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Wheels Up: Spiral progression pedagogy towards creative movers using wheels

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ABSTRACT: This study explored a trailblazing creative means for Physical Education (PE) preservice teachers (PSTs) to explore movement: agility, balance and coordination by embodying a reflective approach to a series of practical challenges. A novel balance-on-wheels learning and teaching spiral progression was created for this bespoke intent. The study operationalised the reflective cycle dimension by Kolb (1984) to theoretically underpin and pragmatically structure the experiential embodied learning sequence. Teacher educators implemented a series of connecting experiences using balance bikes, bicycles and tricycles, scooters, mountain and BMX bikes and made sense of these using the Kolb cycle as a pedagogical guide. In so doing, the sequencing created opportunity for the group to collectively gain competence and confidence on wheels through the creative progressions. This collective transformative experience enabled the creation of an elementary school accessible progression spiral practice document to be applied within school placement as well as into upcoming early career teaching roles. Following the connecting experiences, PSTs were invited to share insights and ideas onto a class online interactive padlet. This was collated to depict the concomitant school-ready wheels progression spiral as well as a school checklist to consider accessible wheels experiences using affordances creatively.

Keywords: *physical education, motor creativity, progression spiral, preservice elementary teachers*

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Introduction

Curriculum is messy (Jackson, 1992). It is exciting and complex as reflective of teaching (Ching, 2011). Ways to tacitly engage and inspire learners is what makes PE so exciting. Creative ways to introduce and develop subject matter are welcome across all levels of PE. Creative skills are enhanced with psychosocial progression (Dominguez et al., 2015). The Early Year Foundation Stage (EYFS), (the Early Years curriculum in England) has acknowledged the importance of creative and critical thinking over numerous years (DfE, 2012). The current rendition also recognises the need to develop imagination and creativity (DfE, 2021). Certainly, through the lived, the experiential approach to creating a teaching and learning progression spiral, educators dedicated to and through the elementary age phase, will be able to facilitate opportunity for self; social and emotional development through an authentic context. Children revel through creative opportunities in particular through using the full breadth of a holistically subject rich curriculum, from elementary phases (Cremin & Barnes, 2018). Creativity is also a congenial construct to complement experiential learning. Cremin and Barnes (2018) remind us of our duty to explicitly foster creative development, as emphasised within the EYFS (DfE, 2021). Children love to play. Opportunities to do so beyond the early years are to be celebrated. Eberle (2014) posits play to consist of elements: anticipation, surprise, pleasure, understanding, strength, and poise. Children need, and love to play and be curious (Howells et al., 2018). Intellectual and perceptual curiosity positively impacts school performance and when combined with conscientiousness, serve to support progression as might that of intelligence (von Stumm, 2011). Therefore, progression ought to embrace a global movement of childhood play (Bruner, 1966). Holistically, early years practice fluidly uses and utilizes learning domains to foster development with play deployed as a significant conduit.

Within the realm of educational movement, motor creativity; the ability to respond in a divergent, dynamic or unique manner to a movement challenge, appears to increase between six and twelve years (Dominguez et al., 2015). Motorically, children progress through fundamental movement phases into sport skill phases across early and more intentionally, elementary aged years into later childhood (Gabbard, 2021). Play can extend further into older children's modified games which provide different means to experience educational movement. Experiential play, physical activity implemented through developmentally appropriate games and modified sports each proffer valuable means to enhance motor competence. Educationally, topics and themes make for exciting methods for educators to further engage pupils creatively, through an experiential lens. By embodying the lived experience through the teaching and learning cycle, we can collectively fill and share that space between content and pedagogy across the spiralling

movement progressions. Potentially, children ought to be able to advance both motor competency and motor creativity without our having to position these linearly. Indeed, it might be that using a modified games approach through wheels, reduces the traditional perceptions around bicycling (a solo recreational to competitive pursuit) in what entices more children to enjoy participation and learning across a created learning progression. A more nuanced construct of play could facilitate the emergence of motor competence and confidence through motor creativity as and when they are used and occur. Eberle (2014) contends play is emergent and resists definition. That stated, play has scope for "challenging or soothing, rough or gentle, physical or intellectual, mischievous or well mannered, orderly or disorderly, competitive or cooperative, planned or spontaneous, solitary or social, inventive or rule-bound, simple or complex, or strenuous or restful" (Eberle, 2014, p.231–232) participation. The presented and subsequent progression spirals will have all Eberle's characteristics as found to be of social value for each bespoke experience and context. A committed focus on this at elementary level is vital during PST training.

The scope and sequence presented in this paper adopts a novel approach of person - powered wheels (scooters, and bicycles) as a challenging yet accessible medium for participants to understand how they can improve their balance as they develop a keen sense of how they move through a variety of environments on wheels. Opportunity for PSTs to considers ways to use such a medium within their own practice was embedded across the process. Recently NHS Digital (2021) highlighted a need to reengage children in physical activity following the pandemic. This paper proposes a creative way for PSTs to help children potentially reengage in transferrable life-wide and life-long activities, within the mode of wheels.

Learning is situated through a potentially complex recursive cycle across planning, teaching, to and through assessment of the obtained work and of the actual effectiveness of the process. When appropriate, the learning journey can be enacted and admittedly complicated through that all-encompassing experiential domain, whereby "knowledge is created through the transformation of experience" (Kolb, 1984, p.41). The problem of creating a meaningful and developmentally appropriate learning sequence on wheels may appear complex, due to perceived risks and potential unpredictability of balance and control. However, balance and control are key aspects of the English elementary PE national curriculum (DfE, 2013), and they will be examined through the spiral progression in this paper exemplified through the lived experience of the PSTs. A spiral progression presents and positions learning in such a way that learners get to further their understanding and knowledge through revisited opportunity to recapitulate learning across a series of variations. In this paper, the spiral learning engages

participation using a wide set of wheels, within a range of experiences, over, across, around and through a variety of affordances.

As with all outdoor experiential learning, the risk ought to lie within the learning rather than any sense of lived danger, whereby that conceptual zone of proximal development (Vygotsky, 1978) is holistically risk assessed and contemplated. This is crucial in order to present a series of accessible learning and engagement entry points for diverse learners. Opportunities to learn, to know that and know how, are embodied through the building of where, when and why; contextual knowledge, across the experience. All these elements were considered when focusing on learning balance through wheels, allowing the exciting experience to be Wheelie Good!

Children embody ways of knowing in PE through immersive experiences (Payne & Costa, 2021). These holistic tenets are crystallised through our balance on wheels series. Higher education and initial teacher training concerns complex learning (Knight, 2001). Such ambiguities invite more support for our PSTs as offered in this paper. PE teacher education will want to encompass the experiential elements sought for targeted child settings. The affordances that are used through the initial teacher education programme of focus, arguably reflect and represent potential lived experiences for graduating early career educators in prospective elementary school settings. In the current rendition, a creativity framework to progress motor creativity alongside motor proficiency of agility and the stability skills of balance, and coordination through the conduit of wheels, is constructed using interesting movement concept combinations through space awareness and effort in relation to the environment. It sought to engage PSTs through their learning as well as provide accessible and transferable teaching and learning scope and sequence for their future based practise as early career elementary educators invested in elementary PE.

From early years, children are physically and emotionally 'present' to take advantage of planned and emerging affordances. Affordances: possibilities for action available through that available means (Gibson, 2014), assist children in making sense of content they experience. Awareness of and considerations from PSTs will also wish to tackle such dynamic notions alongside the more stable elements of the PST education program. Tasks presented across the created progression spiral span the closed to more open ends of a motor skill continuum, whereby movement challenges have determined and emergent movement possibilities. It is proposed that young children more easily express themselves kinaesthetically (Torrance, 1981). For children to be able to develop creativity, they need to know; the technical prowess of and the understanding underpinning what they are doing. A closed stable environment to one with more nuanced options increases fundamental skill fluency. Educators likewise need to be knowledgeable

and only at such points, are arguably ethically and safely ready to extend their pedagogy to facilitate higher order; creative thinking. Motor wise, if children are motor competent, they then have the cognitive capacity to explore fluency, originality, and imagination. What with the acknowledgment that embodied learning is nonlinear, the ecology of how motor creativity develops remains nuanced at best. Children however at the older elementary stage (11–12-year-olds) score higher across motor creativity than their younger aged (6-7 year olds) counterparts (Cenizo, 2005). This implies that a spiral curriculum holds a promising capacity to progress creativity as part of the educational experience from an early age phase. As such, the creation and integration of progression spirals through fundamental skills of their own sake for the younger aged children and then for that of older children, offers a robust pedagogical approach to creative PE.

Within PST education, scaffolded opportunities are effectively sought and imbedded as to build knowledge and acumen (Bruner, 1996). Such intent creates possibilities for the emergence of student-centred learning embodied within the dynamic lived context whilst explicitly building content and subject knowledge and competence. When we explore notions around autonomy, of shared ownership and accountability for the learning process with the PST, the realization that content is more than just content is profoundly apparent (Knight, 2001). Content is more than content. Pedagogy is more than pedagogy. Conceptual space between these, if it exists, teacher educators pragmatically explore with collaborating PE PSTs around the informal six general practical areas of England's PE National Curriculum (DfE, 2013). Opportunities to link motor confidence and competence through creativity from early years into and through the elementary age phases will certainly entice and excite children to move as they learn and learn as they move and help support children to find again the joy of movement post pandemic (NHS digital, 2021).

Globally, content and practice essential for PE embrace the spirit that it is the right of every child (UN Committee, 2013), to know about, and to be able to do, as a result of participating in the respective PE program (ICHPER.SD, 2012). Namesake wise, the remit for elementary national curricular PE in England focuses on developing the motor skills of agility, balance and coordination. This allows for children to then apply these fluidly to a range of activities including and beyond athletics, dance, games, gymnastics, outdoor adventure activities, and swimming and water safety areas (DfE, 2013). The elementary curriculum in England has the potential for children to experience a wide range of activities. These could be the new wheels based Olympic and Paralympic events as seen and introduced in Tokyo 2022. It just needs more PSTs to be confident in being able to see how agility, balance and coordination could be applied to wider non-traditional sports such as those using wheels. Of course, curricular program policy guidelines remain companionable with existing PE pedagogical strategies, styles, models and approaches. Lived PE remains dynamically responsive. It may not be reduced to a perfunctory one

size-type-approach. It remains embodied to the currency of experiencing something here, now, and with whom. In essence, prioritizing the experience increases student interest and engagement (Fletcher, Chroinin, Gleddie & Beni, 2021).

PE, and consequently PE teacher education, easily accommodate experiential learning toward outcome focused physical activity, the latter as defined as bodily movement requiring energy expenditure (WHO, 2020). Curricular wise, PE remains the explicit planned progressive learning educational space to learn to move and move to learn (AfPE, 2015) across all age phases of education in England. Sport occurs through PE, as well as in extended curricular experience and community provision, hence the focus on wheels based progressions. It is felt that a wheels theme could be easily transferred from the curriculum to the community and vice versa. Along with sport and physical activity, PE utilises movement as its main conduit from which to draw from other learning domains. Experts through early years seamlessly embody these as they create and maximise the incidental learning moments for children (Broadhead, 2003).

From a Bronfenbrenner perspective, a contextual socio-cultural influence can be understood and indeed facilitated for our young learners (Bronfenbrenner, 2005). By becoming confident and competent in who they are, how they think and move and communicate, their propensity to extend notions of play into other physical activity is likely heightened. Their purposeful positioning of themselves as socializing agents (Gabbard, 2021) can explicitly support the building of self; metacognitive, awareness as regards how each person influences their own motor development in meaningful and equitable ways (Murray & Napper-Owen, 2021). Gibson's perspective proffers insights into ways of life and hence living (1983). The socio-cultural consideration bodes well for early years and resonates with respective PST education and fits ecologically with aspirations to implement wheels experiences across an engaging and aspiring elementary PE curriculum.

Context

The authors of this paper both have a passion for wheel set disciplines, as they are both BMX riders and inline skaters. They both also have experience of competing at elite level sport ranging from competing at Commonwealth championships (pole vault), to World Championships in category events (pole vault, high jump and track cycling). They also have experience of enjoying both national and international competitive opportunities (long track ice speed skating, pole vault, cycling as well as both Para-cycling and Para-triathlon). Other insightful lived experiences include coaching and performance

enhancement roles with team games and individual pursuits through voluntary and professional frameworks across European and North American club and collegiate systems. Educators and participants alike have something exciting, a passion and or skill set, to bring to their wheels journey.

The writers were inspired by the success of all of the GB team during the summer 2022 Tokyo Olympic and Paralympic Games, across the 'wheels' disciplines, including the new events of BMX freestyle, BMX racing and Skateboarding. Team GB won 19 Golds, 17 Silvers and 6 Bronzes across the disciplines of BMX freestyle, BMX racing, Mountain Biking, Road Cycling, Track Cycling, Triathlon, Modern Pentathlon, Skateboarding, Para Cycling and Paratriathlon. The colleagues looked at ways to inspire, inform and educate PSTs through non-traditional school-based activities. Such possibility planning might encourage future PE practice that the next generation of wheels-based athletes are pragmatically encouraged from an early age within elementary school setting. Sport England (2021) noted that young children have shown a reduced interest in team sports following the pandemic. Therefore, it seemed an opportune moment to develop new areas of PST PE teacher education appreciation.

The authors felt that using life-wide activities such as balance bikes, scootering, mountain biking and BMX and examining the wheels medium through the progression spiral of a balance skill theme, implemented through a varied flat to undulating environment, would allow for a novel experience, yet transferrable and has the possibility of being continued outside of just the school PE curricular. Moreover, they felt it important to create a fluid progression that could be dynamically contextualised by educators across an array of (elementary) school educator accessible settings. The focus on wheels also allowed for independent learning to occur, rather than having to wait for others to undertake some of the more traditional team-based sports approaches.

Methods

Following the seeking of institutional and participant ethical permission, PE PSTs in their final year of their elementary teacher education degree at a university in the South West London area, England, were invited to participate in the small-scale study. The enquiry aimed to gather and collate insights from the targeted group following their unpacking the breadth of England's elementary PE curriculum through a creativity lens across their specialism over a two-year progression. Creativity was subdivided to accompany a skill theme approach (Graham et al., 2020) for Early Years and lower elementary ((DfE, 2021;

2013), then through a holistic iteration of Bunker and Thorpe's (1982) Teaching Games for Understanding (drawing from games into individual active lifestyle pursuits) for upper elementary national curricular PE (DfE, 2013). This academic continuation aligns with motor development emphasis upon a fundamental motor to more advanced and sports-specific skills (Gabbard, 2021). It prepares children for further participation within and beyond the curriculum and into their secondary progression. Guided reflection to creatively think beyond the here and now is part of preparing for future lifestyle participation (Murray and Napper-Owen, 2021). As such, a reflective model (such as that of Kolb, 1984) makes for a good ecological fit for this educational experience.

The initial teacher education (ITE) progression implemented an array of movement proficiency progression spirals ready to implement in elementary school contexts across indoor to grey, green, and blue spaces culminating through a water set progression (Murray & Howells, 2021). PSTs participated in PE specialism sessions that focused on teaching and learning sequences across indoor gym, playground, field, general and specialist wheels-themed park and swimming pool environments. The current progression is a new initiative never focused on before within elementary PE PST teacher education and utilised a variety of these; grey and green spaces; through general and bespoke bike tracks. It can be easily implemented within school space, local parks as well as any custom-built area for cycling, building within the current curriculum policy to extend the participation in the sport to life wide physical activity participation. This approach is trail blazed by a group of female PSTs (coincidentally) and is holistically inspired by the work of Lambert (2020, p.154), whereby opportunity to explicitly avoid any "prescriptive unimaginative 'straight' pedagogies that restrict teacher creativity dominant PE classrooms, giving rise to ongoing exclusions and maintenance of a space where the embodied experience of moving in the world is foreclosed to many young women". This consideration is revisited and positioned by the mixed PST cohort post connecting experience, who reflected upon the wheels balance progression through a "multiplicity of physicality" (Azzarito & Solomon, 2009, p. 173) discourse as to destabilize any potential gender binary for children when they consider wheels-related activities and sports equipment required for these in elementary school and community settings.

The experiential cycle dimension (only) of Kolb (1984) was utilised as a working framework to guide the reflective action set across the day. This progression spiral contextualised to the needs and through constraints and interests of the PSTs as it commenced from a known entry point as regards experience on wheels and formative fundamental skill assessment using the generic level of skill proficiency (Graham et al., 2020). Participating PSTs were provided a concrete experience for each progression of the spiral. They then took a thinking break, to rest following the physical activity and to reflect upon it. Facilitated discussion (also formed part of the reflected process) to

abstractly conceptualise this for primary use preceded cyclical active experimentation at the outset and culmination of each staged progression (see Figure 1).

The PSTs examined how the wheels-set balance theme added to progression spirals, to enable them to be ready to teach accessible wheel opportunities within their educational settings. All PSTs had previous knowledge of using and applying the progression spirals to other areas of the national curriculum (Murray & Howells, 2021). The use of the progression spirals supports PST understanding and knowledge. It develops their teaching practice using innovative and creative ideas, and simple ideas creatively. The national curriculum for PE aspires to facilitate pupils in their capacity to lead a healthy active life (DfE, 2013). Yet, the data indicates that children have changed their traditional way of engaging in healthy active lifestyles or have struggled to re-engage in healthy active lifestyle following national lockdowns (Sport England, 2021). More than 50% of the population decreased their physical activity (Stockwell, Trott, Trott et al., 2021). Hence, non-traditional everyday activities are welcome additions.

Participating PSTs had a whole day embodied lived connecting experience at Cyclopark, Kent. Cyclopark is a charity trust and a non-for-profit organization. Cyclopark's main objective is making sure that their facility is an outstanding sporting venue, accessible to all ages, and abilities offering cycling, fitness and wellbeing. It is a purpose-built outdoor environment with cycling, skating, and running tracks. It has a 2.9km tarmac course designed for road bikes, also used for wheelchair racing, marathon inline skating, and salmon skateboarding; a 330m track for BMX racing; and a 6km track for mountain biking. There is also a floodlit skatepark. It was a superb hosting venue for the group and the much anticipated day out.

The spiral experience – Theoretical framework

The progression spiral is set upon a curriculum spiral ethos (Bruner, 1966) whereby the learning is revisited across the experience in different ways to match and accompany the needs and improvements of each participant. In this planned advancement, the focus was upon improving balance proficiency and building an appreciation of how to adapt to varied pathways, speeds and terrains. Such movement concepts facilitate the understanding behind the skill (Graham et al., 2020). Concepts "enable us to impose some sort of meaning on the world; through them reality is given sense, order and coherence" (Cohen, Manion & Lawrence, 2018, p.14). The affirmation statements (Table 1.) are set through creative contextually dynamic opportunities in how to attain competence. They seek to encourage children to build their own confidence as they become agentic movers. Across the child paced progression, knowledge and understanding around balance developed by explicitly using varied movement concepts of how and where and in relation to what, where and who, the skill of wheels balance is executed across the spiral.

Figure 1 depicts the experiential wheel balance theme set across the dimension of Kolb's cycle (1984) and enacted through a creative progression. Each experiential learning opportunity was afforded this sequence to provide a pattern of general sequence, such that the 'how' would be familiar to the participants to 'balance' the newness of the 'what' of the day, to shape the pedagogical expectations. This ensured tutors kept the quality of the experiences high with the opportunity for the potential of emergent transformative learning moments. PSTs revisited the learning in the warmth of the indoors between each experiential wheels segment outside, across each phase as to allow time to rest, refuel, rewarm. This enabled the PSTs to then be ready and able to reflect and start to explore and build elementary school transferrable ideas.

The five staged experience commenced with the use of balance bikes on flat surfaces (1), to adapted bicycles and tricycles on flat surfaces (2), then to small wheeled scooters on flat surfaces (3), onto the larger wheeled mountain bikes on flat surfaces initially then transferring to undulating surfaces (4), to finally smaller wheeled BMX bikes on undulating surfaces (5). The process embodied a mini cycle and progression spiral for each of the five progressions. Overall, the progression toward proficiency in balance on wheels evolved through the development of motor competence, confidence and potentially, the start of a transformative motor creativity experience. Balance exercises positively impact speed, agility and balance (Acar & Eler, 2019). It is a crucial skill for wheels (and all) activities.

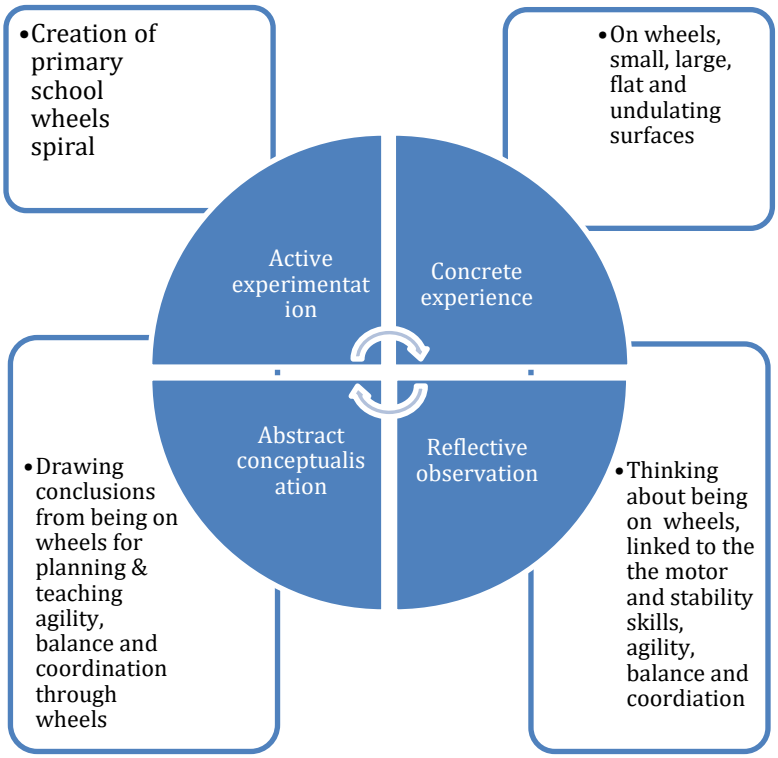
Facilitated cyclical sequence across each experiential learning segment	Spirals upwards	Type of sports equipment used across balance progression on wheels integrated across the spiralled reflective cycles
		Progression 5: smaller wheeled BMX bikes, undulating surface Progression 4: larger wheeled mountain bikes, flat and transferring onto undulating surfaces Progression 3: small-wheeled scooters, flat surface Progression 2: adapted bikes & trikes, flat surface Progression 1: balance bikes, flat surface

FIGURE 1 A revisiting reflective cycle utilised to frame each of the five learning segments. Each experiential progression cycle is facilitated around the experiential learning cycle

The spiral progression - Concrete experiences

The PSTs entered the progression spiral using balance bikes (see figure 2). Their experience started with balance bikes, bikes without pedals. Balance bikes do not have brakes so the first thing that the PSTs needed to learn to stabilize and examine how to stop. There were several ways to stop, the two-foot technique of using friction of the bottom of the shoes against the ground to slow the bike down, or alternatively to use the affordances of the ground e.g., riding onto grass to slow the bike down, when riding on tarmac. The balance techniques were developed through five stages, firstly standing and walking the bike, secondly sitting on the seat and walking the balance bike. The third stage was to use one foot to push off the ground in almost a scootering manner, so the preferred foot propelled the rider forwards, the non-preferred foot, was off the ground. The fourth stage was to use an alternating unilateral one leg then the other, striding manner. The fifth stage was described as the frog push-in when two feet bilaterally pushed against the ground to propel the rider forwards.

FIGURE 2 Balance bike exploring how to travel on wheels (without pedals)

Progression 2

The PSTs then progressed onto adapted bicycles and tricycles (see figure 3) used to aid balance and control for those children/adults less competent or confident balancing on top of a set of wheels. These bicycles were much slower and heavier than the balance bikes and the turning ability of them was much slower. They were designed that way to help with the stability of the ride. The PSTs needed to learn how to adapt their faster speeds experienced on the balance bikes to be able to turn the tricycles in particular.

FIGURE 3 Exploring space and direction on tricycle

Progression 3

Next in the balance in motion spiral was smaller wheels (scooters) (see figure 4), moving from unilateral balance control to bilateral balance and learning. These scooters have brakes (situated at the rear of the scooter), and this awareness of speed control transfers over to all the cycle iterations. The amelioration in balance focused on using the preferred foot to push off the ground whilst balance on the non-preferred foot. The balance point was much more central over the middle of the scooter and the hands were much higher up compared to the balance bikes. The progression of balance was extended with the introduction of gliding, through the scoot and glide, by pushing off hard from the ground and letting the wheels like the scooter forwards. The PSTs then extended this further through the introduction of cornering and carving round both directions and considering how to adapt their balance to remain on the scooter as they carved.

FIGURE 4 Solo challenges on scooters

Progression 4

Progressing onto larger wheels (mountain bikes) (see figure 5), considering balance and control techniques over a variety of different affordances, including both the flat tarmac course as well as the undulating pump course. Through using the undulating pump course, the PSTs were able to examine balance through body position, ascending, descending, and cornering. With the mountain bikes, as they had hand brakes for the first time in their lived experience, the bikes were also incredibly large compared to what they had been using up until this point, so the balance of body position was the first core aspect that they had to develop. How this balance of body position then changed as they went both up and down the undulating pump track. As they climbed, they had to move their body weight forwards, almost over the front wheel to help maintain grip as the bike ascended. They noted that when they did not lean forwards enough the front wheel lifted. It was also the first time that the PSTs had experienced gears, and they had to vary the gears at the right time to help support their movements e.g. reducing gears when climbing, and increasing gears as descending and cornering. They used their gliding skills and leaning skills learned in carving corners in scootering to help them balance as they glided around the corners on the mountain bikes. When they descended, they had to move their body weight back so their position on the bike was with their arms stretched out, pedals level, fingers covering the brakes, and looking ahead.

FIGURE 5 Larger wheels mountain bike on the flat before moving to undulating area challenges

Progression 5

The final stage of the spiral progression was smaller wheels (BMX) over the undulating racetrack (see figure 6). Here they were able to transfer the body weight transfer movements of ascending and descending to the racetrack. BMX bikes only have one brake, most commonly the rear brake, the use of the brake to help balance, was one of the first aspects when focusing on the smaller wheeled bikes. The use of feathering the brake and only using the brake when in a straight line allows for better control and coordination. The BMX racetrack is of a national competition standard and many of the PSTs at first were quite fearful of the undulating nature of the track, due to the start hill being quite intimidating and worrying about lacking the ability to be in control of the bike. The balance was developed through unweighting and weighting the bike over the bumps of the track in that the PSTs had to use the skills from their ascending and descending of the mountain biking to pump the bike over the bumps. There is little pedaling that occurs within the BMX track, except around the corners, the bike pumped back and forwards to move the bike forwards.

FIGURE 6 Progressing the smaller wheels into a larger undulating area

The spiral experience - Reflective observations

Throughout the spiral experience the PSTs learned that looking ahead was key to all aspects of the spiral progression, one of the easiest skills to learn, but also one of the easiest skills to forget, yet it made a massive difference to their balance ability, for example, if the nose went in the direction of travel, then the rest of the body followed. Reflections explored the benefits of having tutors model starting points and giving explicit input on the technical and strategic aspects of agility, balance, and coordination through wheels play. Play was observed across a continuum of less to more purposeful, and whilst PSTs acknowledged they needed the direct input to initiate each micro lesson, they found the free play transitions (between learning sets) to be fun and collegially helpful. Peers were able to share at discretion to help one another, as well as to immerse themselves in their own experiences. Scheduled breaks were also viewed as constructive to the process as to allow for physical rest and facilitate collective informal discussion around each learning set created across the wheels spiral. PSTs were pleased to find that despite the wide breadth of motor competence of the fundamental skill of balance using wheels, all participants were able to combine fundamental skills and transfer them to create meaningful tasks and mini games (as through a TGFU approach; Bunker & Thorpe, 1982) using each and all wheel modes.

The spiral experience - Abstract conceptualizations

PSTs shared ideas around accessible and ready ideas for the elementary school playground, using the usual PE equipment. These ideas extended to local grey spaces and nearby parks as to build a progression of wheels experiences in an accessible and developmentally appropriate manner. Table 1 depicts the created and completed developmentally appropriate spiral of balance progressed through wheels. PSTs participated across each segment from novice to progress at their own pace. They then discussed ideas for elementary school planning. An accompanying “I can” affirmation ensures the experience starts with and remains situated by the learner. Table 1 reads from the bottom up, as to show that children may well go beyond our planned aspirations. What is important is that they have had scaffolded opportunities through PE to develop such interest, passion, and acumen. The respective balance onto wheels entry point for educators will be determined in part, by proficiency and understanding of students, objectives and aspirations, and other contextual considerations.

TABLE 1 A developmentally appropriate progression spiral of balance using wheels. Progression spirals and the table reads from the bottom up

Pupil affirmations	**Motor developmental phase**
I can choose the level of challenge through recreational to more competitive wheels experiences using a variety of forms of wheeled mode I can adapt and or create wheels mini games I can participate in mini games using wheels	 **5. Highly proficient** on wheels as to be able to transfer skills across wheel modes for a variety of purposes in varied settings
I can choose the level of challenge through recreational to more competitive wheels experiences using one form of wheeled mode I can use my balance to participate in a variety of wheel propelled activities	 **4. Competent** on certain wheels across certain self-selected terrains
I can improve my balance using wheels while pedalling to travel in different pathways across an undulating terrain in different directions	 **3. Reasonable control** on wheels when travelling across undulating terrain (and or across flat terrain of increased challenge; in directions and speeds, and timing when solo, in pairs & group synchronisation
I can lead my partner through my own pathway challenge, using different movement concepts in relation to space and pace. I can follow my partner lead through their created challenge pathway keeping balanced I can create my own pathway challenges	 **2. Reasonable control** on wheels when travelling across flat terrain
I can improve my balance using wheels while pedalling to travel in different pathways across a flat terrain in different directions I can improve my balance using wheels by pushing my feet along the ground to travel in different pathways across different terrains	 **1. Novice to balance beyond self body weight - wheels rookie** entry level for early years and any novice ready to enjoy wheels activities
I can maintain balance as I travel on the ground using my usual mode of locomotion	Pre-requisite (safety): Novice mover

Notes: Learning objectives can be created through the affirmations to build confidence alongside competence and vice versa early years through curricular determined. **Novice mover-** Entry point for all learners to raise self-awareness of how they balance their own bodies before adding balancing on/with equipment. Experiences using body for management of self before introduction wheels (ahead of entering this progression spiral).

The spiral experience - Active experimentation of newly acquired knowledge

Participating PSTs remarked upon the uniqueness of the wheels connecting experience to further develop their understanding, knowledge and application of agility, balance and coordination within novel non-traditional PE curriculum activities that have the potential to inspire and motivate a wide range of children. PSTs noted that elementary school children would enjoy the challenges and, as with other areas of the PE curriculum, would and should be able to design their own challenges and movement sequences, mixing up skills with terrains / affordances, through tasks and mini games. The connecting experience also provided opportunities to consider how to effectively plan for accessible progression from a body management perspective (Morison, 1969). Following the transformative experience, PSTs took the approach, and developed a shortened spiral progression, ready to teach in their PE lessons that they shared on the day, they posted these on their online interactive padlet. They used the padlet as a means to share good practice. Three examples are shown below and shared with permission of the PSTs.

Example one: Balance bikes

Progression 1 - Explore the space and free play (following and having chance to practise the safety rules at the outset) within the space- playground, park; available space.

Progression 2 - Follow a peer and switch lead-follow positions, pairs mini games.

Progression 3 - Negotiate a course e.g. starting in basic to more complex such as clockwise. and counter clockwise, weaving around cones, aiming to keep wheels along chalked or existing lines.

Progression 4 - Create a pathway and build on this -self-to peer-to group tasks through games-based activity.

Progression 5 - Build into a course e.g. group 1 idea add to group 2 so that class have created a set of wheels stations.

Example two: Scooters

Progression 1 - Similar ideas for children to transfer learning from balance bikes to another wheels medium, explore the space on the scooter, consider the new hand position, the different foot push position to initiate the scoot and how the body is more upright on the scooter. Free to play to explore body movements.

Progression 2 - Team relays using travel tasks to scoot from start to another point and back- incorporate movement problems to generate opportunity for directional solutions e.g. scoot around the hula-hoop, between the cones.

Progression 3 - Mini games, such as follow my leader around Figures of 8 directional loops.

Progression 4 - Peers create and present a routine e.g., small groups making one (can add music- a scooter dance or pretend scooter-version equestrian routine or use the longboard dance competition as inspiration to combine developing short and long movement patterns on a scooter).

Progression 5 - Playing out a board game such as snakes and ladders on the playground using the scooters as the medium of travel.

Example three: Bikes – Challenge progressions

(Have a central challenge ready with a related challenge to support it)

Challenge 1- Manoeuvring around a space (as with ball games), controlling balance and staying on both pedals.

Challenge 2 - Reduce the space (bring the cones closer together) and challenge how to manoeuvre and stay balanced on the pedals.

Challenge 3 - When foot/feet leave pedal, that bike is out of this challenge and moves to a nearby figure of 8 manoeuvring practice pattern, as the challenge continues until there are balance champions in smaller spaces. (Inclusive exclusion with continued relevant challenge and practice provided).

Finally, PSTs used the Kolb cycle (1984) to develop a guiding checklist (Figure 7) for when they get to adapt and or create and implement their respective school based progression.

The following is the PSTs, wheels set up check list:

- Audit what your class enjoys.
- Audit what equipment you have.
- Use it creatively to ensure equitable opportunities regardless of competence
- Audit your local community.
- Reach out to local opportunities whereby bicycles and or scooters can be accessed; borrowed or hired and safely used.
- Risk assess what you manage to audit (use site and school related formal risk assessment approach for all legal compliance-use an existing school risk assessment as your starting point). Then follow with a pupil learning possibility exploration. Where might you create opportunities for movement possibility exploration which keeps within the ethical safety compliance remit and your own comfort zoning?
- Aim to build your own motor competence and confidence by participating in some wheels activities which you can plan within your school setting straight away.
- Take the time to try out your ideas with other educators and share with school management, get your school peers, and whole school interested and then involved in ways which reflects the interests of your children.
- Be bold and explore creative ways to progress learning and motor competence.
- Form new collaborations and partnerships and aim to give back so that your PE curriculum reflects the aspirations and needs of all children. (Think about sharing venues and equipment (and costs) with other schools).
- Give yourself the chance to learn as an adult, to withhold judgement. You are a role model, and your class knows you are wonderful.
- Use a local to global context to help shape how you enact your PE curriculum, e.g., merge cultural, historical to major sports ideas across the curriculum calendar. Take your curriculum out to a world stage and back to each pupil.
- Have a go!

Conclusions

The journey of elementary PE for educator and child alike is likely to be complex (Carse, Jess & Keay, 2020). Ways to simplify processes and practices ensure equitable access to and use of potentially useful and engaging affordances. These can be used to holistically enhance the learning experience (Baggs, 2021). Embodying meaningful ways to explore this for and alongside our future educators is one way to ensure this journey reflects the nature and motivations of all participants. In this current joint exploration, PST and teacher educators of early years and elementary PE sought to identify progressive teaching and learning experiences using the movement and stability concepts of agility, balance and coordination mediated through wheels. It is proposed that new appreciations of notions and concepts around the skills of agility, balance and coordination, can transcend prior conceptions for further development across a range of other experiences propelled by the body, in a similar fashion as illustrated through wheels as in this paper.

It is foreseen that this creative experiential application can be explored through other areas such as through educational gymnastics; outdoor adventurous exploration into

parkour; agility, balance and coordination into body resistance and suspension training; cultural dance into figure skating (both ice and inline); collaboration teamwork, control and coordination in bobsleigh, luge and skeleton through skateboards as well as street games. An experiential framework was adopted across our connecting experience day to afford action, thinking and 'just being breaks', intertwined with that evasive 'joie de vivre' essence through the learning spiral. All experiences could have so easily remained 'just good fun'. Our PSTs have had the opportunity to experience a wide variety of activities we believe could inspire children and transform the PE curriculum and their approach to their practice. We recommend for future PSTs that they create their own tacit journey, through the spiral progressions and the Kolb cycle to support their planning and teaching.

The transference of fundamentals onto another medium (wheels in this case), attained a deeper impact denoted through PST reflection, than exploring pedagogy through varied more traditional curricular areas. We invite, following this small scale study, our future PSTs and other teacher educators to explore and share a wider range of creative and innovative mediums across their learning and teaching. This may also serve to positively influence future generations of elementary aged children through the facilitation of such transformative learning opportunities. We highly recommend wheel-based explorations of embodied practice to develop movement competence, confidence and motor creativity.

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