

Teachers' Professional Knowledge and their Professional Identity If they Relate or not?

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ABSTRACT

There exist some evidence that research on knowledge of teachers has led to new insights and that studies on teachers' professional identity is of increasing interest for research in the field of education. In reality, there has been no attempt documented in opening the black box of teachers' professional identity and professional knowledge to see how they actually internally related. The current paper fills this gap and bases its reasoning of teachers' professional knowledge presumably seen as the reflection of their professional identity on 3 central parts of teachers' professional knowledge (conceptions, relations, conditions) and 3 aspect of their professional identity (subject matter experts, pedagogical experts and didactic experts). Significantly potential implication can be drawn for the identification of instructor's trends of teaching through having a sufficient and comprehensive understanding about what they believe about them as the instructors. Also to be considered is its potential contribution to the advancement of educational studies regarding proposing the new pedagogical and didactical intervention and adapting the currently-employed measures for quality assurance to approach the teaching development.

keywords: professional identity; conceptions of teaching; subject matter experts; pedagogical experts; didactic experts

1. Introduction

Untouching an academic's deeply-ingrained educational beliefs responsible for his adherence to instructional outmoded forms in classroom practice in particular or his resistance to reform-oriented execution in general can be presumably seen as the primary reason for his return to the traditional instructional routines, under which they gain strong feeling of certainty and security. Indeed, numerous theoretical and empirical studies reveal the governing of an academic's beliefs to his implementation of didactic and pedagogical approach, strategies and techniques (Biggs & Moore, 1993; Chapman, Ramondt, & Smiley, 2005; Chapple, 1999; Entwistle, McCune, & Hounsell, 2002; Wong et al., 2006; Zanting et al., 2001) and the interrelated relationship between educational belief and instructional practice (Canbay & Beceren, 2012; Feixas & Euler, 2013, Chapman, Ramondt, & Smiley, 2005). As an academic's conceptions of teaching have direct influence on his instructional practice and intentions (Kember & Kwan, 2000; Norton, Richardson, Hartley, Newstead, & Mayes, 2005), scholars in the field of education, instead of encouraging the opinionated impose of a constructivism-oriented instructional model on a academic's shoulders, advocated for developing his

conceptual understanding of the nature of teaching and learning as the most effective way of approaching his teaching development (Akerlind 2003, 2004; Gibbs 1995; Kember 1997; Martin and Ramsden 1992; Prosser and Trigwell 1997; Trigwell and Prosser 1996; Wood 2000). It should not be inferred that working with teaching conception becomes the standard of teaching effectiveness, but it should be the centrality of attention can be said for certainty that without a sufficient understanding about teachers' conception of teaching, what drive them to adapt traditional instructional method cannot be detected, examined and eliminated sufficiently and accurately. A theoretical framework was used in this current study to operationalize what teachers' professional identity should be taken to mean. It is hypothesized in this current study that teachers' professional knowledge is the very reflection of their professional identity (PI).

2. Identity and PI

Literature document the vagueness of the concept of identity which is often described regarding to the issue of the *self* and one's *self-concept* (see also Mead, 1934). Basing on such a perspective, the former is viewed to be constructed and prolonged either within negotiations of realistic and situations in society or through task, duties and roles in society which are supposed to be internalized by a person (Wah Tan, 1997). Beijaard (1995) defines identity as *who or what someone is*, the variety of meanings individual can attach to himself, or the meanings attributed by other people. In today literature, this kind of term is viewed as a constantly-constructing process inclusive of the interpretation and reinterpretation of what one going through as he lives through those experiences (Kerby, 1991). An individual's identity is constantly formed during the process of his self-evaluation and reformed as such a person develops over time and through his interactive events with other people surrounding (Cooper & Olson, 1996). As an aspect of individual's self-image is both self-evaluation and identity. Kompf, Bond & Boak (1996) state that what the teacher believes in teaching phenomenon, how they perform instructional employment, the underlying reason leading them to the career of teaching and what role they take in when being in their teaching setting are determined by their identity. According to Ibarra (1999), basing on beliefs and values about teaching and learning and the two other components, every teacher establishes individual perception about his own professional self-concept or identity which govern his classroom behavior (Tusin, 1999). In line with this, Varghese, Morgan, Johnston & Johnson (2005) and Barrett (2008) considers teachers' professional identity as a dynamic construct are in relation to their classroom behaviors (Abednia, 2012), their effectiveness of teaching (Ashforth & Tomiuk, 2000), and their sense of well-being. As both teacher professional practical knowledge and professional identity are constructed with certain kinds of beliefs and value about teaching and learning, it may be deducted that there might be particular relations amongst them. To support this assumption, Epstein (1990) states that intertwined with one's belief is his identity, self-concept, and self-esteem. To make the assumed statement become more scientifically convincing, Grier and Johnston (2009) acknowledge that "teacher identity is based upon the core beliefs one has about teaching" (p. 54). Looking from another lens, Cohen (2008) argues that central of teachers' identities lay in what they believe, value and implement their teaching that govern, inform and influence the level of their devotion, participation and behaviors inside and outside the classroom. The term PI (Professional Identity) was described by (Fejes and Köpsén, 2014) as a group of comprehension and notion regarding how one consider himself or herself as the teacher. In the same vein, Li and Qiu, (2016) state that PI indicates the way each teacher picturize himself with the acknowledgment that he is in the group of professional educators. Van Veen and Slegers (2009) presented a more extensive image of factors regarding the educators' PI, specifying career incentives, central tasks, self-respect ideas about education, the topic of education, and education as work. Recently, to produce a more specific

description (Ruohotie-Lyhty and Moate, 2016) refers one's PI to his professional favorites, objectives, values, and ideas. Rather than giving the direct definition of PI, (Tao and Gao, 2017) considered what shapes an instructor's PT which is referred to professional commitment. To those researchers, professional commitment is the term manifested as the integration of what an instructor finds favorites, places central values, desires, identifications, and viewpoint in his career with the certain degree of significance in their functions. In other source of document, identity is depicted as the experience one subjectively goes through in his mentality, rather than several notion of objective facts regarding to this "real self" (Vignoles et al., 2006). Inspired by the work of Bromme (1991), Beijaard structure the teachers' PI in terms of the teacher as an expert of a discipline, of pedagogy, and as of didactic. Beijaard (1995) classified this identity into the foundation of three separate categories, namely, the subject a teacher being in charge of, the relationship with his students, and the position or role such an academic takes in.

2.1. The Teacher as Expert of Subject Matter

It is traditionally assumed that subject matter knowledge or disciplinary knowledge or knowledge of expertise is seen as the relevant and indispensable aspect of a professional knowledge base of a teacher. The role and necessity of such a knowledge regarding to the subject issue, until some decades ago, is what a good teacher is expected to possess is widely-accepted (Hoyle & John, 1995). Scholar in the field of education recently acknowledge that such conception of teacher knowledge about the subject matter is becoming insufficient for the accountability of the complexity of teaching. Rather than that, it requires new conceptions that teacher is expected to take in the role of a classroom manager and facilitator of learning. In so doing, teaching is eased to be perceived as the act of transmitting the knowledge from the know to the unknown. Associating with that is the result that knowledge of expertise or subject matter knowledge is on the way of being ignored and gradually rejected in studies centered on the knowledge of the teacher. It is their finding that unless the teacher possesses such kind of knowledge, he can make some shift in teaching program, improve the quality of teaching and learning assignment and tasks, offering explanation of subject matter issues with the differences in the level of quantitative aspects, and even having students' understandings and misconceptions diagnosed in precise and adequate manner. The requirement for the teachers to widen and deepen their comprehensive grasp of their teaching subject area is widely accepted. To put it simply, teacher understanding of their teaching subject matter is characterized by their understanding of the relationship and connection amongst elements or components of knowledge (Calderhead, 1996).

2.2. The Teacher as an Expert of Pedagogy

Reducing teaching to a technical or instrumental employment contributing to the effectiveness of students learning leading to their developmental gains seems to be discouraging. The side of didactic of the profession of instruction is of high requirement to have close relation to the side of pedagogy characterized by the features of morality and ethicality. How the students control their action during the conversation with other people, what comes to their minds or which issue of privacy they are encountering at that time are the illustration of teacher pedagogic concern, besides disciplinary concern. Such pedagogical aspects are well-known in teachers' personal and professional role conception (Bewizard, 1995). It is the assumption that when dealing with conception of teaching, little attention was paid to the side of pedagogy, while in realistically instructional practice, academics are constantly support students who are being in trouble with such pedagogical matters (Fenstermacher, 1992; Oser, 1992). The dimensions related to the morality and ethicality more or less are existing and being present in

field of instruction and teaching than in many domains of occupation (cf. Fenstermacher, 1994). The academic used to growingly encounter the moral, social, and emotional dilemmas. Specifically, they wonder about how to educate students for uncertainty/ with multicultural and different backgrounds of social status? It is their confusion about how to deal with pressure and negative impact from being in a society by which the control has been socially replaced intensive processes of individualization? It is their wondering of the judging and discussing method of other sources of information and technologies surrounding the student life? It is their main concern of how to help the teacher get out of trouble as the result of the problem of divorce, sexual abuse to name but a few. Besides of these dilemmas, it is the advice that the academic is expected to raise their discernment on many norms and values when they are in the interaction and relationship with their learners. It is generally accepted that the norms and values are the very relevant ingredient of professional thinking and behavior of a teacher on which they have the reflection and explication (see also Goodlad, Soder & Sirotnik, 1990). Literature documents increasing evidence that the side of pedagogy in one's profession seems to be more crucial than that of didactics and disciplinary (Bewizard & De Vries, 1997) and the former affect the quality and the outcome of students' learning processes in positive manner (Oser, 1992).

2.3. The Teacher as a Didactical Expert

Joyce & Weil (1980) prescribe a model of teaching which maintains its strong influence on the education of teachers. To be more specific, how to make the teaching planning, how to implement and execute and how to evaluate or assess the lessons are the main features described in these suggested models. Through such models, what the teacher is expected to mainly concern is explicitly learning to take into account the accordant characteristic or aspects of instructing. There is the assumption behind the debating for such models is its lack of foundation and support for the teacher to deal with the complexity of teaching career in reality (Beijaard, 1990; Doyle, 1990a). reacting to this criticism is emergence of a more constructivist conception of teaching and learning having its stress placed on the reflection and experiences-based learning (Zeichner, 1983). Assisting (student) teachers in improving and reaching the consistency and sufficiency in the structure of knowledge that systematic and progressive direction and guidance relating to their instructional actions in practice is the potential benefits of the constructivism- oriented learning model (e.g., Bennett & CarreH, 1993; McIntyre et al., 1996).

Quantitative conceptions of teaching associating to the traditional learning models are growing being replaced by more qualitative ones associating to the constructivist learning model with greater stress laying on students' view point of the disciplinary matter rather than respondents' worldview or texts' concepts, assisting learners into further developing their already-held conception and changing those (know differently rather than know more) are the expected learning outcome. Associating with such a new teaching agenda, a teacher brings significant potential contribution to students learning by functioning as the agent or a facilitator and less of a transmitter of knowledge. This entails the equal change toward the process-oriented instruction (learning is then seen as the process not the product) having the focal goal om the leaners' information-knowledge transmission process and utilization (e.g., Vermunt, 1995). Such a shift in the way the teacher conceives or perceive about the teaching phenomenon brings a far-reaching consequence for the way the teacher functions and acts in the new role in general, and for his professional expertise and skills in particular. It is the main reasonability and duties as triggering students' mental participation, initiating their discussion, guiding their knowledge construction, and governing or impacting what students think or perceive, and gradually enabling them to have full control of their learning process. Particularly it is of high expectation

that such a shift in teacher's instructional task another has influence on the perceptions of his professional identity.

3. Professional Knowledge

An academic's 'professional knowledge' is presumable foundation of his instructional practice (Borko & Putman 1995). Handal & Lauvas (1987) claim that each and every instructor holds a theoretical foundation regarding to teaching which is presumably to be the most powerful factor determining his instructional implementation. Due to the diversity and variation of 'professional knowledge' with a plethora of strands which then are not have integration in any particular manner (Clandinin & Connelly 1995). The most accordant of teachers' professional knowledge is their professional knowledge base (Shulman & Sykes 1986) with the specific focus on reflecting their perception of what...(Braugner & Lewis 1998, Shanahan & Neuman 1997). As the knowledge of how to execute the teaching task is intricate and intuitive, giving the reasonable and acceptable explanation seems challenging (Connell 1985). In the effort of figuring out the way to depict the teachers' professional knowledge, Clandinin and Connelly (1995) describes it metaphorically as 'professional knowledge landscape'. To their viewpoint, the expansion of the nature of such a a landscape brings sufficient picture of the notion that professional knowledge of a teacher is inclusive of a wide diversity of elements and governed or informed by a large number of people, places and phenomenon (Clandinin & Connelly 1995, pp.4-5). In their study, the respondents were under the identification within this landscape of professional knowledge, when mostly using their time travelling back and forth between two very dissimilar destinations: the classroom setting and professional, communal position. The landscape of teachers' professional knowledge brings an illustration that there exist multi-facets of teachers' professionalism, importantly incorporating the responsibility, task or role and knowledge of an academic as the practitioner of teaching and as an active occupation lying the cutting edge of instructional knowledge and studies. Shulman (1986) lists out the seven integrated domains of knowledge a teacher of all level of educational system are expected to pertain in other to become capable of. They go as follows: the knowledge of the learners and how to study; the general knowledge of pedagogy; the content knowledge of the discipline being in charge of; the knowledge about other disciplines or subjects; the pedagogical content knowledge; knowledge about the syllabus and knowledge of instructional agendas. It can be said for certainty that such field of are indispensable, important, necessary and valuable in stressing which areas of knowledge the teacher is required to obtain for their teaching performance. Because of that, teachers can be seen as 'resourceful', and competent teachers are expected to be essentially eclectic and pragmatic, possessing the ability to glean the best from theorial background and their practical performance and design of which need to be applied as necessary (Bigge & Shermis 1999). Part of a professional knowledge of the teacher can be promoted for development when the teachers make effort into employing or adopting the theories of learning model and accomplishing 'an eclectic compromise with the establishment basing on their selection of aspects regarding theories opposite together and taking position somewhere among these theories for the purpose of their formation of a mosaic pattern (Bigge & Shermis 1999). McDonough and McDonough's (1997) work revealed that for those or the teachers, when making an attempt into picturizing and visualizing what they were doing eventually end up with the realization that their teaching lesson planning was constructed on multiple layers and layers in respect to their teaching assumptions, teaching experiences and teaching knowledge. it is the requirement that such a teacher dives deeper down if they desire to reach the decrement or comprehension of the underlying reason why they "made the decisions they do" (p.8). Corresponding with the time of being meta-cognitive about the practice of instruction, Bigge and Shermis (1999) manifest their recognition that it is

of paramount to grasp the sufficient compression of individually-held philosophy in education. It is their statement and suggestion that there seems impossible to make the teaching enhanced and learning improved unless the instructor is not meta-cognitive about their 'teaching philosophy'. It is in stating that it the inter-dependence between the manner from which the teacher design, develop and employ their techniques of instruction and the way he defines the teaching and learning process. In the same vein, it is Good and Brophy's argument (1997) that becoming an active decision makers and being able of making their own personal styles improved, instructor needs to possess the base of knowledge that becomes strongly then supportive for their teaching practice, including knowledge about the subject matter, pedagogical knowledge in term of instructional strategies and also knowledge about how students can develop and get motivated through their learning process (Good & Brophy 1997 p.20).

4. Professional Knowledge and PI

Teachers' educational actions in practice are guided by their own conceptual frameworks, a result of their personally interpretative process of educational theories (Eraut, 1994). Supporting to this point, as Borko & Putman (1995) state, teachers' practice will be constructed on their 'professional knowledge' established from individual understanding and experience and other 5 sources, namely, their own experience gained from formal education, research reading, employment of processes characterized by thinking features and processes of observation, reflection and analysis of their own and the teaching of their counterparts or colleagues (cited by Ohi, 2007). To dive deeper a teacher's professional knowledge, its central part, according to Gonçalves & Alves (2013), is her very perspectives on teaching and learning (conceptions, relations, conditions). Gonçalves & Alves investigated teachers construction of professional knowledge by exploring their beliefs in knowledge categories needed for teaching, conditions, relations and conceptions of teaching and learning. Such an investigation of teacher professional knowledge is of use contributing to understanding about "differences in what they value when referring to teaching and learning" (p. 66). Gonçalves & Alves (2013) developed a questionnaire to that comprised questions concerning teacher professional knowledge to investigate teachers' beliefs in the knowledge needed to teach, and the statistical results of the opened question "for teaching the teacher need to have knowledge about..." rank as follow: Subject content (92.6%); knowledge about pedagogical/didactics (88.9%), human relation (14.8%) and knowledge about students (24.1%).

The underlying message in the response of the largest proportion of participants who voted for knowledge of the subject content "stress the main goal of teaching – learning" (Gonçalves and Alves, 2013, p. 62). When prioritizing to place knowledge of the subject content on the top, these teachers are more oriented to subject matter than reality as they believe "teaching as merely imparting or transmitting a body of knowledge" and attach to themselves the proper professional role primarily in terms of imparting a body of knowledge on the basis of subject expertise rather than in terms of establishing supportive relationships with their students, planning or organisational features" (p. 62). Basing on the way Beijaard defined the term identity a mentioned above, the variation of meaning in the role people can assigned to themselves, or the meanings attributed by others, those who believe teaching as merely transmitting a body of knowledge have a tendency to identify the kind of teachers who they currently are as the knowledge transmitter. They usually at least recognize that learners are the receivers and do need to catch what is thrown by teacher (Samuelowicz & Bain, 1992).

The high consensus of the majority of participants (92.6%) in seeing expertise in subject matter as the most necessary knowledge teachers have to possess for teaching in Gonçalves & Alves's

study supported Kember & Gow's findings (1994), which reveal that without knowledge of subject content, teachers cannot become a lecturer as they "cannot just go to the lecture and talk nonsense" (p. 65). In line with this, experienced teachers from Beijaard et al.'s study (2000) utter out that "without expertise in subject matter, one cannot be a teacher" (p.758) or the act of teaching will not be taken place. Inspired by Broome (1991), Beijaard et al. labeled and segmented those with the above-cited utterance into the group of subject matter experts. In line with this, Hoyle & John (1995) claim that disciplinary knowledge was not seen as the sufficient condition for an individual working as an effective instructional agent and is a related aspect of the so-called base of professional knowledge. It is generally acknowledged that it is required the teachers to pertain a comprehensive, intensive and extensive understanding about the disciplinary domain (Calderhead, 1996).

Gonçalves & Alves made attempt into capturing participants' professional knowledge by asking different questions in relation to teaching and learning, regarding the (a) *what is needed for teaching to translate into learning*, (b) *elements influencing students' learning*. the findings from their investigation revealed that 40% of participants selected strategies and materials and 84.1% participants opted for teaching strategies as the key determinant for students' learning goals achievement. Saljo (1979) uses of the phenomenographic method to study adults learners' conception of learning and identify five qualitatively different learning goals, with learning being seen as: an increase of descriptive knowledge in quantitative manner; storing factual information in mind; which can be retrieved and applied when required and being necessary. Empirical evidence in from Prosser et al.'s paper (1994) advocate the justification that the way higher education academics conceive about the meaning of teaching and the role of the teacher and students are closely paralleled that of learners from Saljo's discovery. Specifically, Prosser et al. conducted a semi-structured interview with six respondents being in charge of teaching chemistry and physics having the focal goal of question on learning about respondent meaning of teaching and learning, which re reflected by the direct question "What do you mean by teaching/ learning in this subject?". This topic reveals the data of the purposes of teaching/ learning this subject. The results seem to be reasonable consistent with that of Saljo (1979). Specifically, teachers discussed learning in term of enabling students to make use of what they have learnt for satisfying their external demands. Such a discussion is inclusive of characteristic similar to Saljo's (1979) categories 2 and 3. Similarly, their perception about learning regarding enabling students to develop their existing conceptual framework for meeting their internal demands contain features presumably to be similar to his categories 4 and 5. In the field of educational teaching, a growing body of literature claim that what the teacher believe about teaching phenomenon have strong interrelated relation to their instructional practice that, in turn, impact on the quality of students learning (Biggs and Moore, 1993, Chapman, Ramondt & Smiley, 2005, Chapple 1999, Entwistle, McCune& Hounsell, 2002).

As Lasky (2005) defines professional identity as how teachers define and see their roles in such an occupation, and as it is Leslie S. Keile's (2018) argument that one's identity is the reflection of the ways that individual thinks about himself and what he takes in when teaching, investigating academics' beliefs in relation and condition of teaching or understanding their central professional knowledge help understand the insightful thoughts of their professional classroom roles and then precisely predict the orientation in their aspect of professional identity. Therefore, when conceptualizing the purposes of learning amongst categories 2 or 3 identified by Saljo, teachers have a tendency to employ teacher-centered teaching strategies and do central roles including lecturing or making questions to assist students in remembering knowledge as they assign to themselves the proper professional role primarily regarding transferring textbook's knowledge to the learners. On the contrary, those whose conception of

learning is matched with Saljo's categories 4 and 5 usually base their teaching on knowledge and skills regarding how to plane teaching session and lesson content, how to implement instruction activities and how to make the process of teaching and learning evaluated. Esmail (2016) place such teachers into the professional identity categories of didactical experts who identify the role as facilitating learning and teaching process. Beijaard et al' findings also reveals that teachers who perceive themselves mainly as experts of didactical approach or teaching methods are inclined to clarify their perception by referring to learning about how to offer favorable conditions facilitating or supporting a student's learning and how to make such a learning occurs through the behavior of planning the lesson as key note in their work. This can be well-depicted with the quoted interview: *...important to teach them[student] to learn, to...consider what they... learn,...aware of what ...in their minds...one must possess didactical knowledge and skills.*

Still in Gonçalves & Alves' study, the majority of the participants (61.4%) selected pedagogical relationship as the key determinant of student learning, and this result is consistent with what Oser's reasoning (1992) in his finding which reveals that pedagogical side of their profession increase the quality of learning processes of the students. Pedagogical relationship is particularly when the instructor is devoted to deal with what leaners encountering in respect to emotional, social, or behavioral issues and regards such pedagogical support as one of the most important tasks of any educational work (Joachim Broecher et al., 2019). The simple interpretation in the meaning of pedagogical relationship is teacher-student in term of emotion, society and behavior, which becomes one of the three indispensable patterns portraying the teachers' professional identity in Sikes et al.'s paper (1991). Essential for this relationship with pupils is that teachers demonstrate their personal interest in pupils and respect them. Respondents relate the didactical side of the teaching profession to a pedagogical side with features of morality and ethicality or attach much importance on value of teacher-students relation are labeled pedagogical experts by Broome (1991), Beijaard et al. (2000) and Esmail (2016). Literatures documented that the academics are inclined of conceiving tasks related to pedagogy more curial and valuable than those regarding the aspects of didactic and subject matter (Beijaard & De Vries, 1997).

The last aspect of the central part of teachers' professional knowledge is their beliefs in the meaning of teaching and learning or their teaching and learning conceptions assumed to be belief-driven (Davis 2004, Kwok & Robert (2004). According to Chan and Elliot (0024), teaching conception is referred to what the teacher believes about their instructional preferred ways of teaching and learning dealing with the aspects related to the meaning of to teach, to learn and to behave (, 2004). Literature documents the two main sharply contrasting trends of teaching Traditionalist conception with categories of delivering textbook's information, transmitting the teacher's knowledge and facilitating learning (Samuelowicz & Bain, 1992, Kember, 1997 in reviewing 13 articles), interacting between the teacher and the student (Kember, 1997) received its foundations from Piaget's theories. These theorists emphasize the importance of drilling and repetition in remembering lesson content. Those adapting the traditionalist, quantitative conceptions hold instruction view and utilize simple or less sophisticated teaching method as this conception acknowledge the teacher as the know. On the other hand, constructivist conception reflects the trend of teaching in which through classroom interaction the teacher can facilitate the students to construct their personalized knowledge and encourage their knowledge creation (Samuelowicz & Bain, 2001). It points out the importance of active participation, experience in learning and interaction of a child with his/her peers or with adults in the construction of knowledge (Miller, 1997). Those conceptualize teaching according to traditionalist believe themselves as a source of knowledge, authority or knowledge transmitter while those whose conception of teaching and learning are

constructivist-based see themselves as a facilitator. Supporting to this, Mansour. N (2009) has divided teachers' beliefs into 2 categories: teacher as an authority and a facilitator of learning responsible for the learners' process of learning. Those who see themselves as an authority might share the same belief with 92.6% of teachers in Gonçalves and Alves's study in conceptualizing teaching as transmitting knowledge and take proper professional role primarily in terms of imparting a body of knowledge.

In recent thoughts about teaching, teaching under instruction view is increasingly being replaced by that under construction view with greater emphasis on learning and less on teaching. That is because the old models of teaching (e.g., Joyce & Weil, 1980) do insufficient justice to the reality and complexity of teaching in practice (Beijaard, 1990; Doyle, 1990a). Due to being impacted by the developments or progression of society and the findings from studies in the field of educational psychology, the teacher is gradually getting familiar with and supposed to implement their constructivist-based instruction. What can be clearly inferred is the shift with the focus exclusively on the teachers and their teachings to the recognition of the importance of students' learning discovery and their mental participation in their own processes of information-to knowledge transformational process (e.g., Vermunt, 1995). Specifically, the shift has far-reaching consequences for the teacher's knowledge and skills in particular. To put it simply, it is now the task and the role the teacher is expected to take in is triggering students' thinking about the lesson content and encouraging them to make fully use of their previously-gained knowledge and experiences as the foundation to build the relational knowledge, rather than forcing words or ideas and meaning into their throat and mind (Kember & Gow, 1994). Those who take the conception of teaching as constructivist view have a tendency to employ learning-oriented methodology of teaching as principles underpinning these practices rooted in the meaning of developing students' critical thinking ability and promote collaborative skills amongst students (Chan and Elliot, 2004; Cheng, Chan, Tang, and Cheng, 2009). Corresponding with the time when the teacher makes a shift in conceiving the role and the meaning of teaching and learning is the entailing influences on perceptions of their own professional identity (Beijaard et al., 2001), easing to see themselves as an expert of discipline knowledge to the one with the concern and teaching disposition more didactic.

5. Discussion and Conclusion

It can be argued that PI is not something an academic possess but something they refer to so that they can make sense of themselves as the teacher. Theories of professional knowledge for the occurrence of teaching include knowledge about subject matter to about pedagogy and dictation. To widen the knowledge and increase the understanding regarding one's actual instructional behavior and execution in his own teaching context, learning about his identity is the key (Varghese, Morgan, Johnston, & Johnson, 2005). Also, capturing the one's self-image that he self-picturized in his profession helps visualize his PI (Beijaard, Meijer & Verloop, 2004). Considering the factor leading to the formation of teachers' PI brings significantly potential benefits in the process of addressing task related to identity-based instructional intervention. While Kompf, Bond & Boak (1996) figured out factors of schooling, training, work environment, years of work experience, etc., Beijaard et al., (2000) discover teachers' teaching context and experience and their biography are highly affecting components of their PI. In line with this, Reynolds (1996) pointed out that workplace had a great impact on teachers' identity and suggested that environment of working can be very persuasive, demanding, and often restrictive. Beauchamp and Thomas (2013) highlight the role of teachers' characteristics, requirements of work and experience, occupation-specific information and workforce characteristics in contributing to teachers' identity formation. The relation between life experiences and process of identity formation is pointed out by Tsui (2007). Dillabough (1999)

challenged the relation between individual factors, namely, gender and power relationships and the concepts of teachers' PI and demonstrated that gender and history of male dominance is a core element in the formation of professional identity. Likewise, Koster, Korthagen and Schrijnemakers (1995) concluded that teachers' identity was influenced by their previously certain teachers in their own past. The relationship between professional identity and social structure was also investigated in construction of identity (Reynolds, 1996). Urzúa and Va'squez (2008) believe that teachers' professional identity manifests itself through their social actions. The experiences shape the identities of teachers (Proweller and Mitchener 2004) and the latter also impacts back on the former as teachers' identities generates the modulation of their choices of pedagogy and practice of instructing. Thus, teachers are in the constant process of interpreting and reinterpreting their professional identities according to their experiences (Beauchamp and Thomas, 2009). As argued above, it is of importance to placing teachers' PI at the central of attention as it appears to be the core of their instructional practice and affect the degree of their devotion and commitment as professionals (Dillabough, 1999; Day, Elliot, & Kington, 2005; Burn, 2007), which entails the equal impact on the students' learning approach and their academic achievement (Caihong, 2011). The carefully-conducted learning about the relationship between the PI and professional knowledge allows the approaches of more interrelation which then support the instructor to deal with changes in learning and teaching, generating innovation in teaching setting in creative and constructivist-based manner (Beijaard, Verloop & Vermunt, 2000). Hamachek (1999) says that "the more that teachers know about themselves, the more their personal decisions are apt to be about how to pave the way for better teaching" (p. 209). Teacher identity is based upon what they the core belief about teaching Grier and Johnston (2009). To sufficiently investigate one' construction of professional knowledge requires the investigation on their belief in relation, conception and conditions of teaching and learning which are the central part of teachers' professional knowledge. Therefore, the current paper being reported confirm the relation between teachers' professional knowledge and their professional identity. Having knowledge about teachers' professional knowledge is of use understanding the aspect of their professional identity, say subject matter experts, pedagogical experts or didactic experts or they kind of teacher they currently are, which is in line with what Conway (2001) called the function of anticipatory reflection.

The striking commonality in learning about teachers' professional identity and their professional knowledge is to start the process by learning about teachers' belief in teaching. Learning how the instructors think or conceive about teaching and education is of importance. To be professionally developed teachers, it needs to take the presence of a series of the outer and inner state of affairs, while their PI should be at the center of attention (Hanna et al., 2020). Indeed, taking the entity of a variety of outer and inner situations is needed for educators' success and PD while focusing on educators' PI entity (Sharma and Pandher, 2018). Educators' PI is an important field of research and a significant subject in the area of education, mainly for the past three decades that indicates a viewpoint toward a career and one's professional function (Wang et al., 2018; Derakhshan et al., 2020). Therefore, a growing interest in what the teachers believe and conceive about teaching is what can be easily captured in educational research. Furthermore, attention is also increasingly paid to to the reflection of the questions regarding teachers' professional identity, namely 'who am I?', 'what kind of teacher do I want to be?', and 'how do I see my role as a teacher?'. Having a precise and sufficient understanding of what the teacher believe about teaching and conceive about their professional role and mission brings significant potential benefits in locating the trend in teaching of the instructors following. This in turn benefits the process of educational reform. In other words, educational reforms must take teachers' beliefs into account, if the aim is to bring about overall and sustainable change in the teacher's classroom practice and students' learning. In the same

veine, as what Nespor (1987) and Borg (2005) insist, the way instructors conceive or perceive about teaching can be seen as the inhibited or facilitative factors in driving such an instructor to accept or reflect implementing educational reforms. Proven for that is Northcote's argument (2009) about teachers' teaching and learning conception which can play either a facilitative or a preventative catalyst in leading the instructor having the guided curriculum translated into teaching reality. Explaining for this is the consensus of educational scholar in empirical studies with the widely-acknowledged relationship between teachers' beliefs about teaching and learning and classroom practice (Canbay & Beceren, 2012; Chan & Elliot, 2004; Feixas & Euler, 2013; Gilakjani, 2012). From the other source of literature, it is documented that educational innovation is doomed to failure if it does not give any weight to teachers' beliefs, intentions, and their identity which show their conception of the role in the process of teaching and education (Betoret & Artiga, 2004). Explaining for this, literature manifests the issue of considering beliefs as filters through which all relevant learning and information used to prepare teachers to act in the classroom is influenced (Brown et al., 2009; Lopez-Iguez & Pozo, 2014; Wong et al., 2006; Zanting et al., 2001). From the above-mentioned point, in order to improve teaching effectiveness for the teachers and for the educational enterprises, identifying instructors' innovative beliefs in teaching and learning is necessary. Indeed, education scholars, instead of encouraging the imposition of a constructivism-oriented instructional model, advocate the development of the conceptual understanding of teaching and learning among teachers as the most effective means of promoting teaching development (Akerlind, 2004; Wood, 2000). To have such a comprehension improved, the prerequisite condition is to learn carefully and comprehensively about the instructors' professional identity and factors leading them to construct professional knowledge. The insufficient comprehension of what the teachers go wrong and how they went wrong in their own perception about their role in teaching prevents the didactic and pedagogical intervention from being taking full effect.

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