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Teaching by stealth: utilising the hidden curriculum through body painting within anatomy education

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SUMMARY

This study considers the hidden curriculum within anatomy education, with a specific focus on body painting. Body painting is not only utilised within anatomy education for teaching surface anatomy and clinical examination, but also to provide a platform for the development of other skills, primarily through the hidden curriculum. The hidden curriculum is the unplanned curriculum transmitting tacit messages to students on values, attitudes, principles and organisation. This may lend itself to deliver values in line with General Medical Council UK registration requirements of 'safety and quality', 'communication', 'partnership and teamwork', and 'maintaining trust' in the undergraduate medical curriculum. This qualitative study explored faculty perceptions of the use of body painting as a teaching tool. The hidden curriculum appeared spontaneously as a major advantage of utilising painting. Four major themes emerged; trait development, socialisation, tacit learning and script formation. Anatomy education lends itself to an environment in which to study the hidden curriculum. Results from this study demonstrate faculty awareness of, and deliberate use of, the hidden curriculum as a method to 'teach by stealth', and therefore by actively employing the term pushing at the boundaries of the hidden curriculum concept.

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INTRODUCTION

The hidden curriculum (HC) in medical education is comprised of multiple facets including, organizational and institutional contexts, as well as cultural subtexts that shape how and what students learn outside the formal and intended curriculum (Lempp and Seale, 2004; Hafferty and O'Donnell, 2015). The HC can be viewed through two lenses, as a conceptual framework, or, as a particular process for student learning (Hafferty and Castellani, 2009). Simplistically, it can be regarded as the socialisation of schooling (Kentli, 2009). The HC is identified by the social interactions within an environment. Thus, it is in process at all times, and serves to transmit tacit messages to students about values, attitudes, principles, and organisation. The HC can reveal the unexpected, unintentional interactions between teachers and students which reveal critical pedagogy, often pedagogy not formally delivered (Hafferty and Castellani, 2009; Kentli, 2009; Hafferty and Finn, 2015; Hafferty and O'Donnell, 2015). The HC functions as a powerful vehicle for learning and requires serious attention from health professions educators (Hafferty and O'Donnell, 2015). The HC is particularly well documented within the context of professionalism, and anatomy education inside the dissecting room (Hafferty, 1991; Finn et al., 2010; Hafferty and Finn

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2015; Hafferty and O'Donnell, 2015).

This present study emerged from a larger study on faculties' views on, and experiences with, body painting in anatomy education (Cookson et al., 2017). From the data, it appeared that body painting may lend itself to explore aspects of the hidden curriculum which is consequently presented in this paper.

Distinctions must be drawn between curricula types in order to appreciate the spectra that body painting crosses. Firstly, the intended curriculum is the explicit and approved, typically written in the form of curriculum guides or lesson plans (O'Donnell, 2015, p 6). This is for example the planned content of a body painting session. Of course, what is planned isn't always delivered, thus the null curriculum is whatever learning is generated through what the teacher deletes or omits because of lack of time, interest or knowledge (O'Donnell, 2015, p 8). If, for example, muscles are painted, but the bony landmarks are not, students may learn that muscular attachments might not be considered as important. Next we have the delivered and received (or experienced) informal curriculum, whereby the sessions run and which students attend. The informal curriculum hereby refers to learning which is specific to situations as well as time. Role modelling for example is considered part of the informal curriculum (O'Donnell, 2015, p 7). Body painting classes take place in a different setting from any other classes the students experience in their curriculum, you might call it a co-curricular setting. Within this setting there is more emphasis on community and interpersonal communication from which students can learn through the informal curriculum. What is left is the HC which is not written anywhere but is still pervasive. It varies from teacher to teacher, depending on individual values and interests, dealing with messages about principles, organisation and attitudes (Kentli 2009). Teachers can teach the same lesson plans, but they teach very different lessons depending on their values, subject knowledge and interests. When the formal curriculum is the visible tip of the iceberg, the hidden curriculum comprises the part which is under the water and hence not visible (O'Donnell, 2015, p.8). The value a student may attach to any part of the curriculum might be dictated by whether or not it is part of the assessed curriculum; the difference between what is formally announced as content of a test and what is actually tested can inform the students about what really is important.

High detailed body painting is a technique in anatomy education for demonstrating internal structures on the body surface (Op den Akker et al., 2002). Research has shown that this is an enjoyable and multisensory experience that promotes knowledge retention (Finn and McLachlan, 2010; Finn et al., 2011; Azer, 2011) and aids the integration of anatomy and clinical skills through the teaching of surface anatomy (McMenamin, 2008, Cookson et al., 2017). As such, it has found popularity amongst anatomy faculty internationally (Op den Akker et al., 2002; McMenamin, 2008; Finn, 2010, 2015; Finn and McLachlan, 2010; Nanjundaiah and Chowdapurkar, 2012; Jariyapong et al., 2016) and is thought to facilitate interpersonal learning and building of empathy through peer-examination (Cookson et al., 2017). In the modern anatomy curriculum which has been marked by many changes in curriculum design and methodologies (Ghosh, 2017; Estai and Bunt, 2016; Brauer and Ferguson, 2015; Regan de Bere and Petersen, 2012; Drake et al., 2009; Raftery, 2007; Heylings, 2002) it is therefore recommended as an inexpensive alternative tool for teaching anatomy to students with a wide variety of backgrounds (Chapman et al., 2016). Its method relies on student engagement combining the practical nature of the task, guided by comprehensive instructions, with peer examination and staff guidance (Finn, 2010). Body painting approaches art indirectly as a teaching tool focusing on kinaesthetic learning rather than artistic precision or ability (Finn and McLachlan, 2010).

Body painting sessions are one of the rare occasions where undergraduate students must deal closely with the bodies of other human beings. In a safe environment, students are asked to paint each other and therefore, depending on the areas they are painting, to undress. This distinct classroom experience puts students in situations where they deal with exposing themselves, communicating, and creating a respectful and professional learning environment. This experience has shown to increase confidence in students for peer physical examination and prepares them for future clinical practice (McMenamin, 2008; Finn and McLachlan, 2010, Cookson et al., 2017).

Almost all requirements for doctors to be registered with the General Medical Council (GMC) in the United Kingdom touch upon interpersonal skills, safety, and professionalism. Only one of the four main topics outlined in the guideline "promoting excellence: standards for medical education and training" (2016) specifically deals with the actual knowledge of body structures and pathology. The other three are namely: safety and quality, communication, partnership and teamwork, and maintaining trust. Nonetheless the first years of the undergraduate medical curriculum remain heavily focused on building knowledge and the delivery and assessment of facts. Hence the question arises as to how medical students can learn to fulfil all the other GMC requirements. The topic investigated in this paper suggests that body painting sessions can be used to communicate values such as team-work and professionalism through the language of the hidden curriculum. Next to teaching anatomical knowledge, body painting can be used for teaching values which become crucial

for the future professional practice of doctors.

To date, literature has focussed on the student experience and knowledge outcomes of body painting. The present study, however, presents an exploration of the hidden curriculum within the context of anatomy education which spontaneously emerged from a larger study into anatomists' views on body painting. Although the qualitative data pertain to this context, the aim of this paper is to explore different facets of the hidden curriculum, using body painting to provide the illustrative examples. As a grounded theory study, the emerging data and iterative collection enabled us to further learn more broadly about the hidden curriculum, based within the context of the anatomy environment.

METHODS

This study was part of a wider project looking at faculty views on the use of body painting within anatomy education (Cookson et al., 2017). As part of this project, the HC spontaneously emerged as a prominent area of discussion from the participants.

Grounded theory (GT) was used as both a methodology and a paradigm (Charmaz, 2006; Corbin and Strauss, 2014). GT and the use of semi-structured interviews enabled an exploratory stance to this study of views on the use of body painting within anatomy education. GT is utilized by researchers to create a theory which is 'grounded within the data', thus it is used widely in areas that are considered more exploratory or discovery-oriented. The application of GT allowed authors to move beyond a simple thematic analysis and to build a theoretical framework which emerged from themes within the data (see Fig. 1). The GT methodology is conducted by open, axial and selective coding (Corbin and Strauss, 2014). During open coding initial themes are generated from the data, which are then linked and developed during the axial coding phase. The process is finalised by selective coding, which formalizes the relationship between themes and leads to the formation of a theoretical framework, and hence the generation of a theory (Strauss and Corbin, 1998).

26 anatomists, with a wide range of educational backgrounds and levels of training participated from 14 centres worldwide (Table 1). Initial anatomy faculty were selected through purposive sampling (Marshall 1996) and were contacted by e-mail. Snowball sampling, a process through which already identified participants suggested further colleagues or acquaintances suitable for this project (Marshall 1996) aided the identification of further participants. Recruitment proceeded until the point of thematic saturation, which was confidently reached after 21 interviews; however, interviews were carried out beyond saturation up to a total of 26. All participants worked in higher education institutes and had some experience of body painting in the anatomy curriculum.

Table 1. Participant demographics & geography.

Description	N (%)
Participants	
Total	26 (100)
Female	11 (42.3)
Male	15 (57.7)
Academic position	
Demonstrator/ Doctor on academic rotation	3 (11.5)
Lecturer/ Teaching fellow	6 (23.1)
Senior lecturer/ Senior teaching fellow	8 (30.8)
Professor	9 (34.6)
Country of employment	
Ireland	1 (7.143)
United Kingdom	8 (57.143)
United States	3 (21.428)
Australia	1 (7.143)
Brazil	1 (7.143)

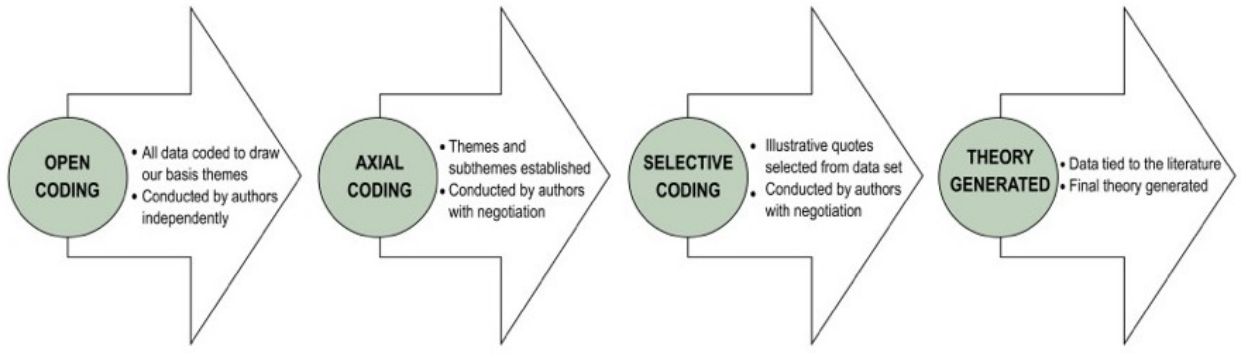

Fig 1. The coding process for grounded theory.

All participants signed consent forms and were made aware that they were free to withdraw from the study at any point without any negative consequences. Ethical approval was granted for this study by the ethics committee of the School of Medicine, Pharmacy and Health at Durham University in Durham, North East England.

Participants were able to choose the timing, location and means of interview; such as a face-to-face interview, over the phone or video conferencing. All interviews were digitally recorded and later transcribed verbatim by administrators within the department. At their request participants had the possibility to review transcripts before analysis. Transcripts were stored as electronic documents on a password-protected computer in a locked room and were destroyed after use (DPA, 2005). Unauthorised access to documents was prevented through data encryption. All personal data were treated as confidential and not transferred to other sources (DPA, 2005).

Data was collected and analysed between 2014 and 2016 by two authors (G.M.F and N.E.C). The pre-defined interview questions (Table 2) forming the semi-structured interviews were validated during a pilot interview (Creswell, 2007; Merriam, 2009). GT analysis was an evolving process with constant comparison of transcripts which began at the first interview and continued throughout data collection in iterative cycles (Corbin and Strauss, 2014). The collected data was analysed separately by the authors prior to discussion and negotiation (Corbin and Strauss, 2014). In order to prevent bias and further reflexivity authors discussed their presumptions on the investigated topic. First the most prominent codes were chosen as major themes, followed by a review in order to comprehend the relationships between the major themes and subthemes (Merriam, 2009). This phase of axial coding refined data and provided insight into explaining themes grounded in the data, by interpreting and reflecting upon their meaning (DPA, 2005; Kuper et al., 2008; Merriam, 2009; Corbin and Strauss, 2014).

Subthemes from the axial coding phase were identified and organized into a coding paradigm (Creswell, 2007). Hypotheses were then generated to interlink original categories using selective coding (Creswell, 2007; Merriam, 2009). Theory grounded in the data was therefore expressed and used to provide new insight into the value of body painting.

RESULTS

During interviews the HC emerged as a major touchpoint in the teaching of anatomy through body painting. Four major themes were identified; trait development, socialisation, tacit learning, and script formation. Illustrative examples of quotes from each major theme and the most prominent subthemes are provided (see Table 3).

Table 3. Themes and subthemes.

Theme	Subthemes
Professionalism as trait development	N/A
Socialisation	Identity formation Confidence Power and Hierarchy
Tacit learning	Empathy Experiential learning Teaching by stealth
Script formation	Rehearsal Embarrassment

Table 2. Interview framework.

Interview stems	
For those who utilise body painting: Do you think body painting is an acceptable teaching modality? Does your institution use body painting? Why/why not? Why is it appropriate for teaching? How frequently is body painting used? Can you provide examples of use? What is your motivation for use of body painting?	For those who do not utilise body painting: What is your knowledge of body painting and its use? Does its use interest you? What factors have influenced your decision not to use it?
Questions to all participants: What are the pros and cons of body painting? What are the potential barriers? Are there any cultural issues or other considerations that need to be made when using body painting? Do you think body painting can be used within clinical skills and peer examination?	

1. Professionalism as trait development

Participants discussed the development of professionalism as a trait, mostly through the process of peer examination and the doctor-patient style encounter that body painting requires. The developmental nature of this process was akin to proto-professionalism (Hilton and Slotnick, 2005).

"It is very common for medical schools to 'teach' professionalism didactically, sort of as a list of dos and don'ts, rights and wrongs. They expect professionalism from one and don't allow it to develop or be learnt – it's deemed as something you possess already. I think the beauty of body painting sessions is that they allow the students to develop as professionals, you see their conduct improve and their confidence grow over the course of the semester. Professionalism is developmental, it develops with their cognitive knowledge and body painting is the perfect example of that. You can't just teach it, it has to be observed, it has to be nurtured and role modelled. Anatomy and clinical skills are great environments for these practices and behaviours to subconsciously pass to the students."

2. Socialisation

Participants discussed the process of students learning from each other through socialisation. Sub-themes such as identity formation, confidence, and power and hierarchy became apparent within the participants' discourse.

"You have the same issues of gender, culture, undressing, students need to develop and realise, I think, they need to develop, trust in the person who's examining them and…because of that, they start to acquire the characteristics that they need to display those characteristics that will engender trust from the patients they're going to examine, too. So I think there's pros and cons, I think body painting is generally, you know it depends which bit of body painting we're talking about I think. You know, which bit of the body we're talking about, you know, hands are fairly safe territory, even faces are reasonably safe territory but anything that involves kind of more sensitive, more undressing, you know for some students, abdominal examination is a tricky one because some students sense that their own body image is not, and their own self-confidence, their own self-esteem is not high and so to do that in a scripted group, say you're working you, you may have never spoken before but that might be a step too far in some areas that involve undressing I think"

Identity formation

Participants described students' forming their professional identities within sessions, frequently based upon observation of other students or staff.

"The large scale and social nature of the class means when students are painting they get to watch others examine and paint more than they would in a traditional clinical examination session. They see someone approach a peer-patient in a certain way and think ' I like that approach' or they watch a staff member and model their behaviour. They start to feel like a junior doctor as unlike in the cadaver lab, they are interacting and they act up accordingly."

Confidence

Participants believed that sessions helped build student self-confidence, something that could not necessarily be taught.

"We provide a safe environment where it is ok to get it wrong, to practice, to learn. As you observe sessions over time you see the students' confidence grow. I'm not saying you don't get that with other areas of the curriculum but, there is something to be said about the informal nature of these sessions that lends itself to confidence building. One of the key things is the class interactions, the chatter with peers."

"It [physical examination] could be an awkward situation but again it's for students that are beginning medical school and anything related to a physical exam when they first start is probably somewhat of an uneasy situation. So this would be, you know, a way to help them get past that aspect of their training. So it's, you know it's a good, I mean it is a first step."

Power and hierarchy

Social learning and interactions were thought to inform students about the perceived power and hierarchical status of doctor-patient interactions, as well as again, tapping into constructs of professionalism.

"Like patients have to do what doctors tell them you know? Patient says, that the Doctor says 'Take your clothes off' you got to take your clothes off. But doctors don't have to do that and who knows what happens when doctors are patients? What if they have to take their clothes off? I don't know, but the point is that students are learning about professionalism and what it means to be a professional regardless of whether it's in the curriculum. You're learning, your head down here, well in sociology we call it 'emotional socialisation'; you're learning rules about managing emotions. That's part of anatomy, the fact that it may not be a learning objective and therefore may fall on the hidden curriculum side doesn't mean that you're not learning anything about emotions just because it's not in the curriculum."

3. Tacit Learning

Participants identified the process of tacit learning. The theme of tacit learning was centred around the intuitive, hard to define and experience-based learning students mastered; it included empathy, trust, communication and how to socially interact within a given learning environment. Descriptions of 'being in a patients' shoes' and

'knowing what it feels like' were frequently recounted. Tacit learning and the hidden curriculum were utilised optimally by faculty, referred to as 'teaching by stealth'.

Empathy

Participants described how tacit learning helped students to develop an empathic approach by, for example, putting themselves in the patients' shoes.

"Anything that involves interacting with people, I think is helpful, before students are immersed in that world of interacting with people. Because in third year, my view is that it, can sometimes start to go wrong I think. You know immersed in things, with people it becomes almost blasé and so people see ill people, the norm becomes ill people in beds who are wearing their nightclothes and they're kind of, sometimes people lose that sense of humanity at that point so anything that sets long lasting traits of working with another person, of imagining and setting up some empathy with that individual before it becomes routine and humdrum, I think is really important"

"It's about putting yourself in the patient's shoes and understanding what it feels like to be palpated sometimes not as gently as you would like to be and being in a state of semi undress in front of your peers. Oh sometimes even, I mean you get groups of students, most of them self-select but occasionally you get groups who haven't worked with each other very closely before and then end up working together. And that can often be the group that choose to work behind a screen; so I suppose it's about sometimes not working with your friends. You know some of the students would be very comfortable painting all sorts of things on each other and others won't so there's, for some students there's that element to it as well."

Experiential learning

Through the hands-on experience, students learn to approach and work with others. It allows students to experience their own vulnerability and professional boundaries. Students learn, through engagement, interpersonal communication. .

"I mean in terms of learning too, have to work with other human beings up close and personal with other human beings, and for some students that's an issue, some students, they've never, you know they're not used to laying hands on another person, so that's helpful for students to have to experience having hands laid on them before they'd go and do it real life with patients I think is important. You know particularly nowadays, but it sets the kind of the tone really for students before they go and kind of have slightly odd attitudes as soon as you get into year three when everybody's ill in bed and the students are walking around practising on people. So to actually get that kind of sorted out earlier on, that they all have experience in what if feels like, they know how off-putting it can be undressing in front of another person, that kind of thing"

"It kind of helps the student see the person behind the patient. Because it would be a big thing to take a first year student, take them into hospital and say 'Do this' you know? Whereas if they're used to, had some run-ins to it, one of them is learning to talk, you know is practising talking to that ill person in either a simulated or a real setting or the other one is working with a peer, doing bit of undressing with that peer seeing, you know before they get into that real ill person, I think it helps them visualize themselves as the practitioner but also maintain that link with, empathy with the individual"

Teaching by stealth

Participants described how their institutions chose body painting for the power of its associated hidden curriculum, choosing it as a stealth delivery mechanism.

"The obvious enjoyment that students got out of it, you know it was fun and I'll always feel that if you can introduce a fun element into teaching and the teaching is still, the learning is still happening then that's a win-win situation. I would, yes it's almost teaching by stealth if you like and that's worth doing. If students don't actually realise they're learning, then something's going right and then it's worth pursuing."

"We could teach anatomy and physical examination in many ways and students will pick up different skills and snippets of knowledge as they go. We deliberately choose body painting for its ability to diffuse the formal, stuffy environment – I would go as far as to say we exploit it. We know its not going to be the best mechanism for delivering all the content for the lab and written exam papers but we know it teaches so much more and we play up to that. We use it for its potential."

4. Script Formation

During body painting sessions, students develop and rehearse scripts whilst communicating and giving guidance to their peers. These scripts and experiences are believed to help students in clinical settings, such as dealing with difficult or embarrassing situations. Participants thought this to be an important part of medical education and something that was hard to fit into a traditional curriculum in an appropriate and genuine manner.

Rehearsal

It is believed that body painting sessions create an environment in which students have the time and possibilities for practice, hence to develop and rehearse the doctor-patient interaction.

"I find that our sessions give students the chance to rehearse, they sort of act up to the role of a doc-

tor and practice. They develop a style, how to explain the procedure, in this case palpating and painting, but you get the idea? It's a chance to perform in a safe place with peers and no pressure from assessments such as OSCEs."

Embarrassment

Body painting in a class setting sets students up for possibly encountering embarrassing situations which can trigger reflection and script formation for similar situations in future clinical practice.

"There is that element of embarrassment about the human body that we talked about. I think staff, you know, feel that too. So that kind of prudishness that says 'this is something which is taboo' is disastrous for the actual practice of medicine and therefore something that we wanted to help overcome… In one case a patient had been asked to remove her top so that a shoulder examination could be carried out but she wasn't wearing a bra- she did so as instructed, you know with embarrassment that there were students about. She said the doctor went red with embarrassment, he was plainly embarrassed. He didn't have the skills to deal with it and that led him to carry on with the exam…The idea students might be mildly embarrassed by having to undress is one of its (body painting's) benefits. They build up a script- "Good Morning, my name is... and I'm a medical student. Is it alright if I carry out an examination?" Etc. It's a script and they learn a script around embarrassment as well, it's something that you need to build up to about this kind of thing. You know "I'm sorry I didn't realise you weren't wearing anything under your t-shirt, slip it back on and we will find somewhere more appropriate". That would be the script and I think it would occur to our students more plausibly than someone who had been trained traditionally and where no one had ever undressed."

DISCUSSION

The Hidden Curriculum

The HC is often viewed as the space between what is formally required and what is picked up by tacit cues (Hafferty and Castellani, 2009). The data in our study demonstrate faculty awareness of this space, and depict the deliberate use of this space as a mechanism of delivery for the informal but desirable learning outcomes that cannot be specifically labelled or taught. Examples include empathy, script rehearsal and identity formation. Snyder defined this gap as the 'emotional and social surround of the formal curriculum' (Snyder, 1971). Snyder concluded that success was determined by students' ability to navigate the space between the two sets of expectations, however invisible to faculty. Within our results, faculty described the use of students' negotiation of this space as 'teaching by stealth'. They hence show to be aware of this space as well as evaluating students within this space.

The HC has frequently assumed a negative framing within the medical education literature, often regarded as somewhat of a disconnection. It is associated with promotion of negative traits or prevention of positive actions (Hafferty and Castellani, 2009; O'Donnell, 2015, p.2). The HC has for example been stated as a cause of decline of moral reasoning in medical education (Feudtner et al., 1994; Hren et al., 2011). Our data however present the HC as an entirely positive learning environment, based upon experiential learning models. The awareness of and, in some cases, utilisation of the HC by faculty within their respective institutions suggests that to the students the HC remains all that is tacit and implied; however, it is firmly on the faculty radar. In the examples provided by our participants, the deliberate utilisation of the HC doesn't appear to diminish its power, perhaps because the HC remains subliminal to the students. Given the data in this study and previous research (Finn and McLachlan 2010), students are almost certainly learning about emotions, professionalism, empathy etc., but what they are learning may not be, purely speaking, what the faculty intend them to learn; the HC is by its very definition hidden. All curricula types are experienced differently- including the HC.

Body Painting

The context in which faculty awareness of the HC emerged was body painting and as such, it is important to consider the literature to date. Previous research has considered students' and staff's experiences of body painting as a learning tool (Cookson et al., 2017; Finn and McLachlan, 2010). In addition to describing the efficacy of body painting for the acquisition of cognitive anatomical knowledge, students have referred to body painting as a means by which they were taken "out of their comfort zone". Finn and McLachlan (2010) reported that students pronounced feeling vulnerable as they were participating in sessions in a state of undress; they spontaneously related their vulnerability to the vulnerability of patients when being asked to undress, and had reflected upon how this would shape their behaviour and attitudes in the future. Furthermore, this article describes students' perceptions of body painting as a learning tool that encouraged them to address issues with body image and confidence, and consider aspects of professionalism and clinical practice, for the most part from the prospective of future patients. Finally, when the painting process was coupled with concurrent peer-physical examination, it allowed students to develop their clinical skills and gain confidence in approaching patients.

These findings from Finn and McLachlan (2010) were characterized in terms of the non-cognitive aspects of body painting teaching sessions. In hindsight, these data can be revisited using a dif-

ferent analytical lens, that of the Hidden Curriculum. For students, this extra knowledge or these non-compulsory 'soft skills' were developed as a result of the informal curriculum. At the time of the original publication body painting was primarily viewed as an innovative method for teaching surface anatomy and was labelled as an informal way to combine anatomy and clinical examination. It was not implicitly viewed as a mechanism for delivering anything other than surface anatomy and basic peer/clinical examination skills.

Within the data from our current study, faculty referred to the acquisition of what we will call for this discussion the 'other stuff' as almost a given; it was 'taught by stealth'. As acceptability for body painting improved and its use within curricula become more mainstream, the appreciation of the *added* value of body painting became acknowledged. In fact, as one of our respondents reports, body painting has almost become the status quo for delivery of the 'other stuff' to the point whereby some institutions who implemented it for cognitive knowledge acquisition are using it solely for its tacit value. *"It's a hidden curriculum that's behind this body painting, almost it's, the most important thing, I'll be honest with you, I think as a device for teaching anatomy, it's limited".*

Body Painting and the Hidden Curriculum

The HC represents a "set of influences that function at the level of organisation culture". The HC is recognised as a device for exploring what an organisation says it is delivering to students and what it actually delivers in the process of education. Though body painting almost always sets out to inform students on a certain anatomical concept, it has been observed that students are also influenced by tacit learning and engage with subjects such as communication, social interaction, trust and empathy, influencing constructs regarding professional behaviour. The HC has been seen as the primary source of ethics training over the course of medical training, although medical schools do offer an intended ethics and humanities curriculum (Hafferty and Franks, 1994).

Socialisation and Professional Identity

Through the process of socialisation students adopt behaviour patterns and perceived norms of a group into which they are immersed. In the case of body painting, results of this study suggest that a student's immersion into a group constructed of peers and faculty will result in learning with regards to subjects such as power and hierarchy, identity formation and emotional socialisation. The link between the HC, identity formation and socialisation theory has been documented (Dreeben, 1967; Hafferty and Castellani, 2009). Within the context of body painting and conducting physical examinations, students undergo professional socialisation. Faculty also describe the students' identity formation within this learning context. Professional socialisation, the process by which an individual learns the roles and responsibilities of his or her chosen profession before emerging as a member of the professional culture, is comparable with the mastery of a profession described by Lave and Wenger (Lave and Wegner, 1991). In short, within this study the HC appears to be a platform for experiential learning through which identity formation and professional socialisation occur: "… socialisation designates the process by which people selectively acquire the values and attitudes, the interests and knowledge—in short the culture—current in the groups of which they are, or seek to become a member" (Merton et al., 1957).

Netterstrøm and Kayser (2008) explored medical students' professional development in relation to the process of studying and learning anatomy. They concluded that when in learning the subject matter, students adapt to fundamental values in the medical profession and are thus transformed into real medical students, sharing a unique experience.

Hence the HC is an important factor in the formation of a professional identity. The *hidden curriculum* is, technically speaking, hidden. Most often, the HC functions at the level of organisational culture and therefore largely operates at a tacit or unconscious level. The HC largely deals with implicit understandings of "how things are done around here." As such, the HC operates within domains that are taken-for- granted and thus often fly beneath the reflective radar of both faculty and students. It is hoped that through discussion, sources of the HC impacting on identity formation can be discovered and explored.

Professionalism and influence through faculty

The HC generates an extensive list of potential tacit messages that educators must be aware of when using body painting and potentially could be used in translating appropriate professional behaviour to a cohort of students. By immersing themselves in the activity, staff battle into the learning trenches to present themselves as role- models for students and demonstrate the conduct expected of future doctors.

This all assumes professionalism is a developing trait, acquired and shaped over time rather than something that happens at a set moment. Literature describes a theory of proto-professionalism, whereby students develop professionalism over a long period of time through immersion in educational and clinical environments (Hilton and Slotnick, 2005). In this case a student's professional development starts the moment they apply to medical school and thus such experiences during anatomy classes contribute to this proto-professionalism journey.

Similarly, proto-professionalism takes into account that such experiences can be both positive

and negative. It is said to be influenced by positive experience through the process of attainment, and negative experience through the process of attrition (Hilton and Slotnick, 2005). Indirect reflection on such processes contributes to the professional journey and with time sees a student's progression to a mature practitioner. With careful manipulation and the awareness of such processes occurring during body painting sessions this study suggests that educators can positively influence a students' professional development, in accordance with the revolutionising anatomical curriculum.

Throughout the study, participants discussed increased confidence in students having been immersed in sessions whereby the above processes had been clear. It is suggested that by undergoing professional development at an early stage, through peer examination, being subjected to tacit messages through the HC and learning from peers by socialisation, students become more confident in themselves when adopting the role of a practicing doctor and approaching patients. Opportunities to undertake such activity is therefore imperative to regenerating an anatomy curriculum whereby patient centeredness and preparation for practice form core outcomes.

LIMITATIONS

The main limitation of this study lies within the generalisability of conclusions. This study was heavily UK-centred, with most participants attached to universities with the same cultural and social stance. Conclusions therefore may not be transferable to other institutions and limiting the usefulness of results.

Due to the methodological framework, this study is subject to researcher bias and subjectivity. This may have influenced results and this must be accounted for in terms of accuracy of conclusions.

CONCLUSIONS

Results from this study demonstrate faculty awareness of, and deliberate use of, the hidden curriculum as a method of 'teaching by stealth', and therefore by actively employing the term pushing at the boundaries of the hidden curriculum concept. Anatomy education, and specifically body painting, lends itself to an environment in which to study the hidden curriculum. In the modern prosection or no-donor based anatomy curriculum, body painting could lend itself to teaching values of professionalism which were formerly acquired through the traditional dissection focussed curriculum. Faculty should reflect on tacit messages they might be communicating and exert caution when utilising the hidden curriculum to 'teach by stealth', as by its very definition it is hidden and thus should not be relied upon as a guaranteed mode of learning.

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