

# **Teachers' Constructs of Quality in Secondary Physical Education Teaching**

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**Appendix 1.1: The Department for Education and Skills (DfES, 2003, p.5) characteristics and outcomes of High-QPE (HQPE) and school sport.**

'When there is HQPE and School sport, you will see young people who:

- Show a strong commitment to making Physical Education (PE) and school sport an important and valuable part of their lives in both school and the community;
- Know and understand what they are trying to achieve and how to go about it;
- Have an understanding of how what they do in PE and school and community-based sport contributes to a healthy and active lifestyle;
- Have the confidence to get involved in PE and school and community sport;
- Have the skills to take part in PE and school sport and are in control of their movement;
- Respond effectively to a range of different competitive, creative, and challenge-type activities both as individuals and as an integral part of teams and groups;
- Are thinking about what they are doing and making appropriate decisions for themselves;
- Show a desire to improve and achieve in relation to their abilities and aspirations;
- Have the stamina, suppleness, and strength to keep going; and
- Enjoy PE and school and community sport.

**Appendix 3.1: The semi-structured A3 template for the Initial Professional Dialogues (IPDs).**

<p><b>Teacher's background</b> (sporting experience, interests and hobbies)</p>	<p><b>Teaching</b> (Length of service, age at onset of ITE, what route they trained by, emphasis during training)</p>	<p><b>Schools</b> (type of school sector(s) worked in and age range(s))</p>	<p><b>General notes</b> (notes not within another category)</p>
<p><b>Teacher's background</b> (education, reason(s) for becoming a teacher)</p>	<p><b>Place in Career</b> (how the teacher has come to be where they are in their career/roles/current position)</p>	<p><b>Teaching</b> (what aspect(s) of teaching are most enjoyed/not enjoyed)</p>	

## **Appendix 3.2: A sample of the research participants' biographical accounts collected via the initial professional dialogues.**

### **Hope (ECT)**

Hope's sporting experience, interests, and hobbies included dancing from the age of two. This included completion of Dance exams three times a year since the age of three. From age six, she started competing in Dance competitions and by age fourteen had become a premier championship dancer. This led to her starting to teach Dance at the age of 14 in a range of genres. In July 2018, at twenty years old she opened a Dance school with a friend. Hope also enjoyed a range of other sports. Firstly Athletics (track and field), which included competing in 800m and Pole Vault for Wolverhampton. She also represented the West Midlands in High Jump. She played Netball at school and also competed for her County. She participated in Gymnastics at school and competed in their competitions, as well as performing gymnastics displays for Wolverhampton for another secondary school. She has also completed all the different swimming levels as well as lifesaving. Alongside this, Hope has completed a range of coaching courses in several sports, which are not part of her own sporting experiences. Her main interests lie in aesthetic activities.

Hope's journey through her education can be visualised here:

#### Pre-Teacher Training

- CofE Primary School and a joint Secondary School/6<sup>th</sup> Form. Took GCSE PE and A-Level.
- Attended university at 18 years old, to study an undergraduate BA (Hons) in PE.

#### ITE

- Directly moved onto the School Direct programme to train as a teacher in Secondary PE.

Hope's early experiences in Dance were confirmed when she started to teach dance at dance school. PE was the only thing she felt she excelled at growing up. She would like to inspire the next generation and help them develop a love for PE as well as helping them develop as a person. After learning more about PE at university, she wanted to teach it effectively and help to raise the profile of the subject. In the future, Hope aims to

complete a Masters in Education and eventually complete a PhD and potentially become a PE lecturer.

Hope is currently training to be a PE teacher in the School Direct programme in the West Midlands. She feels that the main emphasis on the course is doing what the PE teachers/mentors in school want her to do. Hope has experience working around academies and a community special school (ages 11-18) and a Foundation and private/independent school from ages 3-18 years.

Hope enjoys teaching core PE, making her schemes of work, and having some freedom to choose what she has taught on her placements. However, she has struggled when her mentors have expected her to teach in more of a traditional way, which she feels she has had to comply with to qualify as a teacher. She enjoys teaching principles of play rather than technical aspects of sports and also enjoys being creative. She also enjoys teaching GCSE PE and feels she can engagingly present this. She least enjoys the more scientific aspects of A-Level PE. She feels she lacks content knowledge in these areas and finds them hard to understand. Hope has also found confrontation of pupils difficult at times, she outlines a particular example where some Year 9 boys had intimidated her when teaching a lesson with a large number of pupils present. The behaviour of pupils has therefore made her question whether she enjoys teaching.

### **Cole (MCT)**

Cole loved sport growing up and Football was his main sport until around thirteen years old. He played competitively. He had knee problems growing up as well, so spent some years out and then returned to playing later. This included playing at university. Now Cole plays sport for enjoyment, and anything recreationally. He also pursues music interests outside of this. Cole's journey through his education can be visualised here:

#### Pre-Teacher Training

- Cole went to a comprehensive school in Ipswich. He studied GCSE and A-Level at 6th Form and stayed at the same school for both.
- Cole then had a gap year (working in the office for a local health authority) before going to the University of Birmingham to study a BSc in Sport and Exercise Science.

## ITE

- Cole had a year out again doing other jobs before applying and studying a PGCE in Secondary PE in the West Midlands (Aged 23).

## 0-7

- Cole then worked in a Black Country school for his NQT year and beyond. He ran A-Level PE and had a role with international links. He was also the Gifted and Talented Coordinator for three years.

## 8-15

- Cole is currently in his 12th year of teaching. He left the previous school for progression to his current role as Head of Department which he has held now for three and a half years.

Cole used to be called the 'scientist' by his friends as he was very interested in this part of the subject. He considers this a real strength. Cole became a teacher due to an initial love of sport. Immediately after university, he wasn't sure about teaching. When studying the PGCE, Cole found Athletics and Games easy and activities like Gymnastics less easy. Cole has always worked in 11-18 years secondary schools, mostly, like now, in academies.

He most enjoys engaged children who are making progress. He also enjoys teaching the academic aspects of the subject. He least enjoys behaviour of children, which he said is difficult when children are not on side. He sometimes feels like he is babysitting within practical lessons. He also least enjoys paperwork and tick box exercises. Cole did say however if these are purposeful then they are OK. Generally, Cole feels that with his strength of knowledge concerning sport and exercise science, he was lucky to be able to teach the theory side of the subject straight away at the start of his career and this is a key aspect of the job that he enjoys.

### **Patch (LCT)**

Patch's main hobby included elite level Rugby league at university, England and GB representation as well, semi-professionally. He also enjoys all sports. Patch's journey through education can be seen here:

### Pre-Teacher Training

- Patch did 9 GCSEs at 11-18 years high school and 3 A-Levels following this at the same school. They did not do A-Level PE as there was no option for this.
- Patch then studied a PE and Sports Science degree with Theology.

### ITE

- Patch chose the PGCE route for his teacher training.

### 0-7

- Patch did his NQT year in an independent grammar school, then moved back into a state school to allow a greater work/life balance.
- He taught A-Level, GCSE RE, Philosophy, and PE.
- Patch taught in the state school for 8 years also as a school sport coordinator (SSCo) in a Sports College, which included experience in the primary sector. He was the Gifted and Talented Lead and involved with Talent ID and delivery of the Junior Athletic Education Programme (JAEP).

### 8-15

- Patch then had the opportunity to be Head of PE and moved back into the independent sector in this role, as well as Director of Rugby before becoming the Director of Sport.

### 16-23

- Patch has now been Director of Sport for the last 6 years. He has therefore been in independent education again since 2008 and has been teaching for 21 years.

At school Patch was mainly involved with performance in sport and also clubs outside of school. He had lots of sporting experiences and was spoilt for this. There was lots of curricular and extra-curricular time. Patch felt this was unique for a state school and pupils could play lots at break times, lunchtimes, after school, and at weekends.

At the time Patch studied his undergraduate degree, he believed that the combination of theory/practice was attractive. He met very different people in lectures in both aspects of his degree.



Patch became a teacher because he was inspired by his teachers, by how they were and by the opportunities they offered, as well as the time they gave, for tours and weekend fixtures of which he remembers fondly. Patch felt that he wanted to give back to sport. He also liked the vocational aspect/opportunity that his degree offered. He had a work-based learning module at university for 6 weeks, which was an affirmation that he wanted to become a teacher. He wanted a work/life balance to allow for his training and competition (and there was a diverse range of opportunities).

Patch has had experience in a mixture of state and independent schools. Also, lots of these have been faith schools. His favourite schools are Roman Catholic.

Patch most enjoyed his time spent as a School Sport Coordinator (SSCo), preparing children for secondary PE and giving them quality experiences before the transition, described as bridging the gap. He had the opportunity to impact the lives of kids and thinks that, as a child, if you can remember something from school that you will remember forever, it will be sport or trips; even for the non-sporty pupils. They gain memories and friendships, and Patch feels these things are important. He enjoys co-curricular and the other side of children, benefitting the whole child, especially from a relationship-building sense. Patch feels that what PE and SS mean to children is important. The responsibility Patch holds as Director of Sport, he feels is to reinforce and instil strong values in the kids, such as honesty, integrity, problem-solving, and holistic aspects of school life. He feels that this is both a privilege and a responsibility.

Patch least enjoys different things about state and independent schools. For both, whether you have enough resources can be challenging. He feels that using academic staff as a resource is not as effective as they have little or no skill sets. He would, however, rather this than the kids having no opportunities. Patch feels that in state schools there is sometimes not enough PE time, he feels lucky in his school as they have 5-6 hours of PE and games with pupils each week. Patch also feels that budgets can be challenging and that sometimes in PE, in both sectors, more so the independent sector, there can be arrogance and attitude towards the value of the subject, it is not valued in the same way as academic subjects in the independent schools.

Patch feels that faith, alongside education, is important for him as a person. His religious background influences what he values concerning sportsmanship and the encouragement of morals alongside sport. Patch shared a memory about making a bold move and sending a player off in a Rugby game, early in his career, which was

commented on as impressive by a teacher at the time. Patch reinforces behaviour through morals and morality, which is important.

Patch also mentioned the Conservative government's introduction of the sports premium on the back of closing partnerships. He feels that by giving money it made ending the partnerships seem less of an issue, but Patch is not sure this is monitored well enough or that the money is spent in the right way. The independent school Patch now works in has charitable status and so they run many events and offer different opportunities. The swimming pool for example is open to the public sector. There are festivals with sports such as POP lacrosse tournaments, different activities that have a good uptake. There are large X-country competitions run by the school (up to 30 schools attend). They offer extra-curricular activities as well as tours and extra time committed for pupils. There is also an Equathlon – as an outreach project, something different again, overall as many opportunities and tournaments for the local community to access.

Overall, Patch believes that you have to be hardworking in PE compared with working in the classroom in terms of hours, goodwill extension, and unpaid work at lunchtimes, after school, and at weekends as well as sports tours.

### **Appendix 3.3: Overarching constructs (and their definitions) used to form the rank-ordering task (group grid).**

Individual bipolar constructs elicited through the repertory grids were reduced to fifteen over-arching constructs by the researcher and supervisory team. The over-arching constructs can be seen in bold below.

#### **1) Passion for teaching PE**

Definition: A QPE teacher will have a passion to teach the subject, will love it, be driven, and want to be in the job, and also interested in teaching. They may also be passionate about their favoured sports or aspects of the curriculum and also passionate about the delivery of PE for all children. This will likely motivate the students. They are likely to have no personal responsibilities and teaching will come first. Passion is likely to be high and they are driven to succeed (“the legacy of my life”). With enthusiasm and passion, they are not only willing to try different things, but to inspire and change perceptions of PE. They are also likely to be positive and passionate about their values and this passion may make them resilient. There is a likely commitment to delivering QPE. Passionate teachers will understand that PE teaching goes beyond the classroom in terms of opportunity for learning and growth and will have an intrinsic and extrinsic awareness of the value of PE and sport beyond lessons.

#### **2) Strong student-teacher relationships**

Definition: A QPE teacher is likely to have developed great relationships with the kids where they interact and communicate effectively. They will have a relatable understanding of the pupils’ needs and abilities and want to impact the kids positively and make a difference. They will have lots of strategies to deal with different kinds of children and behaviours. Pupil-teacher interactions will be high. These interactions will show the teacher’s enthusiasm for working with children. They will be respected by colleagues and students and be able to deal with behaviour, whilst being aware of a child’s pressures.

#### **3) Strong subject knowledge**

Definition: A QPE teacher will have good experience of delivering and sequencing lessons and so will have strong knowledge and understanding of all sports and aspects of the curriculum. They may have a specialist sport or find an area more natural to teach but should have high subject knowledge of a range of practical activities. Good subject

knowledge will be building and/or secure. They will strive to keep subject knowledge and new ideas up to date and seek to apply strong subject knowledge to all abilities.

#### **4) Creativity and new ideas**

Definition: A QPE teacher will be able to deliver a good lesson. They will be open-minded to try new things, learn, and make mistakes. There will be experimentation and creative lesson ideas. They will have a willingness to implement new ideas into lessons and seek new teaching ideas. They may also have current and creative best practices for content delivery. They will plan well for differentiation and resources. They may want to improve what exists and is delivered in PE and in contrast, even be more willing to challenge new ideas and practices. They will overall appreciate creativity.

#### **5) Good adaptability**

Definition: A QPE teacher will have the ability to be flexible and think on their feet. They will be keen, willing to change, and be mouldable while shaping as a teacher. Their adaptability will make them willing to press on and motivate themselves when needed. They will change easily to meet changing curriculum aims and generally be adaptable to changing situations, where they can think on their feet. Past experiences will help them to be more adaptable and as part of this, they may constantly review safety and ensure meaningfulness in their delivery.

#### **6) Confidence**

Definition: A QPE teacher will be confident and have a calm manner when teaching. They will also be confident in teaching a range of activities and in dealing with things in and out of the classroom. They will have confidence in their ability and what they are delivering, and in teaching a range of activities.

#### **7) Stable identity**

Definition: A QPE teacher will be in it for the long run and will always teach, or will perhaps be looking for new ideas or a new role while deciding if they are 'moving or staying'. They may be finding their identity, learning, and putting into practice fresh, new, and innovative ideas. They may also be trying to establish themselves in the field of work and please others, with an emerging teacher identity. As part of this, they are likely to be pushing themselves and working to impress as they have time for it. They are likely to have energy and time outside of the classroom and be able to do the job. A QPE teacher

is likely to have a presence and a persona as the 'quiet alpha' and have seen most scenarios, their teacher identity will be solid and they will worry less, be happy in their role while their personal and professional self becomes stable. They will be sure of themselves and their teaching career and be fully invested.

### **8) Understanding through experience**

Definition: A QPE teacher will have a well-informed ideology of PE and be experienced with reflection on their lessons. Teaching is likely to be natural and solid and they will have experienced a variety of curriculum, subject areas, and examination groups. They will know what a quality lesson is and be aware of expectations. They will be quicker at the planning process which starts to flow better. They will also be able to differentiate and be independent in dealing with different target groups of students, with wide-ranging needs. They will have experience with linking objectives and planning outcomes, likely, in more than one setting, which will have kept them fresh. They will have taught in at least two schools alongside different people intimately.

### **9) Varied teaching strategies**

Definition: A QPE teacher will have established knowledge and methods which will make them able to differentiate and have awareness of how to teach different learners. They will also understand different strategies for delivery (TGfU, AfL) and have variation and more options and ways of teaching, without worry. They will be able to change and try different teaching strategies such as these and know which strategies work for different types of students. They will also be able to apply knowledge of how to teach (styles/pedagogy).

### **10) Motivation to progress students**

Definition: A QPE teacher will want to have good lessons with a positive climate, enjoyment, and progress. They will have added knowledge to the child from the start to the end of the lessons. They will create lessons in which students make progress and will be motivated and challenged to ensure pupils meet their potential (GCSE/A-Level). They will also be able to provide progressions for students through delivery to meet target grades. They will have a genuine interest in PE, progress, and dealing with reluctant participants and make time to know pupils and contextualise learning for them. They will be able to deliver effectively with progression and differentiation and they will want to

help students achieve. They partly do this by ensuring progress through formative and summative assessments and will be accountable for student grades and performance.

### **11) Understanding of expectations, policy, and initiatives**

Definition: A QPE teacher will have knowledge and application of current education (initiatives, Ofsted, NC). They will work within these expected frameworks as well as department policies, procedures, and planning. They will have awareness of expectations for lesson content and behaviour, which are second nature. They will feel secure in the content they are teaching and their place in the system. Behaviour management is easier as they will have observed teachers deal with different situations. They will be able to consistently deliver and have high expectations. As part of this, they will have structures in place to focus on challenging students who are not meeting their expectations. They are likely to intrinsically follow memory traces of schemes of work. They will be accurate in making judgements and predicting grades and will know how to use data effectively to get more out of students.

### **12) Classroom organisation**

Definition: QPE teachers will have an eagerness to be organised and it will be habitual. They will have ownership of their classroom and be getting on with teaching. They will have good classroom management and be experienced in dealing with issues.

### **13) Collaborative learning**

Definition: QPE teachers will be learning from each other (older: leadership versus younger: fresh ideas). They are likely to be bringing on the next generation of teachers (as a mentor or role model) or will be being challenged, motivated, brought on, aided, or encouraged. They are likely to have life and teaching experience to share with staff and students. They are also likely to be good role models to lead a healthy, active lifestyle.

### **14) Additional responsibilities**

Definition: QPE teachers will either already have responsibilities, and so are effectively established in their roles and ways of assessing, or putting students through GCSEs is their responsibility. If additional responsibilities are not held, they will be seeking more responsibilities and an incentive to keep motivated, while bringing energy and enthusiasm. They will be looking for the next step, may still be learning, and not yet

considered for progression. But overall, they will be driven by their personal goals and to progress their roles and careers.

### **15) CPD**

Definition: QPE teachers are likely to be seeking CPD opportunities. They will be likely to listen, take in information, and engage with CPD opportunities. They will understand their strengths and weaknesses and what CPD is needed. They will seek development regarding the needs of learners and applying this to different ages, abilities, and settings. They will have time to dedicate to their learning and to enhance their teaching practice. Some are likely to continue their studies.

### **Appendix 3.4: The observation schedule**

The purpose of the observation within this study is confirmatory and to identify further constructs of quality not mentioned or elicited from initial informal professional dialogues and RGIs with teachers. Observations will be narrative and written in conjunction with the guidelines within this document and the four key areas below:

- 1) Attributes of the teacher and a description of the classroom context
- 2) The Curriculum
- 3) Pedagogy
- 4) Assessment

#### Data gathering and entry

- The Unique Teacher Participant number will be used on field note sheets, digital recording devices, and NVIVO. Only the Director of Studies will hold a file with the encrypted actual names for all of the participants after they are learned by the researcher and the researcher will hold an encrypted file detailing the participant codes only.
- A copy of this protocol will be used at all times during data collection for reference.
- During the time between the pre-observation repertory grid interview and the classroom observation, Section 1a will need to be completed by the researcher.
- During the observation, narrative field notes will be maintained using the guidelines at the beginning of each section. Teachers will not see the observation schedule or receive feedback as the nature of the observation is not to place judgement on the teacher or to quantify it for them.
- Field notes will be kept in raw and then typed up in Word to be imported as a document into NVIVO 11. The observation notes will then be coded according to the sections of the observation and both individual teacher repertory grid constructs and overall constructs (after the observation process).
- As soon as possible after the interviews, the recording will be destroyed and a transcript sent to the teacher to check that the intended meaning has been portrayed accurately.



**Narrative Field Notes**

1a) Teacher Participant Number: \_\_\_\_\_ Observer: Amy Bywater  
 Gender of Teacher: \_\_\_\_\_ Date: \_\_\_\_\_  
 Time: \_\_\_\_\_ Year: \_\_\_\_\_ Length of Observation: \_\_\_\_\_  
 Area of PE Observed: \_\_\_\_\_ Key Stage: \_\_\_\_\_  
 Number of students: \_\_\_\_\_ Composition of students: \_\_\_ Boys and \_\_\_ Girls  
 Lesson Plan provided?: \_\_\_ Yes \_\_\_ No Career Phase of Teacher: \_\_\_\_\_  
 Sector of school:

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Information about the department:

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Intentions for learning (or learning outcomes):

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1b) A description of the classroom context, to include:

- The environment (indoors/outdoors/space) and how it is set up.
- The resources provided for the lesson (see table below)
- How the lesson is started

Resources	Present	Used	Resources	Present	Used
Printed reading materials or images			Videos, film, music		
Computer or computer technology (teacher and/or students)			Demonstration models		
Overhead projector			Hands-on materials or equipment		
Black/whiteboard			Worksheets		

Interactive Whiteboard			Writing materials (copy etc.)		
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**1c) Notes**

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2) Curriculum (From Penney, *et al.* 2017, p.425)

- Alignment with curriculum and standards frameworks?
- Student centred-ness of outcomes? What learning is being prioritised in the focus of the lesson?
- Are learning outcomes developmentally appropriate and considerate of individual learning needs and styles?
- Is an area of the overall curriculum programme evident (e.h. PE, Health, OAA, Dance, Games, Swimming) and integrated in the lesson?
- Is there some student choice in content, assessment and reporting of achievement?

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3) Pedagogy

*Crucially, the term pedagogy recognises that how one teaches is inseparable from what one teaches, from what and how one assesses and how one learns*

- What is the choice of pedagogic approach to support the pursuit of learning outcomes and does this reflect identified learning needs?
- Are all children involved/engaged? (How/Why/Why not)
- What 'ability' is the teacher favouring in their intentions for learning?
- Behaviourist/Constructivist approaches? (learning theories)
- Teaching styles?
- Instructional models?
- Note on the relationship between the teaching taking place, the learning and the subject-matter.

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#### 4) Assessment

- Are the intentions for learning shared with the pupils? (What are they?)
- Does the teacher regularly check for understanding/progress? How? (1:1, whole class, other?)
- Specific types of assessment which may be used? (Peer/self/whole-group)

**Appendix 3.5: The repertory grid interview schedule.**

<b>REPERTORY GRID SHEET</b> <b>Teachers' Constructs of Quality in Secondary Physical Education</b>	Participant Number: _____
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<b>Emergent Pole</b>		<b>Elements: Teachers' Professional Career Phases (Training, Early, Middle, and Late)</b>					<b>Implicit Pole</b>
	Thinking about 'QPE teaching', what is a central thing that this pair of identities have in common?	IT	0-7 years	8-15 years	16-23 years	24+ years	Which identity is different in this respect? How would you describe the difference in terms of 'QPE teaching'?
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
<b>Overall, a high quality PE teacher</b>							<b>Overall, a lower QPE teacher</b>

### **Appendix 3.6: A synthesis of the pilot study findings in relation to the literature review.**

Pilot study participants were recruited from my researcher's doctoral cohort, the researcher's workplace (a higher education institution), two family members, and a fellow PE teaching friend. These people were chosen knowing they would feel willing and able to offer critical feedback in their use of the RGIs before I used them in schools with teachers. This further prevented participants from harm, due to the efforts put in place to ensure they were comfortable with the researcher at all times and that positive rapport could be formed.

The method of data collection most extensively piloted was the repertory grid. Firstly, a pre-pilot phase consisted of the researcher completing an interview themselves using their amended repertory grid, and by following the ten-step procedure outlined by Jankowicz (2004). There was later a discussion around the final elements to use for the current research. The researcher decided to break these down into small categories based on length of service and also included teachers who are in their ITE year believing that they have valuable insights and opinions to contribute to this research area as well. The 'myself as a teacher now' category was removed as teachers would easily be able to identify themselves as a teacher now by choosing which career phase they most identified with at the start of the RGIs. The pre-pilot enabled the researcher to refine the element groups and the titles and questions as part of the emergent and implicit poles on the repertory grid interview sheets (Appendix G).

The rudimentary analysis allowed the researcher to provide key findings from the pilot study. The individual bipolar constructs elicited through repertory grids were grouped into eleven over-arching constructs by the researcher. The over-arching constructs can be seen in bold below. The pilot study participants identified that a teacher who demonstrates QPET will have, or is:

- **A stable identity**
- **A passion for teaching PE**
- **Adaptable to include all children**
- **Strong relationships and relatability with young people**
- **Strong subject knowledge**
- **Feelings that CPD and learning is valuable**
- Engaging, innovative and **creative** for learners

- The belief that there is value in learning beyond the 'physical'
- Aware of the bigger picture (Education)
- An effective assessor
- Adept at negotiation and questioning (curriculum, pedagogy, and assessment)

(See definitions in Appendix 3.3).

Just over half of the overarching constructs, highlighted in **bold** above, are the same or similar to the overarching constructs created as a result of the participants of the main study's overarching constructs (which can be seen in section 3.4.2 and Appendix D). Those not highlighted in bold may be considered unique overall findings of the pilot study. This may be because the participants of the pilot study were made up of non-teachers, lecturers, and only one PE teacher. It does show that wider audiences outside of teachers may be able to construct similarly to those who do teach PE, which is an important consideration for future research.

The IPDs were trialled once informally with a friend who is a teacher. This opportunity allowed a short discussion as to whether the discussion flowed and the questions were formal enough to gain useful data, but informal enough to show interest and build some rapport.

### **Construction of Over-Arching Constructs from Pilot Study Participants**

Each of the over-arching constructs above was then defined by the number of individual bipolar constructs included within it:

#### **1) Stable Identity (11 constructs)**

Definition: They are likely to have found their feet and are striving, as well as trying what has been learned. They will also have a strong understanding of where they are at in their career and be settled, with a solid grounding of knowledge. They will have a conscious knowledge of PE and more life knowledge. They will be focused on achieving quality in different ways depending on their career phase. They may be finding their style or identity or be revisiting their philosophy of teaching. They are likely to have secure values and will be able to transmit these. They are likely to have a secure personal (self) and professional (role) identity. Because of this, they are confident with themselves and others.

## **2) Passion for teaching PE (3 constructs)**

Definition: They are likely to have chosen to teach the subject and to impart their knowledge of the topic. They will be passionate about PE and learning and the delivery of good subject matter. They will not be consumed by teaching how to pass the test or seeking other opportunities.

## **3) Adaptable to include all children (8 constructs)**

Definition: They will have a broad knowledge of what works and can adapt to student need. They will value the importance of inclusivity and how to achieve it. They see differentiation as an essential part of learning and can apply this in practice. They will be confident with their decisions about what to teach, to benefit the whole group.

## **4) Strong relationships and relatability with young people (6 constructs)**

Definition: They will have strong relationships with pupils and be relatable. There will still be a connection between teacher and student and they will generally understand young people. They will have developed empathy or be developing empathy with children. Building relationships comes naturally to them. They will also have confidence in their ability to teach and reach children.

## **5) Strong subject knowledge (4 constructs)**

Definition: They will have strong and secure subject knowledge, practically and theoretically. They can therefore be adaptable. They are up to date with teaching and research practice. They know an outstanding lesson and a range of sports. They can therefore roll lessons out.

## **6) Value CPD and learning (10 constructs)**

Definition: They will value CPD and learning, will be open to it, and will appreciate that there is always more to learn. They are likely to seek more CPD. If they are not seeking CPD they are likely to be applying it in practice. They are likely to share visions with relation to maintaining teaching quality and they will have a willingness to change. They will still want to progress in their career. They may seek CPD rather than additional roles in school, or they might partake in CPD to progress. This may allow them to take on more responsibilities (but is not compulsory). By engaging in CPD this may influence change

and so there will be enthusiasm to do it. There may also be reciprocal learning and they will value and learn from colleagues.

### **7) Engaging, Innovative and Creative for learners (4 constructs)**

Definition: They will be able to plan engaging lessons and be willing to adapt their teaching. They are likely to have fresher knowledge and more innovative ideas. They will be able to adapt to new NCPE and, for example, assessment without levels. They will be able to express their teaching and deliver it more creatively and think of new platforms for learning (e.g. technology). They will want to inspire children and make them excited to learn.

### **8) Value learning beyond the 'physical' (4 constructs)**

Definition: They will have a more nuanced view of learning and will not just be focused on activities or sport. Instead, they will help to develop children's independence. They are likely to focus on the more holistic development of the child in PE; they will be able to put this into practice and will be passionate about it. They are likely to focus less on physical emphases but physical activity will still take place. Health and sport and techniques will not be the sole foci of learning. They will achieve the best reaction to learning from the young person.

### **9) Aware of the bigger picture (Education) (6 constructs)**

Definition: They are aware of the perception of PE in the wider school. They will want to make a difference in the education sector, rather than coast. They should appreciate more of a work/life balance as well as being driven to work more for success, outcomes, and progression. They are likely to be focused on developing teaching practice (how to, what to, reflect), but also be focused on wider school, departmental, and child issues. They will have a view of the 'bigger picture'. They will have attention to detail and understand the 'whys' and the processes. They are generally aware that the process is equally if not more important than the outcomes.

### **10) Effective assessors (3 constructs)**

Definition: They will be able to conduct assessments effectively and be able to feedforward. They will value exam techniques and feel comfortable in their teaching of them. They are likely to be responsible for outcomes if they have more responsibility and so can roll it out rather than potentially learning off the cuff.



### **11) Negotiation and Questioning (Curriculum, Pedagogy, and Assessment) (7 constructs)**

Definition: They are likely to question what they know. They will negotiate how institutional outcomes are delivered, for example by providing more explicit outcomes that do not solely relate to sport, which is recognisably being 'busy, happy, good'. They will be less beholden to institutional power and more confident in their abilities. Because of this, they may adhere less to external policy or the NCPE. They are likely to take commonly held assumptions about how to deliver and if it does not happen, they don't worry. They are also likely to have extended views on the purpose and outcomes of PE.

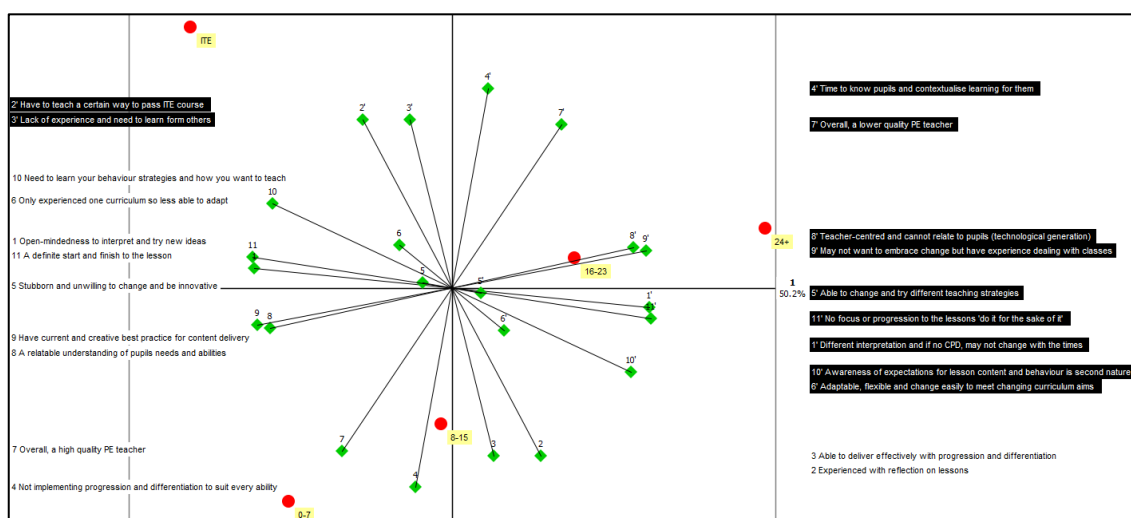
Two constructs did not appear to sit naturally and so were removed from the production of overarching constructs. These were:

- a) That behaviour management is important, but they are likely to have less focus on it in later career phases.
- b) There is a greater emphasis on health and safety in the early years and later they are just going to ensure H&S.

## Appendix 3.7 - How to analyse the biplots produced from the principle component analyses

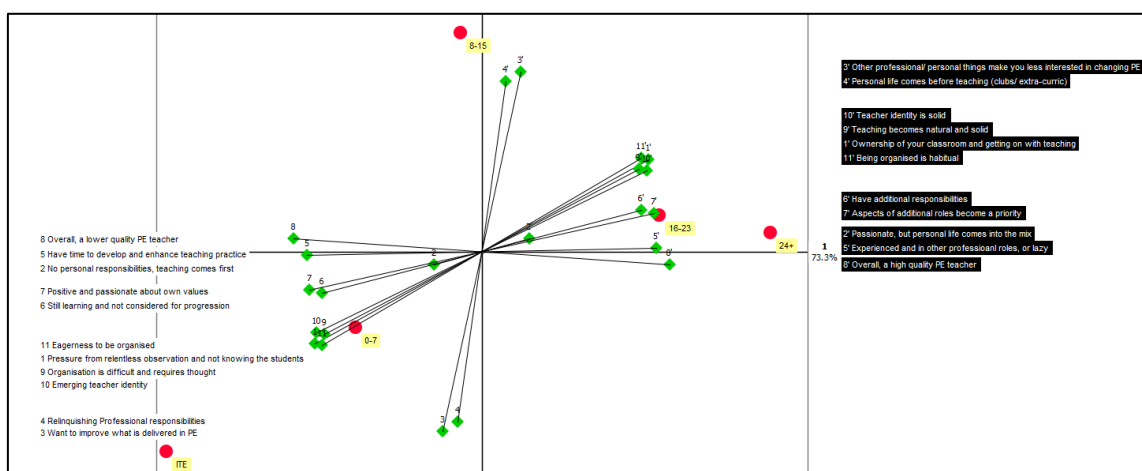
The origin of the biplot is where the axes meet. The origin will be referred to later in this section for certain parts of the analysis. The checklist for inspecting a biplot was used as follows and as appropriate to the individual biplot being interpreted. Thus acknowledging that all biplots were unique to individuals. The checklist to follow includes diagrams, they are presented in a small size as they do not need to be fully read or analysed at this stage. The checklist was not followed in any linear fashion, but each bullet point to follow was considered in the analyses:

- Check whether all quadrants are filled in, this informs us how differentiated the mental world of the client is and how refined their powers of judgment. If all quadrants are filled in, this indicates that the interviewee handles the dimensions of their judgment independently of one another (the axes in the plot are, as calculated, independent of one another too) (Fromm and Paschelke, 2011). This would visually look like a star shape. An example of this can be seen in Hope's biplot below:



- If all quadrants are not filled in, then the interviewee does not judge two dimensions as independent of one another, so that representation becomes one dimensional. Quadrants left empty tell us that the client employs certain judgmental dimensions as dependent on one another. In this case, if we join the construct poles on the biplot with a line, the resulting picture is not a star, but a strip. The nearer the star gets to a strip, or even a line, the more stereotyped the interviewee's manner of passing judgment (Fromm and

Paschelke, 2011). An example of this can be seen in Alma's biplot below (orange rectangle):



Here, the participant specifically seemed to stereotype particular aspects of QPET. Although stereotyping, the constructs were positive in nature and appear extremely associated with either ECTs (yellow oblong) or LCTs (green oblong), with very few constructs directly related to MCTs (blue oblong). Also interesting in the above biplot is the:

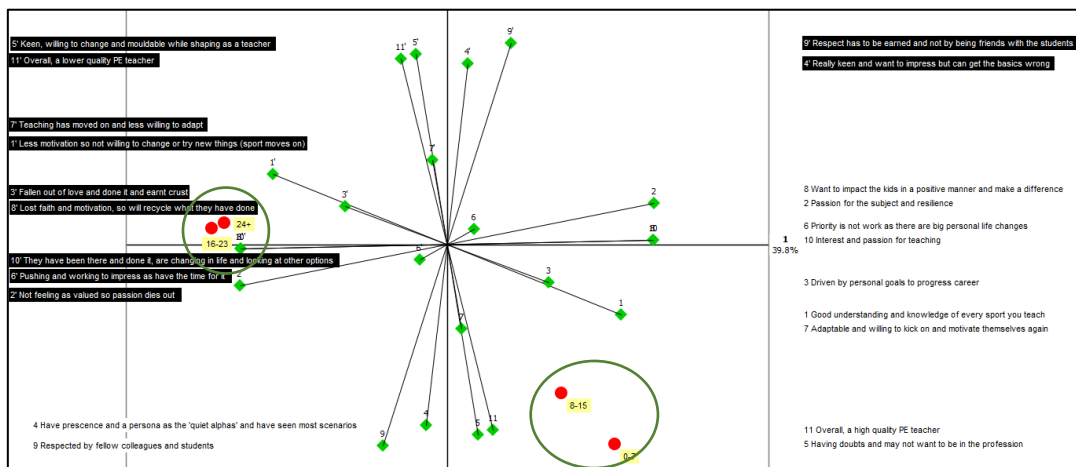
- Peripheral entries in the biplot (far from the origin), which express high correlations. Also that there are no central entries (low correlations) of constructs or elements (closer to the origin).

In Alma's biplot above, the ITE (ECT), 8-15 (MCT) and 24+ (LCT) career phases were therefore highly correlated, and decisive judgments were made. This grid (biplot) is useful in making these three career phases stand out. Analysis of the biplots can often be assisted by revisiting the RGI sheet. In Alma's case, it is clear that very few 2 and 4's were ranked against the career phases. This helps to explain what have been initially deemed stereotypical judgments.

It could also be interpreted that the 8-15 (MCT), 16-23 and 24+ (LCT) career phases are more closely associated with constructs, by distance. However, ITE (bottom left) is highly correlated with the constructs in the same quadrant, particularly as, if we follow the direction of the construct poles, they would pass by the ITE phase. I could confirm this with confidence, as on Alma's RGI sheet, she ranked ITEs more extremely than all other career phases with 1's and 5's. A different circumstance would be if an element (red dot)

sat in a quadrant without constructs and far from the origin (no examples of this). This would be deemed as an element not appropriately represented. To continue:

- If elements or constructs show near the origin, decisive judgments have not been made. This applies only to construct 2 in Alma's biplot above, but applies to constructs 6, 7, and 3 in Liam's biplot below.
- Elements (red dots) spatially close together on the biplot are similarly construed (see the below example from Liam's biplot)



Here the red dots visible on the left represent that the 16-23 and 24+ career phases (LCTs) were construed similarly. In this case, by examining the actual constructs, this was about these career phases losing faith and motivation, recycling what they have done and that they may be changing in life and looking at other options. The 0-7 (ECTs) and 8-15 (MCTs) career phases were also deemed similar for different reasons.

- Constructs (green diamonds) spatially close to each other were also similarly applied
- The angles between the construct lines, which join the poles of these constructs, then are small.

Examples of both of these points can be seen in Alma's biplot below:



As can be seen in the above picture, the 0-7 element (red circle) crosses over with construct 11 and 1 and is also spatially close to 9 and 10. It is therefore directly characterised by these constructs.

- Decisive judgments as described, can indicate an interviewee's sense of superiority and self-control, but also potentially an overestimation of themselves
- Indecisive judgments can indicate indecision, anxiety or caution.

Appendix 4.1: A sample of completed repertory grid interview sheets

Alma (ECT)

Emergent Pole	Elements: Teachers Professional Career Phases (Training, Early, Middle and Late)					Implicit Pole	5
	ITE	0-7 years	8-15 years	16-23 years	24+ years		
1 Thinking about 'quality PE teaching', what is a central thing that this pair of identities have in common? *Logos, prepared to do as much as possible e.g. clubs etc	4 1	1 2	0 4	2 4	4 5	*Experienced enough in order to do it without thinking (habitual) (24+)	11
2 *passion → sport *Teaching identity similar	4 1	1 2	1 3	3 5	4 5	*Additional roles → SLT, M&Y, M&D progressive (24+)	13
3 *Teaching identity formed but different expectations from a lesson	0 5	0 3	2 2	1 1	0 1	ITE → Emerging teaching identity - building what you think/being teaching should look like	3
4 *Become solid in the teaching + phases becomes natural	0 5	1 4	2 2	1 1	0 1	*Organisation difficult during teacher training + have to really think about what you do during lessons	4
5 *unhappy PE (what for tasks who, what delivered time given)	4 1	1 2	1 5	0 2	2 3	*less interested in making waves/ changing PE → Authentic/experience	8
6 *passion → personal life into mix *know what teaching is	2 3	2 5	1 3	1 1	2 3	*Teaching comes 1st No one personal responsibilities	8
7 *Other school responsibilities → M&D, M&Y → SLT, pastoral	0 5	2 5	1 3	1 1	0 1	*Still young - not considered for progression *or looking for more professional responsibility	4
8 *Hav'n't become lazy *Two/ experience to develop/ enhance teaching practice	4 1	2 1	2 2	2 4	4 5	*2 ways → become lazy/experience OR - higher responsibilities	14
9 *Getting on with teaching - ownership of classroom	0 5	0 3	2 2	0 2	0 1	*Observations → pressure → Nerve your students	2
10 *Relinquish personal responsibilities	4 1	1 2	1 5	2 4	1 2	*Life (personal) comes before teaching (clubs/extracurricular)	9
Overall, a high quality PE teacher	5	3	4	2	1	Overall, a lower quality PE teacher	



# Cole (MCT)

Teachers' Constructs of Quality in Secondary Physical Education						
Emergent Pole	Elements: Teachers Professional Career Phases (Training, Early, Middle and Late)					Implicit Pole
	ITE	0-7 years	8-15 years	16-23 years	24+ years	
① Thinking about 'quality PE teaching', what is a central thing that this pair of identities have in common?						Which identity is different in this respect? How would you describe the difference in terms of 'quality PE teaching'?
1 Knowledge & application of current initiatives / current National Curriculum	3 2	1	2	4	5	Less focus on initiatives - More 'old school' approach or moved into leadership positions
2 Want to have good lessons with positive climate, enjoyment and progress	2 3	2	1	3	5	Less focus on outcomes, more on 'getting through' the lesson, less motivated.
3 The objectives or knowledge of what makes 'bite-sized' lessons, 'box ticking'	2 3	1	2	4	5	These may have started career are offered university school life, and teach how they want to teach.
4 High subject knowledge of a range of practical activities	5	3	1	3	1	Less experience of teaching a range of activities Only knowledge from their own sports
5 Good role for PE Motivational to students	4 1	1	5	4	3	Other responsibilities, Personal and professional. That may decrease motivation.
6 Respect from students Dealing with behaviour	5	3	2	1	3	Lack of experience Desire to be liked more than respected.
7 Adaptability, thinking on your feet	5	3	2	1	3	Too rigid in keeping to their Plans, Lack of experience to adapt to changing situations.
8 Knowledge of use of data effectively	4	1	1	3	5	Not needed to use or report on data earlier in career.
9 Creating lessons which students make progress in	5	1	2	2	3	Too much focus on technical aspects, so enjoyment drops
10 Positive role models for students	4 1	2	5	3	3	Try to gain authority and respect in different ways, seen
<b>Overall, a high quality PE teacher</b>	<b>5</b>	<b>2</b>	<b>1</b>	<b>3</b>	<b>4</b>	<b>Overall, a lower quality PE teacher</b>

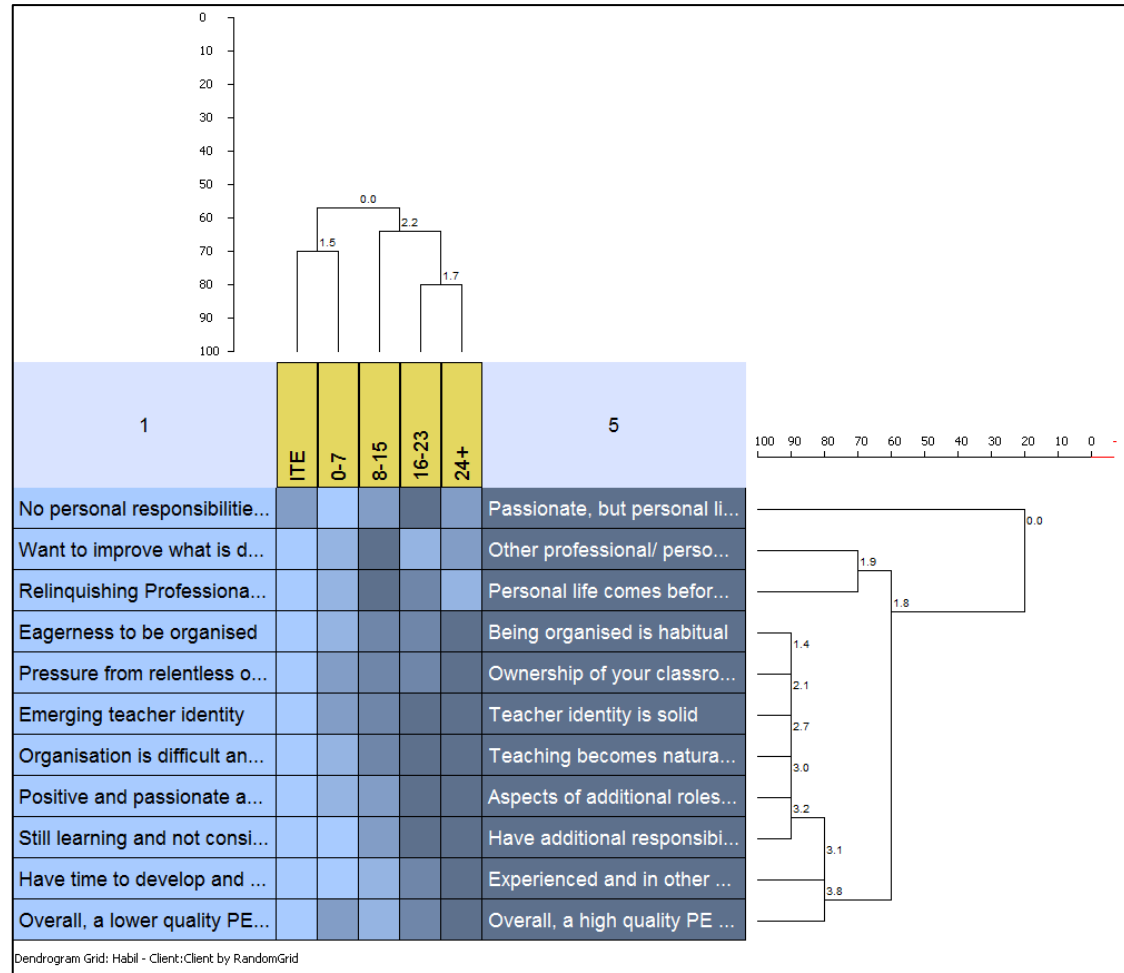


# Shula (LCT)

Teachers' Constructs of Quality in Secondary Physical Education						
Emergent Pole	Elements: Teachers Professional Career Phases (Training, Early, Middle and Late)					Implicit Pole
	ITE	0-7 years	8-15 years	16-23 years	24+ years	
① Thinking about 'quality PE teaching', what is a central thing that this pair of identities have in common?						Which identity is different in this respect? How would you describe the difference in terms of 'quality PE teaching'? ⑤
1 Xpracticing Because of no resources limited subject knowledge enthusiastic - Rose linked spectacles less likely to have exam groups	1	2	2	4	5	Potential promotion means that other roles impact on the quality of teaching → delivery planning/marketing → job ⑨
2 Keeping new ideas to the fore front of teaching → should be fresh	1	2	3	5	3	Tough one - Depends on role of 16-23 years - new roles could impact on teaching negatively ⑤
3 Increased subject knowledge (understanding of SW and how/what CPP to improve -)	5	1	3	3	2	ITE - limited experience only get that experience by doing → different setting / ages & activities ⑨
4 Genuine interest in PE / greater understanding of progress / more able to deal with reluctant participants	3	0	3	1	1	Apart from genuine interest → less able to have understanding of outstanding lessons / program → less able to deal with issues! ⑧
5 Motivated → subject and by love of teaching and enjoy seeing students improve and developing	1	2	5	3	3	When teachers are trying to progress so may not prioritise L+T → busy climbing the ladder! ⑦
6 Relationship with students a period of time - Resources / experience in exam groups experience in dealing with different target groups of students	5	3	2	1	4	Reviews on more experienced staff for guidance / resources and support with different groups - eg challenging students ⑩
7 Ability to be flexible and think out of the box and thinking on feet	5	4	2	1	1	Limited experience ITT training → structured planning within an inch of life & not deviating from the plan - need a plan B. ⑩
8 Good experience in hopefully more than 1 setting - fresh experiences new challenges - stops you getting stale	4	1	2	4	5	probably 24+ - other life issues to deal with know what works for them & so stick to it as its easy & its successful ⑪
9 Experience of variety of exam culture / subject areas exam group experience	5	2	3	3	1	possibly not allowed to teach exam groups might not want the responsibility / planning / marking ⑦
10 Love PE - subject enjoyment	1	5	3	3	1	potential eyes on another prize so less interested. ⑥
Overall, a high quality PE teacher	2	3	4	5	1	Overall, a lower quality PE teacher

Appendix 4.2: A sample of cluster analyses and dendograms produced from the repertory grid data

Alma (ECT)



## Alma (ECT)

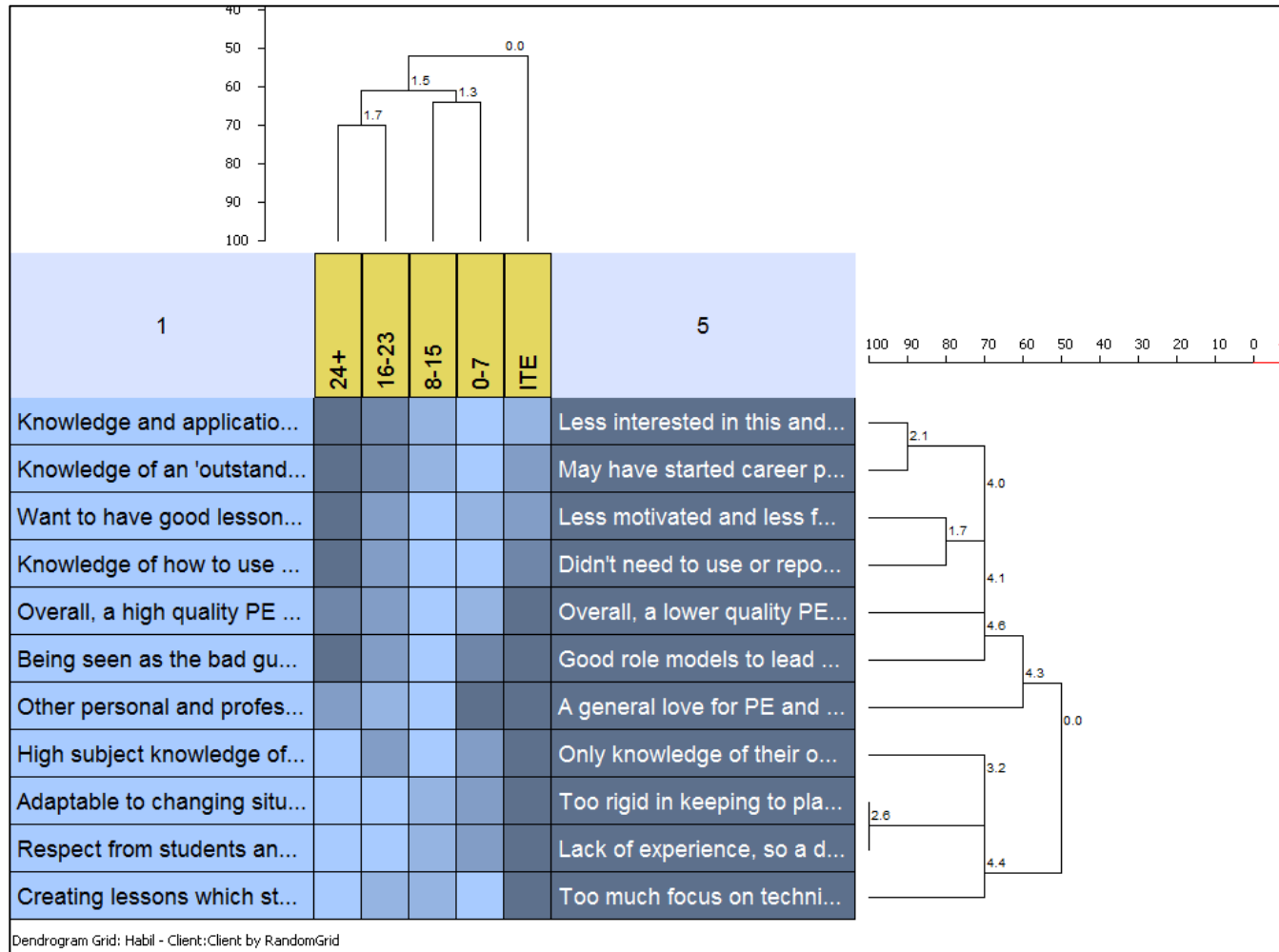
### Cluster Analysis: Elements

	matching	mean similarity	inner similarity	middle similarity	difference	z-score
16-23 with 24+	80.0%	-10	80	41	39	1.69
ITE with 0-7	70.0%	-15	70	38	33	1.46
8-15 with 16-23	64.0%	11	67	38	30	2.22
0-7 with 8-15	57.0%	20	50	0	0	0.00

### Cluster Analysis: Constructs

		matching	mean similarity	inner similarity	middle similarity	difference	z-score
Still learning and not considered for progression/Have additional responsibilities	with Positive and passionate about own values/Aspects of additional roles become a priority	90.0%	-5	90	62	28	1.54
Pressure from relentless observation and not knowing the students/Ownership of your classroom and getting on with teaching	with Emerging teacher identity/Teacher identity is solid	90.0%	-5	90	61	29	1.61
Positive and passionate about own values/Aspects of additional roles become a priority	with Organisation is difficult and requires thought/Teaching becomes natural and solid	90.0%	24	87	60	26	2.04
Pressure from relentless observation and not knowing the students/Ownership of your classroom and getting on with teaching	with Eagerness to be organised/Being organised is habitual	90.0%	24	87	60	27	2.08
Organisation is difficult and requires thought/Teaching becomes natural and solid	with Emerging teacher identity/Teacher identity is solid	90.0%	51	81	50	30	3.19
Have time to develop and enhance teaching practice/Experienced and in other professional roles, or lazy	with Still learning and not considered for progression/Have additional responsibilities	80.0%	51	76	46	30	3.14
Have time to develop and enhance teaching practice/Experienced and in other professional roles, or lazy	with Overall, a lower quality PE teacher/Overall, a high quality PE teacher	80.0%	53	75	36	38	3.79
Want to improve what is delivered in PE/Other professional/ personal things make you less interested in changing PE	with Relinquishing Professional responsibilities/Personal life comes before teaching (clubs/ extra-curric)	70.0%	-15	70	35	35	1.91
Relinquishing Professional responsibilities/Personal life comes before teaching (clubs/ extra-curric)	with Eagerness to be organised/Being organised is habitual	60.0%	45	61	34	27	1.76
No personal responsibilities, teaching comes first/Passionate, but personal life comes into the mix	with Want to improve what is delivered in PE/Other professional/ personal things make you less interested in changing PE	20.0%	42	56	0	0	0.00

### Cole (MCT)



## Cole (MCT)

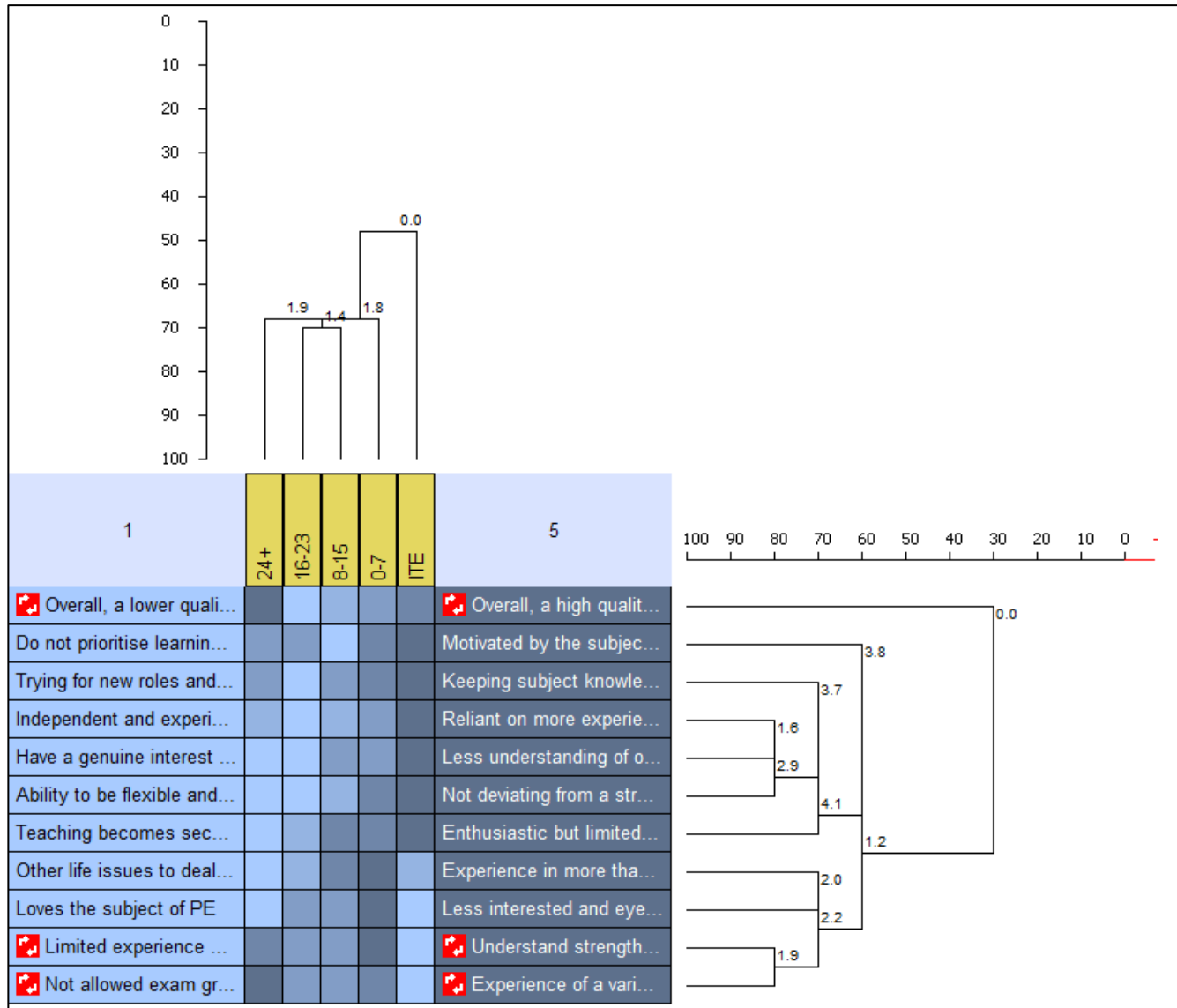
### Cluster Analysis: Elements

	matching	mean similarity	inner similarity	middle similarity	difference	z-score
24+ with 16-23	70.0%	-15	70	47	23	1.74
8-15 with 0-7	64.0%	-18	64	47	17	1.26
16-23 with 8-15	61.0%	17	56	42	14	1.49
0-7 with ITE	52.0%	20	50	0	0	0.00

### Cluster Analysis: Constructs

	matching	mean similarity	inner similarity	middle similarity	difference	z-score
Respect from students and able to deal with behaviour/Lack of experience, so a desire to be liked more than respected	with Adaptable to changing situations and can think on your feet/Too rigid in keeping to plans and less experienced	100.0%	0	100	36	64 2.59
Knowledge and application of current education (initiatives, Ofsted, NC)/Less interested in this and less of a priority, unless in leadership	with Knowledge of an 'outstanding lesson' and can 'tick boxes'/May have started career pre-Ofsted so teach how they want to teach	90.0%	-5	90	38	52 2.08
Want to have good lessons with a positive climate, enjoyment and progress/Less motivated and less focus on outcomes, more of 'getting through'	with Knowledge of how to use data effectively to get more out of students/Didn't need to use or report data earlier in career	80.0%	-10	80	39	41 1.66
Knowledge of an 'outstanding lesson' and can 'tick boxes'/May have started career pre-Ofsted so teach how they want to teach	with Want to have good lessons with a positive climate, enjoyment and progress/Less motivated and less focus on outcomes, more of 'getting through'	70.0%	29	72	31	41 3.99
Respect from students and able to deal with behaviour/Lack of experience, so a desire to be liked more than respected	with Creating lessons which students make progress in/Too much focus on technical aspects, so enjoyment drops	70.0%	20	80	30	50 3.45
Knowledge of how to use data effectively to get more out of students/Didn't need to use or report data earlier in career	with Overall, a high quality PE teacher/Overall, a lower quality PE teacher	70.0%	31	64	31	33 4.13
Being seen as the bad guy that has to clamp down on stuff/Good role models to lead a healthy, active lifestyle	with Overall, a high quality PE teacher/Overall, a lower quality PE teacher	70.0%	32	59	29	30 4.62
High subject knowledge of a range of practical activities/Only knowledge of their own sports as less experience of a range	with Adaptable to changing situations and can think on your feet/Too rigid in keeping to plans and less experienced	70.0%	30	73	29	45 4.40
Being seen as the bad guy that has to clamp down on stuff/Good role models to lead a healthy, active lifestyle	with Other personal and professional responsibilities may decrease motivation/A general love for PE and motivation to students	60.0%	31	52	29	24 4.31
Other personal and professional responsibilities may decrease motivation/A general love for PE and motivation to students	with High subject knowledge of a range of practical activities/Only knowledge of their own sports as less experience of a range	50.0%	30	43	0	0 0.00

### Shula (LCT)



## Shula (LCT)

### Cluster Analysis: Elements

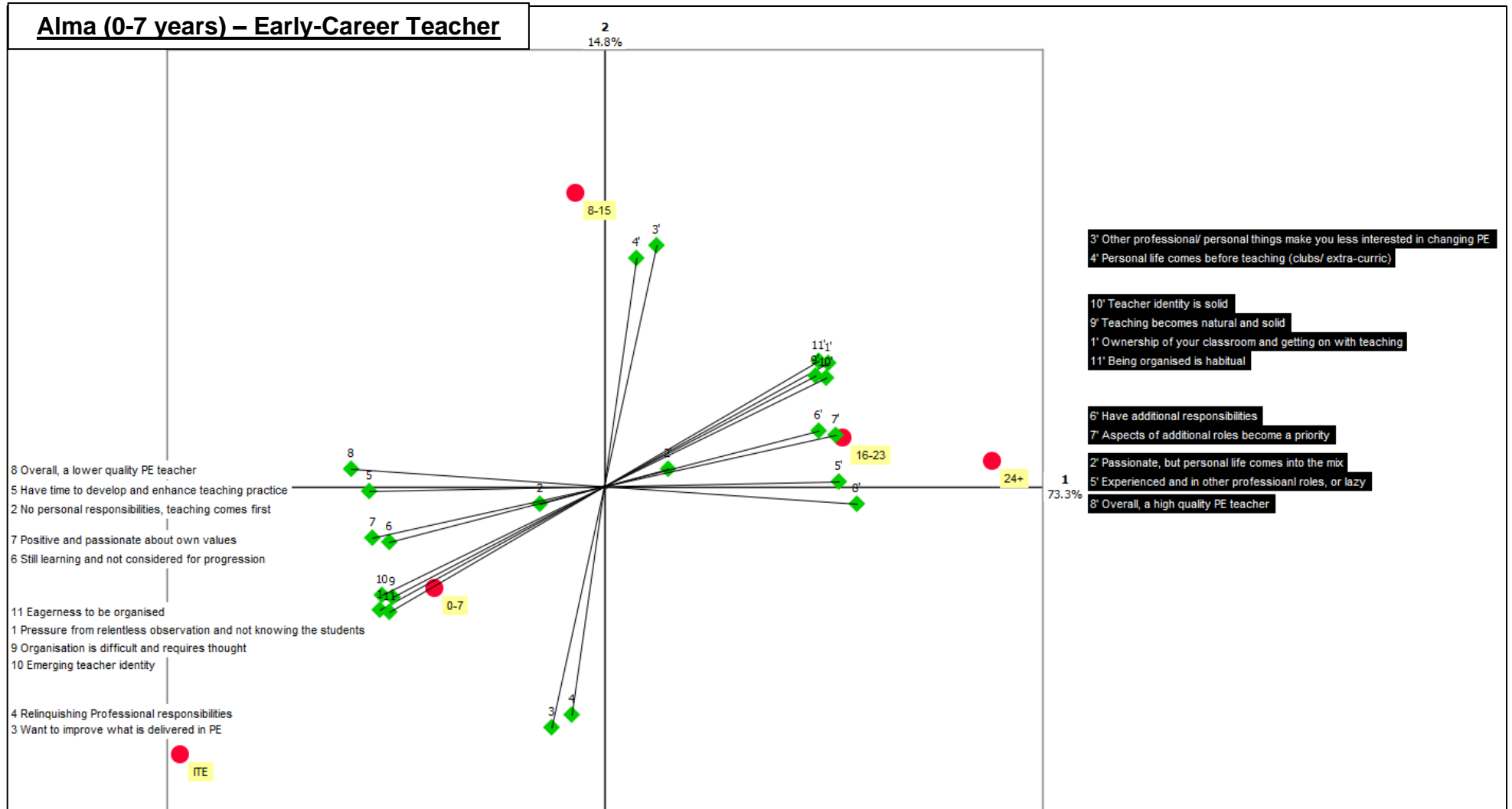
	matching	mean similarity	inner similarity	middle similarity	difference	z-score
8-15 with 16-23	70.0%	-15	70	53	17	1.35
0-7 with 8-15	68.0%	8	62	49	13	1.27
16-23 with 24+	68.0%	20	60	40	20	1.84
ITE with 0-7	48.0%	21	52	0	0	0.00

### Cluster Analysis: Constructs

	matching similarity	mean similarity	inner similarity	middle similarity	difference	z-score		
Have a genuine interest in PE, progress and dealing with reluctant participants/Less understanding of outstanding lessons/ progress	with	Independent and experienced dealing with target groups of students/Reliant on more experienced staff for guidance with challenging students	80.0%	-10	80	50	30	1.58
Understand strengths and weaknesses and what CPD is needed/Limited experience and subject knowledge to apply to different ages, abilities and settings	with	Experience of a variety of curriculum/ subject areas/ exam groups/Not allowed exam groups or might not want the responsibility	80.0%	-10	80	43	37	1.93
Have a genuine interest in PE, progress and dealing with reluctant participants/Less understanding of outstanding lessons/ progress	with	Ability to be flexible and think on their feet/Not deviating from a structured plan	80.0%	20	80	46	34	2.95
Loves the subject of PE/Less interested and eyes on another prize	with	Other life issues to deal with and stick to what they know works/Experience in more than one setting which keeps you fresh	70.0%	-15	70	33	37	1.96
Understand strengths and weaknesses and what CPD is needed/Limited experience and subject knowledge to apply to different ages, abilities and settings	with	Loves the subject of PE/Less interested and eyes on another prize	70.0%	16	55	36	19	2.17
Trying for new roles and promotion/Keeping subject knowledge and new ideas up to date	with	Independent and experienced dealing with target groups of students/Reliant on more experienced staff for guidance with challenging students	70.0%	31	75	43	33	3.73
Teaching becomes secondary due to quick promotion/Enthusiastic but limited subject knowledge	with	Ability to be flexible and think on their feet/Not deviating from a structured plan	70.0%	36	70	40	30	4.13
Other life issues to deal with and stick to what they know works/Experience in more than one setting which keeps you fresh	with	Teaching becomes secondary due to quick promotion/Enthusiastic but limited subject knowledge	60.0%	33	49	39	10	1.54
Do not prioritise learning and teaching as busy climbing the ladder/Motivated by the subject and a love of teaching	with	Trying for new roles and promotion/Keeping subject knowledge and new ideas up to date	60.0%	33	48	38	10	1.17
Do not prioritise learning and teaching as busy climbing the ladder/Motivated by the subject and a love of teaching	with	Overall, a high quality PE teacher/Overall, a lower quality PE teacher	30.0%	33	46	0	0	0.00

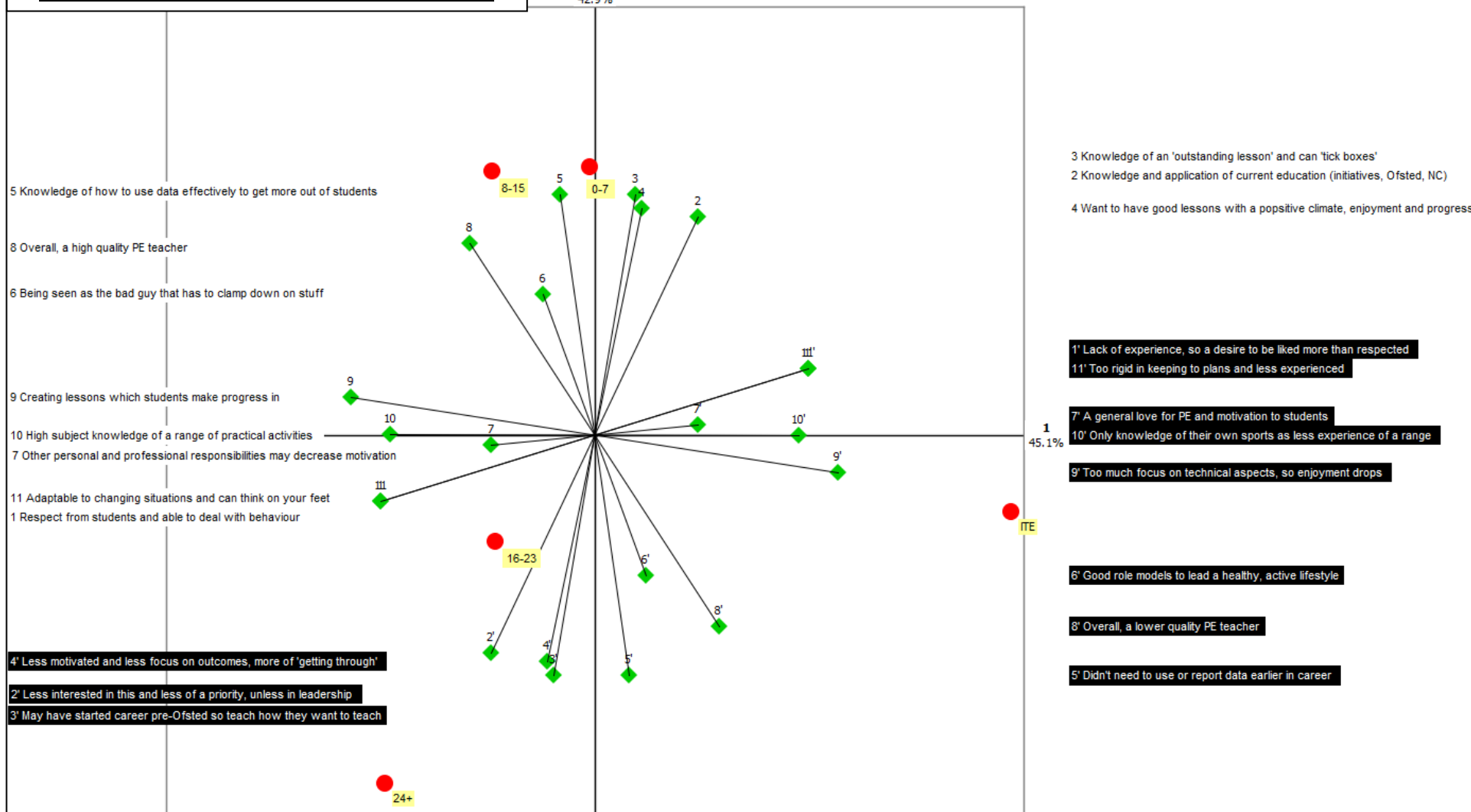


Appendix 4.3: A sample of principle component analyses produced from the repertory grid data (presented as biplots)



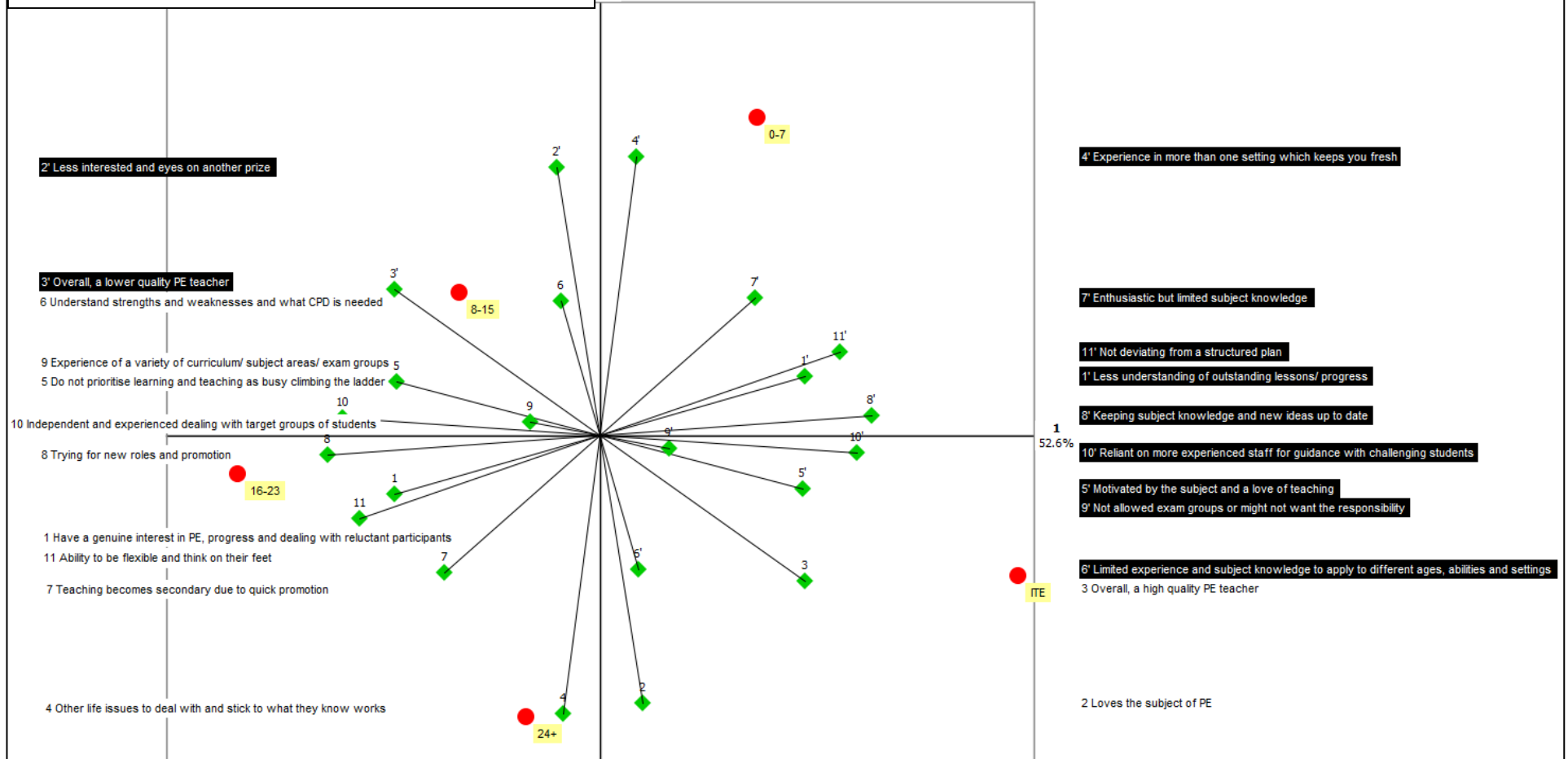


## Cole (8-15 Years) – Mid-Career Teacher



## Shula (24+ Years) – Late-Career Teacher

2  
0.0%



4' Experience in more than one setting which keeps you fresh

7' Enthusiastic but limited subject knowledge

11' Not deviating from a structured plan

1' Less understanding of outstanding lessons/ progress

8' Keeping subject knowledge and new ideas up to date

10' Reliant on more experienced staff for guidance with challenging students

5' Motivated by the subject and a love of teaching

9' Not allowed exam groups or might not want the responsibility

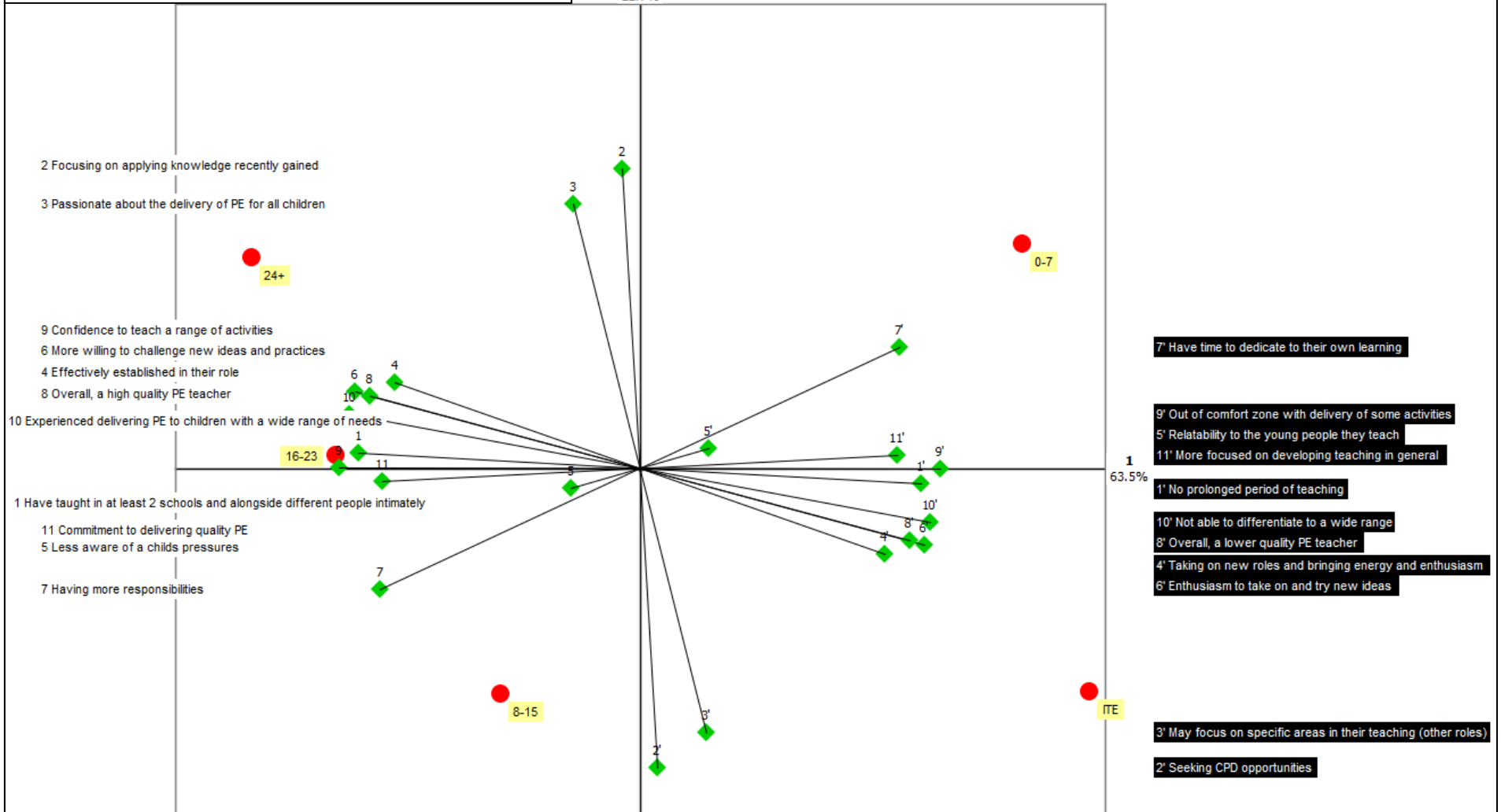
6' Limited experience and subject knowledge to apply to different ages, abilities and settings

3' Overall, a high quality PE teacher

2' Loves the subject of PE

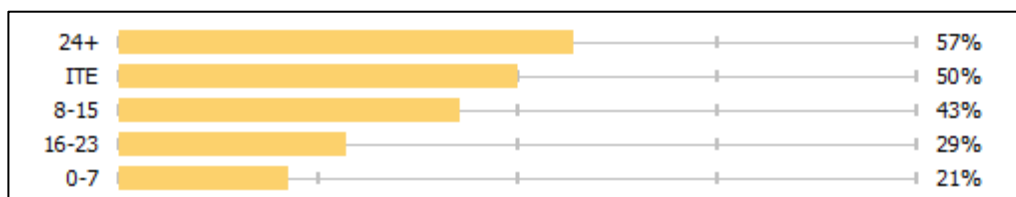
## Thomas (24+ Years) – Late-Career Teacher

2  
22.7%



#### Appendix 4.4: Findings from the MouseSort

Fourteen individual repertory grids were conducted with teachers across different career phases and were then transcribed. The ratings from the original grids were analysed in relation to elements and constructs and are the focus of this section. The first statistics measured using the MouseSort feature of GridSuite were the extreme ratings allocated per element (see figure below).

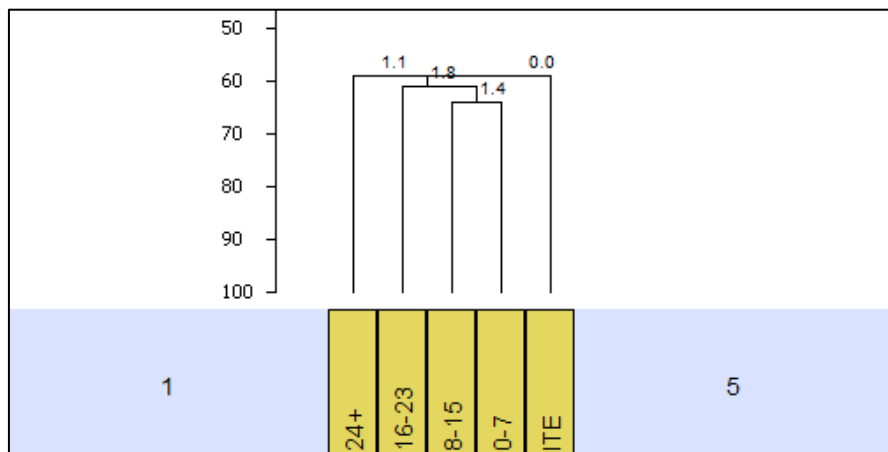


The figure above highlights that 57% of the fourteen participants allocated extreme ratings to the 24+ career phase and 50% to ITE. Extreme ratings were therefore allocated to the two groups at the extreme ends of the continuum of career phases. Fewer extreme ratings were given to the 0-7 career phase with 21%. The interpretation of this piece of data depended on whether the extreme weightings were positive or negative for the 24+ and ITE PLP's and also whether the ratings for the 0-7 career phase were positive or not overall. It can be seen in the figure above that the 24+ category had more extreme, positive ratings overall than ITE did. The ratings for the ITE career phase were mostly negative. The figure above also shows that the 8-15 career phase had more positive and neutral rankings than 0-7yrs, which may be suggestive that the 8-15 years category is deemed the highest quality career phase for PE teachers overall.

By using the overall ranking construct (a higher QPE teacher – a lower QPE teacher) which was provided at the end of the RGIs it was revealed, through eyeballing that almost half of the participants (n=6) individually ranked themselves as the highest QPE teacher out of all career phases presented to them (made up of four teachers in the 8-15 career phase, one in 0-7 one in 24+). Similarly (n=5) participants also ranked themselves the second highest QPE teacher (made up of three teachers in the 16-23 career phase, one in ITE, and one in 24+). The remaining participants (n=4) only ranked themselves from 3-5 and were all ECTs. Teachers in each career phase also ranked themselves with more positive extreme values overall than all other career phases. This shows that teachers within each career phase feel that more constructs related positively

to their career phase than others. It was only when rankings from teachers at all career phases were compared that overall similarities and dissimilarities could be seen.

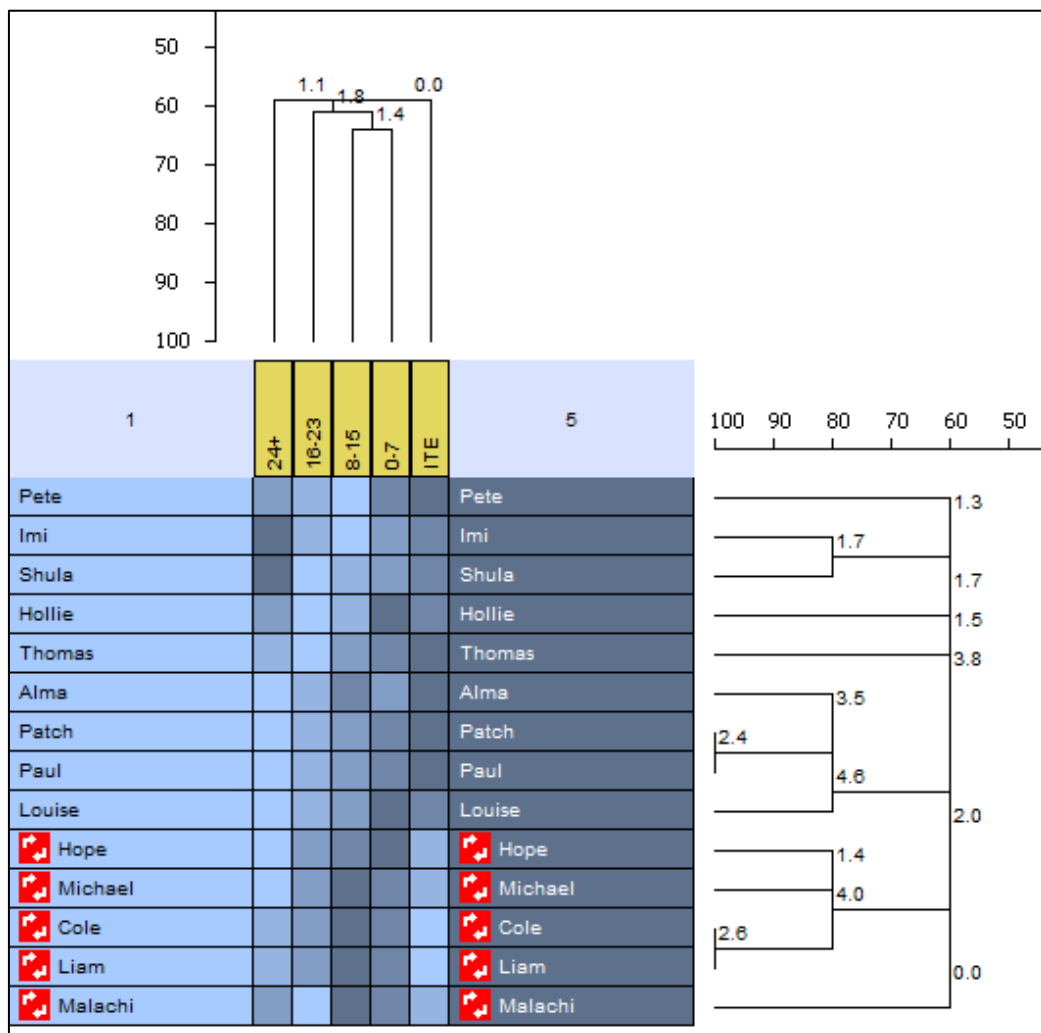
By consulting the cluster analysis (see below) for the elements, it can be seen that 0-7 and 8-15 had the greatest similarity, by 64%, and were rated the highest-quality teachers overall. This was followed by 8-15 and 16-23 with 61%, ITE, and 0-7 with 59%, and 16-23 and 24+ with 59%. This may not be classed as a significant finding as there is only a 5% difference between all of these stated similarities. While 0-7 and 8-15 were also deemed most similar in terms of high quality teaching the z-values<sup>1</sup> of these were all <2.0 (as seen below), which means they may be artificial or show very small similarities as compared to other groups. The biggest differences, identified from the MouseSort were between ITE and 8-15 and 8-15 and 24+, both with 35%. These findings may also be suggestive that all participants are deemed as QPE teachers as the percentages are all >59%, however, many are stated to be high quality for different reasons and with the highest being 64%, there are still ideological aspects of QPE teaching that those deemed the highest quality may desire. This may suggest that all career phases may possess particular aspects of QPE teaching at different points in their career and not all of them.



The figure above also shows that Cole and Liam as well as Patch and Paul were the two pairings who construed the elements in the same way (100%). For Cole and Liam, this meant rating ITE as the lower quality teacher and 8-15 as the highest quality teacher. Both of these teachers are in the 8-15 career phase themselves. Patch and Paul rated the 24+ career phase as the highest quality and ITE as the lowest. Both of these

<sup>1</sup> Z-Values are a 'test value' for distinguishing "real" clusters from artefacts. The value should be >2.0 and should increase with the level of hierarchy (Tschudi, cited in Fromm, 2017, p.48).

teachers are in the 16-23 career phase and deemed this career phase the second highest quality overall. Both of these pairs could be deemed positive concerning feelings about their own and others' QPE teaching within their career phases, however, while Cole and Liam believe the quality of PE teaching may decline, Patch and Paul, believe the quality improves over a teacher's career phases. As there are high similarity levels with many of the elements (see figure below) and because the dendrogram presents a mainly flat tree; this may signify that the constructs are relatively unified and judged with little differentiation (Fromm and Paschelke, 2011). This would be the case given that this dendrogram is based on only one overall construct (a high-QPE teacher and a lower QPE teacher) and all participants' ratings of the elements.

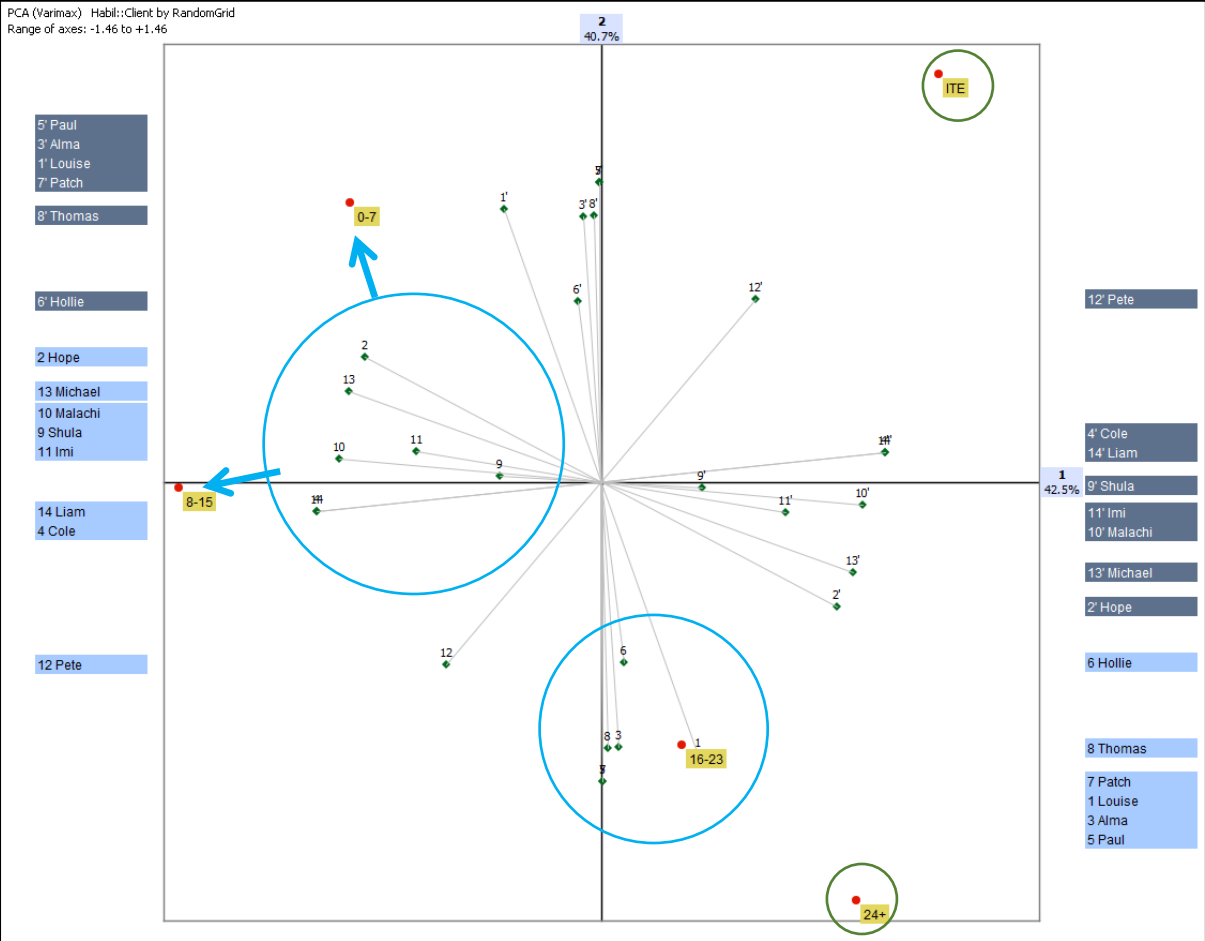


Referring to QPE teaching overall and given there is little differentiation between ratings of the elements, it may be argued that all groups have different contributions to make to QPE teaching, dependent on their career phase. It is also evident that some teachers construe and rank against the elements relatively similar to other teachers in

the same career phase as themselves: for example, Paul and Patch (16-23yrs) and Cole and Liam (8-15yrs). Michael (8-15) also showed an 80% similarity with Cole and Liam (both 8-15). Teachers in different career phases have also construed similarly: for example, Louise's (ITE) and Alma's (0-7) 80% similarity with Paul and Patch (both 16-23). Given there is a mean centrality of 50 for all of the elements, ranging from 47-54, it is clear that there is some differentiation made between the career phases, but not a significant amount

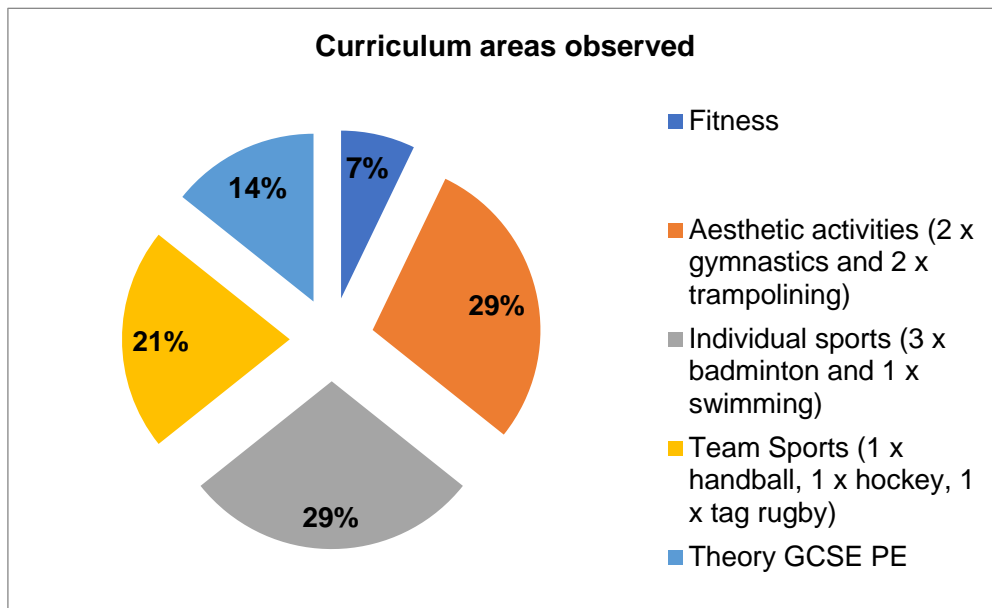
Referring to the PCA on the page to follow it can be summarised that overall, the 0-7, 8-15, and 16-23 career phases are construed more positively by all of the teachers from different career phases. The red dots in the figure on the next page highlight the elements (career phases) and the green rhombi highlight the teachers who have construed positively or negatively concerning these elements. The blue circles highlight the key, positive clusters and the orange circles highlight the ITE and 24+ groups as potential outliers within this scatter graph; they are outliers as they are ranked more extremely and therefore seen more distinctly compared to the other career phases. The participants' names in light blue boxes to the side of the figure represent more positive rankings and those in dark blue represent more negative rankings. The proximity of the positive rankings to the 0-7, 8-15 career phases further confirm they may be deemed the highest QPE teachers overall.

PCA (Varimax) Habil:Client by RandomGrid  
 Range of axes: -1.46 to +1.46

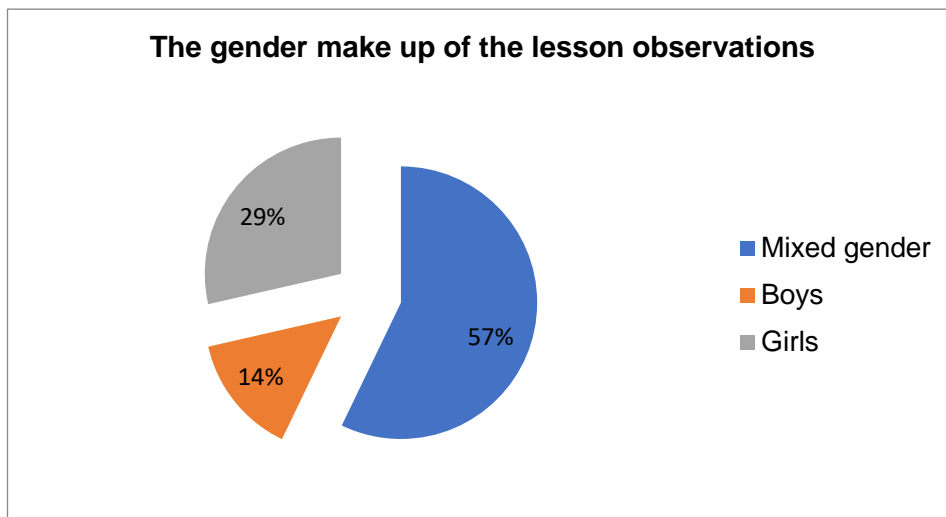




#### Appendix 4.5: The curriculum areas observed



#### Appendix 4.6: The number of single or mixed gender classes



## Appendix 4.7: An example of observation field notes for one participant

### Hope (ITE)

#### Narrative Field Notes

1a) Teacher Participant Name: Hope Observer: Amy Bywater  
 Gender of Teacher: Female Date: 12/12/2018  
 Time: 2.10 Year: 10 Length of Observation: 50mins  
 Area of PE Observed: Badminton Key Stage: 4  
 Number of students: 26 Composition of students: 0 x Boys and 26 x Girls  
 Lesson Plan provided?: No Career Phase of Teacher: ITE  
 Sector of school: Was state, now Academy.

Information about department: 5 in department. 2 x male and 3 x female

#### Intentions for learning (or learning outcomes):

- To be able to exploit depth using the overhead clear shot.

Pupils will be able to:

Emerging	Developing	Secure	Mastery
Attempt to copy the overhead clear shot action	Copy the overhead clear shot action and attempt to apply it to a game situation	Apply the overhead clear to a game situation where depth is starting to be exploited tactically	Confidently apply the overhead shot in a game situation where depth is tactically exploited to be successful within a game.

1b) A description of the classroom context, to include:

<ul style="list-style-type: none"> <li>- <i>The environment (indoors/outdoors/space) and how it is set up.</i></li> <li>- <i>The resources provided for the lesson (see table below)</i></li> <li>- <i>How the lesson is started</i></li> </ul>
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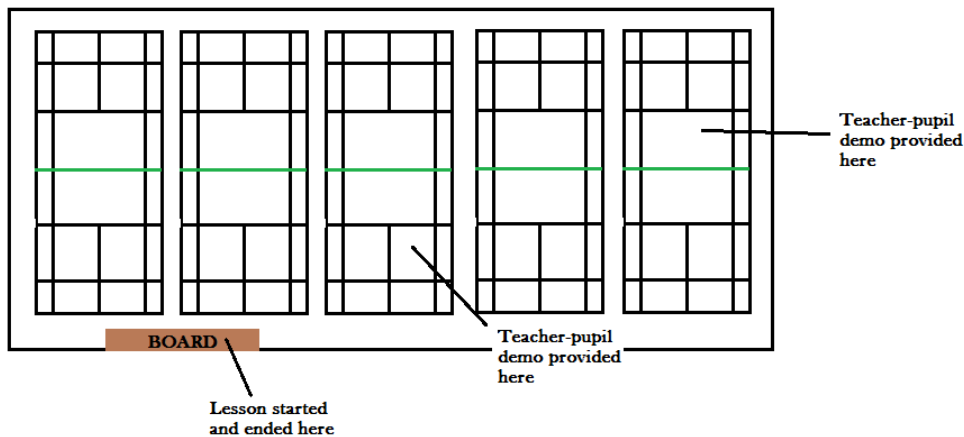
Resources	Present	Used	Resources	Present	Used
Printed reading materials or images	✓	✓	Videos, film, music		

Computer or computer technology (teacher and/ or students)			Demonstration models	✓	✓
Overhead projector			Hands on materials or equipment	✓	✓
Black/whiteboard	✓	✓	Worksheets	✓	✓
Interactive Whiteboard			Writing materials (copy etc.)		

### 1c) Notes

- A large sports hall. 5 x Badminton courts worth of space. Acoustics relatively good as a large, non-echo space. All courts were set up in advance from a previous lesson. Learning objectives were ready prepared on the board. The lesson is started 3-4 metres from the board. Teacher appears very relaxed. Having small friendly chats with some of the pupils while others entered from the changing rooms.
- The pupils had already had a Netball lesson before this one and so they get a good amount of PE lesson time. This was with another teacher.
- Before the lesson, I had a catch up with the teacher who was in her last week of her first placement on a School Direct programme.
- All resources for the lesson were laid out on a bench under the board to start with.
- Objectives were written on the board in detail and in different colours. The objectives used emerging, developing, secure and mastery and WLV pack for the assessment. The school's curriculum expectations were weaved into the wording of this, and the teacher said that she has been given a lot of freedom in terms of what she does within the activity areas she was asked to cover during her placement.
- There was one resource card readily available for technique (Appendix B), which was hung over the badminton net and another resource to the side which was based on noughts and crosses (Appendix A), one with a blank grid and one with pre-decided ideas. All of the resources were differentiated.

### Layout:



- To start the lesson, the teacher asked, “What can you remember about using movement to think about depth?”
- “What can you remember about moving around the court?”
- Thinking time was given for pupils to consider their answers
- Probing questions were then used to check pupil understanding

2) Curriculum (From Penney, *et al.* 2017, p.425)

- *Alignment with curriculum and standards frameworks?*
- *Student centred-ness of outcomes? What learning is being prioritised in the focus of the lesson?*
- *Are learning outcomes developmentally appropriate and considerate of individual learning needs and styles?*
- *Is an area of the overall curriculum programme evident (e.h. PE, Health, OAA, Dance, Games, Swimming) integrated in the lesson?*
- *Is there some student choice in content, assessment and reporting of achievement?*

- The lesson was aligned with curriculum standards
- There was student-centeredness of outcomes.
- Understanding of how to execute the overhead clear within badminton was the priority of the lesson, but there was also expectation to understand that use of this shot can promote depth (tactically), particularly at the back of the court. There was also a reciprocal element to the lesson where pupils were expected to work together to give feedback and help each other to improve the shot, using a checklist (Appendix B). The objectives show that the key focus was execution of the shot.

- Pupils were given adequate time and space to be able to perform the shot and to improve which was noticeable during the lesson.
- The learning outcomes are developmentally appropriate for a Year 10 group, particularly as this is a specialised movement skill and in line with the NCPE (2013) also focused on strategies and tactics and later using the shot to score further points.
- As Badminton was presented, this falls under games in the NCPE.
- There was student choice in terms of content, assessment and reporting of achievement.

### 3) Pedagogy

*Crucially, the term pedagogy recognises that how one teaches is inseparable from what one teaches, from what and how one assesses and how one learns*

- *What is the choice of pedagogic approach to support the pursuit of learning outcomes and does this reflect identified learning needs?*
- *Are all children involved/engaged? (How/Why/Why not)*
- *What 'ability' is the teacher favouring in their intentions for learning?*
- *Behaviourist/Constructivist approaches? (learning theories)*
- *Teaching styles?*
- *Instructional models?*
- *Note on the relationship between the teaching taking place, the learning and the subject matter.*

- After initial questioning which started the lesson, learning objectives were verbally shared with the pupils (just the first objective however, not all of them).
- Also asked 'what do we mean by the overhead clear?'
- The first resource cards were handed out (Appendix B) with a demonstration using one court. Resource cards (Appendix, C, D and E) were hung over the net and highlighted the correct technique and different pathways pupils could take later in the lesson.
- The teacher managed behaviour for learning by reinforcement rules ('girls, are you listening?').
- Pupils went straight into short games to be able to perform the shot. They used the criteria sheets provided (Appendix B) to help each other improve and this appeared consistent across all courts.
- All pupils were engaged with the first task which is using criteria as a checklist (see Appendix B) and performing the shot with a partner. The teacher is focusing

- on facilitating learning. The teacher was able to move around the whole room and give some 1:1 feedback where needed.
- During the teacher's movement around the room, they used open questions and then followed up with corrective feedback. The teacher was consistent in moving around and observing the group.
  - The regular class teacher who was observing the ITE student was giving direct feedback regarding the technique during the first activity.
  - At 2:29, teachers are still performing the overhead clear (Approximately 10 minutes).
  - Pupils were given time and space to practice (active participation).
  - Non-participants were fully included in the practices.
  - The teacher stands back and observes practice and decides who specifically to give 1:1 feedback to.
  - There seems to be an established routine with the group. They have done Badminton lessons prior to this one.
  - The lesson started with a game, rather than a skills practice. This worked well.
  - The teacher calls the group at the end of the room and asks them to bring in the technique resource cards (2:34) (really used the entire space for teaching well).
  - The teacher then makes the pupils aware of further learning objectives and focuses attention to mastery (hardest), which was based on a 'peri-peri' theme, which indicated level of difficulty.
  - The teacher does a demonstration with a chosen pupil and then questions the rest of the class. This showed the technique in action.
  - The teacher's voice changes, and tone is motivational and keeps the group's attention.
  - Reinforcement of behaviour "please put your racquets down".
  - The task is then moved on and pupils are referred to the next resources (hung over the net) (Appendix C, D and E) (2:37).
  - Ability to do the overhead shot depends on a pupil's partner to be able to get the shuttle up high enough. Most pupils were able to perform the shot, but some were not able to move their opponent through use of the shot, which removes the skilfulness of the shot. More decision making in terms of choice of shot could have been a later progression. When to use the shot to score more points and why.

- The teacher again balances attention across all courts and questions, focusing on technique and how this would be changed to improve performance.
- The teacher brings one court in order to progress their learning by moving onto the noughts and crosses activity. They are again given choice about which level of difficulty they choose. This group was chosen based on their quick progression and ability to perform the overhead clear shot consistently (2:41).
- This group have time to get started while the teacher then blows their whistle and asks the rest of the class to come in.
- The rest of the group have explanation of what the chosen group are doing. Easy, medium and hard options. GCSE PE students were encouraged to take harder options (2:44)
- Groups encouraged to choose an option (pathway).
- Good flow to the lesson, not too long spent on anything. All pupils are still engaged and working at different paces. This shows elements of personalised learning which is a strong feature of this lesson.
- They choose which level of challenge they then want and the grid they want to engage with (Appendix F, G, H).
- The teacher moves around and asks individual pairs their progress with this.
- Groups have chosen their own pace to work at (2:51).
- Pupils then asked to pack up ("well done for today"). They bring all resources and courts in and sit back around the board.
- The teacher waits for all pupils to re-join.
- The teacher's relationship with pupils is very good. The teacher seemed relaxed throughout and pupils worked more independently throughout the lesson. Peer relationships were clearly useful for their learning.
- The year group overall is split into two mixed ability groups, the pupils in this group were top set (based on maths and science).

#### 4) Assessment

- *Are the intentions for learning shared with the pupils? (What are they?)*
- *Does the teacher regularly check for understanding/progress? How? (1:1, whole class, other?)*
- *Specific types of assessment which may be used? (Peer/self/whole-group)*

- Pupils complete a 'peri-peri' assessment sheet (Appendix I) and choose which level they wrote these at with reference to their overall objectives.

- Some pupils continue to speak while the teacher is explaining, but it is clear they still understand what has been asked of them.
- Pupils complete their sheets at their own pace and hand to the teacher when completed, before leaving. This was called an 'exit ticket'.
- On pupils' way out the teacher would say 'thank you for today'. All pupils say goodbye which shows fondness of relationships.
- Pupils enjoyed analysing and were commenting on this on their way out.
- The teacher then encourages the last pupil while they take their time completing it.



**Appendix 4.8: A table to integrate key findings from the four data collection methods adopted**

<b>Data Collection Method</b>	<b>Key themes found concerning this data collection method</b>	<b>Sub-categories created (ST= sub-theme)</b>	<b>Key findings to highlight</b>
<b>IPDs</b>	<p style="text-align: center;"><b><u>Theme 1</u></b></p> <p style="text-align: center;"><b>The affective<sup>2</sup> impact of PE and sport on teachers' professional lives (section 4.1.1)</b></p>	<p><b>ST1:</b> Teachers' personal experiences with PE and Sport</p>	<ul style="list-style-type: none"> <li>- A wide range of sports and physical activities either competitively and/or recreationally (most commonly mentioned were Football, Rugby, and Netball).</li> <li>- A range of positive coaching experiences and vocational qualifications alongside formal study (targeted to gain relevant experiences).</li> <li>- Work placements (volunteering and/or in the primary sector).</li> <li>- Wanted to be involved with PE and sport from a young age.</li> </ul>
		<p><b>ST2:</b> The affective benefits of PE and sport experienced by the teachers</p>	<ul style="list-style-type: none"> <li>- Positive influences of role models and opportunities they offered.</li> <li>- School PE teachers were the biggest influence. Cared about their success.</li> <li>- Inspired. Improved confidence. Memorable.</li> <li>- Valuing student-teacher relationships</li> <li>- Enjoyment while taking part in the subject area.</li> </ul>

<sup>2</sup> Kirk (2019, p.151) refers to the 'affective domain' as '(among other things) interest, motivation, perseverance, valuing, caring, resilience, and joy'.

			<ul style="list-style-type: none"> <li>- Families; another key influencer.</li> </ul>
		<p><b>ST3:</b> The affective benefits desired by the teachers for their pupils</p>	<ul style="list-style-type: none"> <li>- Secure student-teacher relationships,</li> <li>- The desire to impact children’s lives,</li> <li>- Having a sense of humour,</li> <li>- Instilling confidence in their pupils,</li> <li>- Inspiring a love for PE; and,</li> <li>- Enabling children to personally develop as a result of their influence.</li> <li>- Wanting to see children make progress.</li> </ul>
		<p><b>ST4:</b> A desire to raise the profile of PE</p>	<ul style="list-style-type: none"> <li>- The profile of PE needs to be raised. The value of it is often questioned.</li> <li>- PE may need to be taught more effectively.</li> <li>- PE is less respected by those who are outsiders to the subject area.</li> <li>- The value placed towards PE may differ dependent on the school sector.</li> </ul>
		<p><b>ST1:</b> Theory or practice preferences</p>	<ul style="list-style-type: none"> <li>- Preferences for teaching theory, practice, or a combination of both highlighted the presence of dualisms.</li> <li>- Practical delivery alone can be monotonous or delivered in a less engaging way.</li> </ul>

<b>IPDs</b>	<b>Theme 2</b> <b>‘Ways of working which influence teachers’ feelings of enjoyment’ (section 4.1.2)</b>		<ul style="list-style-type: none"> <li>- Creative AfL techniques are less possible or present in practical lessons.</li> <li>- There are differences in what it takes to be an effective teacher of theory PE and an effective teacher of practical PE. These also have different knowledge bases.</li> </ul>
		<b>ST2:</b> Teachers desire variety, autonomy, and freedom to choose	<ul style="list-style-type: none"> <li>- Desire to have a variety of practical and theory lessons.</li> <li>- Teachers desire a certain level of autonomy in their roles and freedom to make choices about what they teach.</li> <li>- Enjoying being creative.</li> </ul>
		<b>ST3:</b> The challenging behaviours of children	<ul style="list-style-type: none"> <li>- Expressing empathy for reasons why children may exhibit challenging behaviour.</li> <li>- Relationships with children can improve the ability to manage behaviour.</li> <li>- The gender of the teacher and pupils could contribute to difficulties with managing behaviour.</li> <li>- Children can be difficult to manage sometimes; but some teachers felt positive about working with more challenging children and are confident and adaptable in doing so.</li> </ul>
		<b>ST1:</b> Changing in education over time	<ul style="list-style-type: none"> <li>- Political changes and emphases over time.</li> <li>- Different foci come back around in a cyclical nature.</li> <li>- More recent times have shown a press for data.</li> </ul>

	<p><b><u>Theme 3:</u></b></p> <p><b>‘Change and aspirations across teachers’ career phases (section 4.1.3).</b></p>		<ul style="list-style-type: none"> <li>- There are increasing commitments that home life demands.</li> <li>- Priorities of teachers change over time.</li> <li>- Notable was the closing of school sports partnerships and the launch of the school games.</li> </ul>
		<p><b>ST2:</b> Experiences as ECTs</p>	<ul style="list-style-type: none"> <li>- A notable shift in the foci of undergraduate degrees over time (e.g. learning about pedagogy or a range of sports).</li> <li>- The theoretical side of PE was emphasised during teacher training.</li> <li>- University training providers in terms of standards important, equally to the mentors on school placements.</li> <li>- Empathy towards other career phases is needed as priorities and governmental emphases have changed over time, re. QPE teaching.</li> </ul>
		<p><b>ST3:</b> Career trajectory and additional responsibilities</p>	<ul style="list-style-type: none"> <li>- Many of the teachers shared that they hold additional responsibilities alongside their teaching.</li> <li>- Within schools, this included a range of subject-specific and pastoral roles.</li> <li>- Some teachers choose not to take on additional responsibilities.</li> <li>- Some also had additional responsibilities outside of school.</li> <li>- 9/14 of the participants had additional responsibilities.</li> </ul>
	<p><b>Individual participant’s RGI were analysed by</b></p>	<p>ECTs, MCTs, and</p>	<ul style="list-style-type: none"> <li>- A timeline nature of elements across the PCAs.</li> <li>- Different aspects of high-QPE teaching (positive or negative) are more or less relevant for early, middle, or late-career teachers.</li> </ul>

	<p><b>PCA across the early, middle, and late-career phases.</b></p>	<p>LCTs</p>	
<p><b>RGIs</b></p>	<p><b>Additional qualitative findings of the RGIs after analysing the transcripts</b></p>	<p><b>ST1:</b> Desirable values for a PE teacher (see <b>Appendix N</b>)</p>	<p>- <u>General values which PE teachers may desire to be a QPE teacher</u> (being a healthy role model, maintaining your identity and philosophy as a teacher, questioning the nature of competition, lifelong participation, acknowledging exclusionary PE practices that are detrimental to adolescents' wider development, PE should cater for a range of potential attitudes, value extra-curricular activities, motivation to progress learners, observation).</p> <p>- <u>Many tools which teachers may require to teach well</u> (recognising what isn't working and having the capacity to change it, keeping calm when things don't go well, backup plans, willingness to change, being creative, taking risks, trying new things, planning, deviating from the plan, knowing how to achieve objectives in practice, working collaboratively, dealing with behaviour and sharing resources, observing experienced teachers, health and safety considerations, knowing the pupils, resilience, dealing with the pressure of observations and the ability to reflect).</p> <p>- <u>Factors relating to wanting to improve as a teacher or wanting to improve PE in general</u> (a willingness or desire to change what already exists and what is delivered, a desire for additional responsibilities, the desire to progress personal roles; and progressing to maintain motivation).</p>

		<p><b>ST2:</b> Components of student-teacher relationships</p>	<ul style="list-style-type: none"> <li>- A relatable understanding of children’s needs, issues, and abilities.</li> <li>- Being empathetic towards the learners.</li> <li>- Offering learners more autonomy in their learning experiences.</li> <li>- Closeness in age contributes to relatability.</li> <li>- Sharing an emotional experience with his learners through sport.</li> <li>- Dealing with behaviour and how behaviour is reinforced. Having a sense of authority and presence.</li> <li>- Having relationships with clear boundaries and an ability to deal with reluctant participants.</li> </ul>
		<p><b>ST3:</b> Knowledge bases required by QPE teachers</p>	<ul style="list-style-type: none"> <li>- <u>A well-informed ideology</u> (other people can be influential in shaping a teacher's ideology, an ideology of wanting to ensure success for all pupils of all abilities, teachers must be clear in what they believe in).</li> <li>- <u>Knowledge of assessment and how to use data for pupil progress</u> (accuracy of judgments, being able to put assessments in place, how to use data to ensure pupils can progress).</li> <li>- <u>Knowledge of pedagogy</u> (Knowledge around how to teach for different learners, methods of teaching, and meaningful learning experiences).</li> <li>- <u>Knowledge of practical subject knowledge</u> (knowledge of a range of practical activities and sports, there may be an overemphasis on helping children to become good at sport and so there should be less focus on them. Others have a preference for focusing on techniques).</li> </ul>

<b>RGIs</b>	<b>Additional qualitative findings of the RGIs after analysing the transcripts</b>		<ul style="list-style-type: none"> <li>- <u>Knowledge of the pupils</u> (knowing the pupils, progression, and differentiation, keeping up to date with what children are interested in, developing relationships with pupils helps you to understand them and cater to their needs, knowing about their age, ability, gender, and disabilities).</li> <li>- <u>Knowledge of expectations and policy</u> (changes in expectations regarding teaching and PE, different school sectors influence the quality of PE teaching, meeting expectations of ITE providers).</li> <li>- <u>Knowledge of the dualism 'new' versus 'old school' teaching</u> (these assumptions are defined).</li> </ul>
		<p><b>ST4:</b> Maintaining a passion for teaching and your identity</p>	<ul style="list-style-type: none"> <li>- <u>Causes for a decline in passion</u> (how change can cause declines in passion, when the passion shifts or declines, a plateau in career and emergence of other priorities, considering dropping out of teaching, additional responsibilities detracting from passion, the repetitive nature of PE).</li> <li>- <u>Factors which help to maintain passion</u> (teachers taking ownership themselves, mentoring ECTs, the need for new challenges or roles).</li> <li>- <u>The effect of being passionate</u> (enthusiasm is infectious for children, if you are passionate, you are likely to be more open to learning).</li> <li>- <u>Ways in which PE teachers show their passion</u> (by teaching for a long time, trying new ideas in teaching, putting time into the resources used, putting time into planning).</li> <li>- <u>What teachers are passionate about</u> (teaching, particular sports, wanting to change perceptions of the subject and what and how it should be delivered, willingness to inspire, working with children, a desire to achieve,</li> </ul>

			to developing relationships, wanting to be a good person and role model, extra-curricular clubs).
<b>Rank Ordering Task</b>	<b>An online rank ordering task to rate (1) the most important and (15) the least important constructs of QPE teaching.</b>	The creation of 'super-constructs'.	<ul style="list-style-type: none"> <li>- There was consensus in what PE teachers and senior leaders across all career phases deem as attributes of a QPE teacher.</li> <li>- The three most important over-arching constructs were deemed as 'passion for teaching PE', 'strong student-teacher relationships', and 'strong subject knowledge'.</li> </ul>
	<b>The demographics of the lesson observations</b>	Curriculum areas delivered, gender make-up of the lessons	<ul style="list-style-type: none"> <li>- The majority of lessons focused on the motor or cognitive development of the child. None of which, related to the social or affective domains; this is not to say they were not present, but they were not explicitly part of the learning objectives provided by the teachers.</li> <li>- Half of the lessons were mixed gender and the rest single-sex classes.</li> </ul>
		<b>ST1:</b> Aspects of inclusion	<ul style="list-style-type: none"> <li>- Additional support</li> <li>- Observing practices and intervening to provide feedback</li> <li>- Non-participants included</li> <li>- The need for more inclusive learning outcomes</li> <li>- A vast range of differentiation.</li> </ul>



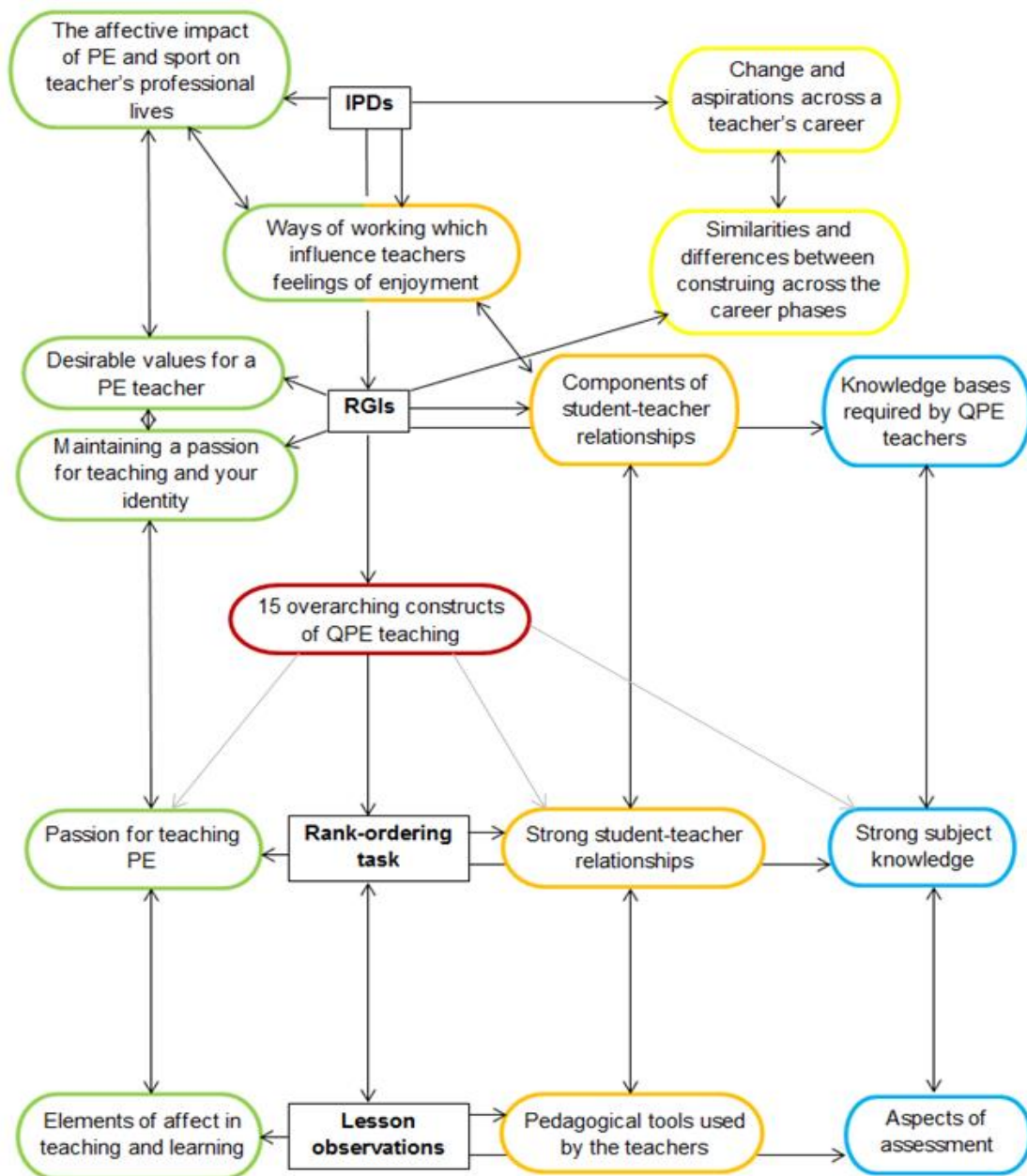
<b>Lesson Observations</b>	<b><u>Theme 1</u> Pedagogical tools used by the teacher</b>	<b>ST2:</b> Pedagogical content knowledge	<ul style="list-style-type: none"> <li>- A wider knowledge of sport</li> <li>- Pupils used for demonstrations and teacher demonstrations</li> <li>- Health and safety considerations and safe practice in PE</li> <li>- Clear explanations of tasks</li> <li>- Comparing performances</li> <li>- Elements of competitions encouraged</li> <li>- Developing pupils' examination technique</li> <li>- Applying it again to specific sporting situations</li> <li>- Scaffolding of pupils' learning</li> <li>- Personalised learning environments.</li> </ul>
		<b>ST3:</b> Styles of teaching adopted	<ul style="list-style-type: none"> <li>- A combination of styles used</li> <li>- Direct instruction or the command style</li> <li>- Use of resources to work reciprocally</li> <li>- Elements of Sport Education and Teaching Games for Understanding</li> <li>- Different learning theories</li> <li>- Too much of one style perhaps impacting upon student behaviour</li> <li>- Combinations of styles making the lessons more meaningful for all learners</li> </ul>






<b>Lesson Observations</b>		<b>ST4:</b> Use and types of questioning	<ul style="list-style-type: none"> <li>- Checking pupil understanding through questioning</li> <li>- Use of probing questions</li> <li>- Scaffolded questioning in both theory and practical lessons</li> <li>- Questioning decreased engagement when used for too long</li> <li>- Use of direct questioning</li> <li>- Good knowledge of the pupils to ask questions appropriately</li> <li>- A range of questioning techniques</li> <li>- Questioning which provoked thought.</li> </ul>
		<b>ST1:</b> Developmental emphasis underpinning the lesson intentions	<ul style="list-style-type: none"> <li>- Cognitive emphases</li> <li>- Aspects of motor development</li> <li>- Alma's lesson a good example of the learners working holistically</li> </ul>
		<b>ST2:</b> Forms of feedback used	<ul style="list-style-type: none"> <li>- Value and corrective</li> <li>- Reference to techniques</li> <li>- Directed at individuals</li> <li>- Using different types of feedback</li> <li>- 1:1, whole class, peer and self</li> </ul>

	<b>Theme 2</b>  <b>Aspects of assessment</b>		<ul style="list-style-type: none"> <li>- Feedback which reinforces tactical problems</li> <li>- Use of technology to interact with peers, analyse, and evaluate performances.</li> </ul>
		<b>ST3: Monitoring and ensuring pupil progress</b>	<ul style="list-style-type: none"> <li>- Pupils making good progress</li> <li>- Providing regular progressions</li> <li>- Not rigidly sticking to the plan to ensure progress</li> <li>- Good adaptability to ensure pupils still made progress</li> <li>- Careful management and attentiveness to pupil progress</li> <li>- Pupils working together to ensure progress</li> <li>- Ensuring pupils challenged themselves</li> <li>- Standing back and then facilitating learning</li> </ul>
		<b>ST1: Caring teaching</b>	<ul style="list-style-type: none"> <li>- Relatability with the pupils</li> <li>- Short, informal conversations with the pupils</li> <li>- Showing a genuine interest</li> <li>- Teacher appears very relaxed</li> <li>- Knowledgeable about the students</li> <li>- Commanded clear respect from the pupils</li> </ul>

<b>Lesson Observations</b>	<b><u>Theme 3</u> Elements of affect in teaching and learning</b>		<ul style="list-style-type: none"> <li>- Used humour while engaging</li> <li>- Knowing pupil names</li> </ul>
		<b>ST2:</b> Levels of engagement	<ul style="list-style-type: none"> <li>- Additional roles provided</li> <li>- The pupils enjoy competition</li> <li>- Pupils self-paced their learning</li> <li>- A motivational climate created</li> </ul>
		<b>ST3:</b> Pupil Autonomy	<ul style="list-style-type: none"> <li>- Allowing pupils to come up with ideas or ways of warming up</li> <li>- Ownership of adapting an activity</li> <li>- Be creative and eventually putting sequences of their movements together</li> <li>- Provide each other with feedback</li> <li>- Choose their level of challenge</li> <li>- More challenging to facilitate at times due to student behaviour</li> </ul>

**Appendix 4.9: A concept map to summarise and integrate the results and findings of the four data collection methods**



	The four data collection methods adopted
	Teachers' individuality and affective dimensions of QPET
	Teachers' practices involved for QPET
	Teachers' knowledge for QPET
	Teachers constructs of QPET across career phases and of other career phases

Two of the themes relate to teacher cognition. The first is 'teachers' individuality and affective dimensions of QPET', which covers the feeling aspects of cognition and teachers' individual dispositions. The second theme is 'teachers' knowledge for QPET' which relates to what teachers know (and therefore their thinking). Both aspects of cognition (thinking and feeling) are therefore emphasised through the findings. However, while they are presented as individual themes, they are arguably interwoven and connected. My points here also applied to the third theme, 'teachers' practices for QPET', as both of the previously mentioned features of cognition unfold through social interactions in the classroom context. These three themes have therefore related to the phenomenological thread throughout my thesis. With this in mind, I have found that the intellectual activities of teaching are not divorced from affective feeling. Particularly, as teaching relies on the social interaction between teacher and learner. The *wholeness* and *embodiment* of experience which began to unfold through **chapters 1-3** were therefore significant throughout my findings.