2020-02-27

Critical Reflection: Tracking professional identity formation in a medical student trainee

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Abstract

We sought to establish a framework to track professional identity formation in one individual trainee through the use of reflective writing. Using the same six reflective prompts, one undergraduate medical trainee wrote six reflective essays each year of training which were subsequently analyzed by a faculty member and the author looking for specific themes. 22 of a possible 24 pieces were analyzed and the three major themes that emerged across four years were *roots*, *emotions*, and *self-doubt.* Overall, the themes highlighted the critical nature that an individual's socio-cultural identity plays in medical professional identity formation. This work serves to emphasize that critical reflection is imperative for professional identity formation and argues that PIF is truly a dynamic interplay between a trainee's personal identity and the medical community's established dogma.

Introduction

In the early part of the 1990s, sociologist Jack Mezirow published his work on the concept of "transformative learning" and how he deemed "critical reflection" as crucial to achieve transformative learning. Mezirow wrote extensively on the difference between what he called "instrumental learning" – a data driven objective focused on *how* to do something that possesses verifiable data to measure competency – and "communicative learning," the latter more focused on the *why* we do things. He wrote specifically that "of even greater significance to most adult learning is understanding the meaning of what others communicate, concerning values, ideals, feelings, moral decisions, and such concepts as freedom, justice, love, labour, autonomy, commitment and democracy."[i] For Mezirow, and crucial for this project, is the understanding that medicine constitutes not only instrumental learning (i.e. discrete facts like pH values for acid base problems) but also grapples with communicative learning, especially so when it comes to professional identity formation.

Critical reflection, then, for Mezirow and for this project, is defined as not only the assessment of past action to answer the question of how best to achieve something, but rather "understood as an assessment of how or why we have perceived, thought, felt, or acted."[ii] By this definition one can create a framework for understanding the power that reflection can have on challenging pre-supposed notions of belief, faith, or in medicine, how we as trainees arrive or begin to arrive at our own professional identity. Medicine is a field full of discrete patterns of measuring success – so called "professional competencies" – which are established norms of behavior that for many years have encompassed the monolithic definition of how a "professional" physician is purported to act, think, and behave.[iii] The penchant for creating competencies for "medical professionalism" has been a trend over the past 20-30 years, as Forouzadeh et al. describe, in response to perceived failures of a field plagued with "pay-for-service" models and a "gradual loss of trust" in physicians. This project exists in this particular grey zone: the interface between critical reflection and professional identity formation.

Forouzadeh et al. pool definitions of professional identity, most of which have an underlying unity in their definition: how the "professional" physician exists within the framework of the field and how that specific physician relates to their position in the field. Inherent in these definitions is the understanding that there is a duality to professional identity;

the established and normalized "professional" definition in the field and the relationship of the individual to this definition. In a perfect world, both of these "strings" serve to complement one another, the physician takes stock of both her or his ethical, moral, spiritual, and religious identity *and* is content with how that identity fits within the framework of the field itself. Undoubtedly, for trainees, professional identity formation (PIF) is a dynamic process shaped in large part through the schemas, experiences, role-modeling, and understanding of how they fit into the "professional" medical field.[iv] Logic follows then, that some of the most important factors influencing trainee PIF happen during the clinically-heavy years; for most these encompass third and fourth year of medical school. This project sought to trace the journey of one under-represented minority through four years of medical education incorporating critical reflection as the vehicle to understand his own professional identity formation.

During the aforementioned rise in publications about professionalism, much has been written about the role the humanities play, or rather, *should* play in professional identity formation. Shapiro J et al. insightfully argue that "instead of compelling learners to narrow their focus to concrete behaviors, literature can help them realize that professionalism cannot be separated from an understanding of their own humanity and that of their patients."[v] The intrinsic skill-sets necessary for critical reading of literature – interrogating structures of established narratives, revisiting texts to investigate alternative or complementary conclusions, and forcing students to not only "feel" something after an encounter but to describe, seek alternative explanation, and contextualize that emotion[vi] – blend themselves extremely well to scaffold a trainee's PIF in medicine. The "counter-cultural perspective" that Shapiro et al. ascribe to a critical appraisal of literature is emblematic of the type of work that is both necessary and missing from the literature of PIF. It is no longer enough to codify the importance of a "professional physician" into achievable "competencies" when we understand that these competencies attempt to extol accepted patterns of behavior which themselves can be both extremely problematic for minority student's PIF, and ultimately dangerous as "adherence to hospital etiquette, respecting academic hierarchy, and subservience to authority are valued more than patient-centered virtues" in surveys of third and fourth year students.[vii]

Certainly, studies have been carried out in the past describing how narrative medicine, reflection, and humanities have positively influenced clerks and fourth year students.[viii] [ix] [x] However, not many of these, save for Brady et al. have tracked PIF over a longitudinal series of reflections, and there is a dearth of projects investigating PIF specifically in minority students or students from disadvantaged backgrounds. In fact, Volpe et al. recently published on PIF across three disciplines – nursing, medicine, and psychology – in a meta-synthesis whose powerful conclusions include: "although most of the included studies gathered at least some demographic data such as gender, age and race, very few included these data in a robust way in their analysis and interpretation of findings." Unsurprisingly, minority representation in the PIF literature is painfully absent and the field risks defaulting to viewing professional identity formation as servicing one member of the hegemony, upper-middle class white males.[xi] We hope this project serves to address the needs in the PIF literature for examples of how literature and critical reflection helped one minority student shape his own professional identity while in medical school.

This project thereby occupies a space both in service of Mezirow's description of what critical reflection could be deployed to achieve as well as a representation of how external

factors, schemas, events, and role-models served to create a foundational professional identity for a minority trainee. The goals included providing insight into how critical reflection can be standardized and followed longitudinally as well to further contribute to the PIF literature by highlighting some of the factors and frustrations of a minority trainee attempting to build his own professional identity through reflection. In line with Mezirow, we hope this project can contribute to "reformulating [prior] assumptions to permit a more inclusive, discriminating, permeable, and integrative perspective" in the field of professional identity formation.

Methods

Over the course of four years, an individual trainee wrote six reflective pieces each year always in response to the same prompts. The prompts were chosen for their breadth of topics and in order to establish consistency across the four years of training. The prompts were as follows:

1. "A significant experience in medical school"
2. "Change I: Self"
3. "Change II: Relationships"
4. "Becoming a doctor"
5. "Memorable patient"
6. "Personal and professional balance"

With permission from the course director, these prompts were borrowed from an elective at our institution entitled "Creative Writing Optional Enrichment Elective"[xii]: for which the aim is to give pre-clinical students the opportunity to reflect on their experience as medical students. This is typically taken either in year 1 or year 2, but the author and several classmates committed to doing this over two years, and then this project grew out of extending the assignments over all 4 years. The timeline for writing each year was based on the academic calendar, with the end of the respective medical school year marking key transition points. Given the dynamic nature of training, the first two-year pieces were all completed between August of 2016 – April of 2018 before entering the third clinical year. The third-year pieces encompassed the time between May of 2018 – April of 2019. The fourth-year pieces stretched between May of 2019 – January of 2020, which given project time constraints had to be completed in January.

There were no specific requirements set in place for the type of writing – be it prose or verse – nor for any length requirement. The pieces used for analysis were also not extensively edited past their original draft in efforts to maintain the authenticity of each piece for the time they were written. The pieces were considered finished at the discretion of the trainee and uploaded to an online database accessible by the project advisor, DH, and the trainee under the specific prompts mentioned above.

At the completion of the project, 22 of 24 (92%) reflections were finished on time and used for analysis. Independent analysis of all pieces was done by trainee, with a focus on themes. Each piece was analyzed individually both by the author and the faculty advisor looking for how diction, syntax, details, and reflection help to create the overarching themes of the work. This was done chronologically, beginning with the first year of medical school. Key themes were tabulated across prompts and reported per year of medical training. Each

individual prompt was also analyzed across all four years, with themes reported per prompt. Individual ideas, moments, words, or phrases were also highlighted in each group and reported.

Results

Twenty-two of 24 final pieces were uploaded to the online database for a final completion rate of 92%. The first year (MS1) had full reflections uploaded, with 6/6 prompts filled. The second year had 4/6, and the third and fourth years were complete. All the uploaded pieces of writing fit their required timeframes (i.e. they were all uploaded in their respective medical school years).

Medical Student – First Year (Pre-clinical)

After analysis of the six first-year pieces, five main themes became apparent. Firstly, the themes of "*roots*" or discussing past experiences, role models, ethno-cultural Colombian identity and language was distinctly prevalent across the writing. This theme would also continue to pop up across the years. Secondly, a broad theme originally titled "professional identity formation" was split into two themes: *duality* and *reassurance*. Questions of the role of the physician as both a "professional" person with "personal" qualities was evident and manifested itself as writing that dealt with personal culture crashing with the medical world. *Reassurance* was seen in specific diction connecting to personal value systems that were reinforced: maternal love and belonging.

Moreover, the theme of *disbelief* (also encompassing *self-doubt*) was very clear throughout the writing. Disbelief of both personal identity ("how did medical school happen?), medical practice ("real patients vs. textbooks"), and personal growth (close friends in medical school, "5cm more of confidence"). Lastly, the pieces that were written near the end of first year had diction that was more confident and syntax reflecting a more authoritative voice. The theme of *belonging* was highly evident, especially in the Memorable Patient and Personal/Professional balance reflections.

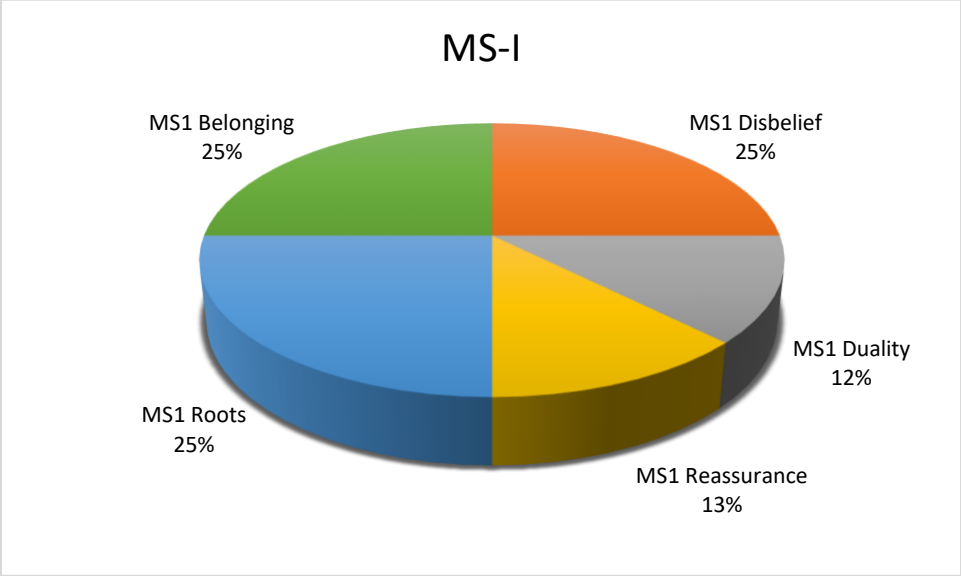

Figure 1: Themes of first year

Medical Student – Second Year (Pre-clinical)

This is the only year were only four pieces were available for analysis with two pieces not uploaded representing missing data. Given the time sensitive nature of each year's reflections, the decision to not write pieces for second year after the academic year concluded was taken to ensure originality in each year. The themes for second year were analyzed using the finalized four pieces.

The theme of *roots* was again highly evident in the writing, with callbacks to "home" in Colombia, a change in relationship with mom, and recalling positive experiences with past physicians (childhood pediatrician). Questions regarding the theme of *identity* continued to come up, with essays demarcating the importance of taking pride in a humanistic approach to medicine. New in the second year, however, were negative themes encompassing *Anger/Frustration* with the system around the trainee. Anger was evidently based on lack of representation ("no place that looks like me") and assumed "sacrifices of ethics" to function within the medical framework seen most prominently in the reflection on Becoming a Doctor.

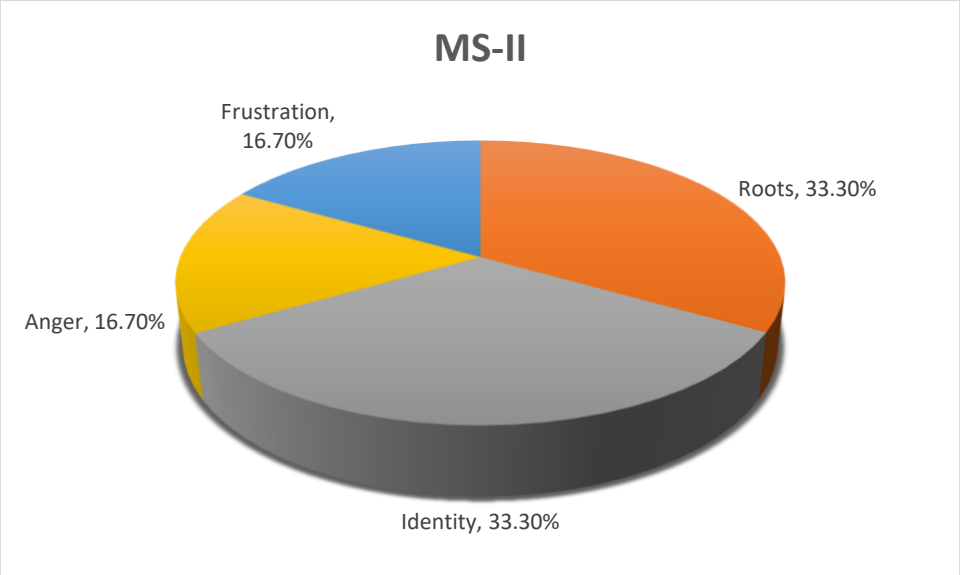

Figure 2. Themes in second year

Medical Student – Third Year (Clinical)

The third year reflections clustered around four main themes as well, albeit the themes were more multi-faceted and broad. Again we saw the prominent theme of *roots* play a key role, this time focused on the importance of role models, the dearth of Hispanic leaders in medicine, death, and the use of Spanish language. Death and tragedy play a role in this theme the Change in Self piece reflects the struggle of being away from a perceived cultural home-base. We also noted the theme of *duality* pop up again. This time duality encompassed both

the job (learning moments / tragedies for families; surgical gloves / winter gloves), life (palliative care training / death of grandparent), and ethics (procedures / patient experiences).

The underlying themes of *compassion* and *empathy* were more explicit in these writings as were the patient descriptions around them. These themes consistently stood in contrast to a growing sense of fear regarding the responsibility of the profession ("compassion kept fear at bay") seen best in the Becoming a Doctor reflection. Compassion also extended to a new-found understanding of death with dignity and seemed to continue to form the bedrock of patient experience for the trainee.

Lastly, a new theme emerged clustered around so many different patient experiences written about in the third year. We coined this theme: *Patient Connections*. Wide-ranging and complex, this theme represented the emotionally-laden language used in patient reflections (love, hope, purpose) and how these interactions impacted the trainee ("re-framing" a conception of death, the mortality of family, "listening" to patients, "patient centered care" as motivator, "learning from patients") and a *shared humanity*.

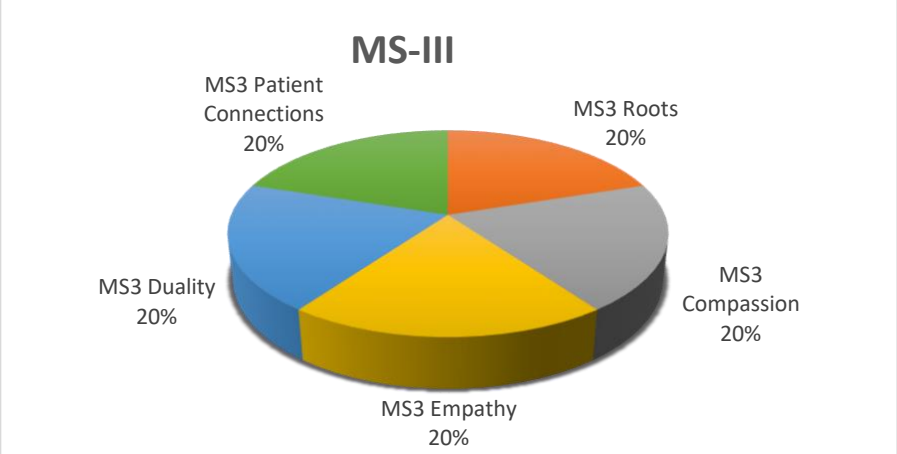

Figure 3. Themes in third year

Medical Student – Fourth Year (clinical)

The truncated fourth year (with pieces extending to roughly over halfway through the year) yielded three main themes. Firstly, the theme of *roots* was again made manifest. Through the continued use of Spanish language and callbacks to his native country, the trainee relied again on past ethno-cultural experiences to frame many new exposures. A penchant for working with Hispanic populations was seen in his personal statement (itself an amalgam of past reflections and new insights) and in heartbreaking clarity in his love letter to a dying mother. Akin to past years, the emotional themes of *compassion*/*love* played prominent roles yet again – this time centered around professional formation (Internal Medicine), foundational moral pillars (Significant Experience), and professional competencies (Memorable patient reflection).

A new theme arose in the final year of training demonstrated through more authoritative diction, active voice, and declarative statements: *confidence*. Evident throughout all pieces, this confidence represented a self-awareness present in multiple facets of the

trainee's life. From professional confidence in Internal Medicine, to emotional confidence and pain in regards to his mother, personal confidence in his own passions (abstract expressionism) and ultimately confidence in his own person (Change in Self reflection).

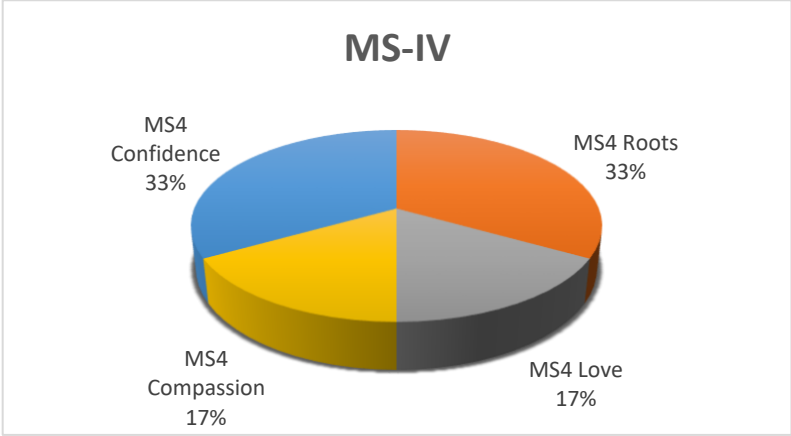

Figure 4. Themes in fourth year

Themes across prompts

Lastly, themes were also analyzed for each specific prompt through four years as a means of tracking longitudinal formation. The results of these themes – which sometimes aligned and sometimes did not with each academic year – are tabulated in Table 1.

	Roots	Pt. Connections	Emotions	Disbelief/Self-Doubt	Compassion	Duality	Belonging	Confidence
Becoming a doctor	**X**	**X**	**X**	**X**	**X**			
Memorable experience	**X**	**X**	**X**		**X**			
Change I Self	**X**			**X**	**X**	**X**		**X**
Change II Relationships			**X**		**X**	**X**		**X**
Professional & Personal Balance			**X**			**X**		
Memorable patient	**X**			**X**	**X**		**X**	**X**

Table 1. Themes relative to specific prompts. Prompts in the column on the left and themes in the top row. Each "X" represents the presence of that specific theme in the prompt **over four years**.

Discussion

Over the course of four years, reflective writing was used as the vehicle through which to glimpse professional identity formation in one minority trainee at a medical school in an academic medical center. Themes were analyzed to glean information about what type of educational experiences, external factors, existing schema, individuals, and institutions served to impact PIF in one trainee. Moreover, the same six prompts used every year effectively allowed a standard benchmark for comparing themes across both time and academic year (seen in Table 1 for example).

Tackling firstly the question of PIF, undoubtedly, the dual nature of "professionalism" that was elucidated by Forouzadeh has certainly borne fruit in this project. Tracking themes over the four years for plurality yielded three main threads: the concept of *roots*, the importance of *emotion*, and prevailing thoughts of *disbelief* and *self-doubt* (Table 1). Firstly, it is significant to even see a plurality of anything at all, given the dynamic and personalized nature of reflective writing to begin with. This shows us that there are mechanisms of standardizing traditionally subjective evaluations (themes) longitudinally in graduate level trainees if they are given the same prompts per interval of time change. This was one of the primary goals of the project was to establish a protocol for longitudinal reflection, and the ability to look at prominent themes at the end of four years cluster around specific ideas lends evidence to the reproducibility of a project such as this one.

Perhaps the clearest and most consistent theme – seen both in Figures 1 to 4 and in Table 1 – is the concept of *roots*. The trainee consistently related to past ethnic, cultural, socio-political, and personal past experience to frame, evaluate, and reflect on current behavior. Using reflective pieces as evidence allowed us to understand that *specific cultural identity and experience* played intrinsic roles in the development of a professional identity. For the trainee each year consisted of call-backs to events, people, and relationships as means of understanding himself and his career. For a minority trainee, certainly many of these roots delved into Latinx and Colombian culture, environment, and language. The impact of this theme cannot be understated. As mentioned before, "professionalism" has been codified into established norms of behavior that focus on achieving competencies. What this project shows, however, is that a trainee's relationship with her or his cultural past is inextricably linked to how they frame their professional identity. It is clear that both at the end of each academic year this trainee's roots were inseparable from how he viewed himself in medicine – a finding that speaks to the duality of medical professionalism. One needs a combination of both professional competencies and personal identity; this project helps fill the gap Volpe et al. so ably described of how little writing there is on minority trainee's personal identities in medicine.

Prevalent in the writing was a proclivity for letting emotions take the center-stage of reflection, be that compassion or frustration. Many pieces spoke to the value of compassion (83% across all 4 years – Table 1) for both patient interaction and career decisions. Over and over compassionate patient-care, patient-centered care, empathy, and love made prominent appearances highlighting an honest and stubborn approach to emotion. Certainly the theme of *emotions* is the most subjective and least generalizable, but it does highlight the trouble with one standard definition of "professionalism." This generation's love for patient-centered care developed out of an older, harsher, *professional*, "doctor-centered care." Frustration was also

prominent in these writings, sometimes aimed at systems level issues or behavior/practice differences. The frustration highlights a clash between an inner personal identity and the perceived medical establishment. Emotions were the lens for many key reflections.

Lastly, it is worth attempting to generalize the main themes from this work into already established schemas of professional identity formation. Cruess et al. suggested a framework for PIF encompassing interconnected ideals between three main pillars: existing personal identities, socialization, and personal/professional identities.[xiii] Key to Cruess' analysis was the point that these three domains are dynamic and build upon each other, specially so when the individual enters medical school. It is clear that the predominance of *roots* as a theme in this analysis certainly fit within the "existing personal identities" section, predominantly as a representation of the sub-category described as "family & friends." This being said, it must be highlighted that an understanding of an individual's socio-cultural identity (as was done in this project) is not equivalent to an understanding of their family structure. Therefore, it is worthwhile to highlight that this work further expands on Cruess' et al. framework and argues for continued research into the conflict between individual identity and PIF.

The project has a few limitations. Primarily, the fact that the reflections are only following one trainee working with data that is already quite subjective. While the project did benefit from one objective reader – DH (project advisor) – compared to trainee assessment, the proper scaling would have to include professional literature experts to best determine themes in writing with standardized protocols. Furthermore, the project would absolutely benefit from more reflections with more trainees in order to increase sample size and reproducibility. Pieces can also be collected longitudinally, with successive trainees adding their pieces to the analysis. Undoubtedly, however, it is truly a key limitation of the current project to only have data from one trainee and not have codified a standard means of evaluating the definition of themes themselves. For example, future research would need to incorporate specific schemas for themes, carefully delineating what aspects of the reflective writing work served to create the theme of *roots*. This would allow for further generisability and standardization across trainees and institutions.

Conclusion

We sought to document the longitudinal professional identity formation of one medical school trainee through standardized written reflections over the course of four years. After thematic analysis, the concepts of *roots*, *emotions*, and *disbelief/self-doubt* were evident across all years of training, highlighting the critical nature of personal cultural identity in developing a professional medical character. Although limited by a small sample size and restricted generisability, the project does propose a means of tracking longitudinal reflective themes in a small cohort of students and the importance of personal ethno-cultural values in framing minority PIF. Certainly more work is needed in this small but growing field.

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