

Article

# 'Nice to Meet You Again': When Heutagogy Met Blended Learning in Teacher Education, Post-Pandemic Era

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**Abstract:** Heutagogy and blended learning (BL) are core concepts in the educational discourse post-COVID-19. Conducting a mixed-methods study, we investigate meeting points between heutagogy principles and BL in the context of curricular change in the academic timetable of teacher education college, where pre-COVID most courses have been taught face-to-face (F2F). At present, teacher educators and students meet F2F for three weeks, followed by a week of remote learning, combining synchronous and asynchronous pedagogies. Data have been collected by a closed-ended questionnaire and two focus groups, involving altogether 76 lecturers and 553 students. Findings indicate that heutagogy has been applied in all facets of BL, rather than only with online or digital technological components. This study explores a bottom-up growth of heutagogy expressions in BL at three meeting points. When the core facets of heutagogy principles have been identified, there has been a predominance of the students' agency and life-long learners, together with facets such as a non-linear learning and capability development that have been underrepresented. This study contributes to the research field of heutagogy in teacher education as it identifies the meaning and the way a structural change in the curriculum can constitute an accelerator and catalyst when implementing heutagogy in practice.

**Keywords:** heutagogy approach; blended learning; post-COVID-19; teacher education



**Citation:** Chamo, N.; Biberman-Shalev, L.; Broza, O. 'Nice to Meet You Again': When Heutagogy Met Blended Learning in Teacher Education, Post-Pandemic Era. *Educ. Sci.* **2023**, *13*, 536. <https://doi.org/10.3390/educsci13060536>

Academic Editors: Carlos Pérez-González and Delfín Ortega-Sánchez

Received: 31 March 2023

Revised: 21 May 2023

Accepted: 22 May 2023

Published: 24 May 2023



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## 1. Introduction

The concept of heutagogy is not new in the field of education. More than two decades have passed since Hase and Kenyon [1–3] introduced heutagogy as an extension of andragogy's reinterpretation to the educational realm. Andragogy is a theory developed by Malcolm Knowles and it engages in adult learning and adult education, emphasizing student-centered teaching. Heutagogy is a term derived from the Greek word underlying the etymology of the word heuristic, i.e., addressing individuals' ability to inquire and learn something for themselves. As an educational approach, it has epistemological, philosophical, and socio-psychosocial origins. It underlies the rationale for a self-determined learning, and a student-centered instructional methodology that focuses on the development of autonomy, capacity, and capability. In the flourishing post-COVID-19 education discourse, heutagogy may be viewed as a holistic approach to the emergency remote learning (ERL) [4,5] and blended learning (BL) era that utilizes technology developments [6,7]. The pandemic hit higher education unexpectedly, entailing swift decisions and actions. The vote for BL is anchored in findings addressing its potential to support an effective teaching–learning process in so many ways. For example: in universal-designed learning (UDL), by increasing interaction between teachers and their students, offering flexibility, stimulating learning engagement motivation, and self-efficacy [8].

Nevertheless, attitudes toward BL among general education faculties are largely negative. Due to a sense of ineffectiveness, uncertainty, personal disharmony, and devaluation of their pedagogical worth [9]), the corpus of studies exploring the integration of BL into

teacher education is still deplorably small [10]. Meeting points between global and local contexts, between various performances of BL, and between heutagogy core facets, all together suggest unique and different perspectives.

## 2. Literature Review

Heutagogy is commonly discussed as an ideological approach, and top-down oriented, such as the progressive theory in education, largely centered on the thoughts of Rousseau and John Dewey, and also derived partly from critical theory in education that aims to overcome unjust social hierarchies [11]. Other perspectives suggest more practical and bottom-up oriented approaches. For example, Marin [12] analyses the presence of heutagogy—a student-centered learning design of a university course during the COVID-19 pandemic. Furthermore, Blaschke [6,13] sheds light on the continuum of pedagogy–andragogy–heutagogy (PAH) as a progression towards further learners’ autonomy. In line with these kinds of studies, this study focuses on heutagogy as an instructional situation-based approach that may facilitate learning in its various performances, including BL.

The practical perspective might account for the renewed interest in the heutagogy approach to higher education, due to changes in learning environments, since the COVID-19 pandemic forced a shift from traditional learning to online spaces. This shift may require students’ more self-directed learning skills and, therefore, using the student central learning (SCL) approach that has been marginalized in higher education [14]. However, in the post-pandemic era, the potential for realizing the principles of heutagogy has tremendously expanded and grown. This is due to the fact that it highlights students’ self-ability and autonomy to render the learning suitable to their needs, double-loop learning, and universal-designed learning. It also underscores a non-linear learning that can be defined as learning that occurs via any medium in the absence of a pre-defined order or sequence [7].

In fact, reviewing studies that focus on the implementation of the heutagogy approach in teacher education, five generic principles are illustrated: (1) learner agency—namely the individuals’ ability to construct their own meaning through experience; (2) self-efficacy and capability; (3) meta-cognition and reflection; (4) non-linear learning; and (5) long-life learning [15]. In a more macro and holistic view, these principles might be generated from four perspectives: learner, learning, teacher, and instruction.

### 2.1. Heutagogy—Learner’s Perspective

Heutagogy principles related to the learner advocate seeing the students as the primary agents of their learning and realizing their self-efficacy. Those principles are part of key facets of the self-determination theory that associates students’ autonomy with students’ motivation in the learning process [16]. Moreover, capability is a core concept and heutagogy approach that encourages student ability, and calls to demonstrate an acquired competency or skill in new and unique environments. In line with the social cognitive perspective of self-regulation, “students who feel efficacious about learning select what they believe are useful learning strategies, monitor their performances, and alter their task approach when their present methods do not appear to function properly” [17] (p. 427).

In online learning, the presence of heutagogy student-centered principles has been extensively discussed. However, consider students’ image, i.e., helping students in developing “a vision of the learner’s self and its location in a broader social and global context” [18] (p. 131). The heutagogy approach in practice has not been sufficiently explored [4,19], although the concepts referring to the learners are anchored in humanitarian philosophical–ethical approaches, and the core concepts are part of the discourse of rights. Such an approach is echoed in the work of [20] on deep learning which encourages the development of global 21st century competencies.

### 2.2. Heutagogy—Learning Perspective

While the focus on learners addresses ethical perspectives, asking what the proper educational act/activity/practice is, and the purpose thereof, the focus on learning is

mainly conducted through the lens of epistemology and developmental psychology. The heutagogy principles of meta-cognition, reflection, and non-linear learning constitute a central place in the answer to the big questions: What is learning? How does human learning occur? Which factors affect it? How are learning principles applied in various educational contexts?

Those questions highlight the importance of self-directed learning and reflect the increasing emphasis on self-regulation by researchers and practitioners. Blaschke and Hase [15] call for a learning process that allows students to wonder and reflect about the contents of learning, the learning process, its impact double-loop reflection, as well as about themselves as learners—triple-loop reflection.

In fact, meta-cognition is a core facet of the constructivism paradigm that emphasizes the learning process of thinking about one's own thinking. It requires enhanced awareness and places an increased emphasis on the application of knowledge for the purpose of developing future learning skills. For example: as problem solving and critical thinking, communication and collaboration, and creativity and innovation [18]. Consequently, self-directed learning is essential for a meaningful online learning performance as well [21]. In their meta-analysis of the effects of scaffolding on learning outcomes in an online learning environment in higher education, Doo et al. [22], found that an online learning environment encouraged students' meta-cognition and, therefore, could improve the quality of learning.

### 2.3. Heutagogy—Teacher's Perspective

The two previous perspectives examining basic principles of heutagogy are no doubt related to one more big question: what might support these kind of learners and learning? The answer, although multifaceted, refers to teachers and, hence, asks: Who are the 'good' teachers? What are their professional identities? What are the relationships between students' agency and teachers' agency? More questions were asked by Akyıldız [23], for example: "Do 21st century teachers know about heutagogy or do they still adhere to traditional pedagogy and andragogy?". These kinds of question reflect the critical discussion about teachers' identity on the one hand. On the other hand, the researcher suggested a descriptive perspective of teachers' identity throughout pedagogy–andragogy–heutagogy (PAH). Pedagogy is teacher-centered and andragogy characterizes adults' learning. From the teachers' perspective, heutagogy is the recognition and its applications in a student-centered process that requires learners' primary responsibility for their learning. Among the seven steps suggested by Hase and Kenyon [3] for describing ways in which heutagogy principles can be applied in the formal curriculum, six refer to the teachers' role and emphasize their importance in being a guide on the side, rather than a sage on the stage. This kind of teacher allows learners to choose the contents and the method, guiding them in the process of assessing their learning outcomes.

Together with the curriculum and pedagogy facets in teachers' identity, the heutagogy approach considers the 'good teacher' as the humanist educator who acts on the basis of care and concern [16] and serves as an agent of norms and values [24]. Emotional and social aspects received prominence here and call for students' well-being.

### 2.4. Heutagogy—Instruction Perspective

Instruction should provide the environment and tools that offer opportunities for heutagogy learning, incorporating a deep-learning framework [19] to encourage the development of 21st century competencies. Furthermore, instruction should offer a pedagogy–andragogy–heutagogy continuum [25] that provides a framework for empowering students through self-determined learning, presenting a pathway to 21st century education and student engagement. In higher education, the demand is to provide students with the knowledge, skills, attitudes, and values needed for being successful in life, developing new ways to inspire, empower, and support students' learning. Above all, curriculum planning and instruction should support agency by acknowledging students' individuality, abilities, passions, and interests. In the context of remote learning, although educators often lacked

experience and digital competence in online education [26], teachers' agency was characterized by action, rather than only capacity or competences. It impacts teachers' ability to act constructively, direct their professional growth, and contribute to the development of adult colleagues and pre-service teachers [27,28].

Given these four perspectives of heutagogy, the renewed interest it has evoked as a holistic approach in education is not surprising. There are already researchers that express positive attitudes towards the impact of the pandemic on advanced and up-to-date pedagogy [10,29]. Specifically, Zhao and Watterston [29] addressed basic principles of the heutagogy approach as part of the pedagogical changes that were proposed before the COVID-19 pandemic. However, these principles had never been fully realized, were focused on during the post-COVID-19 era, and should be maintained. The potential of new venture creation was introduced into higher education by the pandemic in order to accomplish a variety of beneficial outcomes. Hence, this study investigates from the perspective of a heutagogy approach a post-COVID-19 curricular-structural change manifested by a new BL academic timetable at an Israeli teacher education college.

The college pre-COVID timetable consisted of two twelve-week semesters, with three to four days of learning per week. With very few exceptions, all academic courses were conducted on campus in face-to-face (F2F) sessions. The new timetable, planned in the wake of COVID-19, comprised three weeks of F2F on-campus sessions, followed by a week of remote learning at the discretion of teacher educators (TEs), who were given full autonomy to arrange the module. To implement the BL design, the college rector asked all TEs to modify their syllabi, detailing the online components of their respective courses. In this task, the TEs were offered the assistance of techno-pedagogical experts, albeit with no infringement on their academic autonomy, including the mode of teaching. That is, they could teach synchronously via Zoom or upload asynchronous assignments to the course website on Moodle.

A preliminary study [30] found that both TEs and pre-service teachers (PSTs) were highly satisfied with this new BL timetable and also indicated contextual changes and shifts in pedagogical paradigms: post-COVID-19 blended learning as a negotiation space in teacher education. This study explores the scope and meaning of the heutagogy principles that TEs and PSTs implement in the new BL timetable. BL suggests a variety of meeting points within teaching and learning processes, and this study, as a continuing exploration, delves into the meeting point between the heutagogy approach and the discussed new BL timetable.

This study aims to add to the body of practical knowledge, i.e., rely on empirical evidence when it comes to putting heutagogy into practice. Examining both TEs' and PSTs' perceptions and pedagogical practice regarding the heutagogy core facets may support the positive implementation of this 'new normal' post-crisis educational approach [31]. Moreover, by focusing on the meeting points between heutagogy and BL that were designed in the field, this study adds to heutagogy and its application as an instructional strategy. It may respond to the call of Blaschke [7] to conduct further research of use of heutagogy to support self-determined learning and life-long learning skills where the knowledge is never fully realized. In this respect, two research questions were formulated as follows:

1. What characterized the presence of the heutagogy principles in the new BL timetable?
2. What kind of meeting points were designed between BL and heutagogy?

### 3. Materials and Methods

#### 3.1. Research Design

In this mixed-methods research, we used multiple data sources for interpretation and validation purposes. Data sources were a survey, curriculum documents, and focus groups. A methodological triangulation research design was used to map and analyze TEs' and PSTs' attitudes, considerations, and practices of the various heutagogy principles that were implemented across the new BL timetable. According to Hussein [32], triangulation is a "classical type of combining qualitative and quantitative methods in studying the

same research phenomenon" (p. 106). It was considered a suitable method for this study in that it highlighted different aspects of the phenomena being examined, to identify meaningful etic themes of heutagogy. However, this study is mainly qualitative. According to Vartanian [33], data can be reused for articulating a new research question. In this regard, the quantitative data used in this study were at the focus of a previous empirical examination [30]. Nevertheless, it was used in this study for supporting the qualitative interpretation and expanding the generalization of its results and conclusions.

### 3.2. Participants

Research participants included two target populations: the entire academic staff and PSTs in the college at all levels and affiliations. Seventy-six TEs and 553 PSTs responded to the survey. The return rate of the TEs was 25% and that of the PSTs was 28%. This is a relatively high percentage of return rates since TEs' and PSTs' cooperation in responding to surveys is usually low. The TEs' and the PSTs' gender distribution is representative of the whole college gender distribution.

Ninety percent of the STs' respondents were Hebrew native speakers; 5% were Arabic native speakers; 3% were Russian native speakers; and 2% did not declare their native language. Forty-three percent of the B.Ed. PSTs were in their second academic year; 26% were in their first year; 18% were in the third; and 13% were in their last academic year. Sixty-two percent of the M.Ed. PSTs were in their second year and 38% were in their first year. The main PSTs' and TEs' demographic data are demonstrated in Table 1.

**Table 1.** Main demographic characteristics of the PSTs and TEs participants.

Characteristics	Frequency (%)	
	STs (N = 553)	TEs (N = 76)
<b>Gender</b>		
Female	509 (92)	63 (83)
Male	44 (8)	13 (17)
<b>Academic program</b>		
B.Ed.	357 (65)	59 (78)
M.Ed.	77 (14)	6 (8)
Career changers	119 (21)	11(14)
<b>Disciplinary Specialization (B.Ed.)</b>		
Mathematics and Science	75 (14)	14 (18)
Humanities	134 (25)	17 (22)
Art and Music	195 (35)	9 (12)
English (as a foreign language)	52 (9)	6 (8)
Special education	58 (10)	12 (16)
Pre-school education	39 (7)	18 (24)

The TE participants' mean value of seniority was 12 years (S.D. = 8.4). Only 7% of the TEs were lecturers in the M.Ed. programs, while 68% were lecturers in the B.Ed. programs, and 25% of them were pedagogical instructors in the practicum pathway (kindergarten and schools).

Furthermore, 14 TEs participated in two focus groups (seven TEs in each group). These TEs were sampled using a snowball convenience sample, i.e., each of the researchers contacted familiar colleagues who stated they had responded to the questionnaire, inviting them to participate in the focus group. Ten of these TEs were lecturers in the B.Ed. and M.Ed. programs teaching courses and research seminars in the subjects of education, mathematics, science, and Hebrew literature. This group also shared their various curriculum documents designed on the background of the BL timetable learning. The new BL timetable was integrated into the 2021–2022 post-COVID-19 academic years. Four other TEs were pedagogical instructors. All participants gave their informed consent before participating in this study. This study was conducted in accordance with the Declaration of Helsinki,

and the protocol was approved by the ethics committee of the college (ethics approval code 2023010401).

### 3.3. Data Collection

To deeply understand perceptions as well as educational approaches, such as pedagogy, andragogy, heutagogy (PAH), that might motivate the TEs' considerations and preferences for implementing practices in the BL, curriculum documents were analyzed, and two focus groups were organized. Two main questions guided these focus groups: 1. What are the pedagogies that you prefer implementing in the BL timetable? 2. What are your curricular considerations for implementing these experiences? Each group discussion, lasting for 1 h and 10 min, was allocated for summing up the ideas presented by the TEs during the discussions to avoid deviations and keep the discussions on the right track.

As mentioned, we have used existing data as secondary data in order to obtain insights into the context of this study, namely the TEs' and PSTs' attitudes toward the new BL timetable. The quantitative data were collected by a survey that included assertions related to the TEs' and PSTs' attitudes towards the pedagogical aspects of the new BL timetable. This survey comprised four parts. The first part presented demographic items matching each of the target populations (e.g., training program affiliation; seniority). The second part included an assertion related to the extent of satisfaction with the new BL timetable, as well as categorical assertions related to the TEs' and STs' recommendation for implementing the new BL timetable. The third part presented the TEs' and PSTs' attitudes towards the pros and cons of the new BL timetable, and the fourth part encompassed assertions about the TEs' and PSTs' attitudes toward the variety of BL pedagogies. Moreover, the survey comprised two open-ended questions: "What are the major pros and cons of the BL timetable?" and "How do you think the BL timetable can be improved?"

For the purpose of data collection, a non-probability convenience sampling procedure was applied at the end of the first semester of the academic year 2022. After experiencing the structural change for at least three months, all of the TEs and PSTs in the college received a link to an anonymous 'Google Form' online questionnaire.

### 3.4. Data Analyses

A qualitative research paradigm was adopted using six phases of inductive thematic analysis for establishing trustworthiness, conceived by Nowell et al. [34]. Data analysis started after the researchers had acquainted themselves with the data as a whole. Thematic analysis was then performed for mapping and analyzing the TEs' considerations in the open-ended part of the survey, and which were discussed in the focus groups [35]. The qualitative analysis included encoding of all data. In the next phase, the themes were reviewed by all the researchers in order to reach a consensus. The researchers discussed the passages related to each encoding category, reaching an intercoder agreement of 90%. As far as validity was concerned, each researcher then shared the passages that she interpreted as illustrative of a given category. At this stage, the researchers made sense of the results using the literature in the field. Heutagogy principles were used as etic categories for analysis.

The quantitative analysis was performed to shed light on the qualitative results and to validate their interpretation. Quantitative data analyses were performed, using the SPSS 29th version. The quantitative analysis was based on descriptive statistics by computing the frequencies of the TEs' and PSTs' attitudes toward the new BL timetable.

## 4. Results

Results were interpreted in light of the two research questions. The first question addressed the presence of heutagogy principles in TEs' and PSTs' actions and perceptions, and the second one related to meeting points between the heutagogy principles and the learning environments that were implemented in the new BL timetable. It is noteworthy that the concept of "heutagogy" was not directly expressed in either TEs' or in PSTs' language. However other expressions connected with the heutagogy approach were

extensively used. Heutagogy characteristics served as etic categories in the researchers' interpretive analysis of the data. The results of the thematic analyses are presented in an etic approach, whereby the heutagogy principles are discussed according to four perspectives: learner, learning, teacher, and teaching.

#### 4.1. Learner's Perspective

The BL timetable generated changes in the learners' role with an emphasis on being active players and self-directed learners. This learners' role change might be perceived as positive as the findings had shown that the TEs and PSTs were highly satisfied with the new BL timetable design [31]. The PSTs high satisfaction with the new BL timetable was also demonstrated by the results presented in Table 2, as 81% of the PSTs recommended doubling (from 3 to 6 meetings) the number of distance meetings each semester.

**Table 2.** PSTs' and TEs' attitudes toward the new BL timetable.

Attitudes towards the New BL Timetable	Incidence of Agreement (%)	
	PSTs (N = 553)	TEs (N = 76)
Number of weeks of distance learning should be doubled	81	21
BL improved the teaching and learning process	74	79
BL increased the relationship between a variety of disciplines	75	53
BL improved competencies of integrating technology into teaching	80	71
BL increased motivation to learn	77	58
BL increased meaningful experience	75	57
BL reinforced TEs and PSTs' relationship	59	45
BL created teaching/learning overwork	18	42
BL undermined sequential learning	78	52
Shifting learning responsibility towards the PSTs, facilitated flexibility in the learning process	88	54

Looking at the principles of heutagogy, the results indicated that the principle "learners' agency" was demonstrated among the PSTs. This principle was reflected in expressions such as: "I can choose when and where I can do given assignments", or "I can combine the academic studies and life", or "It encourages self-responsibility and motivation to learn". This perspective was also supported by the quantitative results as 88% of the PSTs argued that the new BL timetable enabled time flexibility in the learning process.

These aspects of the learners' agency were found to be associated with the PSTs' satisfaction with the new BL timetable. Furthermore, the learners' agency served as a motivational factor for learning. This interpretation can be supported by the fact that 77% of the PSTs argued that the new BL timetable increased their motivation to learn.

Regarding the principle of self-efficacy and capability, the PSTs expressed this principle in relation to the success in their learning process and with their enhanced self-confidence as learners. These expressions were frequently mentioned by low-achieving PSTs and PSTs with learning disabilities. For example: "I am a student with some learning disabilities, and I found that BL supported me because I can learn at home in a quite environment and be in contact with the lecturer for receiving support", or "I have now more confidence for participating in the lesson even without switching off the camera and I am not afraid of asking questions in front of other students".

The heutagogy principle of meta-cognition and reflection was demonstrated in relation to the PSTs' insights about learning strategies and competences needed in the shift to a self-directed learner: "I accomplished many learning strategies that are new for me, such as

assessing the validation of materials that are published on the net"; "I was surprised to realize that I can learn by myself even if the lecturer is not around" or "I need to be in a high locus of control". This heutagogy principle, as well as the above-mentioned self-efficacy one, was supported by the fact that 75% of the PSTs pointed out that the new timetable increased meaningful experience.

#### 4.2. Learning Perspective

The PSTs described their motivation for self-directed learning in relation to variation of material and method, choice opportunities, and time and place flexibility. For example: "I feel that the learning process is varied, flexible and more interesting", or "More choices are given by the lectures. I can choose to read a text or to watch a video or listen to a podcast or all together".

Moreover, integrating technology into the learning process was perceived as innovative and relevant: "It is an innovative learning, using digital tools and technology as should be done in the 21st century". In this respect, the quantitative results indicated that 80% of the PSTs perceived that the new BL timetable improved their competencies of integrating technology into the teaching.

Moreover, the PSTs could repeatedly go over the course material as much as they needed and this was found to be a major aspect of the self-directed learning: "Recorded lessons are great because I can use them for practice and revision of the material taught in it"; or "I feel that the way I learn now is deeper and I have more time to internalize the material and concentrate on my learning". In this context, the survey illustrated that 74% of the PSTs perceived that the new BL timetable improved their learning process.

Regarding the heutagogy principle of non-linear learning, which is based on a constructivist approach, the findings showed that the BL timetable promoted a contemplating and wondering process, for example: "I find myself surfing the net finding more and more relevant and interesting material". This kind of non-linear learning was also related to research competences in seminar courses. Regarding the contemplating process, 75% of the PSTs felt that the new BL timetable increased the relationship between a variety of disciplines. However, it is noteworthy that the non-linear learning heutagogy principle was challenging as 78% of the PSTs felt that the new BL undermined sequential learning.

The words of one PST attested that the new BL timetable promoted the heutagogy principle of life-long learning: "Experiencing independent learning is something that will serve me also when I finish my academic studies even when I will need to look for a job". Furthermore, life-long learning competences, such as problem-solving and critical thinking, were mentioned by the PSTs. These competences were related to the shift to a more self-directed learning and to its impact on PSTs' performance in the future: "participating in BL has intensified skills needed in the 21st century".

#### 4.3. Teacher Perspective

In the context of the new BL timetable, the TEs related to personal and emotional aspects of learning. For example, the TEs were aware of the overload aspects of distance and self-directed learning, as one of the TEs described: "Online meetings should aim to do things in other ways and to decrease workload". This interpretation was followed by the quantitative results as 42% of the TEs felt that the new BL timetable created overwork in teaching. Moreover, promoting the relationship with the PSTs was a major aspect in the TEs' considerations: "The personal relationships with some of my students were promoted especially with those who I personally met one-on-one via Zoom". And: "I do my best to be fully alert to students' need. In choosing the learning experiences for the online module I keep on asking them at the end of F2F meeting what topics do they prefer to focus on and how to ... let them choose whether synchronous or asynchronous. In the next F2F session, I asked them if they had found the assignment meaningful and/or fair". Other TEs in the focus group argued that: "I do my best to better cater to the STs' needs. However the formal curriculum and the course demands are part of my consideration and the question who

and what is going to be at the center. This applies to F2F sessions as well as to the online module"; or: "I feel like a different teacher in the different courses: in courses that are research-centered I mainly guide and act as facilitator to support student-centered learning in the personal learning process of each student. However in general courses of education I mainly lecture and act as teacher-centered. I find that this kind of professional identity is justified and meets the needs of students". Nevertheless, it is noteworthy that only 45% of the TEs felt that the new BL reinforced their relationships with the PSTs.

As far as meta-cognition and reflection are concerned, we/the researchers found evidence that some of the TEs requested the PSTs to post their reflections in a blog. The TEs' considerations for including a reflective blog in the learning process were related to the transition in the teachers' role, i.e., becoming a mediator who supported the PSTs' self-directed learning: "More responsibility for learning should be shifted to the students". According to the survey results, 54% of the TEs felt that the new BL timetable shifted learning responsibility towards the PSTs. The blog was found to be a digital tool that illustrated the PSTs' challenges and misconceptions. Thus, the reflective blog enabled the TEs to diagnose which facet of their professional identity on the continuum of pedagogy–andragogy–heutagogy they needed to provide to the PSTs in order to support their learning process. For example: "It is more difficult to monitor the PSTs' learning process from a distance. I found that reading their reflective posts in the blog made it clear to me what were their struggles and what kind of support I needed to offer them at each stage of their learning process"; or "I believe in my students' capability to learn by themselves and, on my part, I think that my role is to support them". And: "More responsibility for learning should be shifted to the students".

#### 4.4. Teaching Perspective

Motivation to learn and develop is a key factor in self-directed learning. The findings showed that the TEs were oriented towards increasing and maintaining the PSTs motivation to learn. In order to do that, the TEs used a variety of teaching methods and contents in online and in F2F learning: "I give varied assignments for engaging the students and increasing their motivation to learn independently", or; "I always look for relevant material for my students in order to raise their motivation to learn". In line with these expressions, the results of the survey indicated that 54% of the TEs perceived that the new BL timetable increased the STs' motivation to learn. The TEs allowed the PSTs to take charge of and manage their workloads. They informed the participants in the focus group that their curriculum documents attested to a variety of pedagogies supporting students' agency, asking them "to choose", "to analyze based on your own experience", and "to surf web sites and suggest new sources for learning ...".

The findings indicated that increasing the PSTs' motivation to learn was related to designing a non-linear learning experience based on challenge/problem-based learning that may be linked to life-long learning and 21st century competencies: "I encourage and support self-directed learning. I usually upload to the course website in the Moodle short video clips or texts that present a problem or a challenge and I ask the students to find materials that will assist them in solving the problem". Regarding teamwork and collaboration competencies, the participants stated: "Interaction with peers is important and I love the feature of breaking rooms via Zoom". Integrating reflective blog assignments in the course also aimed to promote a meta-cognition and thinking routine as a monitoring tool in the process of self-directed learning.

## 5. Discussion

This study aimed to explore properties of heutagogy at its meeting point with BL, as a result of arguments about higher education in general, and teacher education in particular. That is, a critical examination of teachers' attachment to pedagogy without allocation of a sufficiently wide and meaningful room for heutagogy [22]. Hence, this study was conducted following the suggestion of Luckin et al. [26], Blaschke and Hase [15]

and Blaschke [7] to form a line of development across pedagogy–andragogy–heutagogy. Indeed, the research questions echo that continuum proposed in the current context of a new BL academic timetable designed and implemented post-COVID-19 in a teacher education college.

In any event, before discussing the meaning of the data related to the research questions, it should be specified that an interesting, extensive, and general finding obtained from the data was that the concept ‘heutagogy’ was being only scarcely, if ever, mentioned in the discourse of students and teachers in this study. The researchers of this study related to it only from the semantic aspect. However, on the background of arguments about the place of heutagogy in higher education, and on the background of the findings of this study, heutagogy could be interpreted also in a symbolic way: a lacuna in the language indicating the lack of a broad and comprehensive perception, manifested also by perceptions and actions. Still, heutagogy principles had diverse and thought-provoking performances. In the examination of the entirety of the heutagogy manifestations, the findings showed three meeting points between the heutagogy principles and the teaching and learning processes that were implemented in the new structure of blended learning. These meeting points can be introduced as: (a) regular; (b) borderline; and (c) contextual. The following passages will elaborate these meeting points.

The first meeting point was a ‘regular’ meeting prevalent in the field of education. We entitled it as ‘regular’ since it was extensively discussed in the empirical literature about the potential of technological learning environments and online learning for the assimilation of heutagogy principles [4]. Indeed, also in this study, the potential to support student agency by increasing interaction between teachers and their students, offering flexibility, and boosting learning, was found with reference to the online learning module within the overall BL structure. Transferring the responsibility for the learning to the students was, to a certain extent, coerced on the teachers and the students, due to the need to shift to online learning. Nevertheless, and in line with Deci and Ryan’s theory of motivation [23], the high level of satisfaction attested that this change had been welcomed and that ‘regular’ meeting points increased the PSTs’ self-determined learning. It was related to designing much more experiences such as challenge/problem-based learning that may yield a non-linear learning, and be related to life-long learning and 21st century competencies, similar to what came up in the study of Robert and Moore [36]. Furthermore, in the new structure, the students identified their ability to derive from various pedagogies of online learning compliance with their learning style. Students with special needs also expressed their opinion about the advantages offered by online learning environments. In this sense, they empowered their agency as learners. The teachers acknowledged the properties of independent learners in online learning and, through the curriculum documents, facilitated heutagogy learning. In this mode of learning, they directed the students to access various Internet sites, searching for information and examining its suitability and relevance to the learning topics. In this respect, the teachers referred also to the principles of divergent and non-linear learning. However, one cannot ignore the fact that the TEs and the PSTs were aware of the impact of the new BL timetable on the teaching and learning process. Both TEs and PSTs were challenged by the non-linear teaching and learning process. While the linear process of teaching and learning may be viewed as a traditional approach for teaching and learning, the non-linear process can be viewed as reflecting a more progressive approach. This aspect of heutagogy, which the new BL enforced, and its challenges should be taken into account when designing a heutagogy curriculum.

A second meeting point was found in this study as a new and interesting point that added to the existing knowledge in the literature. It adopted an innovative approach in isolating each module of the BL timetable, focusing on its properties of heutagogy, in an endeavor to respond to the call of a better understanding how to effectively integrate BL in post-COVID-19 education, That implied a meeting point that we framed as ‘borderline’ between the online learning module and the F2F at the college. The meeting point of the ‘borderline’ and the heutagogy principles illustrated that here, too, conditions for the

empowerment of heutagogy were created. First, the findings, in line with a preliminary study [30], showed a teacher–student dialogue regarding the learning contents and the desirable learning styles. A sizeable proportion of TEs seemed to regard the online component of BL as a negotiable space with PSTs over the pedagogies for online learning. This process attributed a central place to the learners, transferred the responsibility to them, and allowed them to be part of the curriculum planning that was growing and changing in different contexts. Second, this meeting point offered an invitation to a reflexive discourse, in which teachers requested the students to critically reflect upon their learning in an online learning module: What did they learn? What did they understand? What did they like to learn and in what way? This kind of critical reflection stimulated meta-cognitive thinking and enabled the building of knowledge. Schunk [16] offers a broad and deep picture of learning theories and focuses on the social cognitive perspective of self-regulation theory, within which students who feel efficacious about learning select what they believe, choose useful learning strategies, “monitor their performances, and alter their task approach when their present methods do not appear to function properly” [16] (p. 427). Moreover, this process supported the learners’ motivation, as illustrated by the findings of this study. Third, this meeting point invited the students to engage in critical reflection. In fact, the teachers allowed the students to wonder when they surf the Internet and find sources. Yet, at the same time, they asked the students to think about the meaning and quality of the knowledge with reference to the material learned in the F2F sessions.

A third meeting point was between the principles of heutagogy and the F2F component on campus. Here, the picture of heutagogy learning manifestations was more complex. Side-by-side with conventional teacher-centered learning, expressions of student-centered learning came up. The TEs pointed out a difference in teaching as a function of the kind of different courses. In seminar-based and methodological courses, heutagogy was prominent, compared to courses of educational infrastructure. Blaschke, [7] specified the need for organizing preparatory processes of transferring responsibility and assuming responsibility by teachers and students. Similarly, in this study, there seemed to be room for examining preparation of this kind. Along with the need to conduct preparation that supports heutagogy learning, this study addresses another direction for discussing the meaning of the data associated with the various needs of all the partners involved in higher education. It concerns the scope and positioning of heutagogy in higher education overall. PSTs, too, expressed the need for conventional learning in which they submitted themselves to the leading of the lecturer. In other words: a complex picture of needs corresponded to the principle of coherence.

Furthermore, the third meeting point called for a discussion of the principle of continuity according to which there was a line of development from pedagogy to andragogy and then to heutagogy. However, based on the findings of this study, it is recommended to examine whether this concerns a linear line of development, or a hybrid system that facilitates both pedagogy and heutagogy, or a divergent, complex, and ecological system.

This study has several limitations. First, teacher education is an academic context with distinctive characteristics in which TEs also act as role models as to selecting and implementing various pedagogies—including heutagogy. One may argue that, in other academic contexts, the implementation of heutagogy may be governed by different or additional principles. Another limitation is related to the methodological aspect of this study. As we used existent survey data that was not directly related to the TEs’ and PSTs’ attitudes toward heutagogy, we invite future research that will develop a questionnaire that directly examines the implementation of heutagogy in higher education.

## 6. Conclusions

This study gave rise to several conclusions. The first one calls to draw attention to heutagogy as a concept that has a semantic and symbolic meaning. Hence, it is worthwhile turning it into part of educational discourse in teacher education programs. This concept

has the potential to function as an organizing holistic approach that offers philosophical, epistemological, psychological, and socio-cultural aspects.

The second conclusion addresses the potential of learning in a post-corona age. It reinforces the discourse about heutagogy and its meeting points that should be identified, comprehending the quality of each one of them in relation to the actualization of heutagogy principles.

The third main conclusion is that heutagogy at its meeting point with BL functions as a case study illustrating how learning and teaching in higher education evokes a discourse about complexity, rather than about dichotomic approaches to what is conventional and progressive only.

**Author Contributions:** Conceptualization, N.C., L.B.-S. and O.B.; Methodology, N.C., L.B.-S. and O.B.; Formal analysis, N.C.; Investigation, N.C., L.B.-S. and O.B.; Writing—original draft, N.C., L.B.-S. and O.B.; Writing—review & editing, N.C., L.B.-S. and O.B. All authors have read and agreed to the published version of the manuscript.

**Funding:** This research received no external funding.

**Institutional Review Board Statement:** The study was conducted in accordance with the Declaration of Helsinki, and approved by the Ethics Committee of LEVINSKY-WINGATE ACADEMIC COLLEGE (Ethics approval code 2023010401, February 2022) for studies involving humans.

**Informed Consent Statement:** Informed consent was obtained from all subjects involved in the study.

**Data Availability Statement:** Not applicable.

**Conflicts of Interest:** The authors declare no conflict of interest.

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