CONCEPT MAPPING TECHNIQUE AS A VEHICLE FOR GAINING INSIGHT INTO STUDENTS' UNDERSTANDING OF PERSONAL DEVELOPMENT

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Abstract

Personal Development Planning (PDP) in the higher education setting is defined as 'a structured and supported process undertaken by an individual to reflect upon their own learning, performance and/or achievement and to plan for their personal, educational and career development' [1]. However, in general terms, personal development is a part of everyone's experience as we all grow physically, psychologically, intellectually and socially. Although developmental processes are embedded in the human psyche they are highly influenced by sociocultural factors. Therefore, the way of thinking about personal development will vary distinctively across representatives of different cultures. These different attitudes find their reflections in the structure of various aspects of social life, in which education has always played an important role. When globalisation and multiculturalism are heavily affecting educational systems, it is important to think of a culturally appropriate pedagogy, one that takes into account society's cultural diversity and helps students adapt to foreign systems but, at the same time, does not undermine their cultural backgrounds. The idea of valuing individual students' experiences and backgrounds, including different cultural perspectives and promoting cultural appreciation emerges from the literature of the subject (for example: Hellmundt, 2003, Schwartz et al, 2003, Burnapp, 2006, Alfred,et al, 2002, Carroll, J. et al, Jankowska 2007). Furthermore, the idea of culturally appropriate pedagogy reflects an ever increasing need for preparation for employment in a global market and raises issues about western ideas of reflection in multinational societies. PDP, as such, is an intangible and broad concept and any investigation into its nature requires well thought through research practices. One of the tools that have been adopted in this research is concept mapping. The concept mapping technique is not only a valid research tool which helps reveal the participants' knowledge of a particular topic but can also be a powerful teaching tool for making **the process of acquiring the knowledge explicit**.
This research explores the use of concept mapping tool in a much 'softer' area than the 'hard' sciences (where the concept maps had been used extensively) and provides an insight into opportunities and challenges both for a researcher and student participants. It also explores some of the cultural aspects of the study (cultural variations in the visual and conceptual representation of PD) and the usability of the tool in an intercultural environment (benefits for diverse student population).

Keywords - concept mapping, personal development (PD), PDP, culture

1. Personal development planning – background for the study

Personal Development Planning (PDP) is defined as 'a structured and supported process undertaken by an individual to reflect upon their own learning, performance and/or achievement and to plan for their personal, educational and career development' [1]. The implementation of PDP and Progress Files was introduced in the United Kingdom by a national policy and was expected to be operational across the whole Higher Education system by 2005/06. Thus PDP, as a process clearly linked to the curriculum, became a part of students' experience across the Higher Education sector in the UK. Although the implementation of PDP and Progress Files may seem to be a natural and inevitable process in a country with a growing tradition of recording achievement, this might not be the case in many other countries with distinctively different educational systems, experiences and socio-economical structures. And, in fact, even in the United Kingdom structured, supported, recorded, and assessed (formally and informally) PDP activities can be still novel, often patchy and under researched.

Personal development (PD) is a part of everyone's experience as we all grow physically, psychologically, intellectually and socially. However, developmental processes are highly influenced by socio-cultural factors. Therefore, the way of thinking about personal development may vary distinctively across different cultures. These different attitudes are reflected in various aspects of social life, in which education has always played an important role.

PDP is a complex construct which encompasses the whole range of aspects of human growth. Some of these include self-awareness, self-efficacy, autonomy, skills and abilities. Additionally, the process of reflection plays a key role in the development of these aspects. However, although reflection is a predominant feature of human experience, reflective learning, as Burnapp [2] states, may not be a valued practice in all the culturally different educational settings. Moreover, reflective learning may also have different meanings and interpretations. Therefore, an integrated and strategic process of PDP, which incorporates activities like recording, reviewing, evaluating, planning and doing, may be an alien construct for many foreign students. Newcomers to British educational system may struggle to understand the concept of PDP, its value and relevance to their lives.

When globalisation and multiculturalism are heavily affecting educational systems, it is important to think of a culturally appropriate pedagogy, one that takes into account society's cultural diversity and helps students adapt to foreign systems but, at the same time, does not undermine their cultural backgrounds. The idea of valuing individual students' experiences and backgrounds, including different cultural perspectives and promoting cultural appreciation is emerging from the literature of the subject (for example: [2, 3, 4, 5, 6]). Furthermore, the idea of a culturally appropriate pedagogy reflects an ever-increasing need for preparation for employment in a global market. Thus, I argue that in order to make the experience of PDP relevant and valuable to international students these areas need to be investigated in-depth:

- Students' prior representations and experiences of PDP

- Students' perceptions of PD (personal development) & PDP and related concepts of employability, learning, higher order skills and reflection
- Possibilities of incorporating multicultural aspects into a delivery of PDP, especially in culturally diverse academic environments.

This study was focused on issues which contribute to the construct of PDP in the light of culture. Therefore various representations and implementations within culturally distinct groups of students (British, Chinese, African and Eastern Europeans) were investigated.

1.1   Concept maps

Concept mapping has been tested and adopted as a technique in this research not only because it is a valid research tool which helps reveal the participants' knowledge of a particular topic, but also because it can be a powerful teaching tool for making the process of acquiring the knowledge explicit. Novak [7, 8] believes that the visual representation of the knowledge in the form of a concept map promotes the interaction of new material with existing cognitive structures and in that way contributes to meaningful learning.

In order to assure that meaningful learning can be adopted by the learner the following conditions need to be met:
1. The learner's relevant prior knowledge - the learner must know some information that relates to the new information to be learned in some non-trivial way.
2. Meaningful material - the knowledge to be learned must be relevant to other knowledge and must contain significant concepts and propositions.
3. The learner's motivation to learn meaningfully - the learner must consciously and deliberately choose to relate new knowledge to knowledge s/he already knows in some nontrivial way [8].

This research explores the use of concept mapping tool in a much 'softer' area than the 'hard' science (where the concept maps had been used extensively) and provides an insight into opportunities and challenges both for a researcher and student participants, as well as some critique of current approaches. It also explores some of the cultural variations in the visual and conceptual representation of PD and the usability of the tool in an intercultural environment (benefits for diverse student population).

Data analysis used for concept maps focuses on their structural and conceptual richness. The method was previously used and described in several research projects by Kinchin, Hay & Adams [9] and Hay [10, 11] and is grounded in Novak's [8] work on meaningful learning and Ausubel's [12] assimilative learning theory.

Novak [8] (1998) proposes a following typology of learning:
- Non-learning – the lack of cognitive change (manifesting as a lack of new concepts in the next map and an absence of new links in student's prior knowledge).
- Rote learning –the addition of some new knowledge but with absence of links between the newly and previously learned material (indicates lack of deeper understanding and assimilation of the new knowledge).

- Meaningful learning – a significant change in the structure of knowledge (manifested either by addition of new concepts and/ or links in the prior knowledge structure developed during learning or the meaningful linkage of new concepts to prior knowledge).

Constructivist learning theory indicates that people learn not only by memorizing material (which would be defined as rote learning is Ausubel's and Novak's terms) but also (and more importantly) by integrating and organizing new information into a pre-existing framework of knowledge [13]. The learners mediate and create their new comprehension of the subject matter on the basis of what they already know and believe and new material they come across [14]. Moreover, reflection understood as the learner's conscious effort and activeness in integrating new knowledge with the one already acquired is an important prerequisite to meaningful learning.

Novak [7, 8] believes that the visual representation of the knowledge in the form of a concept map promotes the interaction of new material with existing cognitive structures and in that way contributes to meaningful learning.

According to Novak [8], Kinchin, Hay & Adams [9] and Hay [10, 11], the concept maps have the value of 'making learning visible' as the teacher can 'see' what ideas the student has about a particular topic and can help to evaluate students' learning and acquisition of the crucial concepts. The fact that the concepts are linked with the arrows and labelled is a distinctive feature which does not appear in other kinds of mind maps, but is an important step towards achieving fuller understanding of the knowledge that is available to a learner at a particular moment in time. The student can hold both valid and invalid ideas (misconceptions) about the particular subject and concept maps can be very useful in revealing the incorrect assumptions which then can be changed. Unless the learner is aware of the mistake s/he cannot correct it. In order to investigate the learning in more detail it is important to show the concept maps made before and after learning, which would make the changes in learning structures transparent and the progress (or, unlikely but theoretically possible, regress, or in fact stagnation) in the students' knowledge of the subject.

In this research the basic typology of chains, spokes and nets was used to describe the structure of students' knowledge. And the qualitative measure of the conceptual variety was used with the particular interest in concepts revealed by students of various cultural backgrounds.

- Spoke – a single-levelled radial structure in which all the related aspects of the topic are linked directly to the core concept, but are not directly linked to each other. A spoke is often quite simple but allows for further additions to the structure. Any possible future deletions do not interfere with an overall structure.
- Chain – a linear structure in which each concept is only linked to those immediately above and below. There is a logical sequence to the chain but no scope for further additions other than at the bottom of the structure. Any deletions would disrupt the overall structure and there is little possibility of richer linkage.
- Network – a highly integrated and hierarchical structure, often with several levels, which demonstrate a deeper understanding of the topic.

> Any additions or deletions are possible with a various influence on the overall structure and a scope for further development.

As pointed out above, the researcher was generally interested in gaining insight into students' perceptions, representations and experiences of PDP. This particular article reports on findings in relation to the research questions:

- What are students' prior representations and experiences of PD?
- What are students' perceptions of PD (personal development) & PDP and related concepts of employability, learning, higher order skills and reflection?
- Are there any cultural differences existing in students' representations of PD?
- Are there any opportunities of incorporating multicultural aspects into the delivery of PDP, especially in culturally diverse academic environments?
- Does concept mapping contribute to the generation of personal development itself?

The study and general observations

The study involved 12 students from a Communication in Business module that ran in the autumn semester of 2007 as part of a master's course in Intercultural Communication. The University of Bedfordshire has a significant population of students coming from various cultural backgrounds with statistically the biggest groups of African, Chinese, Eastern European and British students. Therefore the sample of 4 African, 4 Eastern European (Slovak, Polish, Russian), 2 Chinese and 2 British students was chosen to reflect the diverse body of students.

The students were asked to sketch a concept map on the topic of Personal Development (PD) and to participate in a follow up interview twice: at the beginning and end of the semester. All the concepts come from the students (not elements given by the researcher for the participants to sort out). The data discussed in this paper concentrates on findings from the concept maps which seem to have a potential of revealing some cultural differences and a variety of approaches to personal development. The analysis of pre- and post-concept maps has indicated some interesting tendencies but it is important to note that individuals' conceptions are not fixed or unchanging, and the descriptions presented are snapshots of the students' understandings of PD at a particular time.

Although previous research has shown a clear division between 3 various structures (chains, spokes, nets) and between 3 various outcomes of the learning: non-learning, rote learning and meaningful learning it became apparent to the researcher that those kind of typologies might be more useful in approaching academic subjects (where the instruction of the main concepts can be fairly easily outlined and monitored). However, the process of 'learning' about personal development is much more vague, intangible and difficult to pin down and these divisions may become more blurred or even in some instances irrelevant. For instance, according to Novak's theory the lack of cognitive change (lack of new concepts and new links) suggests non-learning, while the addition of some new knowledge but without linking it to

the pre-existing knowledge indicates rote learning. As the examples and commentaries below show it does not always apply to an individual's knowledge of his/ her personal development as sometimes the lack of structural change may not be a sign of non-learning or rote learning (in case of minimal structural change).

Example 1 (maps below) comes from an Eastern European student whose map did not change and who, in fact, was reluctant to repeat the task of concept mapping as she believed her ideas about personal development were stable, well-formed and mature. She also felt that she knew exactly her direction in life, was quite confident and would not envisage any major changes in the future. Interestingly, among the new concepts which appeared in her second map there was a concept labelled 'ability to reflect' (in the first map she had a concept 'ability to study', which does not seem to be an equivalent of reflection). However, both maps of this student do lack richer linkage between the main concepts; for example there is no linkage between education and curiosity and ability to reflect or career and self-satisfaction or relations with people. This example would be most likely defined as non-learning according to Novak's typology.

It might be possible that an established and deep personal belief that one knows everything already and should not change anything, can inhibit further development and block one from opening to new opportunities (until something substantial happens, provoking change). It is also possible that some people reach a plateau before they can progress further. Similarly, the periods of incubation, stagnation, or even breaking down misconceptions and reforming ideas (which can be seen on surface by others as regression), may be inevitable for some but hopefully would not last for long. It does seem that this student is on a 'plateau' and does not have any need for changes at that moment. Possibly, in such a scenario a person cannot believe that any further changes are possible or needed. Unless this person finds herself affected by some new circumstances or faces some new challenges there might be very little chance she would progress further in her way of thinking.
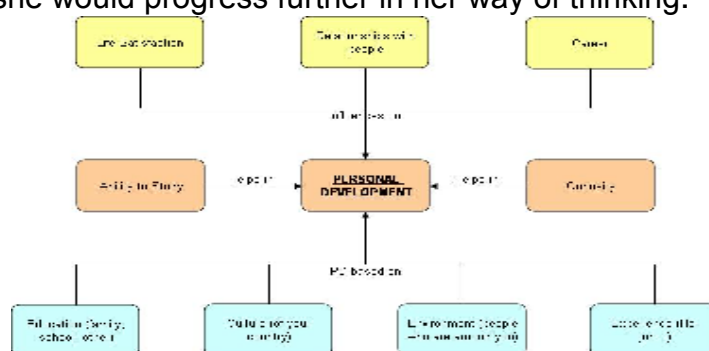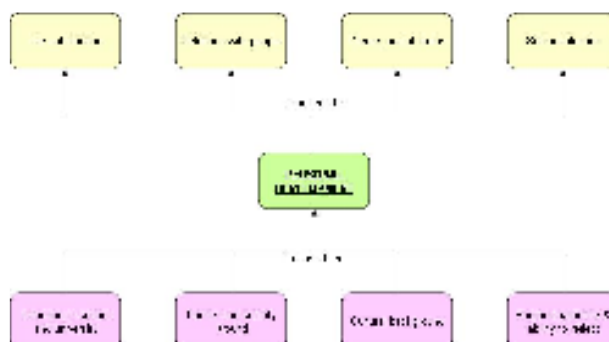

Figure 1. Student 8: pre- map

Figure 1a. Student 8: post- map

Example 2 comes from a Chinese student, whose maps in Novak's terms would be most likely clustered as rote learning, but in the light of this research could be seen as meaningful learning. Her first map was a spoke, which revealed some tendency towards developing a network as there was one concept (be useful to the society) that was interlinked with four other concepts ('getting money', 'having a degree', 'helping others' and 'forgiving others') and hence showed a more complex and richer area. Her second map had more features of a net, with more concepts and a richer linkage between them. However, the concepts evolved around the ones derived from the first map and seemed to be just thought through more carefully, interlinked in a meaningful way and organised in a better way.

Interestingly, there seems to be a conceptual shift present, which moved this student towards more individualised and personalised ideas of development. In her first map the concept of the 'usefulness in the society' was the one interlinked with other main branches. This concept disappeared in the second map, as well as another one linked to it: 'forgiving others' faults'. And although her second map still reveals the importance of social life, especially family connections and friendship, there are new, much more individualistic concepts added in her second map ('go to pubs', 'travelling', 'job development', 'buy things which I like', 'learn different culture'). In her second map the density of ideas related to self development is much greater and there is a visible shift towards self-improvement for herself, not for others. This is in contrast to the ideas expressed in the first map, which evolved around self-improvement for the sake of serving others.

The noticeable changes in her maps reveal the tendency to experiment with new ideas coming from a different culture. This student may be in the phase of 'trying out', fascination with things and activities which possibly were not so common or accessible for her before. She may be in a transition point where her own culture clashes with a Western one and leads to incorporation of more individualistic trends. Some of those 'new things' seem shallow and connected with the culture of consumption but she also incorporates a new, important concept of 'job development' as well as retains valuable concepts from her previous map.
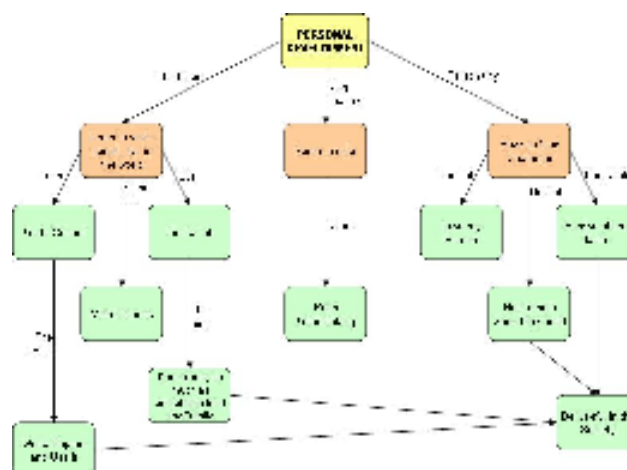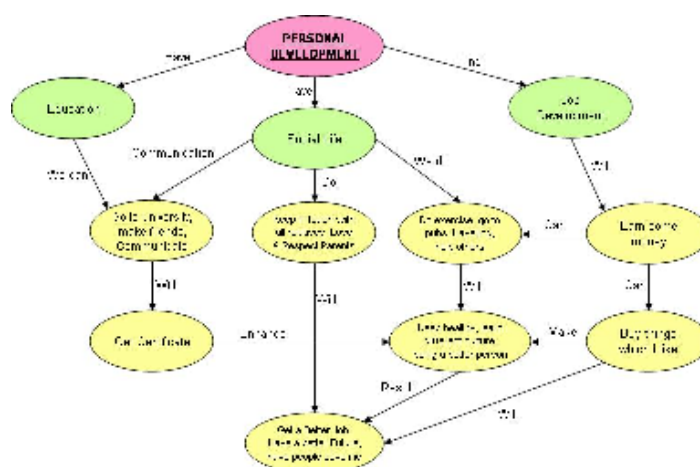
Figure 2. Student 5: pre- map.

Figure 2a. Student 5: post- map.

Example 3 comes from an African student whose maps pose a challenge for analysis as she used two different metaphors (drawings) for the two concept maps (hence some of the concepts differ). However, the overall feel of understanding of personal development that this student gives is similar in both maps. Personal development is represented as a lengthy process, which starts metaphorically 'at the bottom' and leads to gathering personal fruits of satisfaction on completion of a cycle. Her first map represents a mountain, where personal development is compared to the process of climbing. Reaching the top of the mountain is associated with obtaining satisfaction and collecting some 'fruit' ('career development' and 'social and culture satisfaction'). Personal development is also equated to 'learning processes', which are influenced by 'factors' such as: 'age, resources, coaching and technology'. On the way to the top there are 'challenges', represented in this map by 'clouds, rain, thunderstorms and floods'. Reaching the peak, however, is not the end of the journey and the whole process is seen as a 'cyclical' one. Therefore after reaching one mountain a person needs to set off for another one, and in this way more and more experience is being gathered.

The second map is a metaphor of growing 'a tree'. Personal development here is planted with a 'seed of personal desire' and the journey up to the top ('gathering fruit') is fuelled with 'determination to achieve an ambition in life'. 'Communication' (both 'internal communication with self and with others')

seems to be an important process facilitating the growth and on the way to the top one is 'gathering knowledge, skills and experience (through exchange with others)'. The fruits here are not only connected with 'a good career and social life and culture', but also 'spiritual development and technological advancement'. Interestingly, a career in this map is related also with qualifications and may mean 'employment or self-employment'. Technological advancement in her first map was one of the factors in the development, while in the second map it is a fruit of development (when 'one goes with the pace of the world'). She also makes an interesting observation here: that 'fruits are different to different people according to their personal desire'.

There is no explicit notion of cyclical development in the second map, but this may be due to the metaphor used.

Both maps are rich and represent a cohesive vision of personal development. The second map brought about some more professional language ('personal desire', 'ambition', 'communication', 'knowledge', 'skills', and 'experience'), but lacked some of the important concepts from the first map, especially the idea of development being cyclical, the challenges on the way and some factors, which play an important role in the process. This student clearly has a vision and is open to opportunities, at the same time recognising the necessity to work hard in order to achieve her goals.

Such a map poses further challenges for analysis as the student did not follow the instructions and came up with something in between a concept map and a drawing (she drew the mountain and then the tree, which was changed into an electronic version that looks like a photograph as the researcher could not draw those images). Therefore it is more difficult to identify the structure and the linkages and classify them according to Novak's typologies (chain/spoke/net, non-learning/rote-learning/meaningful learning). However, these maps indicate the student's readiness to challenge instructions and come up with something that suits her better her imagination and insight into the concept. Creating such metaphors probably involves more the student's engagement in thinking it through (more reflection needed), good presentation and the will to get the story across, hence may be even more meaningful than some networks. Moreover, the concepts held within these metaphors can lead to richer meanings being communicated.
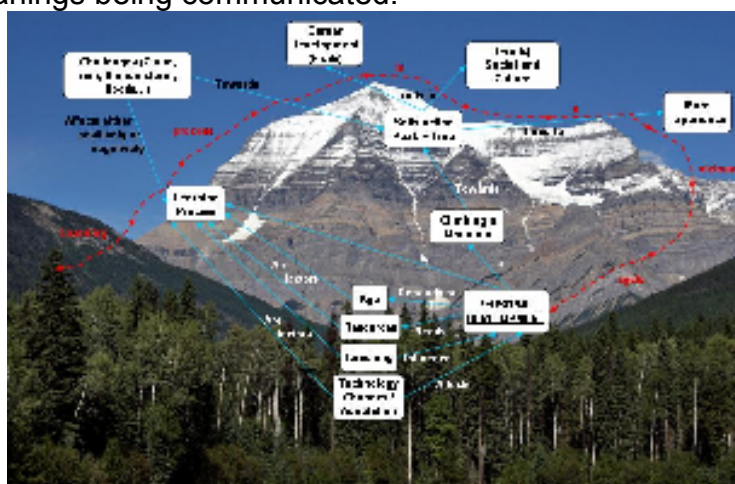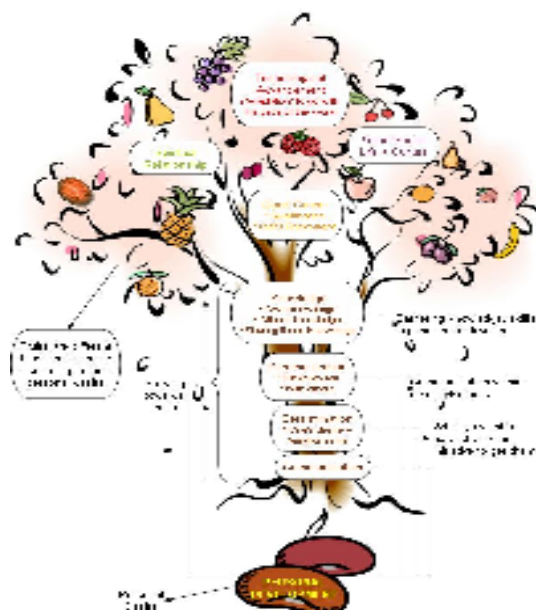

Figure 3. Student 9: pre- map.

Figure 3a. Student 9: post- map.

Example 4 comes from a mature British student whose attitude towards the task clearly affected his visual representation. He enjoyed creating both concept maps, made several remarks about the relevance of the process to his studies and life and its usefulness (other students made similar comments as well). He also reflected over the task and made significant changes to his second map, stating that the task of completing the first one have helped him to organise the second one (even though he had no access to the first map and hence no chance to work on it but he still vividly remembered the previous task). This student's language resembles the 'experts' language (e.g. 'transferable skills', personal development as 'a logical, possibly non-linear process', 'reflection', 'feedback loop', 'journey of self-discovery', etc.). This is most likely due to the years of work and life experience (mature, much older student with years of experience in professional business environment) as well as high level of awareness and deep interest in the field of human management and development. However, the nationality can also play an important role here (being used to this kind of language). His first map is a spoke, but a much richer spoke than any of other students', with rich linkage (multidirectional as well). His second map can be difficult to qualify (just as student 9) as he did not follow the rules of concept mapping and tried to represent his vision of personal development in a form of a time line depicting a 'journey from point A to B', with possible diversions, loops, factors and goals. However, the richness of the concepts and their interconnections would probably fit the definition of a network (hence meaningful learning). Both maps are much more developed in comparison to those produced by the other participants and suggest a greater level of reflexivity of the student. They both concentrate significantly on areas of career development and education, the first map also incorporates some self-awareness and reflection about 'inner and public self'. The second map represents a more personalised journey, although still concentrates on the career and education.
Interestingly, in the first map he described personal development as a 'logical process', which can be 'possibly non-linear' and 'individual (unique)'. He also

shows the importance of 'feedback' and 'review' in this process. In the second map, he defines personal development as a 'journey of self-discovery', which is continuous and clearly non-linear. Therefore he seemed to gain more assurance about non-linearity of the process. Moreover, in his second map he talks about the importance of having a clearly defined goal (which did not appear in the first map). According to him planning is also very important but it is 'difficult to make a plan unless you know what you want to achieve'. He also underlies the importance of taking 'small steps' and 'incremental changes' and having 'positive reinforcement'. He also is clear about his wishes (having 'options' and 'want to work for companies for 5 years and then move up/on'). He keeps the 'ultimate goal' in his mind and believes it is important to try to achieve it, but he is also aware that he may need to take an alternative route. Moreover, this student reveals a more personal feel to achieving the goals like: 'truth', 'enlightenment', peace' and 'wholeness'. His second map also recognises a crucial role of mistakes or failures, as by re-doing things we can learn a lot, and feedback is recognised as an important process here.

Although, at the first glance, his second map may look as a less developed (with less concepts as well) in fact it is a more deeply thought through one. The concepts from the first map were incorporated into a cohesive vision represented in the second map as if the author made more sense of them (personalised the concepts acquired in the course of studying and working). The second map also reflects the steps this student took on his personal development journey.
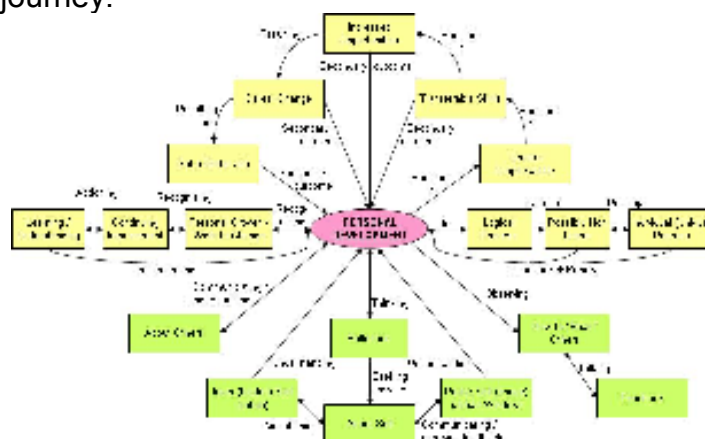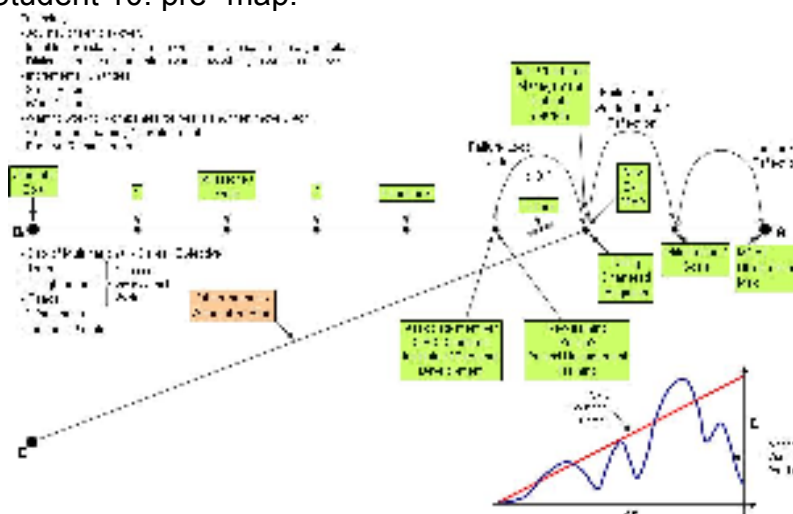

Figure 4. Student 10: pre- map.

Figure 4a. Student 10: post- map.

According to previous research [8, 9, 10, 11] the gross structure of a concept map is a remarkably good indicator of understanding, which is indeed something the researcher can partially relate to. Firstly, chains were rarely seen in students' work on PD – this is optimistic in a way and should not be surprising given that they should have already spent some time thinking about PD in a sense that they have made important decisions in life (e.g. continuing education into the university) and therefore were involved in reflection about self, skills, abilities, interests, personal fit for the future career, even if it might have been done more inexplicitly rather than in a form of structured, conscious reflection. For this reason one should think that probably nobody comes to this field as tabula rasa, everyone has some pre-conceptions and experiences and probably more of them than in any area that students have not encountered before. Students seem to prefer more complex, and at the same easier to develop or amend, structures like spokes or nets. The majority of the students that took part in both this and other projects involving concept mapping represented their knowledge in the form of a spoke – which usually became a more complex, developed spoke or a net in the next version, therefore showing the move towards a more developed understanding of PD. However, **in the light of data gathered for this study the researcher is not convinced that the lack of structural change always indicates non-learning**.

It is striking that although every learning process is a complex one, the process of developing personally may be a much more complicated one: non-linear, prone to change due to life circumstances, difficult to capture and measure, sometimes marked with the periods of regression, stagnation, transition or reaching dead-ends. It might be also possible that the representation of the knowledge in such a personal, intangible subject is more prone to mood variations or external conditions (the level of personal exposure may depend on who it is presented to, when and where, etc.) Sometimes in personal development one needs to step back and revisit one's opinions and beliefs in order to be able to progress further. Moreover, it might be possible that a fairly simple representation of PD can contain more complex concepts, hidden behind the simple structure, (almost like being in a shadow or background of big, inclusive concepts). It is possible that people may feel the urge to organise and simplify the way they think about a complex issue just to be able to represent it clearly, instead of going into a greater detail.

In some cases, concept maps which, according to the exiting typology, should be classified as non-learning can actually be a sign of a stable, well developed and cohesive knowledge of the subject. In such instances, a person may have a clear 'vision' of their personal development and this will not change easily. This, I think, is something that differentiates the subject of PD from other, more 'definite' subjects. There are things that students need to learn for their subject study, which are crucial and when a student moves from a less developed structure to a more complex, one can say that this student has gained a deeper understanding of the subject and acquired more relevant concepts important for this subject. But in PD there is not a definite number of concepts that need to be acquired, and neither there is a 'correct' or 'wrong' answer to what PD should entail. There is a group of concepts which seem to

be important for the subject of PDP in the British educational system, but even this can be challenged as they may not be equally relevant or useful to the students of other cultural backgrounds and also the consensus on what concepts are crucial is not easy to achieve. Therefore it is difficult to specify what exactly every student needs to know and achieve in the field of personal development as every individual is different and his or her personal development goals will be different as well. In scientific fields it may be easier to define the ultimate set of concepts which need to be acquired, so that the student can comprehend a particular area of a study. It might also be easier to target the 'threshold concepts' [15] – concepts that are crucial for understanding a subject in question. Once they have been grasped and mastered, a student can move onto a next level. The threshold concepts also trigger change in the learner and in that sense the learner is 'changed', transformed and cannot go back through the threshold. It may be more difficult to identify (and agree) on threshold concepts in PDP as ultimately it is up to every student to decide how far they take the subject. On the other hand, some students make it clear that they need more structure, support, tools and directions in order to progress with their personal development; in other words they recognise the need to be signposted to important concepts in PDP, especially those which are more elusive and difficult to pin down.

Moreover, the disappearance of some concepts may not be a worrying sign. As long as the concepts which are being removed are pretty trivial and overly unimportant or are replaced with less concepts of a deeper meaning, the sheer number of concepts may not be indicative of students' development. Hence the post- map with less concepts then the pre- map is not necessarily the sign of 'regression' or 'deterioration' but actually, to the contrary, may present a more mature, cohesive and concise vision of a subject.

1.2 Observed cultural tendencies (table with brief comparisons in appendix 1):

African students' concept maps usually incorporate concepts of:

- Religion, spiritual development, fulfilment, etc.
- Professional development – focus on career and achievement, also financial gain. Some of them mention particular professional bodies they want to liaise with.
- Family and social life – these students mention marriage, having children and caring for others more often than students of other backgrounds (although it is also fairly common for Chinese students and may possibly be explained by more collectivistic nature of these societies)
- Culture – the students also mention their own cultural background as well as other cultures often
- Health – keeping healthy, eating healthy and exercising seemed also to be an important topic (both for some Africans and Chinese).

One student used metaphors to represent her vision of personal development. Although she received clear instruction on sketching a concept map, she did not follow them. As this is exceptional representation, it is difficult to provide an explanation for it. However, it links with an idea that metaphors were important in vastly oral African cultures and hence may still be used to explain complex ideas. Also the language used is more 'flowery', intangible, descriptive, while some Western maps use 'dry', concrete words.

Another student arranged his concept map in a circular way (also the case in some other African undergraduate students' maps in other research projects), which is quite an atypical, unusual structure and have not been noticed in the maps created by students of any other cultural backgrounds. This visual representation resembles the circle and may be somehow related to the way knowledge was passed in African villages (telling the stories in the circle).

Chinese students' concept maps usually incorporate concepts of:

- Education – degree, academic studies (also previous schools) – the concepts are well defined and specific and explicitly connected with acquiring a degree and hence future career development, social status and financial benefits.
- Money – these students very often mention money and are not shy about expressing their expectations of high salary and a good quality of life. Also other materialistic things are being mentioned (e.g. a car, a house, etc.).
- Family and social networks – love and respect for the parents as well as the obligations and social responsibilities (in the interviews they mention in a similar way their teachers); also friends and other people around. Socially respected people's opinions are valued and often followed to the letter.
- Social life – some Chinese mark the importance of helping others, serving their society, etc (but this is not the case with all Chinese students)
- Development of personality/ character –the need to harness the character, build its strengths, concentrate on perseverance and put a lot of effort (this may possibly be connected with the importance of discipline and Confucian belief that hard work will pay off?)

Chinese students' maps are the least abstract, quite 'down to earth', frequently capturing concepts around materialistic expectations and specific goals. These students often concentrate on 'here and now', which is their studies. They may have further future goals but achieving the first steps is most important to them. They often do not work (on the contrary to the students of other cultural backgrounds) as they do not want to be distracted from their academic studies. Hence they also do not participate in other extra curricula activities that often. Their motivation to study is often instrumental and goal-oriented. They also tend to stick to their own cultural circles and mix least often with other students. The language they use is quite specific as opposed to African 'flowery', highly descriptive way of expressing ideas (even though both groups talk about some similar things).

Eastern European students' concept maps incorporate concepts of:

- Academic life – they tend to concentrate on their academic studies and often talk about university. They mention knowledge and the ways of acquiring it most often. Some of them also mention skills, goals, self and life satisfaction, ability to study, time effectiveness, problem solving or curiosity. The need to improve and self-evaluation and reflection are present as well.
- Career – seems to be quite important but the focus is slightly different than for African or Chinese students. Eastern Europeans think about skills development and the personal fit for job as well as personal satisfaction, while Chinese, for example, follow the career which is often chosen for them by others (sometimes without recognition of their personal abilities or interests) and also often related to business. They are achievement oriented and financial and social recognition plays an important role.

African students strive for professional development as well as social recognition. Most of Eastern Europeans do work and try to develop their skill for future but personal fit for job and work satisfaction are crucial. They also recognise the fact they may need to try different things before they decide what they want to do and they seem to appreciate various experiences, which allow them to keep their options open.

- Culture – they talk less often about their own background (as opposed to Africans for example) but rather concentrate on openness to other cultures, learning from/ about other cultures, etc. Travelling is probably linked to this.

- Family is mentioned rather as a source of support and the social heritage and seem to have less influence on their future path (in a way that Chinese family has on their children).

- Environment – some of Eastern Europeans mention the importance of environment which could/ should support personal development.

Eastern Europeans seem to be **mostly preoccupied with their studies and academic life**. They enjoy studying as such and often work towards several degrees (sometimes at the same time). Having a BA degree is frequently not enough for them (among the students in this research project there were students with several degrees, studying simultaneously in two countries, including a student on a Masters course here in the UK and on a PhD back in her own country). Future career is important but intellectual development is often seen as a goal in itself, leading to personal satisfaction and the sense of achievement.

The researcher herself is of an Eastern European background and therefore it may influence her meaning making and this can come as a limitation of this study. The belief in education as a means to achieving a better position on a career ladder (in author's opinion) is quite common in many Eastern European countries and is also a way of securing oneself from unemployment (some students embark on yet another study to avoid unemployment – this is particularly visible in countries which provide free of charge higher education). It also gives a chance of social recognition and reputation that may be important in further development.

British students' concept maps usually incorporate concepts of:

- Education – is pretty important but at the same time it is often treated as a necessary step for career development. Hence they are less likely to study for the sake of the studies (also student loans are so big that most British students cannot afford doing Masters or multiply degrees, as opposed to Eastern Europeans, for example)

- Skills – British students mention skills, opportunities, feedback, experience, etc – their language is often 'career loaded' (they use professional expressions more often than other students which may be a sign or career orientation, but may also be linked to the language proficiency).

- Interests, hobbies, leisure time are mentioned by some.

It is fairly difficult to draw conclusions on British students as they form a very small group (both in this and other research projects) but they seem to be mostly career oriented.

Summary:

Concept mapping proved to be a useful research tool for revealing snapshots of students' representations of PD as well as some cultural trends. Most students enjoyed concept mapping and commented on the fact that the task itself engaged them cognitively and 'made' them reflect on the aspects that are not often discussed openly and remain in sub consciousness. Therefore, the researcher claims that sketching a **concept map facilitates disclosure of personal understanding and at the same time provides a platform for personal development**. Concept mapping can be a good vehicle for reflection and as such has a potential of instigating further changes and moving students towards deeper understanding.

As it has been pointed out the analysis of concept maps pose some **challenges and the available typologies seem not to be the most useful**. The researcher believes that more open ended, phenomenographic approach to analysis, which recognises that the maps have a potential to initiate further thinking of the subject and instigate change, can be more beneficial. Such approach also should take into account the fact that personal development in its very own nature can often be non-linear, intangible, difficult to capture or measure and marked with periods of incubation, stagnation, transition, progression or reaching some dead ends.

The analysis presented above shows that culture inevitably influences the perception of personal development. Students coming from various cultures tend to concentrate on various aspects of personal development. There are, of course, some common themes (like gaining education, career development or importance of a family) but even these have a different hierarchy of importance and often different meanings under the same concepts' labels. Therefore, in attempt to make the PDP tasks more useful and engaging, a more individualised attitude towards introduction of personal development is needed. This could manifest itself in:

- efforts to present and explain to foreign students what PDP is, especially in the way it is understood in the British educational system. Students should be informed what exactly educators mean by PDP (to avoid possible misunderstandings), what are the goals of PDP and in what way exactly **it may be useful to them.** The last point seems to be crucial as only by knowing **what there is for them – international students**, they can start participating in a truly engaged way in any PDP activities. The students need to understand the system in which they study so that they are able not only to merely survive but most importantly succeed and compete on British and global market later on;

- understanding the fact that **the first and most important thing to consider should always be student's 'self'**. One of the universities' roles is supporting students in their development, even though many universities still concentrate predominantly on academic development. Each student comes with an individual set of prior knowledge, skills, beliefs, values, habits, as well as goals and dreams. PDP, introduced in a thoughtful way, could support the planning and realisation of these goals. This can be achieved if the lecturers are dedicated and understand that the students' background is one of the important factors in their perception of the world. If, instead, the lecturers believe that all 'other' students need to adjust to the British system without any questions many of the students will probably stay disengaged or pretend to be engaged and no change will take place. Obviously all students need to adhere to some regulations and achieve some standards in order to complete their studies but instead of trying to 'colonise' them maybe we should try and

help them understand where they come from and lead them to where they actually want to go;

- making students more aware of the fact that if they decide to go back to their home countries they **may have to re-adjust**. Robinson-Pant [16] gives many examples of PhD students who, upon their arrival back home, had a re-entry shock, needed to battle their way through the home educational systems and other difficulties, including their own internal fights, where they had to negotiate their identities again as British ideas often would not fit in easily. Discussions, reflections and big debates should evolve around both socially and personally important issues, especially around what is truly important to every person and what is not, what is useful in various environments and what could be rather harmful, what should be taken, changed, tailored or given up. Tackling such topics could better prepare students for any future changes. In the light of Meyer and Land's [15] threshold concepts theory all the changes, especially personal ones, which come from gaining more knowledge, experience and broadening of horizons, are irreversible and can lead to the feeling of some kind of discomfort – students may feel lost, de-rooted, confused or they may feel they are trying to break the wall by introducing the ideas they brought from abroad;

- informing home universities that returning students may need some support in their re-adjustment;

- **putting more stress on intercultural awareness** in the British system, so that all the students would feel included. This could be achieved by valuing individuals' 'self', encouraging them to reflect on particular issues from various perspectives (e.g. home versus British or international) and highlighting the fact that experiencing of various perspectives can enrich and lead to positive changes. It is also important to remind the lecturers that giving only English examples (or other but mostly from English speaking areas in the world, like the USA) often excludes foreign students as they may struggle to understand or/and engage. This recommendation can be very difficult to fulfil as every teacher in every country uses many metaphors, idioms, proverbs, TV examples, relates to history, novels and poems that are often unknown to the foreign students. However, it is important to be aware of such obstacles and try to eliminate them at least by checking students' understanding and providing explanations, when necessary and by introducing more internationally known examples;

- in the light of enthusiastically referred by many international students subjectively felt **change achieved by studying in a foreign environment and in a foreign language,** it seems to be particularly important to **introduce more intercultural tasks** (realised at least partially in groups), which would expose students to the ideas and beliefs different to their own and therefore would require more discussion and negotiation.

Appendix 1

	OBSERVED CULTURAL TENDENCIES IN THE CONCEPT MAPS CONSTRUCTED BY:			
	African students	Chinese students	Eastern European students	British students
Family and social life (these students mention **marriage, having children and caring for others** more often than other students)*	**Family and social networks** - **love and respect** for the parents as well as the **obligations and social responsibilities** (in the interviews they mention in a similar way their teachers); also friends and other people around. **Socially respected people's opinions are valued and often followed to the letter.**	**Family** - mentioned rather as a source of **support** and the **social heritage** and seem to have less influence on students' future path (in a way that Chinese family has on their children).	**Family** – only **nuclear family** mentioned (marriage, children) and **providing for the family.**
Education	**Education** – degree, academic studies (also previous schools) – the concepts are well defined and specific and explicitly connected with acquiring a degree and hence future career development, social status and financial benefits. Education is seen in a quite instrumental way here.	**Education and academic life** – EE tend to concentrate on their academic studies and often talk about university. They mention knowledge and the ways of acquiring it most often. Some of them also mention skills, goals, self and life satisfaction, ability to study, time effectiveness, problem solving or curiosity. The need to improve and self-evaluation and reflection are present as	**Education** – is pretty important but at the same time it is often treated as a necessary step for career development. Hence British are less likely to study for the sake of the studies. **

Professional development (career) – focus on career and **financial achievement**, also **financial gain**. Some of them mention particular professional bodies they want to liaise with. African students strive for professional development as well as social recognition.	**Career** - Chinese follow the career which is **often chosen for them by others** (sometimes without recognition of their personal abilities or interests) and also often related to business. They are **achievement oriented** and **financial and social recognition** plays an important role	**Career** – seems to be quite important but the focus is slightly different than for African or Chinese students. Eastern Europeans think about **skills development** and the **personal fit for job** as well as **personal satisfaction**. Most of Eastern Europeans do work and try to develop their skill for future but personal fit for job and work satisfaction are crucial. They also recognise the fact they may need to try different things before they decide what they want to do and they seem to appreciate various experiences, which allow them to keep their options open.	well. **Career** - British students mention skills, opportunities, feedback, experience, training, career change and development, etc – their language is often 'career loaded' (they use professional expressions more often than other students which may be a sign or career orientation, but may also be linked to the language proficiency).
Culture – the students often mention their **own cultural background** and **identity** (they refer to themselves being e.g. Nigerian, Ghanaian, of particular roots, Black, etc) as well as **other cultures'**. Other students highlight their	**Culture** – mentioned peripherally (as learning about other cultures or making friends from different countries during studies).	**Culture** – EE talk less often about their own background but rather concentrate on **openness to other cultures, learning from/ about other cultures**, etc. Travelling is probably linked to this.	**Culture –** mentioned by one student as she referred to being only half British and by the other commenting on multicultural student body.

			Interests, hobbies, leisure time are mentioned by British students.
		Environment – some of Eastern Europeans mention the importance of environment which could/ should support personal development	
	Health – keeping healthy, eating healthy and exercising		
background in this way less often.			
Health – keeping healthy, eating healthy and exercising			
Religion, spiritual development, fulfilment – most African students (and none others) mention religion and practices, God, a relationship with God and spiritual development as important aspects of personal development			
	Money – Chinese students very often mention money and are not shy about expressing their **expectations of high salary and a good quality of**		

	life. Also other **materialistic things** are being mentioned (e.g. a car, a house, etc.).	
	Social life – some Chinese mark the importance of helping others, serving their society, etc (but this is not the case with all Chinese students)	
	Development of personality/ character –the need to **harness the character, build its strengths, concentrate on perseverance and put a lot of effort** (this may possibly be connected with the importance of discipline and Confucian belief that hard work will pay off?)	

* Although it is also quite common for Chinese students and may possibly be explained by more collectivistic nature of these societies

** also student loans are so big that most British students cannot afford doing Masters or multiply degrees, as opposed to Eastern Europeans, for example

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