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Why Returning to VET?

Results of a Qualitative Comparative Study about English and German Car Mechatronics

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Abstract: Educational choices, especially the influence of class on these choices have been a subject of lively international debate. However, thus far, there has been little international and comparative research with respect to vocational and education training (VET) decision making from a subject-oriented perspective. This paper considers occupational-biographical orientations of English and German car mechatronics and focuses on the roles of learning and gaining vocational qualifications. Drawing on the concept of occupational-biographical orientations, the paper describes three types of orientations based on analyses of findings from 11 autobiographical-narrative interviews with English and German car mechatronics. The interviews clearly showed that occupational-biographical orientations explained different views on the necessity of returning to (continuous) vocational education and training. They also demonstrated that subjective perceptions of the national VET system fostered particular occupational-biographical challenges, which supported or hindered existing learning attitudes. Overall, the findings suggested that occupational-biographical orientations exerted the most important influence on learning biographies and decisions to return to (continuous) VET.

Keywords: VET, Vocational Education and Training, Comparative Qualitative Research, Lifelong Learning, Return on Education and Training, England, Germany

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1 Introduction

Within the scope of international and comparative vocational education and training (VET) research there have been many studies which investigate and compare the structures and training patterns of different VET systems and their transfer to other countries (Phillips & Ochs, 2004; Pilz, 2016). Over recent years, investigating learning conditions and processes of the individual learner from the subject-oriented perspective within the VET system has gained in importance but has not yet been undertaken extensively and thoroughly within the field of international and comparative VET research (James et al., 2007). Analysing different relevant VET aspects from a subject-oriented perspective is not only of value for teaching and learning processes on the micro level such as for vocational teachers but also for the macro level such as for VET policies. For instance, in Germany there is a line of argumentation that adjusting the German VET system to a stronger competence-oriented ('English-like') VET system will impede the development of a holistic professional identity (Drexel, 2008; Kuda & Strauß, 2006), which is a central goal in the German VET system. But so far little is known about how and to what extent the structures of VET systems affect the individual learner, the learning biography and professional identity.

2 Research Perspective

To tackle this gap in research, at least partially, the research project described here works with the concept of biographical occupation orientations. As the general topic is the effect of VET systems on the individual learner, the learning biography and professional identity, we have the VET system on the structure level and the individual learner acting out his/her professional identity on the action level. The concept of biographical occupation orientations acts as a mediator between the structure and action level. The intermediary role shall be illustrated with the vocational qualification orientation individual learners have. Vocational requirements get subjectively acquired on the structure level by filtering and breaking them through occupational-biographical processes of self-constitution (Wagner, 2000). There is the vocational requirement, i.e. qualification on the structure level and the processes of self-constitution on the action level—both levels are linked by biographical occupation orientations.

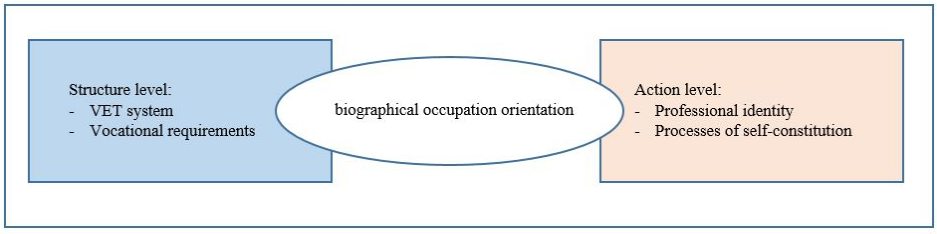

Figure 1: concept biographical occupation orientation as the link between structure and action level

It is not only the mediatory role of biographical occupation orientations which makes it a valuable concept. The concept of orientation has also been used because orientations are on the one hand cross-situational and on the other hand do not stay the same throughout the course of time, as new life situations lead to new experiences (Giegel, Frank, & Billerbeck, 1988, p. 13). In addition, biographical occupation orientations are a crucial order scheme for employed persons. These orientations mirror the specific identity construction, which employed persons form in their individualization process and onto which they hold on to (Giegel et al., 1988, p. 10). With this concept in mind two research questions have been raised:

- Which biographical occupation orientations do German and English car mechatronics develop?
- How does a holistic (Germany) and a fragmented (England) VET system affect the development of such biographical occupation orientations?

Against this backdrop, this paper investigates the role of learning and gaining vocational qualifications as one facet of biographical occupation orientations. Furthermore, it reconstructs how the structural condition, i.e. the national VET system affects this specific facet of biographical occupation orientations.

The countries Germany and England were selected because they represent two very different VET systems. The German VET system is characterised by its dual training, linking theory and practice and pursuing a holistic, i.e. concerning the whole person, training (Bertram, 2003; Waterkamp, 2006). The English VET system is fragmented, i.e. there are only a few binding specifications and many diffuse but flexible structures (van Stipriaan & Lauterbach, 2011; Shaw, Shaw, & Blake, 2016).

The car mechatronic occupation was chosen because the car technology development has been changing rapidly within the last twenty years. Thus there are changes and challenges at the car mechatronics' workplace and it is assumed that therefore the issue of biographical occupation orientation and especially the fact of learning arise.

3 Empirical Approach

The Grounded Theory methodology (Strauss & Corbin, 1990) was used to inform the research design and tackle the research questions. Data collection was done by applying autobiographic-narrative interviews (Schütze, 1983), which comply with the Grounded Theory methodology. Furthermore, this type of interview allows to collect data from a subject-oriented perspective and to address topics like biographical occupation orientations. The data was analysed twofold: first, applying Grounded Theory coding (Strauss & Corbin, 1990) for reconstructing biographical occupation orientations in themselves and second, using narration analysis (Schütze, 1981) which enables the reconstruction of the development process of the biographical occupation orientations. Both analysis methods reveal structural influences on the development process of biographical occupation orientations. The data material had been analysed by the researcher

herself, who presented and discussed her findings on a regular basis in a research workshop in order to secure the fulfilment of quality criteria for qualitative social research (Przyborski & Wohlrab-Sahr, 2010).

The study was conducted between 2009 and 2014 in two structurally comparable cities in Germany and England. According to the Grounded Theory methodology the sampling process was done in two steps. The first step consisted in choosing selection criteria which were based on logical assumptions about car mechatronics, i.e. when might car mechatronics be confronted with the topic of biographical occupation orientations and the fact of learning? The selection criteria were:

- They have been working in their occupation for at least three years.
- The car mechatronics have acquired a vocational qualification in their field at some point of their life.

In respect to the car mechatronics' working place, the following aspects had been taken into consideration:

- The automobile brand the car mechatronics deal with.
- The type of car workshop the car mechatronics work for (contract workshop, independent workshop).
- The employment relationship the car mechatronics have (self-employed, employed, operative level, management level).

The second step consisted in theoretical sampling, i.e. the sampling is done by applying theoretical selection criteria, which have unfolded themselves in the course of analysing the first set of data. The selection criteria were then:

- strategic use of VET institutions and programmes, collecting vocational qualifications
- defining limits of one's own scope of duties and expertise, knowledge based on experience
- passionate handling of the car, expert knowledge due to turning hobby into a profession

According to the qualitative nature of this study and the applied Grounded Theory methodology inductive reasoning was applied. The starting point are specific observations, in my case statements by the interviewed German and English car mechatronics. Due to Grounded Theory coding specific patterns which are valid for the entire sample were reconstructed, in my case three types of biographical occupation orientations. These patterns led to tentative conclusions, as in my case for a) the interplay of biographical occupation orientations, the subjective perception of the national VET system and the decision for returning to (continuous) vocational education and training and

b) the influence of the national VET system on the development process of biographical occupation orientations.

Eleven interviews had been conducted in total, six in Germany and five in England. Interviews lasted from 50 to 180 minutes and, by agreement with the interviewees, were recorded digitally and subsequently fully transcribed. The researcher is trained in conducting autobiographic-narrative interviews and speaks both languages at a native level.

4 Description of the Findings

Following the research questions I will first describe the biographical occupation orientations the interviewed German and English car mechatronics have developed. I will then outline how the national VET systems are perceived by the interviewed German and English car mechatronics and how this has influenced their learning biography and attitude toward lifelong learning. Some of these results had been published before (Gericke, 2013).

4.1 Three Types of Biographical Occupation Orientations

Below, I present the three types of biographical occupation orientations as reconstructed from my sample of German and English car mechatronics (Gericke, 2014). The focus rests on four facets of the biographical occupation orientations, which are relevant for the topic of the paper, namely: occupational-biographic resources, working tool, professional identity and applied action strategy when challenges arise.

4.1.1 Type one of Biographical Occupation Orientations: Strategic use of Qualification Offers

German and English car mechatronics whose biographical occupation orientation can be summed up with *strategic use of qualification offers* draw upon the same occupational-biographic resources which is ascent and education orientation, but the motivation for this orientation differs. The German car mechatronics of this type have a strongly developed lifelong learning orientation due to parents and peer-group, who embody this orientation. Furthermore, they had experienced a standstill feeling at an early point of their working life which has strengthened their desire to gain additional vocational qualifications:

> *Varied work is important for me. And with this varied work also the technological advancement and my own personal advancement comes with it. So that there is no standstill feeling which I have had and then I thought about going to the school for mastercraftsmen* (OL l.240–244; translation by Gericke).

Due to founding a family they have developed a strong desire for job security and have looked for appropriate strategies. They applied an economic view on themselves and

looked for ways to make themselves more valuable for the employer and thus securing the job through the acquisition of expert knowledge: "This further training is also my future capital and securing my job. Because the more I know the less dispensable I am" (OL l.354-357; translation by Gericke).

The English car mechatronics of this type had experienced a difficult school career, in some cases an educational trajectory and left school with a stigma. In spite of these experiences they have developed a strong educational orientation, thirst of knowledge and career aspirations. This was due to an education and career oriented family background and an occupational long-term perspective.

The working tool the German and English car mechatronics, who belong to this type of biographical occupation orientation, use is their up-to-date knowledge: "The typical challenge is learning [...] one of the main things is learning the technology [...] Eh you can't fix a car properly unless you understand it" (AH l.347–350). They acquire their knowledge by using strategically and continuously available vocational qualification offers. They are willing to invest time and money in keeping up-to-date.

The professional identity of this type of German and English car mechatronics consists of customer orientation, providing good service and being able to repair every component of a car: "to give our customers a really good and professional service [...] a mechanic was expected to know how to do all these jobs" (AW l.1253f. and 1327f).

The automotive industry experiences a constant and rapid technological advancement, especially in respect to electrotechnology. The car mechatronics perceive the fast-changing technology as challenging and at times they feel that they lose control over the car and this threatens their ability to act:

> *You get to learn and know about one thing and then before you know where you are that learning is of no use to you, because they have moved on and they changed that"* (AW l.1184–1186).
> *The technology is doing things which are actually impossible to do [...] Nowadays the cars tell you what they want to have done with them, it's not me anymore telling the car but the car tells me* (OL l.2141 and l.2485f.; translation by Gericke).

By gaining up-to-date knowledge they try to maintain their ability to act in their occupation and to fulfil their professional identity, i.e. being able to repair the car and providing good quality work.

4.1.2 Type two of Biographical Occupation Orientations: Defining Limits of one's own Scope of Duties and Expertise

German and English car mechatronics who belong to the second type of biographical occupation orientation *defining limits of one's own scope of duties and expertise* have two occupational-biographic resources at their disposal. Firstly, they are excellent networkers. They come easily in contact with other people and stay connected with them. It is by using their network that they find their jobs:

> *I was out of work [. . .] So I went to see my old what was my old area manager [. . .] and he gave me a job* (AM l.200–203).
> *[. . .] I had a couple of friends that work there. Obviously they're not there now [. . .] 'Oh, Rattling's is looking for a mechanic [. . .]' I said 'Oh, find out how much the wages are' (,) [. . .]* (TO l.589–592).

Secondly, they are able to define their scope and limits of tasks and duties in their different areas of life and communicate these to their environment.

> *That is car electrician, they do the electronics, right. We have to do this too to some extent. A normal mechanic needs to be able to do it too. But the real electronics, no. A normal mechanic is not able to do it. That is not possible* (RP l.1261-1267; translation by Gericke).

The working tool these German and English car mechatronics apply in their daily work is their experience: „I mean 90% of my job or my skill base is experience" (AM l.642). Their experience does not stem from gaining a vocational qualification but from their practical work with cars. They have started to work on cars without theoretical knowledge and learnt by trial-and-error. It is this learning-by-doing and learning by trial-and-error which constitutes the experience they draw upon in their daily work.

> *I'm not a qualified mechanic, never have been, everything I've learnt, I've learnt in my years in the industry* (AM l.250f.).
> There are trained mechanics but they do everything by computer. But a lot of the problems you get with the cars with experience you can tell what's wrong with them. But it's just trial and error a lot of the time (TO l.1005–1008).

The professional identity of this second type of German and English car mechatronics consists mainly of customer orientation: "In the job I mean at the moment the challenging part I mean is the customers, because you have to keep them happy" (TO l.256f.). Handling the customer is very important to them. They take pride in being able to deal with very emotional customers. Nonetheless, if the customers become too emotional for them, when their self-defined limit has been exceeded, they hand over the customer to their superior: "Anytime that I feel that I can't handle a situation, I contact them [the superior]" (AM l.1335f.).

Next to customer orientation it is quality work which is part of their professional identity. Providing a good service for the customer and their automobile are their working objectives. Nevertheless, they do not have the aspiration to be able to repair every component of the car. Instead they see their professionalism in being able to communicate clearly their scope and limits of their work field and duties. „[. . .] we do some repairs. It depends on what sort of repairs it is [. . .]" (AM l.544f.)

When challenges arise at the workplace and their tool ‚experience' cannot be applied then the German and English car mechatronics of this second type of biographical occupation orientation know where and whom to ask in order to get the needed information

and support. They actively use their network and know their network-members' expertise: "You learn from the talks with colleagues" (RP l.1674f.; translation by Gericke). In addition, they define the challenge as one which exceeds their self-defined scope and limits of duties and expertise and hand over the problem to a colleague or superior: "I always try and do the best I can. If I can't, if I get something I'm not sure about I'll ask for a second opinion" (TO l.946f.).

4.1.3 Type Three of Biographical Occupation Orientations: Passionate Professional Practice

German and English car mechatronics who belong to this third type of biographical occupation orientations could fondly be termed as 'nerds'. Their occupational-biographical resources are love and passion for repairing cars, which have been developed and fostered in their childhood and throughout their teenage years.

> *I used to build models [...] I used to go around collecting bits of bicycles [...] until I had enough parts to make a bike [...] then I started buying old cars, taking them apart and selling them* (KP l.53-62).
> *What have been my interests? Actually it has always been cars [...] I have always been excited about cars* (TS l. 138-148; translation by Gericke).

When these German and English car mechatronics deal with their favourite object —the automobile— they use their passion and in-depth knowledge as their working tools. For them their passion and in-depth knowledge is a biologically determined personality trait:

> *They [young apprentices] haven't got this natural thing that I grew up. It's/ it's inbreeding. It's inbreeding in/ if you saw me in half I've got a mechanic frame right through me* (KP l.457f.).
> *When you pick a tool up you can tell by looking at someone pick a tool up whether they've got the natural aptitude to use that tool or/ or not* (KP l.459f.)
> *It's in me* (TS l.998; translation by Gericke).

As they have been working on cars and other types of vehicles all their life, they have gained in-depth knowledge. It is their specialist knowledge which enables them to repair cars, where colleagues fail. "I have an in-depth-knowledge of how all the components work [...] My in-depth-knowledge gives me the edge at the ones that come along that the machine can't fix" (KP l.804f. and l.809f.). For them it is the combination of passion and in-depth knowledge which constitutes their working tool:

> *I've got it in here (((tips with his finger onto his head))) and here (((tips with his finger on his heart)))* (KP l.784f.)
> *I not only see the car as my occupation but it is also my hobby. I deal with it differently* (TS l.916f.; translation by Gericke).

The professional identity of these German and English car mechatronics consists of applying a holistic view to the car, providing quality work, being able to repair every

component of the car and treating the customer fairly. However, the core of their professional identity is passion and knowledge.

> *I have the habit of looking at the whole car [...] Where other colleagues fail with the car, I look a bit further, I have an overall view of the car* (TS l.906–915).
> *I have quality standards. I want that when I do things or I do things for myself, then it is my goal to do a good job. So I can tell myself, I ask myself 'Would you do it this way with your own car too?' If I say 'Yes, I would do it exactly like that' then it's okay* (ME; translation by Gericke).
> *Values are yeah honesty and get the job right* (KP l.605f).
> *They [young apprentices] haven't got the heart or spirit to eh to be a good technician* (KP l.426).

It shall not be left unmentioned that German and English car mechatronics with a passionate biographical occupation orientation choose or suffer from isolation at their workplace. Their very high quality standards make it difficult to have good working relationships with their colleagues:

> *I am, because I am very zealous and the others just do their job in order to get money. And these two attitudes clash against each other, that doesn't always work out well. [...] Later on, I didn't care anymore. At one point you develop the attitude, 'let them gossip'* (TS 927–931 and 971; translation by Gericke).
> *And the type of people that work in factories, they're not professional people. When you are used to being around professional people all the time and all of a sudden you have to work in an environment full of idiots it was ehm didn't like it at all really* (KP l.302–305).

German and English car mechatronics of this third type of biographical occupation orientations are aware of the fast changing automotive technology. There are more and more electronic components. In contrast to the first type, they do not feel challenged by this technological advancement. They have the in-depth knowledge to deal with the modern technology.

> *The cars have become more and more technically advanced, electronically [...] But because I have an in-depth knowledge of how all the components work, cars still work the same, they've just gone in a different way. And eh because of my background knowledge I know roughly where the problem is before I start* (KP l.803–807).

It is their specialist knowledge which makes them superior to the diagnostic machine:

> *Every now and then you get a job, which the diagnostic machine can't work out and ehm unless you know how that works, how do you know how to diagnose it? That's the problem, because the diagnostic machine is only a guide* (KP l.763–766).

> *In principle your tool/ your tool number one is your brain. Well, without your brain/ well, you have got the diagnostic machine, okay. But your brain is your main working tool* (ME l.4278–480; translation by Gericke).

German and English car mechatronics of this third type of biographical occupation orientations speak of the need for learning. However, this need is not caused by the rapid development of automotive technology, but it is sparked by their inner need to keep up-to-date. They learn purely for themselves and do not have their current or future employer in mind.

> *It's just the inner drive, really, to eh to constantly learn, to constantly update myself. And eh I always push as hard as I can to eh learn what I can [...]* (KP l.814–816).
> *And why did you decide to do the master craftsman training? Well, actually because it is the only thing left where I can progress* (TS l.1012–1015; translation by Gericke).

4.2 The Subjective Perception of the German and English VET System

I will now present the reconstructed subjective perception of the German and English VET system. In contrast to the biographical occupation orientations there is a national dividing line between the interviewed German and English car mechatronics. The subjective perception of the two different VET systems is homogeneous within the two groups. The focus will be on how the German and English car mechatronics had experienced their VET system and which consequences it had for their learning biography and lifelong learning attitude.

4.2.1 Subjective Perception of the German VET System

The interviewed German car mechatronics have passed through the dual vocational training. That means, they took part in theoretical lessons at the vocational school and had practical training in a company for 3.5 years. All German car mechatronics were satisfied with their dual vocational training, linking theory and practice: "[...] the vocational training, the practical and the theoretical training were super" (TS l.49f.; translation by Gericke)". They perceived their vocational teachers and trainers as well-informed and up-to-date: "The manual skills you had been taught by older colleagues who had been experts in their field" (DW l.149f.; translation by the author). They report of a pleasant learning atmosphere in school and company: "That was a nice thing. We all got on well with each other" (ThS l.174f.; translation by Gericke). Their general impression of the German VET system is one of having a clear structure with clearly defined ways of acquiring vocational qualifications and offering continuous vocational educational training. However, the interviewed German car mechatronics see that the strong VET structures are at the expense of flexibility.

The interviewed German car mechatronics are well-informed about available pathways of acquiring vocational qualifications and even continuous vocational education

and training. German car mechatronics who belong to the first type of biographical occupation orientations—strategic use of qualification offers—have a profound knowledge and make extensive usage of the available institutions of vocational education and training as well as continuous vocational education and training. They return to institutions of continuous vocational education and training in order to keep updated and capable of action when technological challenges arise. For them lifelong learning is their strategy for dealing with technological challenges. German car mechatronics who follow the second type of biographical occupation orientations—defining limits of one's own scope of duties and expertise—acquire a basic vocational qualification and have no further aspiration for continuous vocational education and training. They feel that their basic vocational qualification is sufficient. Lifelong learning in a formal context is rejected. They learn in informal settings like talking to colleagues. German car mechatronics of the third type of biographical occupation orientations—passionate professional practice—return to institutions of continuous vocational education and training in order to quench their thirst for knowledge and strengthening their expert status.

4.2.2 Subjective Perception of the English VET System

The interviewed English car mechatronics have passed through a variety of vocational education and training programmes; starting with a 4.5 year-long City Guilds apprenticeship to a three-week in-house-course on single car components.

> *[. . .] two training courses with my very first job [. . .] one was on suspension work and one eh was on eh car braking systems [. . .] I did two training courses with them in the year I was with them [. . .] but they did in-house training [. . .] the guy who gave me the job taught me to fit tyres. So, it was like 'This is how you do it (') (–) This is how it's done' [. . .]* (JM l.330–337 and l.751–754).

The companies which provided training have been changed by all of the interviewed English car mechatronics. All of them reported that they were treated as employees first and were hardly taught anything. Trainers at the company lacked any pedagogical suitability and the working environment was perceived as very challenging. They perceived their vocational teachers as educators with outdated knowledge. Furthermore, the practise models at the vocational school were outdated too.

> *[. . .] everybody used to wash their (–) hands in a bucket of water [. . .] their conditions were even worse [. . .] the heating (') which was virtually eh non-existing in the/ in the winter [. . .]* (AW l.374f. and l.492–494).
> *Now (–) it wasn't a particularly good way of being taught, because you don't have as much time [. . .] the teacher starts to go through everything. Ehm it was a very short day ehm by the time you actually got to the theory side of things. And you're also mixed with other people who didn't do it as a job and done it as a other sort of qualification [. . .] and they weren't really showing a lot of interest* (AH l.856–73).

> *Because colleges seem to be about ten years behind (,) They will only work with cars were do/ donated to them (') [. . .] they never had anything that were modern (,) [. . .]* (AH l.690–693).

Their general impression of the English VET system is one of diffuse structures, low quality standards at the vocational schools and in general a weak position of apprentices in companies. However, the interviewed English car mechatronics see one strong point in their VET system, which is its flexible structure. Changing companies that provide training or even discontinuing an apprenticeship and starting a new one in a completely new industry is uncomplicated.

The interviewed English car mechatronics have experienced their VET system as a challenge in respect to deciding a suitable pathway and dealing with difficult training conditions but value its flexibility. English car mechatronics who belong to the first type of biographical occupation orientations—strategic use of qualification offers—have undergone an intense and long searching process in finding their right path and available structures for vocational education and training as well as continuous vocational education and training. They return to institutions of continuous VET in order to keep up-to-date and capable of dealing with technological challenges but also as a strategy to overcome their rather hard school career and fulfil their personal desire of educational and career aspirations. English car mechatronics who follow the second type of biographical occupation orientations—defining limits of one's own scope of duties and expertise—have either no or low vocational qualifications. They value their practical knowledge more than any formal knowledge they have ever acquired. English car mechatronics of the third type of biographical occupation orientations—passionate professional practice—return to institutions of continuous vocational education and training in order to quench their thirst for knowledge and increasing their expert knowledge. Although these car mechatronics had a very clear idea of their professional career they also suffered from a disorientation of available VET programmes and opportunities.

5 Analysis

The entirety of the findings gives three insights about the interplay of biographical occupation orientations, the subjective perception of the national VET system and the decision for returning to (continuous) vocational education and training:

- The different working tools—as one facet of biographical occupation orientations—the interviewed car mechatronics use, explain the different views on the necessity of returning to (continuous) vocational education and training.
- The subjective perception of the national VET system fosters certain occupational-biographic challenges and thus supports or hinders existing learning attitudes.
- It is the biographical occupation orientations which have the main influence on the learning biography and the decision of returning to (continuous) vocational education and training.

I will now describe these three insights in detail. I will start with presenting the interplay between working tool and dealing with technological challenges.

The first type—strategic use of qualification offers—draws upon his biographical resource ‚ascent and education orientation'. He has developed this resource throughout his life and in interaction with family members and peer-group. As a consequence his working tools in his occupation are lifelong learning and getting vocational qualifications. With these working tools in mind he defines his professionalism through good quality work, a holistic approach to the car, i.e. being able to repair every component of the car, and good customer work. The continuously changing automotive technology is a challenge which he tries to master by using formal settings of learning and gaining more knowledge which represent his working tools again. This cycle is illustrated by the figure below:

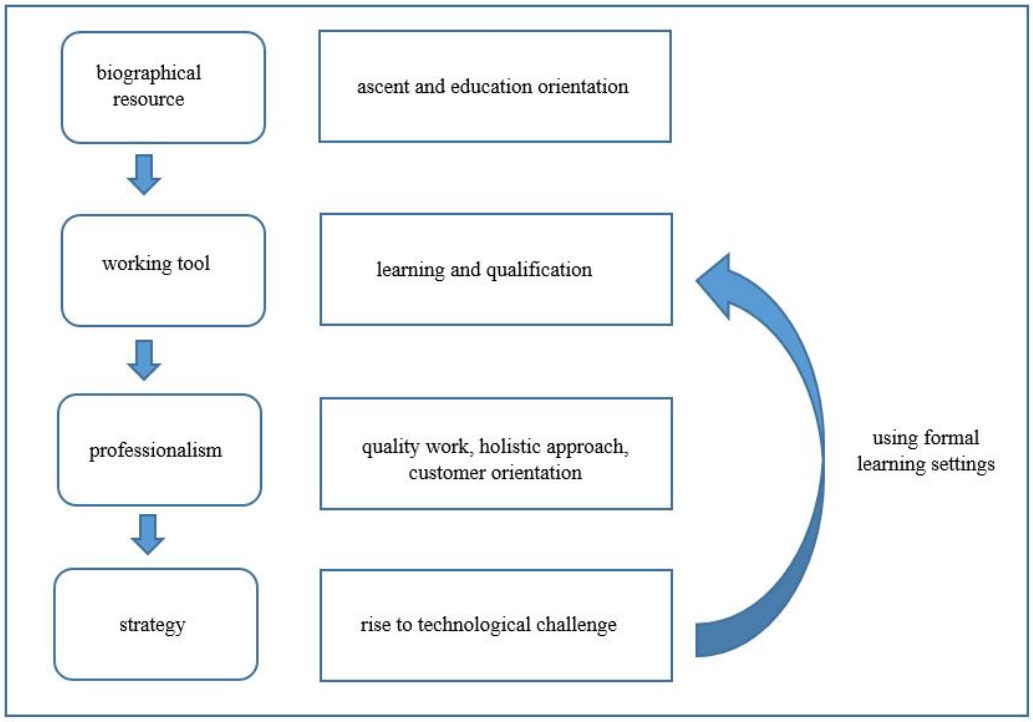

Figure 2: biographical occupation orientation cycle for type 1—strategic use of qualitative offers

The second type—defining limits of one's own scope of duties and expertise—has developed the biographical resource ‚networking and defining personal work area'. This resource came into being especially in interaction with VET gatekeeper (access to VET) and colleagues (access to jobs and knowledge). The working tool car mechatronics of this type use is their experience, which has been acquired in formal and (mainly) informal contexts. They see their professionalism in handling customers well, good quality work for the selected components of the car and being able to define precisely their scope of

expertise and work. The rapidly and continuously changing automotive technology does not affect them as these changes are outside their scope and work area. Thus they acquire needed knowledge informally by talking to colleagues and by trial-and-error, which is the basis for their working tool experience. This cycle is illustrated by the figure below:

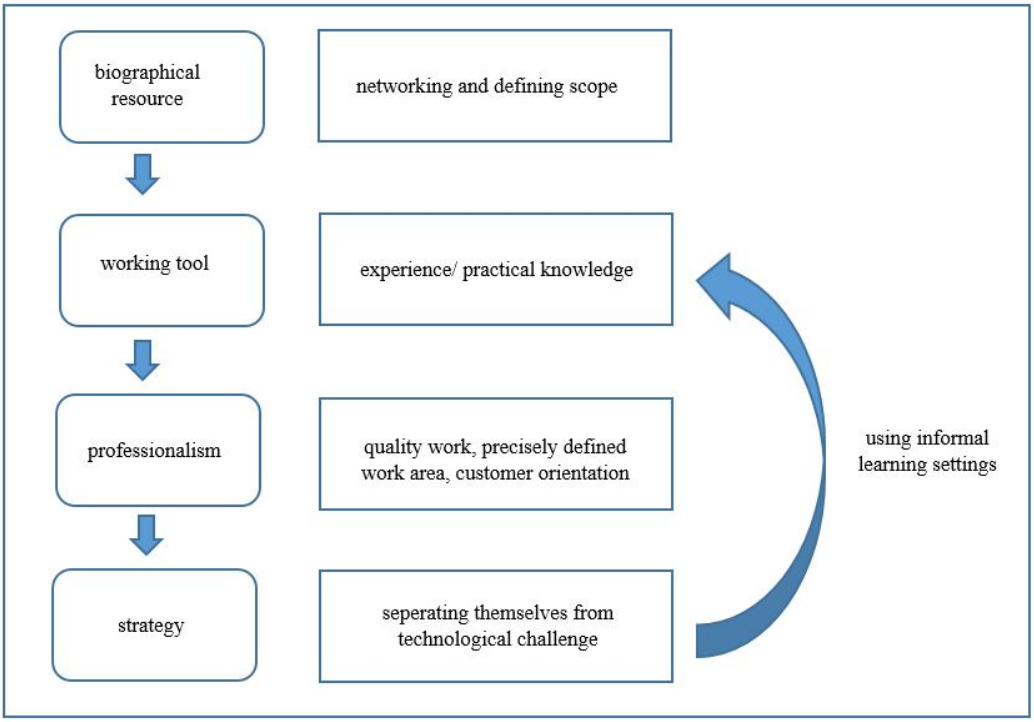

Figure 3: biographical occupation orientation cycle for type 2—defining limits for one's own scope of duties and expertise

The third type—passionate professional practice—has as his biographical resource his passion and love for working on cars at his disposal. His passion and specialist knowledge are his working tools. Excellent quality work, a holistic view of the car, i.e. being able to repair every component, and good customer interaction constitute his professionalism. The rapidly changing automotive technology is not a challenge but a welcome change and opportunity to demonstrate his expert knowledge and fuelling his passion. He uses available formal settings of learning in order to strengthen his expert knowledge and act out his passion. This cycle is illustrated by figure 4.

I will now outline how the car mechatronics' subjective perceptions of the German and English VET system foster their occupational-biographic challenges and thus support or hinder their existing learning attitudes.

The German car mechatronics report of a clearly structured German VET system with clearly defined pathways and know of available programmes for continuous vocational education and training. As vocational qualification is kind of a currency on the German labour market (Sackmann and Weymann, 1994) and the only access possibility for qual-

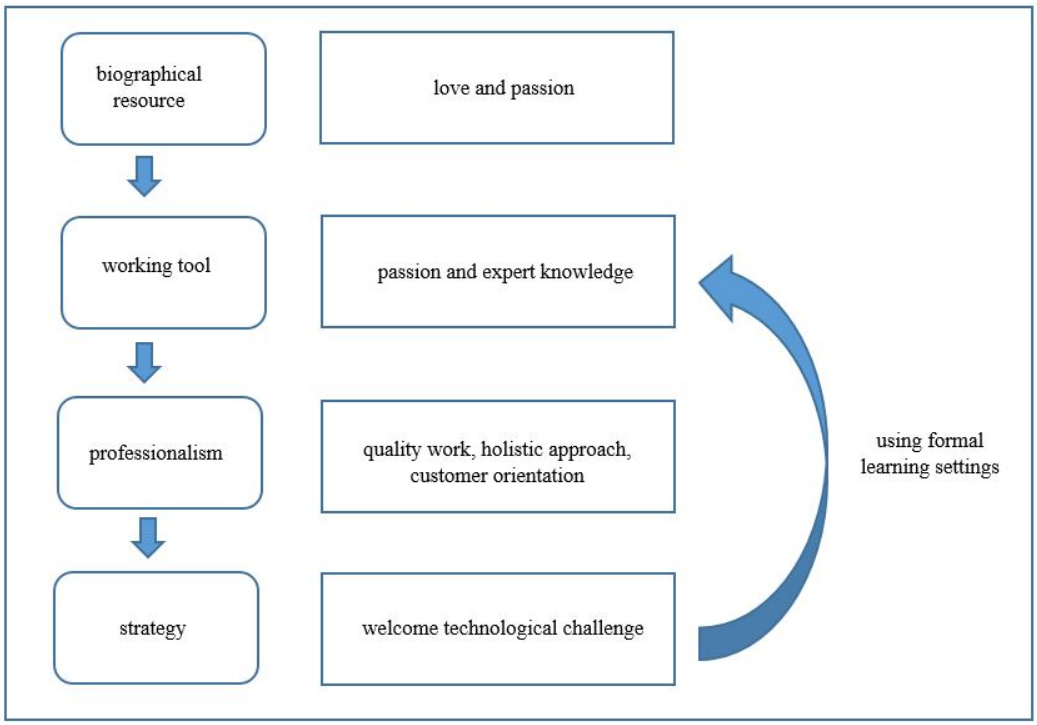

Figure 4: biographical occupation orientation cycle for type 3—passionate professional practice

ified work, all interviewed German car mechatronics have successfully passed through their dual training. Those with a (formal) lifelong learning attitude (i.e. type one and three) use the available institutions of continuous VET. The clearly structured VET and CVET system helps them to find appropriate VET programmes. Thus the German VET system is perceived as supportive in respect to pursuing formal learning opportunities. However, the interviewed German car mechatronics miss flexibility within the VET structure. The rigid structure sanctions a change of educational pathways and/or discontinuing apprenticeships and starting a new one (Bindl, Schroeder and Thielen, 2011). In many cases German employees need to fund their new VET pathway by themselves. Consequently, many employees who would like to enter new VET pathways will stay in their occupation due to financial circumstances. This structural hindrance might impede their learning attitude.

The English car mechatronics report of a confusing English VET system. Its structure is fragmented to a degree that the interviewed English car mechatronics feel overwhelmed when they try to orientate themselves and choose an appropriate pathway. They undergo a long searching process in order to find a suitable VET programme. Their occupational-biographic challenge is to find their way through their VET system. Employees with a strong lifelong learning attitude have to invest considerable time to get an overview of available CVET options. Here the English system can be perceived as hindering

the realisation of an active lifelong learning attitude. However, the English VET system is also seen as a flexible one. It allows individuals to experiment with different VET programmes—without financial sanctions. The English labour market is accessible through learning-on-the-job and thus open for individuals with no or low formal vocational qualifications. This explains why some English car mechatronics of the second type, i.e. defining limits of one's own duties and scope, value practical knowledge more than knowledge gained in formal learning settings. The following table gives an overview on the occupational-biographic challenges provoked by the national VET system and the influence the system has on learning attitudes out of the subjective perspective of the interviewed German and English car mechatronics:

Table 1: Overview on the national VET systems' influence

	Occupational-biographic challenge	**Influence on learning attitude**
German VET System	dealing with inflexibility	– supportive, if the learner stays in the once chosen educational pathway – obstructive, if a career change is aspired
English VET System	resolving disorientation	– obstructive, if the learner does not find his way through VET jungle – supportive, if the learner wants to experiment with diverse programmes

The previous sections showed that the national VET system hinders or supports a lifelong learning attitude. Clear structures make it easy to get an overview of available options and to choose a suitable programme. A VET system with diffuse structures requires a stronger involvement and motivation of the individual in order to find a suitable course. However, the previous sections also show that it is the biographical occupation orientations which have the main influence on the learning biography and the decision of returning to (continuous) vocational education and training. The cycle of: biographical resource — working tool -– professionalism — perception of new automotive technology — strategy is not disturbed by structural conditions. It is the biographical occupation orientations which are the driving force in deciding for or against the return to (C)VET.

6 Outlook

The concept of biographical occupation orientations has proven to be valuable when looking at educational decision-making from a subject-oriented perspective. However, it is important to acknowledge here, that the findings have a purely explorative character and that a far bigger sample is needed. Due to the small sample size I cannot make a statement on the national VET system's influence on the relative number of people belonging to the three types of biographical occupation orientations. However, my hypothesis is the German VET system supports the development of the first type, namely strategic use of qualification offers, as there are many CVET opportunities at the German car mechatronics' disposal, whereas the English VET system fosters the development of the second type, namely defining limits of one's own scope of duties and expertise, due to the fragmented VET structure. At any rate, the findings refute the in the introduction mentioned German argument that adjusting the German VET system to a stronger competence-oriented ('English-like') VET system will impede the development of a holistic professional identity (Drexel, 2008; Kuda and Strauß, 2006), which is a central goal in the German VET system. The findings show that the structures of the English and German VET systems do have an either obstructive or supportive role when developing certain biographical occupation orientations, but the VET system does not per se hinder the development of a holistic personal identity. Simultaneously, the national VET system does indeed hinder the development of a holistic personal identity to a greater or lesser extent depending on the power the subject gives to his/her structural circumstances and the available biographical resources. Thus this paper demonstrates that analyses from a subject-oriented perspective is a worthwhile endeavour and enlightens even macrosocial levels such as VET policies.

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