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Changing the Titanic's trajectory: Introducing heutagogy to in-service teachers via the flipped classroom

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Abstract

The passive learning phenomenon continues to thrive in high school classrooms as traditional teacher-centred pedagogy remains the norm. In this article, I investigate how a learning-centred pedagogic intervention can address learners' basic psychological need for *competency*, *relatedness*, and *autonomy* (collectively known as self-determined behaviours), thereby initiating a move across the Pedagogy-Andragogy-Heutagogy (PAH) continuum. The pedagogic intervention was implemented by in-service teachers across the Western Cape Province. I drew from four datasets: semi-structured online interviews; feedback questionnaires; a spontaneous response; and research diaries. The analysis reveals three primary factors that can either promote or deter the successful activation of learners' self-determined behaviours, namely the complex relationship between learner autonomy and teacher control, teachers' struggle to embrace alternative teaching methods, and learners' readiness to shift across the PAH continuum. Acquiring self-determined behaviours will assist high school learners to become lifelong learners and will ease the transition from the Further Education and Training Phase to the sphere of Higher Education and Training and will develop critical and necessary 21st-century skills.

keywords: self-determination theory, pedagogy-andragogy-heutagogy continuum, active learning, passive learning, self-determined learning, learning-centred pedagogy

Introduction

Educational change is often a slow and arduous process, a reality that is powerfully captured by Martin Gustafsson (2024, para. 6) in his insightful analogy. He states, "The inconvenient truth about whole schooling systems is that improving learning is a painfully slow process… entire schooling systems… are Titanics that rarely change course." Building on his analogy, one may question why slight rudder adjustments are not made sooner to avoid Titanic tragedy.

This is reiterated in the title of the 2025 World Bank Report: *South Africa Economic Update: Learning – Overdue Reforms and Emerging Priorities in Basic Education*. Although I concur with the title (with the emphasis on *Overdue Reforms*), the report again primarily focuses its attention on the Titanic as a whole and overlooks largely the potential (or power?) of the captain to adjust the rudder and change the course of the ship. However, all hope is not lost since the same report now offers a call for action to focus on the pedagogical to overcome challenges, strengthen foundational learning, and, finally, drive reform action (World Bank, 2025). While reform can chart many courses, in this article, I choose to steer toward pedagogical waters. More specifically, I navigate into the seas of learning-centred pedagogy (LCP), of which active learning forms a key component.

Using a slightly different analogy, Hobbiss et al. (2021) similarly suggested emancipating learners from the ossification of outdated classroom practice. Although a change in pedagogy is considered one of the primary means of improving learning outcomes (Bertram et al. 2021), teachers are hesitant to embrace alternative pedagogies (Mwanahanja, 2023; Reeves, 2018). This is detrimental to educational innovation since the outcome may be resistance to change altogether (Adipat, 2024; Darjan, 2024). Problematic, however, is that bottom-up educational reform is currently neglected in school contexts (Brown, 2023). The problem is further exacerbated by barriers in the implementation of active learning in Higher Education and Training (HET) generally (see Børte et al., 2023; Grøndahl Glavind et al., 2023) and more specifically in pre-service teacher education programs (Bremner et al., 2023; du Plessis, 2020). Pre-service teachers' educational experiences (such as exposure to LCP or a lack thereof) in HET may impact their pedagogical approaches when they enter the schooling context as newly qualified teachers. Ironically, the new generation of teachers ends up steering the ship in the direction of the iceberg, which, in this article, symbolises the passive learning phenomenon (Pretorius, 2023; Silva et al., 2021; Westerlund & Eliasson, 2022).

The passive learning phenomenon is universal (Darjan, 2024; Pretorius, 2023; Schur & Guberman, 2024). The dominant teaching practices are characterised by an overreliance on direct teacher instruction during which knowledge is transferred as a static product (Geduld & Sathorar, 2016), learners are treated similarly since they are considered members of an audience (Munir et al., 2018) and classrooms are void of activities that promote deeper learning (Bantwini, 2017). Such a prevailing teaching methodology is problematic since learners are not adequately provided with opportunities to develop higher-order cognitive skills, socio-emotional skills or intrapersonal skills (Pretorius, 2023). Although research has progressed from the emergence of active learning in the early 1990s to theories such as mastery learning, goal-oriented learning or, more recently, phenomenon-based learning, it seems that the disconnect between theory and practice globally (Marchand Martella & Schneider, 2024) and in the South African educational context remains evident.

In 2012, the Flipped Classroom concept started to stir the stagnant waters of passive learning. Originally pioneered by two high school science teachers (John Bergman and Aaron Sams), it transformed the traditional teaching approach by moving direct instruction outside of class time through pre-recorded video lessons that learners could watch at home. This allowed

classroom time to be used more effectively for supporting learners and engaging them in collaborative, hands-on learning activities. Although the South African context varies significantly from that of the United States, the potential of the pedagogical approach was recognised as encouraging the activation of learners' self-determined behaviours.

Heutagogy, defined as the theory of self-determined learning (Hase & Kenyon, 2003), views learners as autonomous individuals who acquire knowledge through experience (Blaschke, 2012). According to Setlhako (2021), "Heutagogy challenges the traditional way of teaching and learning" (p. 3). When teaching and learning are approached from this premise, responsibility shifts to the learner, encouraging the exploration of new questions, contexts, and directions (Blaschke & Hase, 2016).

This article forms part of a larger study titled *An altered flipped classroom pedagogy as intervention strategy to address passive learning in a teacher-centred classroom*. While the aim of the original study was to demonstrate how a context-specific, learner-centric pedagogical intervention can be applied successfully in everyday South African classrooms, in this paper, I shift the focus to key benefits that arise from active learning pedagogy: heutagogic learning and the activation of self-determined learner behaviours. Moreover, when learners' self-determined behaviours are activated, this also initiates a move across the PAH continuum. Unveiling heutagogy as a core construct to navigate past the iceberg, I explore the following research question: "To what extent can learner-centred pedagogy activate learners' self-determined behaviours and initiate a move towards heutagogy?"

Literature review

Active learning pedagogy enjoys attention in educational research, with empirical studies consistently showing that it is more effective than passive content delivery (Bhardwaj et al., 2025; Dubinsky & Hamid, 2024; Kozanitis & Nenciovici, 2023). While I do not argue the point that active learning is a novel pedagogy, I contend that there remains a gap in fully understanding its pedagogical implications, and that this is essential for informed educational practices (see Drew & Mackie, 2011). Also, contemporary educational practices often do not reflect what is known about active learning (Li et al., 2023).

The shift towards learner-centred education, particularly in South Africa, faces unique challenges, largely because of the historical implications of Curriculum 2005. Nykiel-Herbert (2004) highlighted that learner-centred pedagogy can backfire if teachers lack the conceptual understanding and practical skills needed to implement it effectively. Moreover, Horn (2009) suggested that repeated failures in learner-centred approaches often stem from incorrect methods of implementation or from a flawed understanding of learners' developmental needs.

Many teachers remain comfortable with traditional, teacher-centred pedagogy and are often reluctant to shift their roles in the classroom (Dole et al., 2015; Plaisir, 2020). This resistance is rooted in the comfort and familiarity that traditional approaches offer, as well as the anxiety and uncertainty that a change to learner-centred methods may bring (Gündüz & Akkoyunlu, 2019). The broader school system also plays a significant role in influencing

teachers' willingness to adopt new pedagogies. Research indicates that despite teacher education programs advocating for learner-centred methods, teachers' actual classroom practices often revert to traditional methods when teachers are confronted with systemic constraints, such as centralised curricula, peer pressure, and a focus on standardised testing (Barabanova & Kazlauskiene, 2020; Schweisfurth, 2011).

The altered flipped classroom

In this paper, I explore one of the positive outcomes of an active learning intervention, namely the Altered Flipped Classroom Pedagogy (AFCP). Developed to introduce learner-centred pedagogy (LCP), the intervention adapts Bergman and Sam's (2012) flipped classroom model to suit the South African context in which technological resources are often limited. According to the most recent "National education infrastructure management system report" (Department of Basic Education, 2023), only 21,48% of the public schools in the country have access to the internet for teaching and learning. Taking these contextual factors into consideration, the AFCP was designed to build on the active learning foundation of the flipped classroom (Kissi et al., 2017; Li et al., 2023) that is rooted partly in socio-constructivist learning theory, especially the in-class activities (Hsieh, 2017; Steen-Utheim & Foldnes, 2018). It also opens a space for learning to become more self-directed. The AFCP utilises these active learning theories without being dependent on the technological component often associated with the pre-class activities of the traditional flipped classroom. While ample studies have investigated the flipped classroom at HET level, studies at school level have only recently started to emerge (see, for example, Chakawodza et al., 2024; Gcabashe, 2023; Mokhele-Ramulumo et al., 2024; Paragoo & Sevnarayan, 2024; Pretorius, 2023).

Unveiling heutagogy in the South African education system

Almost a decade ago, Kanwar et al. (2013) asserted that the National Qualifications Framework seems more oriented towards pedagogy and andragogy, with a limited focus on heutagogy, which emphasises learner autonomy and self-determined learning. They contend that though the South African Qualifications Framework has attempted to address this issue by introducing new policies, these have not translated effectively into practice.

Heutagogy, coined by Hase and Kenyon in 2000, is a learner-centred approach to learning that incorporates active learning strategies (Agonács & Matos, 2019). It aligns with individual learning, creativity, and innovation (Blaschke & Hase, 2016) and increases levels of learner agency (Margarit, 2021). In a heutagogic approach, attention is given to the best way(s) in which humans learn, and this information is then transmitted to education systems (Hase, 2014). The concept encompasses four fundamental principles: metacognition; reflection; capability; and agency (Blaschke, 2016).

Empirical research on the pedagogical impact of self-determined learning is limited because the focus has been primarily on understanding various psychological traits (Glassner & Back, 2019). However, a study by Green and Schlairet (2017) explored the educational research

field for a teaching and learning model based on the principles of heutagogy. They identified the flipped classroom as a suitable option. More research in high school contexts focusing on heutagogic learning approaches is imperative since these enable learners to develop the skills needed to meet the societal demands of the 21st century (Vinayan & Harikirishanan, 2021). I seek to address this gap by presenting an exploration of the activation of learners' self-determined behaviours when in-service teachers implement a context-specific active learning intervention (AFCP).

Teaching methods that promote a heutagogic approach provide learners with a greater sense of freedom to choose the direction and path their learning will follow. Heutagogy is not done to learners but occurs, rather, when teachers create opportunities for learners to grow as self-determined individuals (Banerjee, 2019). When they are allowed to do so, they are more focused and efficient when it comes to their learning (Hase & Blaschke, 2021). By implication, this requires a more flexible curriculum (Agonács & Matos, 2019). This higher level of agency also increases the demand for learners to take responsibility for their learning (Hase & Blaschke, 2021).

Introducing the pedagogy-andragogy-heutagogy continuum

In 2010, Luckin et al. investigated the relationship between pedagogy, andragogy, and heutagogy. They argued that these three learning theories reside on a continuum, which gradually moves from one end (high level of teacher control and learner passivity) to the other (high level of learner autonomy and active learning). For a visual representation of the continuum, refer to Pretorius (2025), p. 97.

This shift does, however, not happen automatically. Teachers have to deliberate on whether they want to adapt their pedagogic practices and develop their resources accordingly to become more learner-centred and autonomy-supportive. This may be particularly challenging when policies and practices promote external rewards and high-stakes testing maintains the traditional models of teaching (Ryan & Deci, 2020).

On the pedagogy end of the continuum, teachers take full responsibility for what is learned, and, when learning happens, it is considered completely teacher led. Moving toward the centre, the self-directed approach of andragogy is taken by learners who are encouraged to act more autonomously when it comes to decision-making and problem-solving. Teachers take a facilitative role and occasionally act as mentors. Heutagogy flows naturally from andragogy because there is a gradual increase in ownership and responsibility on behalf of the learner (Ilieva et al., 2019). Although andragogy and heutagogy are both considered learner-centred approaches, they differ since andragogy focuses primarily on the best ways in which learners learn, whereas heutagogy extends this to include learners' initiatives to improve their learning skills and then extends this to informal or novel contexts (Little & Knihova, 2014).

The shift from an andragogical approach to a heutagogical one entails mainly the level of freedom learners have to choose their learning paths (Agonács & Matos, 2019). When

allowed to do so, Hase and Blaschke (2021) found that learners become more focused and efficient when it comes to their learning. However, research has shown that learners have become accustomed to traditional pedagogical approaches (Blaschke, 2014), which may impede or inhibit a heutagogical approach.

A heutagogical approach to learning is desirable because it enables learning about one's learning preferences and challenges an individual's overall paradigm about the meaning of learning. It also closes the gap often experienced between learning via traditional teaching and how learning occurs in the world of work (Banerjee, 2019). The move from one end of the continuum (pedagogy) to the opposite end (heutagogy), however, places a great demand on learners since it requires a transformation of not only long-standing schooling traditions but also, in many instances, the mindset that learners themselves have developed about pedagogy. The pedagogy-andragogy-heutagogy move thereby compels learners to challenge their existing frame of reference that is rooted in passive consumption of knowledge towards an inquiry-based approach in which they are active agents (Blaschke, 2014).

Self-determination theory

Having a more nuanced understanding of the psychological factors that influence learners' motivation to learn is essential. Self-Determination Theory (SDT) makes a significant contribution to educational theory since it closely examines (i) the role of motivation in learning, engagement, academic performance, and learner well-being and (ii) the impact of satisfying or thwarting the three basic psychological needs (*competency*, *autonomy*, and *relatedness*) (Wang et al., 2024) that directly impact their ability to work and learn independently.

With regard to the flipped classroom in general, Li et al. (2023) argued that there is a lack of consistently applied theoretical perspectives. They found only a few articles that "explicitly invoked a theory in terms of explanatory power or specific references to a body of conceptually oriented literature" (p. 2013). SDT did, however, emerge as one of the more prominent theories in their scoping review that underscored its relevance to understanding learner motivation in this teaching approach. They also concluded that the interest in flipped learning has grown over the last few years because of the link between active learning and the potential of the flipped classroom to achieve this pedagogical outcome when introduced into the classroom. Considering the significance of academic motivation and SDT in education, there has been a growing number of educational interventions based on this particular theory (Wang et al., 2024).

In brief, SDT is a macro-theory of motivation, emotion, and development that includes components of both internal and external motivation (Niemiec & Ryan, 2009; Ryan & Deci, 2019). Based on the predisposition of humans to be inclined naturally towards mastery, learning, capacity building, need cultivation, and being socially connected (Deci & Ryan, 2000; Legault, 2017), one can assume that humans possess certain inherent proponents to action or partake in each of these activities successfully supported by whether the extent to

which their need for competence, autonomy, and relatedness is met (Deci & Ryan, 2000; Ryan & Deci, 2020).

These three psychological needs emanate from Basic Psychological Needs Theory (BPNT) (a mini-theory of SDT) and shift attention to individuals' internal properties and how these influence motivational processes. A better understanding of the need for autonomy, relatedness, and competence, including how they are met or the effect on people when they are thwarted, is imperative because it generates a better understanding of why teachers need to be cognisant of these needs while teaching, as well as knowing how to adapt teaching practices to activate learners' self-determined behaviours.

The first of the three psychological needs, *autonomy*, is considered an individual's capacity to practice self-regulation (Deci & Ryan, 2012), originating from a desire to experience choice and agency (Stroet et al., 2015) while being authentic (Di Domenico & Ryan, 2017). Other key features of autonomous behaviour include taking ownership of one's actions (Ryan & Deci, 2020), the need for self-organisation when it comes to personal experiences, and the ability to regulate behaviours (Yu & Levesque-Bristol, 2020).

Competence is generally defined in terms of one's ability to achieve various outcomes (Deci et al., 1991). It is also correlated with efficacy (Yu & Levesque-Bristol, 2020), a sense of mastery, and individual capacity development (Legault, 2017). If learners' need for competence is neglected, this may result in amotivation (Ryan & Deci, 2020). This ultimately impedes their ability to take the initiative or responsibility required to drive their learning (Turner, 2019). Contrary to this, competent learners can use their knowledge and skills in unfamiliar or changing contexts (Hase & Kenyon, 2007).

The need for *relatedness* is primarily achieved when individuals experience a sense of belonging and community (Niemiec & Ryan, 2009; Vansteenkiste et al., 2010). More importantly, a sense of social connectedness enables individuals to grow and nurture their need for autonomy and competence. A study by Wang et al. (2019) identified a sense of relatedness as the strongest contributor to autonomous motivation.

One of the key hypotheses supporting SDT argues that learners who experience higher levels of basic psychological need fulfilment exhibit greater intrinsic motivation, which, in turn, makes them more self-determined in their learning. This is usually demonstrated through increased autonomous motivation, well-being, engagement, and academic achievement (Conesa et al., 2022). In contrast, a classroom dominated by a teacher-centred pedagogy may negatively impact optimal learning since learners' psychological needs are thwarted. When learners' needs are thwarted, it impacts their self-determined behaviours and, ultimately, their overall potential to grow as independent agentic learners.

The link between heutagogy and SDT

Deci and Ryan's (1985) theory considers motivation from a psychological point of view. They maintain that when learners' need for autonomy, relatedness, and competence is met,

they become more self-motivated as their self-determined behaviours are activated. Similarly, self-motivation is a key aspect of heutagogy since learners must possess high levels of intrinsic motivation to engage in self-determined learning (Blaschke, 2016; Glassner & Back, 2019).

Heutagogy also acknowledges the importance of learners' need for competency since it is crucial for enhancing their capabilities, capacity building, and developing their competencies (Banerjee, 2019; Blaschke, 2012). Capable learners can apply their knowledge and skills in new, unfamiliar, or dynamic contexts (Hase & Kenyon, 2007). Learner agency is seen as essential to self-determined learning and can be linked to the need for autonomy. Learners are given the flexibility to choose how, what, and when they learn, with these choices varying considerably depending on each learner's experiences, knowledge, and skills (Hase, 2014). Heutagogy also overlaps with BPNTs concept of relatedness by promoting peer collaboration. Canning and Callan (2010) suggested that learners' heutagogic tendencies develop when they engage in discussions about their learning experiences. They further argue that heutagogy creates an environment for collaborative reflection, allowing learners to express their views, beliefs, and opinions confidently. For a visual representation of an integrated PAH- and SDT-continuum, refer to Pretorius (2025), p. 99.

Methodology

The study followed a qualitative pragmatic research design rooted in naturalistic inquiry (Turale, 2020). This research design is commonly used when a more practical approach that leads to in-practice solutions is required (Sandelowski, 2000). Researchers are not restricted to specific sampling techniques when employing a qualitative research design, provided they aim to achieve maximum representation (Johnson & Christensen, 2014).

I obtained permission from relevant committees, including UNISA's Research Ethics Committee (the affiliated tertiary institution) and the Western Cape Department of Education to conduct this study. Informed consent was also obtained from participating teachers and the school principals of those who implemented the intervention post-training.

I used volunteer sampling, a non-probability sampling technique, to select the study participants. Participants were invited to participate via advertisements and self-select if they wanted to participate (see Mukherji & Albon, 2018). An invitation was circulated to grade 8–11 in-service teachers who teach at high- or combined schools across the eight Districts of the Western Cape Province. Both public and private schools were included. Schools were initially contacted telephonically before the invitation was extended via email. A total of 54 teachers registered for the online training sessions, with 31 attending one of the scheduled sessions. Nine teachers gave their consent to participate in the study. The final sample consisted of two male and seven female teachers, of whom two taught at private schools. The experience of the teachers ranged from novice (first year) to veteran teachers, of whom one had more than 30 years of teaching experience. Various subject areas were represented, including languages (English, French, Afrikaans), geography, mathematical literacy, life orientation, natural science, and engineering graphics design.

Four methods were used to collect the data. Online interviews, the primary source of data collection, were conducted with five teachers to elicit their views on their experiences of introducing the AFCP in their classrooms. This gave me insight into aspects such as the challenges faced, the process of role-transitioning, perceived advantages (social and/or academic), and aspects of learner motivation. Feedback questionnaires (with questions similar to the interview protocol) were completed by three teachers who attended the online training but could not implement the intervention either because of time constraints or because their principal withheld consent. Keeping a research diary was a voluntary option, and two of the participants completed one. A spontaneous response refers to a participant (Grade 7 teacher) who was teaching at a combined school and consequently received the invitation when it was distributed to the school staff. After attending the online training, she voluntarily sent two emails providing a rich and descriptive narrative account of the training as well as her implementation of the intervention. These narratives were included in the final dataset. Qualitative research is emergent and flexible in nature (Merriam, 1998), and researchers have the flexibility to adapt, make adjustments, and incorporate various types of data to address the research question (Flick, 2018). This was more so the case given that the data collection period for the study coincided with August–September 2021, during the COVID-19 pandemic, which posed significant challenges to accessing schools for data collection.

The data from the four datasets was analysed using Braun and Clarke's (2006) thematic analysis with the assistance of CAQDAS (ATLAS.ti). Thematic analysis can be used effectively within and across data to better understand the participants' behaviour, lived experiences, and perspectives and how these relate to the study at hand (Clarke & Braun, 2017). It has been used elsewhere to analyse data from natural classroom settings, thereby highlighting the applicability of the method (Xu & Zammit, 2020).

Across the six phases of thematic analysis, the researcher starts the process by familiarising themselves with the data (Phase 1) and progresses to Phase six, during which the findings are produced. From the original study on which this paper is based, I grouped thirteen categories into four overarching themes: Systematic and external factors; Learners; Teachers; and Self-determined behaviours. The last theme, which is the focus of this paper, was divided into two sub-themes, namely, PAH continuum and Self-determination theory.

Trustworthy results are crucial for professionals in applied fields where research impacts participants' lives. Findings must demonstrate rigour, provide credible insights, and have validity. Validity refers to how accurately a study reflects the phenomenon being explored (Richie et al., 2014). Common strategies to ensure rigour and trustworthiness in qualitative data include triangulation, member checks, rich descriptions, declaring researcher bias, negative case analysis, and peer debriefs (Creswell, 2009). I employed these strategies to support the trustworthiness of the findings.

Findings and discussion

The significance of taking action is key to introducing the intervention (AFCP) and facilitating its effective implementation. At the foundation of this action lies the motivated behaviour of both teachers and learners. In this section, I explore the potential of the AFCP to foster learners' self-determined behaviours, allowing them to transition from passive recipients of knowledge along the pedagogy-andragogy-heutagogy continuum to becoming learners who take the initiative, regulate, and drive their learning experiences. I also make specific reference to the three basic psychological needs and how these were at least potentially satisfied via the implementation of the AFCP intervention.

Moving towards the heutagogy end of the continuum

Progressing along the PAH continuum is a process that involves a balance between teachers' readiness to relinquish control and learners' need to take the initiative in becoming more autonomous. As demonstrated below, teachers who chose to implement the AFCP created an environment in which learners could engage in autonomous behaviour. Simultaneously, learners' need for relatedness was fostered since they were able to learn through social interactions with their peers. Teachers are regarded as key role players in this process. They have to take the necessary action(s) to facilitate learners' participation through pre-class and/or in-class activities, guiding them from being passive receivers of knowledge to engaging in teacher-initiated, learner-centred activities and ultimately progressing to self-motivated, autonomous learning initiatives.

As mentioned earlier, learners may find it challenging to move from the traditional teacher-centred approach to heutagogic learning, where they become autonomous drivers of their learning endeavours. Teachers unknowingly recognise learners' ability and readiness to move from a more passive teacher-centred approach (pedagogy) to a self-directed approach (andragogy) and then also to a more self-determined approach (heutagogy). However, Stoszkowski and McCarthy (2018) caution that teachers should take care not to presume that learners will master heutagogical learning on their own and certain attributes may, therefore, have to be taught.

From pedagogy to andragogy

The example below exemplifies teachers' adaptations to their existing praxis to employ a more active approach to learning when implementing the AFCP intervention.[1]

> I put them into groups, and I asked them to create a lesson. I gave them each a role. I asked them to create a lesson which had to include visual elements. It had to include some questions, some study questions. It had to include an introduction and an analysis and also some feedback.

1 Participant responses have not been edited.

In another instance, one teacher highlighted how she was challenged by her learners who were ready to move across the continuum but she, as an individual, has not yet made the mental shift required or adapted her pedagogical approach to move towards a more andragogic approach. This may also highlight the emotional demand with which teachers are confronted to adapt their practice to initiate a move across the PAH continuum.

> I started off teaching grade 11's. It was a very bright class that I first taught. They were like the intelligent of the intelligent so it was quite intimidating standing in front of them because they would always want to take a subject that bit further, and I'm like OK girls, can I just like. . . like this is what I need to teach you, I will do more research and come back to you, but just it was tough because it was the first time I was working with learners who actually wanted to engage in more and not just here's the work here we go.

Another explained it quite accurately via the analogy of learning how to drive a car. This also captures the potential of the AFCP to address the need for competence and autonomy, which enables learners to gradually move across the PAH continuum towards becoming more autonomous and independent.

> I believe it is the learners' responsibility to learn and the teacher's responsibility to give direction (not instructing alone). It's like learning to drive a car: If the learner doesn't sit in front of the steering wheel, the teacher continues to enhance his/her driving skills while the learner remains a passive passenger. The flipped approach in contradiction, has the potential to flip the teacher out of the driving seat and forces the learner into the driving seat. . . Teaching, therefore, is rather about enhancing learners' thinking about the content than remembering unquestionable facts. To help the learner making sense of uncertainty, it's important to put the learner behind the steering wheel and give the learner a voice to display their own interpretation. When listening to learners' conceptions, teachers can correct learners' misunderstandings about content. If learners took the wrong turn help them to know the map, so that they can get back on track again. But teachers who do ALL the talking, silence their learners' voices, which means the content remains abstract and the learners main concern is to try and remember everything. When they are writing end exam, they are supposed to know the map and adapt where they needed to.

From andragogy to heutagogy

The move from self-directed to self-determined learning is exemplified by more learner independence and less teacher input, direction, or control. Once teachers set the platform to explore and decided to limit their control over the learning experience, they witnessed learners' readiness to become self-determined.

> They enjoyed, you know, digging into the. . . topic on their own without being told exactly what to do.

> I found that the pre-class set the tone, got them thinking about the subject, and in almost every case they gave me more information than was contained in the textbook. I find that they can now highlight key concepts without me telling them what those actually are, as they have a basic idea of what they are learning about, so they are reading their work with more understanding.
>
> Now they're teaching themselves (laughs).
>
> So, the minute I give them something to do on their own, they run with it. . .
>
> . . . but with my grade elevens, they were just full steam ahead.
>
> But it was literally. . . almost like saying ok, here is all of the resources here is everything now you figure it out, and as a group they were able to do it beautifully.

The PAH continuum can be considered a form of scaffolding since its primary aim is to enhance learner agency rather than to increase conceptual complexity (Hase & Blaschke, 2021). It again exemplifies the high level of control at the end of pedagogy. In contrast, higher levels of maturity and low levels of teacher control are required at the heutagogy end of the continuum (Ilieva Nikolovska et al., 2019). As Chawla and Singh (2019) mentioned, the PAH move is usually associated with adult education or Institutions of Higher Education and Training. This can, therefore, be considered a key finding as teachers' experiences demonstrate both learners' readiness and willingness to embark on learning experiences where they take ownership and responsibility for their learning. Consequently, if learners can develop the skills and cognitive capacity to move across the PAH continuum more readily at a younger age, it may ease their transition into Higher Education and Training or into the workforce, which may be more complex and demanding and where greater emphasis is placed on skills and competencies (Youcef, 2021).

Meeting the need for autonomy via the AFCP

The findings revealed an intricate balance between learner autonomy and teacher control. Higher levels of teacher control yielded lower levels of learner autonomy and vice versa. When teachers embrace their role as facilitators, they automatically create opportunities for autonomous learning. Teachers found this move difficult because of the old habits of yielding most of the power in teacher-centred classrooms. Le Roux (2016) concurred by stating that teachers have to relinquish their control to allow more spontaneous learning experiences. Bartholomew (2018) similarly found a correlation between an increase in controlled motivation and a decrease in autonomous motivation.

Regarding learners' actions, teachers also expressed how learners exceeded their expectations with their efforts. Learners demonstrated how capable they were at working on their own.

> For one lesson I asked them to find me five fun facts about the sun (to introduce Astronomy Natural Science) and one student came up with two pages because it 'was

> so interesting'. This from the child who usually spends all lesson yawning or disturbing the others.
>
> Ek het spesifiek lydend en bedrywend as een van my onderwerpe gekies omdat dit 'moeiliker' taalwerk is en ek was verbaas om te sien dat die leerders dit eintlik 'op hulle eie' kon regkry. [I specifically chose active and passive as one of my topics because it is considered 'more difficult' language work and I was surprised to see that learners could manage 'on their own.']
>
> Ek dink dit wys vir leerders dat hulle onafhanklik kan werk, of dat hulle eintlik genoeg kennis het om iets self te ontdek. [I think it demonstrates to learners that they can work independently and that they actually have enough knowledge to discover things on their own.]

These experiences by teachers align with the point made by Deci (1992), who stated that although humans are growth-oriented and proactive, they are also vulnerable to control. When the need for autonomy is supported, it provides a scaffold for learners to internalise their autonomous behaviours, which positively affects their learner agency. When learners experience higher levels of agency, they tend to take responsibility for and ownership of their learning more readily (Sheldon et al, 2009). Central to the autonomy discussion is the notion of choice that translates into decision-making (Reeve & Cheon, 2021).

Meeting the need for relatedness via the AFCP

The psychological need for relatedness is seen to be the strongest contributor to autonomous motivation (Wang et al., 2019). If teachers neglect or refrain from including opportunities for collaboration or peer learning, important skills, such as the key interpersonal skills needed for effective communication, may remain underdeveloped. Teachers underlined the value of including learner-centred activities since these provided learners with feedback from peers, extended their existing knowledge structures collaboratively, and enabled good communication and interaction skills. Teachers also realised the value their contribution could make to the classroom and society.

> And, and I think afterwards I think they've found it very rewarding because. . . the feedback from their peers was very good.
>
> And adding to each other's discussions, because that is how I always tell them how an idea starts or how a conversation starts.
>
> Learners interacted well and I saw such an amazing side to my learners.
>
> Learners will start to realise that they can make meaningful contributions in class, at home or in society in terms of their ability to become critical thinkers and problem solvers. They will become eager to learn because they are included in the learning process.

Meeting the psychological need for relatedness allows learners to experience a sense of community and belonging in the classroom since this speaks particularly to humans' need to connect and feel connected. It also highlights the critical role teachers play when it comes to creating a classroom atmosphere that is warm, welcoming, and supportive. When learners' need for relatedness is satisfied, it may positively affect the teacher-learner relationship, which translates positively to internal motivational properties. If teachers omit peer learning and collaboration opportunities, learners may feel that they do not belong (Adi Badiozaman et al., 2020).

Learners may also increase their knowledge structures when they are provided with opportunities to express their opinions or views. Their peers can challenge these, which may broaden their perspective or alter their worldviews. This is beneficial because learners may be indifferent to those with views or opinions different from their own (MacCleod, 2004; Niemiec & Ryan, 2009), which may lead to exclusion.

Meeting the need for competence via the AFCP

Teachers recognised the potential of the active learning intervention to meet learners' psychological need for competence. They did, however, not specify how this can be achieved.

> Yeah, so it builds. . . it builds confidence.
>
> . . . to feel confident when they make contributions because they have a platform to do so.

When the need for competence is met, learners start to feel enabled, which positively translates to other areas of their lives. However, when their need for competence is continually thwarted, this may contribute to higher levels of amotivation (Ryan & Deci, 2020) that may reinforce passive learning behaviours. Learners cannot grow their competence if they are not optimally challenged to build their capacity (Di Domenico & Ryan, 2017). Addressing this psychological need is therefore noteworthy since learners who experience a sense of competence can transfer their skills and knowledge to novel situations and unfamiliar or changing contexts (Hase & Kenyon, 2007).

Although there was no direct reference to strategies used by the teachers in the study to build learners' competency, research has shown that specific strategies can be used to meet this psychological need. Teachers can, for example, provide learners with choice when it comes to activities or content (Herman, 2012), give non-comparative feedback regularly (Narendran et al., 2018), and allow opportunities to learn through trial and error (Turner, 2019). However, both excerpts show that teachers recognised the potential of the AFCP to meet learners' psychological need for competency.

Although learners' experiences are not included in the study, it is important to note their key role role when it comes to accepting or resisting a move across the PAH continuum and, consequently, whether their self-determined behaviours are activated.

Active engagement on their part can, therefore, be considered a prerequisite for the successful implementation of the AFCP intervention. When learners choose to participate and engage in active learning activities, it opens opportunities to move past andragogic and towards heutagogic learning experiences where they can initiate, discover, innovate, and ultimately drive their own learning paths.

Conclusion

Introducing the AFCP enables high school learners to move more effectively across the PAH continuum. When teachers adapt their pedagogy to become more learner-centred, learners' need for autonomy, relatedness and competence is addressed. This then positively affects their overall internal motivational properties and, by implication, their self-determined behaviours. Learners also become more autonomous since they are less dependent on their teachers and more inclined to initiate, explore, and drive their learning paths. Highly controlled learning experiences may thwart learners' psychological need satisfaction, ultimately impacting their overall emotional well-being and cognitive development. The recommendation is made that pre- and in-service teachers be exposed to context-specific pedagogic interventions that address outdated teacher practices that do not encourage the move towards the heutagogic end of the PAH continuum.

At the start of this article, I made reference to the Titanic analogy. Throughout this paper, the argument has been to steer from traditional pedagogy towards more learning-centred teaching. An earlier study proposed the AFCP as a practical intervention for in-service South African teachers to achieve this outcome. Here I have explored the potential of the AFCP to activate learners' internal motivational properties via the satisfaction of their BPNs. This, in turn, can potentially initiate a move across the PAH continuum. The goal of progressing towards heutagogy is to make learners more self-determined in their learning pursuits and cultivate the skills necessary for lifelong learning.

As we well know, there were not enough lifeboats on the Titanic to save everyone. Teachers are, therefore, called upon to act proactively and preventively by making minor yet crucial adjustments to the rudder. Ultimately, it will change the course of the entire ship and avoid the Titanic tragedy of educational stagnation.

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Data availability statement

The data supporting the study's findings are available from me upon reasonable request.

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Conflict of interest disclosure

There is no conflict of interest to report for this submission.

Ethics approval statement

Ethical clearance was obtained from the University of South Africa's College of Education Ethics Committee (Ref: 2021/07/07/58561080/31/AM) and the Western Cape Department of Education (WCED) (Ref: 20210810-4912) before collecting the data.

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