

Investigating the Processes and Means Involved in EAP Teacher Learning: A Sociocultural Analysis of In-service Teachers' Experience as They Professionally Learn

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ID: IJEAP-1802-1168

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Received: 13/08/2017

Accepted: 22/12/2017

Available online: 02/02/2018

Abstract

There is little understanding of the processes and means involved in teacher learning. Further research is needed to better understand what happens when teachers learn. Therefore, using sociocultural theory (SCT) as a theoretical framework, English for Academic Purposes (EAP) teacher learning was documented and examined. To achieve this goal, an in-depth description of nine in-service EAP teachers' experience as they professionally learned was provided. The participating teachers' learning was traced from an analysis of their current cognitions on EAP towards reaching a deeper understanding of the issues as mediated during dialogical interactions. Constant comparative analysis was used to analyze the data collected through observation, recordings and field notes. The findings showed that reaching an expert's understanding involved the processes of externalizing current cognitions, verbalizing emerging understanding and full transformation in the individual's thinking. Mediational moves (means of learning) were found to be contingent on teacher-learners' learning needs. 'Narrating', 'judgmental speech' and 'externalization' were shown to provide space for using the potential of 'speech' and 'others'. The findings of this study might promise some implications for teacher education.

Keywords: EAP, mediation, teacher cognition, teacher learning, transformation

I. Introduction

EAP, as an established branch of English Language Teaching (ELT) and research (Hyland, 2006), aims at professionalizing special groups of learners into their target academic communities (Basturkmen, 2014; Belcher, 2009; Hyland, 2006). This goal of EAP has brought about an increasing demand for EAP teachers with distinctive identities, roles and qualifications (Campion, 2016; Dressen-Hammouda, 2013; Hall, 2013). EAP teachers need

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theory-informed and situated teacher education to reconstruct their cognitions and identities (Basturkmen, 2014). Developing EAP teacher education programs requires knowledge of the processes and means involved in teacher learning explained by a robust theory of human learning (Johnson & Golombek, 2011a). However, our knowledge of the processes and means involved in teacher learning is incomplete (Richards, 2008).

Given the fact that professional learning is situated in contexts and distributed across people as well as activities (Richards, 2008), and that EAP teacher learning is neglected as an area of research (Basturkmen, 2014), further research probing the processes of professional development helps understand what happens when teachers learn. This understanding is indispensable in developing situated teacher education courses (Johnson & Golombek, 2016; Richards, 2008). This study was an attempt to provide an account of the interaction between the processes and means involved in EAP teacher learning through presenting an in-depth description of the teacher-learners' experience of professional learning. Learning in this study is defined as transformation in teachers' cognitions on EAP education. To provide a vivid account of teacher learning, Sociocultural theory (Vygotsky, 1978) was used as a framework to examine the social and cognitive processes of teacher learning (Johnson, 2009).

2. Background

2.1 *The Sociocultural view of L2 teacher education*

As a theory of human learning, by recognizing the "interconnectedness of the cognitive and the social" processes of learning, SCT takes explanatory power to explicate "the cognitive processes" of teacher learning and thus making it possible to trace how teachers learn and develop (Johnson, 2009: 13). SCT conceptualizes teacher learning in terms of the social base of human cognition development (Vygotsky, 1978). Participation in social interactions is necessary and sufficient condition for human cognition development as it helps to mediate the transfer of learning from an external to internal state of development. Dialogical interaction is recognized as an optimal form of social interaction providing rich opportunities for mediating teacher professional development.

Mediation is conceptualized as "a self-directed or other-directed process resulting in voluntary control over one's social and mental world through the use of cultural artefacts, concepts and activities" (Donato, 2016, p. 31). Only "responsive" (Johnson & Golombek, 2016) or "strategic" (Johnson, 2009, p. 19) mediation provided considering the learners' Zone of Proximal Development (ZPD) could be contributive to professional learning. ZPD is "Defined as the difference between what a person can achieve independently and what he or she can achieve working in collaboration with others or with someone more expert" (Johnson, 2009, p. 15).

Recognizing the situated nature of teacher learning and that "different contexts for learning create different potentials for learning" (Richards, 2008, p. 165), SCT differentiates professional and experiential knowledge (Johnson, 2009). To put it simply, teachers need to

effectively interconnect their experiential knowledge with professional knowledge (Johnson, 2009). Experiential knowledge refers to the “empirical knowledge that may actually be incorrect or misinformed”, developed through teachers’ involvement in everyday nonprofessional activities and discourse. On the contrary, professional knowledge is “systematic and generalized knowledge” learned through schooling (Johnson & Golombek, 2016, p. 5).

2.2 English for Academic Purposes

English for Academic Purposes (EAP) is recently viewed as a research-informed area of English language teaching (ELT) which focuses on disciplinary variation in terms of communicative needs and practices with the very goal of helping learners become professional members of their desired communities (Hyland, 2006, 2015). As Hyland (2006, p. 2) maintains, “EAP aims at capturing ‘thicker’ descriptions of language use in the academy at all age and proficiency levels, incorporating and often going beyond immediate communicative contexts to understand the nature of disciplinary knowledge itself”.

EAP is set off from other branches of ELT through focusing on students’ target needs (Belcher, 2009) including discipline-based communicative practices and demands, discourse features and language uses (Hyland, 2006). Being responsive to the communicative needs and practices of particular social groups, EAP is learner-centered and research-based language education seeking to develop situated literacy (Belcher 2009; Hyland, 2006). Because of the very goal of EAP, EAP teachers need to assume specific cognitions, identities and qualifications to provide their learners with the right languages, practices, and discourse they need.

3. Research questions

Given the substantial gaps in the literature, this study aimed at providing an account of the processes and means involved in EAP teacher learning. Accordingly, the study was guided with the following research questions:

1. What processes in-service EAP teachers go through to professionally learn through transforming their cognitions?
2. What mediational means successfully mediated the processes of transformation in the EAP teachers’ cognitions?

4. Methods

4.1 Design of the study

The present study is part of a broader study with grounded theory design (Charmaz, 2006) which involved micro genetic analysis of teacher learning. The data featured in this qualitative case study is a part of the micro genetic analysis of classroom interaction collected through observation/recording and field notes.

4.2 *The context*

The study was conducted at a state university in Iran (University of Iran, UOI- Pseudonym is used to keep confidentiality about the participants' identities and data). Students with different majors other than ELT were required to take at least a two-credit EAP course taught by teachers from ELT and content departments (Author, et al., 2014).

Drawing on sociocultural theoretical perspectives, the study followed Vygotsky's notions that "through others, we become ourselves" (1931/1997, p. 105) and that "thoughts undergo continuous change during the process of speaking" (Johnson & Golombek, 2016, p. 44). Accordingly, a "community of learners" (Shulman & Shulman, 2004, p. 257) out of in-service EAP teachers were formed to collaboratively participate in the teacher education course using the potentials of dialogic speech and human mediation. The EAP teacher education course was inspired by the premises of sociocultural-based teacher education models such as 'critical friends groups' (Johnson, 2009a), 'critical incidents analysis' (Farrell, 2008, p. 3), and 'cooperative development' (Edge, 2002). Being so, the in-service teachers collaboratively engaged in critical but friendly discussions starting with narrating the critical incidents (Farrell, 2008) emerging out of their own daily teaching experiences. The interaction focused on discussing teaching dilemmas in relation to macro-issues of EAP teaching.

The educator-researcher took a number of key roles. First, he served to function as a coordinator of the interactions. Second, as the educator he gave the teacher-learners the space to externalize and verbalize their understandings. Third, he identified the teachers' learning needs and offered mediations through a number of mediational moves such as offering scientific concepts, descriptions, explanations, etc. Fourth, he created space for the teacher-learners to give further thoughts to their own ideas and those offered by their peers. Finally, he created the space for other peers to mediate their own and colleagues' thinking. To be clear, the researcher-educator initially gave the teacher-learners space to externalize their current understandings of the selected topics. Upon understanding their learning needs, he directed the interaction among the participants to facilitate the process of transformation in their cognitions. He either used a number of interactional moves to mediate the change in their understandings or gave the peers the chance to do this. The priority was to give the teacher-learners space to have as much contribution as possible. The whole interaction was directed to have maximum externalization of the teachers' current understandings and verbalization of their newly developed thinking. This way, the teacher-learners had the chance to externalize their current understandings, expose their understandings to mediation as well as transformation, and mediate their peers' thinking.

4.3 Participants

Six ELT teachers and three subject specialists were selected from a total of forty EAP practitioners through a *priori* sampling. Wishing “to maximize the range of perspectives investigated” (Onwuegbuzie & Collins, 2007, p. 285) and select *information rich* participants, the study used *purposeful sampling* through adopting the *maximum variation strategy* (Patton, 2002). To remove the negative effects of contextual factors on teacher cognition, the EAP teachers from one context (i.e., UOI) were selected. EAP teaching experience and their willingness to participate in the study were the criteria for selecting them as participants of the study (see Table 3.1).

Table 1: A summary of the participants’ background and subject-specific characteristics

Participants	Age/ gender	Degree	Department	EAP teaching experience
Arya	Early 40 M	Ph.D. Asso. Prof.	Content	7 years
Majid	Late 50s M	Ph.D. Assist. Prof.	ELT	17 years
Navid	Early 30s M	MA, Instructor	ELT	2 years
Diba	Early 30s F.	MA, Instructor	ELT	1 semester
Behdad	Mid 30s M	MA, Instructor	Content	7 years
Fateh	Late 20s M	MA, Instructor	ELT	1 year
Shayan	Early 30s M	MA, Instructor	ELT	2 years
Hamoon	Early 50s M	MA, Instructor	Content	5 years
Mehrab	Mid 30s M	MA, Instructor	ELT	10 years

Note: M= Male; F= Female; Asso. Prof. = Associate Professor; Assist. Prof. = Assistant professor. Further, fake names are used to keep confidentiality about the participants’ identities and data.

4.4 Instruments

A wide range of data collection methods were used in the three phases of the broader study to explore the teachers’ prior cognitions, examine the professional learning and provide further evidence for the possible transformation in their cognitions. That data featured in the present study was collected in the while-the-course section of the study employing

observation, recordings and field notes. These data made documenting and examining teacher learning through micro genetic analysis possible.

4.4.1 Observations and recordings

As the core purpose of this study was to trace the process and means of teacher learning, all classroom interactions were captured through observing and recording using audio and video recorders during the course sessions. In initial meetings, the teacher-learners were asked to present and discuss critical incidents they have experienced in their actual teaching practices and also discuss critical issues they prioritized. In the next sessions, the teachers discussed the issues they themselves presented as critical issues and incidents in the first meeting.

4.4.2 Field notes

In conjunction with observations and recordings the researcher-educator as the full participating observer took field notes from observations during interactions. New issues, interpretations or questions that occurred during each session were written down in the field notes to be probed further and/or used in the follow up discussions or post-course interviews.

4.4.3 Procedures for data collection

The study was conducted during winter 2015 and spring 2016. The English departments' agreement and the participating teachers' informed consent were obtained prior to data collection. The teachers were assured that their anonymity would be preserved and that they could withdraw from the study at any time and for whatever reasons. The teacher education course was implemented within eight weeks (each week a two-and a half an hour meeting). Classroom discussions were recorded using one video and two audio recorders. The collected data were exposed to repeated analysis, transcribed and translated into English. Data analysis was conducted simultaneously with the implementation of the course and data collection.

4.4.4 Data analysis

While-the-course recordings were analyzed for reoccurring themes and further for instances of mediation and transformation in the teachers' understandings. Mediation was defined operationally as the interactional moves made by the educator and the peers capable of assisting the teacher-learners to externalize their thoughts and/or reorient their own or peers' thinking until they reach an "expert's understanding" (Johnson, 2009, p. 20). Employing constant comparative analysis, the researcher used *initial/open* coding for the first cycle and *focused coding* for the second cycle of data analysis (Charmaz, 2006). During different coding phases analytic memos were written to record the researcher's thoughts and interpretations on coding and categorizing (Charmaz, 2006). Linguistic and discourse analysis of data were also employed to identify the themes that recurrently reflect the teacher-learners' progress in re-conceptualizing and reconstructing their understandings of EAP needs, needs analysis and needs responsive instruction. The study's reports of the

analysis of the classroom interactions included selected extracts of the transcribed talks and a theory-informed commentary on each extract.

5. Results

In this section, an instance of professional learning in which the teachers developed '*clear understating of EAP needs, needs analysis and needs-responsive EAP teaching*' will be presented. The report (analyzing the interactions as they unfold) depicts the possible changes in the teachers' cognitions and describes the processes as well as means involved in teacher learning.

5.1 Meeting four: The teachers' current cognitions

In the fourth session of the teacher education course, the topic and issue of needs analysis was raised and discussed. As a convention in the course, the session was initiated by giving the teachers time and space to externalize their own understandings of the issues related to needs analysis. The teachers mainly understood needs analysis as assessing students' proficiency levels (present situation needs or lacks- PSNs) and did it exclusively through teachers' intuition rather than systematic needs assessment. They mainly tended to take the clearness of target situation needs (TSNs) for granted. That is to say, the needs and purposes of their actual learners were left un-analyzed and un-responded. Actually, they revealed in their first statements in this session that they did not realize the role of needs analyst for EAP teachers. Even if they wanted to be responsive to learners' needs they left needs assessment to others especially syllabus designers or materials developers.

One of the teachers (Arya) specifically focused on being responsive to learners' target situation and communicative needs. He insisted that EAP target situation needs, rather than present situation proficiency lacks are geared to the very goals of EAP. He strongly focused on teachers', including himself, intuitive understanding of the target situation needs and that these needs are clear needing no systematic analysis. More importantly, EAP teachers' role in analyzing each group of learners' EAP needs was not realized.

The group's discussion and the mediations provided by the teacher-learners as well as the researcher-educator helped bring about transformation in the teachers' current understandings of the discussed issues. For example, Arya, came to the understanding that target situation needs should be investigated systematically and not taken for granted. As a result, he evolved a new understanding of EAP teacher role as a needs analyst. Mehrab, the other teacher-learner admitted that what they commonly do is an intuitive understanding of learners' EAP needs and that the practitioner needs to rely on systematic processes of needs assessment. Generally, as the findings show, the discourse of the teachers in the next meeting talking about other key issues of EAP provides ample evidence that they have developed new understandings of needs analysis and more importantly consider it as a key issue in EAP education.

What follows is the presentation of the extracts taken out of group discussion. The aim is to display the mediational moves made by the teachers' and the educator. Also, the evidence showing transformation in the teachers' opinions will be presented. In the final section, evidence of the teachers' discourse will be provided to show the clarity of their newly-emerged understandings.

Excerpt 1

1. **Mehrab:** ...to assess students' needs, ... I consider the what of the course I am supposed to teach, what are its goals, what my students are to achieve. These things become needs for me. ...
2. ...
3. **Mehrab:** ...I rely on my own understanding rather than investigating my students' own ideas about their purposes. I do it personally. I partly do it relying on my previous experiences in teaching these courses. ...
4. **Researcher:** You do that intuitively
5. **Mehrab:** Yes. Exactly
6. **Researchers:** What these needs consists of?
7. ...
8. **Mehrab:** ...for example I teach English conversation. I say to myself that 'these students need to learn some vocabulary items, learn word pronunciations...'

In the excerpt 1, Mehrab talks with assurance about the way he assesses students' needs. He gives an example of the course commonly considered as a general English course- English conversation. This can be viewed as evidence that needs analysis has not been a part of his EAP teaching activity so far. Although he focuses on students' target situation needs, he assesses them simply relying on his own intuition. The expressions such as "I rely on my own understanding", "relying on my own experience" and "I say to myself" can be used as evidence revealing this. Obviously, in assessing students' needs the very goals of EAP, students' target situation communication-based needs are not adequately taken into account. In other words, the needs and purposes of actual learners are not assessed and responded. Fateh (turns 9&11) challenges Mehrab's ideas on understanding learners' needs intuitively believing that "needs analysis is very context-based". In addition, he introduces the concept of students' 'purposes' in the discussion on needs analysis. Moreover, the idea of EAP teacher role as needs analyst is implied in his discourse. It was then that Majid (turn 15) advances the idea that there are many sources that teachers can rely on to assess students' needs including the syllabus, teachers experience and students' current levels of mastery. Majid seems to be trying to show that he is observing students' purposes and also the very goals of EAP through abiding by the prescribed syllabus. Behdad (turn 21) challenges Majid's solution for needs analysis which is understanding their needs within a single session and through introducing some basic concepts.

Excerpt 2

9. **Fateh:** ...I think that needs analysis is very context-based. That is, without knowing students' own voice about their purposes and merely relying on the teacher's experience would not be successful.
10.
11. **Fateh:** we should ask them about their targets. To find out their purposes...
12. **Researcher:** Do you do that?
13. **Fateh:** No. I am going to do in future (Laughter)
14. ...
15. **Majid:** I try to draw on three sources to determine the needs in the courses I teach. One of them is the prescribed syllabus
16. **Navid:** the main needs
17. **Majid:** Yes. It needs to be abided by. Second, I draw on my long-time experiences, and third I see my students' current levels...
18. **Researcher:** well, how do you assess the needs?
19. **Majid:** ...in the first session, I try to talk about the general points of the course to check their familiarity with these concepts. I present the general definitions... if they have problems with these basic concepts I try to tune my teaching with their current level of mastery...
20.
21. **Behdad:** ... These needs are partly specified by the syllabus...partly we should draw on the students' own experience ...my own teaching experience shows that it is not possible to find this in the first session...

No clear-cut distinction can be seen between students' communication-oriented and their present situation needs. Arya (extract below, turn 22) starts to argue about the centrality of being responsive to students' target situation needs rather than their proficiency lacks because EAP teachers' "goal is to teach them EAP" instead of EGP. Here, a demarcation is made between students' TSNs and PSNs. There are three major points in Arya's argument. First, he argues that EAP should be taught in line with the very goals of EAP; second, he sees target situation needs self-evident needing no assessment at least for himself; and three, students' present situation needs should be disregarded as they are supposed to be proficient enough when they gain entry into the course.

The interaction moves made by the educator and peers helped Arya to clarify his stated ideas and externalize the assumptions behind his thinking. Arya's insights on the centrality of target situation needs in EAP served to function as a mediation for other peers to reorganize their thinking on types of needs and their value in EAP. Furthermore, his understanding itself needed to be mediated to undergo some change. He needed to take into account the necessity of needs assessment for each EAP course. The whole idea and

discussion advanced by Arya created a space for the peers to give more thoughts to the issue of EAP needs and needs analysis. In turn, the researcher-educator's and other teachers' moves also created the space and opportunity for Arya to bring about some transformation in his understanding.

As the excerpt 3 shows, Arya (turns 22&24) insistently focuses on the priority of students' target situation needs but reduces the task of needs analysis to assessing students' proficiency lacks. He stresses that proficiency assessment is not needed as the purpose is meeting students' target situation needs. In response to Navid's question on the possibility of asking students about their own purposes (target situation needs- TSNs) Arya (turn 27) again stresses that these needs are specified in the syllabus and he also knows them from his experience. Then, two moves by the researcher-educator and Navid (turns 28&31) reminds him that he is reducing the task of assessment to PSNs study and ignoring the act of analyzing TSNs. Once more, he insists that what is important is being responsive to students' professional needs. The researchers' another question makes him consider the act of assessing TSNs. In response, he (turn 36) uses the expression "whether these needs are assessed or not" which is the starting point in directing needs analysis to assessing TSN. The other move by the researcher-educator (turn 37) reminds him that he simply does it intuitively. Then a turn can be seen in his opinion that he (turn 38) agrees with the significance of assessing students' proficiency. Finally, he narrates his teaching practices to show that if he does not assess TSNs is because he knows them. Arya's points serve to function as mediation especially when he focuses on the significance of EAP target situation needs. It also surfaces his current understanding in need of being mediated to transform.

Excerpt 3

22. **Arya:** ...I think for these degrees we do not need to do needs analysis (assessing students' proficiencies) because this is an EAP course with a specified syllabus...what now can I do for their needs (proficiency lacks)? ... My goal is to teach them EAP.
23. **Researcher:** needs analysis is not needed or the condition do not allow you?
24. **Arya:** ... They cannot improve their proficiencies because it's not my job...
25. **Navid:** ...can't you ask them (students') about their own purposes?
26. ...
27. **Arya:** well, ...the goals of EAP are in the syllabi. ... I cannot teach Grammar... and make it worse
28. **Researcher:** ...you are defining students' needs only in terms their proficiency levels
29. **Arya:** yes, you are right

30. ...
31. **Navid:** I remember that you said EAP mainly refers to developing students' ability to search for papers and study them, etc.
32. **Arya:** yes. ... Whether they are high or low in proficiency makes no difference. I will teach them EAP...
33. **Researcher:** ...don't you need...to find what target activities they need to perform in future?
34. **Arya:** ... You are right
35. **Researcher:**...
36. **Arya:** ... Whether these needs are assessed or not, I will teach them these activities.
37. **Researcher:** You mean, you know these needs intuitively?
38. **Arya:** I do teach these tasks...even if I assess them (proficiency lacks), it's not possible in this short course to meet them....
39. **Researcher:** you mean, because you cannot meet students' needs, then needs analysis should be avoided
40. **Arya:** but I know what their [target situation] needs are...
41. **Researcher:** So, without doing systematic analysis of their needs, you draw on your experience.
42. **Arya:** Yes. I know the needs. I know for example, students' need to read professional texts. So, I ask them to search for two texts, analyze them and explain their structures (organization)...

As excerpt 4 shows, Diba (turn 46) makes contribution to the interaction first expressing her assumptions and then narrating what she actually does. She says "I believe the course objectives are clear. Every course has its own goals" and that "teachers know what the goals of the courses are.... In addition, there is the syllabus". Surprisingly, she continues to say that she does not believe and abide by syllabi. Practically, she only relies on "the latest materials and course books" and takes the students' needs for granted. Her emotive language "*honestly*, I have never done systematic needs analysis" shows that she is starting to see systematic needs analysis as EAP teacher role and duty.

In continuation, the insights developed through the dialogical interaction helped Mehrab (turn 48) to think through his own ideas and come to an emerging understanding that what they do is taking the obviousness of students' needs for granted leaving its assessment to other sources such as commercial textbooks, syllabi, etc. He admitted that they usually "assume[d]" others have done needs analysis for EAP teachers. This indicates a significant shift in his thinking because, for the first time, he was understanding that EAP teachers in addition to be responsive to students needs should fulfill the role of needs analysts.

The interaction continues with Arya (turn 51) insisting on the centrality of TSNs. This time, the educator asks him about the necessity of assessing students' target situation needs. This move makes Arya (turn 54) advance the idea that EAP students at different degrees have different target situation needs stating "It depends on students' degrees. ... There are different expectations of the courses in these degrees". The discourse shows that he is getting close to accepting the necessity of assessing students' needs by the teacher because the needs of actual learners are less likely to be fully specified in advance without the roles fulfilled by EAP teachers.

Excerpt 4

43. **Navid:** so, you follow the syllabus
44. **Arya:** yes, I cover the syllabus and teach based on the syllabus...but whatever are their EAP needs I myself teach them depending on the actual classes.
45. **Researcher:** He does not assess students' needs systematically. That is, he intuitively knows what students' needs are...
46. **Diba:** I believe the course objectives are clear ... Teachers know what the goals of the courses are.... I addition, there is the syllabus, though I do not believe in the syllabi. I basically believe that and I actually do look for the latest materials and course-books to find the courses' needs. Honestly, I have never done systematic needs analysis ...
47.
48. **Mehrab:** ...we leave the task of needs analysis to others and assume that they have done it and we do not need to assess our students' needs. How? ... we assume these things are in the syllabus ...for the course writing...I select a textbook titled *academic writing* and assume that it's based on needs analysis and my job is to simply teach it. That is, I assume some other people have done that before and do not need to repeat it.
49. **Researcher:** well. There are two types of needs analysis...
50.
51. **Arya:** ... I need to teach EAP to my students rather than EGP...it is not my expertise to teach them EGP. ...responding to students' EGP needs contradicts with the EAP goals
52. **Researcher:** ... you are now interpreting students' needs only in terms of their general English proficiencies but what about their professional needs such as their needs to learn target discourse and genres...
53. ...
54. **Arya:** well. It depends on students' degrees. ... There are different expectations of the courses in these degrees ...

After giving the teacher-learners space to externalize their assumptions and conceptualizations of needs as well as needs analysis, the educator (turn 55) provided a mediation through a brief description of different types of needs in EAP. The researcher-educator provided this description when he found that teachers seem to have problem with differentiating target situation communication-based needs from present situation proficiency-based needs. Accordingly, perceiving that teachers were ready to grasp the concepts, he presented a brief explanation on major types of needs and needs analysis. Excerpt 5 below, displays the educator's mediation. Navid (turn 57), turns back to Arya's last point and agrees that needs analysis depends to students' degrees and that in lower degrees students do not know what their target situation needs are. In response to the researcher-educator's question (turn 58) he advances the idea that "it is unlikely to work in the early semesters but in the last semesters it's much more effective". Then, he (turn 61) gives a tangible example of his own experience when his students helped him to assess his actual students' target situation needs.

Excerpt 5

55. Researcher:

Well. The first group of needs that should be explored are the professional abilities need to acquire and also professional activities they need to perform as the members of their target communities...(Researcher, Session 4)

56.

57. **Navid:** ...needs analysis also depends on students' degrees, ... B.A. students, for example, have little understanding of their profession, their needs and their wants. ...But MA student are more aware of their needs...

58. **Researcher:** well. You mean MA students' needs should be assessed but not those of BA students?

59. **Navid:** it works for BA degree, as well, but not that much

60. **Researcher:** ... You mean needs analysis is less likely to serve your purposes

61. **Navid:** it is unlikely to work in the early semesters but in the last semesters it's much more effective. For example, we have a course called language assessment 2 which is mainly a theoretical course. One day, my students said that because they teach in private schools they need to learn practical test development. This was a good example of needs assessment that they themselves informed me about their needs.

The time and space created in the interaction gave teachers to think through their own ideas and give more thoughts to the ideas advanced by the peers and the educator. As a result, Arya (turn 62) appears once more in the discourse but this time with clear evidence of transformation in his understanding. He starts with the expression "I think needs are discipline- and degree-based", and more importantly, he concludes his statement by saying "well, these needs should be specifically assessed for all disciplines...". He is now clearly

and strongly admitting that EAP students' target discipline needs (in each discipline and degree- for each group of students) should be assessed and not taken for granted.

In continuation, towards the end of the meeting four and the part of the meeting focusing on needs analysis, Arya (turn 66) clearly differentiates two types of needs (i.e., present situation proficiency needs and target situation communication-oriented needs). Admitting the role of present situation needs in the success of academic communication activities, he suggests that EAP education is more concerned with students' EAP needs rather than EGP ones. This shows the maturity of his evolving understanding of the necessity of analyzing actual learners' needs and purposes. His idea through the expressions such as "...it should be done" and "it is a necessity that should be done but it's not done" is another indication of the new understanding of the role of needs assessment in EAP and teachers' role as needs analysts. In sum, there is evidence to show two shifts in his thinking. One, students' present situation needs are important and their centrality should be taken into account; and second, students' target situation EAP needs should be assessed and not taken for granted.

Excerpt 6

62. **Arya:** yes. I think needs are discipline- and degree-based ...these needs should be specifically assessed for all disciplines...
63. **Researcher:** why shouldn't we say we have different degrees and their needs should be assessed separately?
64. **Arya:** we have two types of needs. One is General English needs and the other is EAP needs. General English needs analysis should be left undone
65. **Navid:** it is necessary, too
66. **Arya:** Yes, it's necessary, it's necessary...But let's put it aside and go on the EAP...EAP needs should be assessed, ...specifically for each discipline and degrees. The problem is that this is left undone...
67. **Researcher:** ...you mean it's a must but actually not done
68. **Arya:** yes, it should be done
69. **Majid:** Sure. It's a necessity and it should be done.
70. **Arya:** it's a necessity...But, it's not done....

5.2 Meeting six: further evidence of emerging understanding

The topic of discussion in the sixth session was designing and developing an EAP course and syllabus. The participating teachers were asked (through the researcher-educator's prompt in the form of questions) to talk about *who should design and develop an EAP course* and *what should be the major characteristics of an EAP course*? In their contributions to group discussion one of the points that participating teachers clearly

expressed was their realization of and focus on the role of needs analysis in developing an EAP course as well as EAP teachers' role as needs analysts. In essence, the group together advanced the idea that needs analysis is an inevitable part of course development which should be done primarily by EAP practitioners.

In excerpt 7 below, the centrality and significance of needs and the related issues surfaces significantly in the discourse created by the group. Fateh (turn 71), as the first contributor realizes the role of needs assessment in developing a research-based EAP course. His interaction with Navid (turns 77-80) shows that they both prioritize needs analysis. In order to prompt other teachers to have contributions and also give them time and space to make their assumption of EAP course more explicit, the educator asks a question about teachers' preference of syllabus types. Navid (80), believes the current syllabus can be informed by the findings of needs analysis probably by the teacher. This is a realization of the role of needs analysis and the role of the EAP teacher in fulfilling this role which is also stressed by Behdad (turn 81) stating that "the teachers can better understand the needs of their actual students". In addition, Behdad lists a number of communication-oriented needs and sources. The idea is further advanced by Fateh (turn 83) who considers the role of needs in connection to disciplines' goals, objectives of the course and the decisions of other EAP stakeholders.

Navid (85) makes a significant realization in terms of teachers' role when he says "the teacher can assess needs personally and can use the findings of other relevant needs analyses". He identifies EAP teachers as needs analysts or at least those who actively make use of needs analysis findings. In response to the educator's question (turn 86) he (turn 87) insists that for EAP course needs analysis should be done by EAP teachers for each individual group of students. In continuation, Fateh connects needs analysis to the other role of EAP teacher i.e., materials selection and preparation. Stating that "the materials should be selected and prepared by the teachers depending the needs of their students" he not only realizes two roles of needs analyst and materials preparator for the EAP teacher, but also realizes the successful fulfillment of individual roles in connection with the other roles.

Excerpt 7

71. **Fateh:** Well, about designing and developing EAP course ...I think a committee including a group of expert and scholarly members of both communities of ELT teachers and subject specialists who jointly work should perform the job
72. **Researcher:** well, you mean for each single discipline a specific research-based course should be developed?
73. **Fateh:** yes. yes.

74. **Researcher:** ... what do you mean by research...needs analysis?
75. **Fateh:** yes. yes
76. **Researcher:** ...
77. **Navid:** well. Needs analysis should be done first and then the committee can keep on doing its job
78. **Fateh:** well. They themselves can do needs analysis...
79. **Researcher:** ... if a novice teacher comes to you and ask you about EAP teaching and syllabus, which syllabus type would you recommend to him/her?
80. **Navid:** well. We have only traditional syllabus ...this syllabus can be modified to suit students' needs through doing needs and genre analysis
81. **Behdad:** I prefer the syllabus which is developed locally by the academic departments because this way the needs of the students and the local areas will be considered. Actually, the teachers can better understand the needs of their actual students...Syllabus design should be research-based...you need to study students' job opportunities, their career-related and skill-related and knowledge-related needs....
82.
83. **Fateh:** ... a committee including the experts of both subject area and language teaching should develop a research-based syllabus. Then at the level of universities, the teachers depending on the needs of their actual learners, without changing the syllabus, and gearing to EAP goals and course objectives determined in the syllabus, should select their materials and etc.
84. **Researcher:** ...who should do needs analysis. Should the teacher personally do needs analysis or he should use the relevant findings?...
85. **Navid:** well the teacher can assess needs personally and can use the findings of other relevant needs analyses...
86. **Researcher:** you mean, should teachers do needs analysis for every single course?
87. **Navid:** well it depends on the significance of the course. EAP is one of those very significant courses for which needs analysis should essentially be done.
88. **Fateh:** I prefer a flexible syllabus. I think the goals, objectives and policies should be set by top authorities and the materials should be selected and prepared by the teachers depending the needs of their students...students can be involved in needs analysis through asking them to tell us about their wants...
89. **Behdad:** for each course design, the priority should be given to needs analysis. Without considering needs...the course becomes purposeless...many stakeholders should be involved in needs analysis ...

As far as the EAP teacher role identities are concerned the findings show that the teacher-learners developed clear understandings of three key roles. That is, the roles of EAP teachers as needs analysts, evaluators of findings related to needs analysis, needs-

responsive materials developers, and also needs-responsive instructors were realized as the essential roles of an EAP teacher. They developed the idea that teachers need to analyze their actual learners' needs rather than leaving needs assessment to other stakeholders. This is because specific groups of EAP learners have specific needs and purposes. In addition, considering and evaluating the findings of needs analysis research is the task of the EAP teacher if he/she wants to be a needs-responsive instructor. Moreover, they came to realize that EAP needs should necessarily be considered in connection to the very goals of EAP education.

6. Discussion

The findings showed that the process of teacher professional learning involves 'externalization' of the current cognitions, 'verbalization' of the emerging understanding, and 'reaching a deeper level of understanding' (Johnson & Golombek, 2016). These processes are facilitated through a number of mediational moves which are "emergent, dynamic, and contingent on the interactions between teachers and teacher educators" (Johnson & Golombek, 2016). That is, externalization, verbalization and display of a deeper understanding are facilitated through different mediational moves. At the phase of externalization, for example, when the teachers themselves made their opinions about EAP needs, needs analysis and needs-responsive teaching explicit, the educator simply used 'reflecting' move to help the clarity of the advanced ideas. Narrating was found to be the preferred move by the teachers when externalizing their assumptions about and practices of being needs-responsive teachers. Narrating helps them talk about things that are relevant to their own activities and gain "more control over their thoughts and actions" (Johnson & Golombek, 2011b, p. 487)

Teachers should be given space to verbalize their emerging understandings. It helps them make cohesion among their thoughts and also their higher order understanding. 'Scenario' can be used as a reach mediational tool to help teachers verbalize their emerging thinking and display higher order understanding (an expert's understanding). For example, in meeting six the educator used a prompt through creating a scenario (*who should design and develop an EAP course and what should be the major characteristics of an EAP course*) to assist and encourage teachers to verbalize their thoughts. Though the focused topic was syllabus and course design, all teachers found the prompt as a space for verbalizing their newly-developed understanding on EAP needs and needs analysis. More importantly, they talked about needs analysis relating it to other key issues such as EAP course/syllabus design (turns 71, 77, 78, 80, 81, 83, 85, 87, 89&90).

'Challenging' move may help the speaker to further think through his/her own ideas and make them subjected to possible transformation. The evidence that support this is in excerpt

2 (turn 94) when Fateh, challenged Mehrab's opinion. The way he challenged Mehrab was based on his own understanding. Interestingly, it did not make Mehrab be defensive and reflect defensively. It seems that Mehrab treated it as a new idea and respected his peers' challenge. The same thing happened when Behdad (turn 21) directly challenged Majid. As a result, the challenging moves functioned as "responsive mediation" (Johnson & Golombek, 2016). The findings do not support the argument by Edge (2002) that judgmental speech prohibits professional learning.

The more the teacher-learners contributed to the discussion, the more they externalized their ideas (even the strongly-held ones) and received mediation. Consequently, they were more likely to experience an early and deeper transformation. This can be illustrated by change in Mehrab's thinking on EAP needs analysis during meeting four. He (turn, 48) was the first one to show signs of change in his understanding. He said "we leave the task of needs analysis to others" accepting that they did not fulfill their role of needs analysts. So, the one who made his ideas explicit (the process of externalization) made his thinking subject to transformation. The same happened to Arya. He focused on the obviousness of EAP students' target situation needs. In turns 62 and 70, he believed that the EAP needs of specific groups of students should necessarily be assessed. As a result, the teacher-learners who had the most contributions with more assurance were the only individuals to show evidence of transformation in their understandings. This can refer to and support the key notions in SCT theory that our "thoughts undergo continuous change during the process of speaking" (Johnson & Golombek, 2016, p. 44) and that, "through others, we become ourselves" (Vygotsky, 1931/1997, p.105).

7. Conclusion

The main purpose of this study was to examine and describe "what happens inside the practices of L2 teacher education" (Johnson & Golombek, 2016, p. 4). The results showed that teacher learning involved transformation in the teacher-learners' cognitions. Based on the findings of this study it can be concluded that professional learning is dynamic and distributed across individuals. Individual who go easily through the process of externalization are more likely to experience change in their understandings. The other conclusion is that the success of professional learning depends on the interaction between the processes and means. Understanding this interaction may help create different learning opportunities for different groups of teachers based on their learning needs (Richards, 2008).

Theoretically, the insights achieved from this study may help the recognition of EAP teacher education. The study can be considered a successful attempt that helped depict what actually happens to teacher learners' cognitions when they involve themselves in teacher

education activities (Johnson & Golombek, 2016). The findings may also have some pedagogical implications for teacher educators and EFL teachers. Drawing on the findings of this study, they may create and use learning opportunities that take advantage of the potential of ‘others’ and ‘speech’ in facilitating the process of their professional learning. EAP practitioners and teacher educators may consider the fact that successful transition to EAP teacher (Campion, 2016) demands reconstruction of EAP-specific cognition. Accordingly, they may use and create learning opportunities that take into account the what and how of teacher learning.

The findings and limitations of this study help provide some suggestions for further research. First, further research may be needed to probe the contingency of different mediational moves in different conditions. Second, the study focused on examining transformation in teacher-learners’ cognitions. Documenting and examining change in teachers’ instructional practices was not included within the aims of this study. Further studies might be needed to examine changes in teacher-learners’ instructional practices, too.

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