact on a person's state. He also observed that W. A. Mozart's music is extremely useful for reducing difficulties due to its melodies, rhythms, symmetry, purity, simplicity, and high frequency tones (Mamić, Fulgosi-Masnjak & Pintarić Mlinar, 2010).

that imaging. The mother states that Tomatis therapy has been used since the boy was six years old. The therapy is carried out in sessions lasting 90 minutes, with breaks of 60 minutes, and thus repeated three times a day for a week. After that, there is a break of five weeks, and the procedure is repeated. Several children listen to the therapy in the same room. Children put together puzzles while listening to music and flip through picture books, and therapists warn that there must be complete silence in the room. In the beginning, they went to Zagreb and Belgium for therapy, which required financial costs, and the journey was tiring for the boy. This is why the parents decided to buy a Tomatis therapy device and use it at home. The mother states that she underwent training that lasted a week and trained herself to play music at home. She emphasizes that she is trained to conduct therapy exclusively for her child. They received five programs, and every other week, the boy listens to a different program for a year. After a year, the parents go with the boy to Belgium, where a new brain scan is done again, according to which he receives new listening programs. A program is determined separately for each boy's ear. The choice of compositions that the parents will listen to is given in the program, and the composers whose compositions the boy often listens to are W. A. Mozart and J. Strauss.

Another method that the boy's mother talked about is nighttime Tomatis. Before going to bed, the boy lies down, listens to music, and it soothes him and puts him to sleep. After that, the boy had a better and more beautiful dream. What the mother points out is the fact that the parents were warned about in Belgium, which is that Tomatis therapy should not be combined with drugs because they cancel out the effects of music therapy.

As a conclusion of the conversation, the boy's mother said the following: *With the help of Tomatis therapy, my son managed to overcome his difficulties in expressing himself and became a fully verbal boy who puts together complex sentences without difficulty and has quite good diction, which is very rare in children with autism spectrum disorder. As they told us in Belgium, hearing and speech are closely related and influence each other, so listening to music affected his speech and expression.*

6. Discussion and conclusions

The purpose of this study was to examine how students with autism spectrum disorder behaved in the Music culture class and how music therapy affected their behavior. The case study showed that a student with autism spectrum disorder has a developed musical ability and that he actively participates, with sustained attention, only in music lessons at school, that he loves music very much, memorizes songs, and performs them. He also recognizes compositions and artists and remembers the names of compositions and composers. The stated results are in accordance with the research of Zrilić et al. (2022), in which a boy with

autism spectrum disorder gladly participated in music lessons, had a developed sense of rhythm, and loved to dance to music. As for music as therapy, the student has been going to Tomatis therapy for several years now, and progress can be seen in his behavior. He is calmer, has much greater attention and concentration, is in a better mood, and his self-injury has decreased. Also, the boy managed to overcome difficulties in expression and speech and became a fully verbal boy who enjoys every form of music. The above results coincide with research that has shown that music therapy has a positive effect on communication, vocalization, joint attention, and concentration (Bujanović and Martinec, 2019; Hanser, 1999 according to Burić Sarapa and Katušić, 2012) and reduces undesirable forms of behavior (Jagudina and Johansson, 2011). according to Burić Sarapa and Katušić, 2012; Pasiali, 2004). This research included one student with an autism spectrum disorder, and we believe that a case study that would follow more participants would give a more complete insight into the investigated issue. In this research, we conducted interviews with the boy's parents and the boy's teaching assistant. To gain a more comprehensive understanding, we recommend interviewing the music teacher who instructs a student with an autism spectrum disorder in a regular classroom in our next study. Therefore, we can conclude that early diagnosis and response are important for children with autism spectrum disorder. Therefore, Luştrea et al. (2017) point out that parents of children with autism spectrum disorder and experts must act as a team in which each member has a role. They believe that professionals should not only teach parents how to deal with all aspects of autism spectrum disorder but also help parents adjust their parenting styles. Our thinking is in this direction, considering that a developed musical ability is one of the gifts that children with autism spectrum disorder can have. As a result, it is essential to give these kids the tools they need to further develop their musical abilities. The parents can do this by learning the aforementioned and allowing their kids to practice music. It will contribute to children with autism spectrum disorder feeling safe, happy, and accepted in their environment.

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