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Assessing learning transfer and constraining issues in EAP writing practices

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Abstract

The aim of this study was to investigate what learners carry over from a general academic writing course to disciplinary writing settings and the variables constraining the quality of the outcome. Seven EFL university writing teachers and 58 students were selected using purposive and stratified sampling techniques. Data were generated using in-depth interview and document analysis. Thematic analysis and non-parametric statistical tools were employed to analyze the data. The findings showed that the students made limited learning transfer from the writing course to their writing settings across academic discourses. While surface level knowledge of grammatical features show better transfer, skills of discourse level writing processes, thinking strategies and vocabulary showed very poor transfer. A number of reasons are identified for the failure of learning transfer in the study setting. Among others, EAP teachers' failure to bridge the EFL writing and content area writing practice contributed to this problem. The other variable causing this problem is students' failure to make significant moves to adapt skills of writing processes and thinking strategies to new situations. Based on these evidences, alternative ways of improving the carryover impact of such courses have been put forward.

Keywords: Far learning transfer, EGAP, Alignment, Academic writing, Bridging

Introduction

The idea of learning transfer in education has a long history from Thorndike and Woodrow in the early twentieth century to a resurgence in the study of transfer across disciplines in higher education (Misko, 1995; Barnett & Ceci, 2002). The interest in this subject is mainly founded on the premises that every educational endeavor has the ultimate goal of transferring tools of life from classrooms to various avenues in societies. Consistent with this view, learning transfer has been defined as a process by which "learning in one context or with one set of materials impacts performance in another context or with another set of materials" (Perkins & Salomon, 1989, p.133).

Two important points underlie this definition. First, transfer of learning presupposes the existence of two contexts for learners: (1) a learning context where students practice and acquire knowledge and skills, and (2) a context where the students are demanded to use the knowledge and skills to accomplish practical tasks. Thus, the practicing context is meant to make the learners functional in the skills-use(target) context. Accordingly,

educational administrators and practitioners employ different mechanism to ensure learning transfer from practicing-contexts to target contexts.

This may be visible at training program level and course level instructional actions. For example, at program level we see internship or practicum components of training programs (teacher training programs, Nursing training programs, Lawyers training program etc..) as a fundamental means to give learners the chance to transfer their professional knowledge and skills acquired in their classes to the wider world of practice (Barnett & Ceci, 2002; Tuomi-Gröhn & Engeström, 2003). Such components of training would also mean to check the magnitude, variety and deficiency of learning transfer occurring from the package of training to target situations. The evidence from such process further feeds back evidences for improvement in a particular educational program (Beach, 2003; Tuomi-Gröhn & Engeström, 2003).

Yet not all educational practices may have such schemes of internship and practicum components as part of an instructional package. Particularly, supportive course instructional processes such as the teaching of academic writing mostly constitute only classroom practices with no such mechanisms to check or assess transfer of knowledge and skills from practicing settings to target contexts (Leki, 1995; Smit, 2004). Under such circumstances, practitioners largely take for granted that what is learned in an ESL/EFL writing course would be transferred and impact performance of tasks in target contexts.

This assumption has long been challenged, prompting a research interest on transfer of learning in ESL academic writing practices (Frazier, 2010; Lui, 2018; Lynn, 1998; Newkirk, 2002) Writers particularly argue that because of this unexamined assumption, a large number of studies in ESL/EFL writing instruction—having taken perspectives other than learning transfer—sought to observe effects of interventions or explore other phenomena surrounding the process and outcomes of academic writing instruction in the confines of immediate environment. That is, explorations are largely limited to observation of what happens in the immediate EFL/ESL writing classes with less emphasis on whether and what knowledge and skills are carried over from EFL/EFL writing classes to contexts where students are required to apply these skills (Newkirk, 2002). Such assumption had left a vacuum in our understanding of what learners would carry over from skills-practicing contexts (EFL/ESL writing classes) to other target situations (for example, academic content writing classes).

Of course, in the past two decades, considerable scholarly engagement is visible as a move to explore the magnitude and variety of learning transfer from writing courses to disciplinary writing settings. The research moves on this subject largely target general English for academic (GEAP) writing courses, also widely known as First-year Composition (FYC), in ESL educational contexts (Beaufort, 2007; Devitt, 2007; James, 2006b; Leki, 1995).

This English writing course is widely offered to university students majoring in varying disciplines across academic discourses in undergraduate studies (James, 2006b; Smit, 2004). It is largely designed based on the assumption that there are common core writing tools that provide a basis for specific disciplinary writing skills. The list of those skills ranges from the mechanical tools of spelling, basic usage, grammatical accuracy to organizational tools, such as framing thesis, using transitions, and different modes of discourse. Accordingly, its goal is mainly to prepare students for the writing they will do

in their academic content courses during their university studies (Currie, 1999; Hyland, 2002).

Yet it remains controversial whether students carry anything from such courses to academic writing settings. As such, writers and researchers are considerably divided over the merit of such courses. Some scholars such as McCarthy (1987), Smit (2004), and Beaufort (2007) contend that very little or nothing can be transferred from First-year-composition to disciplinary writing settings and suggested abolishing such courses in higher educational practices, while others (Devitt, 2007; James, 2006a) reported considerable transfer of language skills and writing strategies to other academic writing settings.

In one of a representative case study on learning transfer, Beaufort (2007) thoroughly followed up a student in his ESL first year writing practice and later in his content area writing process and outputs. In this in-depth investigation, the researcher demonstrated that the student did not carry anything significant from his ESL writing to his content area writing context. Particularly, Beaufort indicated that the disparity in the nature of tasks in the two contexts made him struggle to carry out academic writing tasks in the content areas. In a similar case study, McCarthy (1987) explored in depth what a single student was doing throughout the course of his ESL writing practice and disciplinary writing tasks. In the follow-up she made, McCarthy could see a close similarity between the ESL writing course and those in the disciplinary writing tasks. Despite this similarity, the student failed to make a “connection” between the two writing contexts and nothing was transferred from the ESL writing context to the other.

In contrast, other writers such as Devitt (2007), James (2006a, 2010), Lui (2018), and Martin and Schwartz (2013) reported that students having passed through ESL first year composition courses tend to transfer relevant language tools and cognitive strategies when facing writing tasks in their content area learning. For example, James (2006a) demonstrated that writing skills such as “using appropriate syntactic patterns, organizing ideas, developing topics, establishing coherence, using appropriate vocabulary, and paraphrasing did transfer from ESL writing to mainstream courses.” Also, Lui (2018) and Martin and Schwartz (2013) indicated that students carried over rhetorical and thinking strategies from first year writing courses to sophisticated academic writing practices in disciplinary writing tasks. Adding to these sets of positive evidences, Devitt (2007) reported that a writing practice offered to ESL engineering group students in the first year of their undergraduate studies significantly raised their genre awareness, leading them to easily adapt them for practical disciplinary writing. Looking further into the literature, one can find more mixed results such as Carroll (2002) (no transfer), Lui (2018) (positive transfer) Grossenbacher and Matta (2011) (no transfer), Belcher & Braine, 1995 (evidence of transfer).

Statement of the problem

From these reports we can clearly see that the carryover impact of EFL writing courses to other writing settings is inconclusive. Further, the studies are not informed by a sound theoretical framework that comprehensively captures the forces determining the phenomena of learning transfer in writing practice. They largely target the learning outcome (transfer of learning) without due focus on the role of the actors namely, learners, GEAP

teachers, and content area professors. Thus, even though the researchers made an in-depth exploration on the magnitude of learning transfer, no clear evidence has reported on the forces responsible for failure or success of transfer observed. Also, in many of the studies reporting evidence of learning transfer, there are questionable methodological operationalization that undermine the validity of the outcomes on the assessment of learning transfer.

To claim a learning transfer from a GEAP course to skills-use settings such as content area writing classes, one needs to ensure three important points. First, there need to be an evidence that the students did acquire the transferred skills from the delivery of the course GEAP course (not prior to it). Secondly, the assessment of the learning transfer need to be made in two steps. In the first step, the researcher is expected to see whether academic writing tasks in the content areas are aligned in a way they demand the use of the language tools acquired from the course. This should be followed by the assessment of learning transfer evidenced by meeting the demands of the content writing task (Currie, 1999; Dyke, 2001; DePalma and Ringer, 2011; Dyke, 2001).

Yet looking into many of the previous studies including the recent ones (Belcher & Braine, 1995; Green, 2015; James, 2010; Lui, 2018), they did not pass through these three steps of assessing the learning transfer. They jumped off into generating the evidence of learning transfer without carrying out the first two important steps. Educational actions such as abolishing this course or intervening for better transfer require valid evidences following these steps.

Another noticeable point in the studies is the context of the investigation. Almost all of the studies were carried out in ESL educational contexts, providing little evidence on the magnitude, and variety of learning transfer as well as constraining issues in EFL educational settings. Yet evidence on this subject would better inform educational actions when they are produced in local educational contexts. Thus, this study sought to investigate the magnitude and variety of learning transfer as well as the forces determining the efficacy of the transfer from a GEAP course in Ethiopian EFL higher educational contexts as a way to inform local educational actions.

This course is principally meant for equipping students, at the university level, with language skills useful to deal with their academic writing tasks across disciplines. For the last decade, the course was offered to students in the first year across academic disciplines in natural sciences, social sciences, engineering, business and economics in Ethiopian universities including BDU where this study was carried out. Yet students having passed through this syllabus, are reported to be deficient in composing academic texts in writing both at undergraduate and post graduate level learning. Particularly, the studies (Kefelegn, 2003; Tefera et al, 2018) indicated that the students lack the skills of analyzing and synthesizing academic content following conventions of academic writing in their disciplines. Also, they lack the linguistic resources (knowledge of relevant grammatical functions, lexical resources, and writing genres) instrumental to make effective writing communication in response to academic tasks in undergraduate and post graduate learning.

Despite this deficiency of learners suggestive of uncertainties over the quality of learning outcome from the course, no assessment of learning transfer from such courses to other contexts has been made. In fact, inquiry on learning transfer is one of the rarities

in Ethiopian ELT discourse. Much of the research in EAP educational practice in this country takes needs analysis as a perspective of inquiry with no perspective on learning transfer (Berhanu, 2007; Alem, 2011; Getahun, 2007).

This over emphasis on assessment of needs suggests that EAP instructional practice is largely taken as a one-way move from needs analysis to course design and to instruction. By taking this view of the process, we risk taking for granted that the feed from needs analysis and the instructional action based on these assessment takes care of the desired outcome of EAP instruction. However, the widely held consensus on the practice of teaching English for academic purpose is that it is a two-way process involving a forward-feeding action of needs assessment and the backward-feeding process of transfer assessment (Smit, 2004; Wardle, 2007). An assessment of how much we transfer, the variety of skills we transfer, and the barriers to what we desire to transfer from the EAP class to the academic learning classes equally informs the instructional practice, course design as well as administrative decisions.

This study, as a way to achieve these ends, explored the carryover effect of an EGAP course to undergraduate content area writing practices and the variables associated with this educational end in EFL higher learning. The investigation involves three subsequent moves. First, a baseline investigation was made on the competence of the students. Prior to the delivery of the GEAP course, the competence of students on the contents of this course was assessed. This was compared with their competence immediately after they took the course. Secondly, the study examined the level of alignment between the EGAP course practices and those in the content area learning. That is, (1) how much the academic writing tasks demand and give a space of use for language tools already practiced in the GEAP course; (2) how much the content area writing tasks require language tools beyond what is practiced in the EGAP course. This is followed by a determination of the language tools (demanded by the content area writing tasks) transferred by learners to the target situation. Finally, based on the evidences discovered from the two moves, the variables responsible for the level of carryover impact of the EGAP writing course were determined.

The following questions were formulated to guide the process of inquiry:

1. Is there a significant level of alignment between the EGAP writing course practices and the demands of content area writing tasks ?
2. Is there any learning transfer from the GEAP course to writing practice in content area learning?
3. What are the variables responsible for a low carryover impact of the GEAP writing course, if there are any ?

Theoretical underpinnings

Capturing the dynamics of learning transfer is one of the complex ventures in educational theories. It requires a model of explanation that connects three components: instructional processes of the learning setting, the conduit of transfer (the learner), and the instructional processes of target situation. As a way to capture this connection, this study employed a theoretical model built around Russell's (1995) socio-cognitive activity

system theory. This theory views the teaching of academic writing as a goal-directed and historically situated process in which individuals assume defined roles (division of labor) to attain the desired goal.

The goal in the whole of the process of the activity system is to attain *far* learning transfer evidenced by learners using knowledge and skills (acquired in a learning context) to carry out a writing task in a distinctive target context such as academic content leaning settings. The attainment of this goal is historically rooted in what teachers do in the ESL/EFL writing classes. In this setting, the preparation and delivery of the writing course should be informed by critical professional practice in which writing teachers ask such questions as: What is it that I am teaching now will be of value for the future lives of students? what can I do to have my students carry their learning over the other contexts as a tool of attaining their life goals? (Leki, 1995).

To this end, the writing teachers are expected to understand that writing is an instrumental tool for exploring disciplinary knowledge, demonstrating conceptual change, documenting a synthesis of knowledge, and reporting processes and outcomes of practical learning activities. Accordingly, they have to align the ESL/EFL writing practices to those ways how knowledge is explored, constructed, structured and shared through writing in in a disciplinary discourse.

Further, the aligning processes should be evidenced by practical pedagogical actions such as *bridging* and *hugging* (Perkins & Salomon, 1992; Russell, 1995). Through the bridging instructional actions, the writing teachers need to first make sure initial learning of the language features and genres has happened. This should be followed by engaging learners in writing practices where they write in reaction to *simulated* academic writing tasks. These tasks need to give learners the opportunity to make lexical, syntactic, and discourse level writing practices. Further, in their hugging actions, writing teachers should move to open the eyes of their students into their future academic life and to think how they will apply the knowledge and skills in academic writing tasks.

While the activity system model of learning transfer assumes these roles of writing teachers, student are also expected to play their part for the successful attainment of learning transfer. To this effect, learners need to make sustained effort to figure out similarities between tasks in the EFL writing classes and those in the content area learning as a way to transfer the writing tools to the target situation. For example, upon facing a content area writing task requiring a cause-effect link between two phenomena, the student must make a connection between this task and his/her EFL writing practice on cause-effect paragraphs or essays. Yet learners should be aware that there would not be a one-to-one match between tasks for all instances. Thus, where there is no one-to-one similarities between the tasks in the two settings, the learners are expected to make mindful abstraction of the skills or knowledge learned in the EFL/ESL context to adapt and repurpose them to content area writing processes (James, 2006a, 2010; Lui, 2018). For example, a learner is expected to adapt the skills of outlining the contents of a three-paragraph short essay (written in EFL writing course) to work out an outline of a multiple-page term paper dealing with an academic theme with different sub-topics.

Apart from the learners and EFL writing teacher roles, the activity system theoretical model assume roles of content area professors in setting a landing stage for learning transfer. This consideration of the role is based on the assumption that learning transfer

cannot occur in a vacuum. Thus, as a primary condition to learning transfer, content area professors are expected to design and assign writing tasks required by the standard content area course syllabus (Russell, 1995; Ferguson, 1997; Maimon, 2002). Further, as a social action to acculturate the students into the academic discourse community, they need to raise their awareness on the role of writing competence for successful academic content learning. For example, they are expected to attach a deserving value for a writing competence students demonstrates in accomplishing an academic learning task (Ferguson, 1997; Leki, 1995).

Finally, While this model captures the whole process of learning transfer through the operation of the activity system, the level of success to attain the desired goal mainly depends on the efficiency of the actors in carrying out their respective roles. Thus, failure in learning transfer is largely explained in terms of the actors' failure in carrying out the expected roles and forces responsible for an inefficient functioning of the activity system cross its components. This study draws on these theoretical insights to assess the magnitude and variety of learning transfer from an EGAP course and the variables responsible for the success or failure in attaining this desired goal.

Methodology

Study setting and research design

This study was conducted in Ethiopian higher education setting where English is learned as a foreign language and an EGAP writing course is offered to all first year undergraduate students across academic disciplines. The research employed an exploratory study design combining quantitative and qualitative tools. It particularly used corpus counts to generate quantitative data indicators of learning transfer. Also, it employed qualitative exploratory tools such as in-depth interview and document analysis to capture the variables associated with the phenomenon at greater depth.

Participants

The participants in this study were drawn from a population of EGAP writing teachers, students and content area professors. The students were selected in their first year EFL writing classes and followed up in their Year III academic content learning classes (after two years). Multi-stage sampling technique was employed to draw the students. First, academic disciplines representing all discourses communities in the universities (natural science, social science, engineering, Business and economics) were selected through stratified sampling. This is followed by a simple random sampling of departments from each faculty.

Once the departments are determined, the students were selected through purposive sampling. It is important to note that the students were selected at the end of the EGAP course semester, based on their achievement in the course. As such, only those who have scored an A (who met >85% of the requirement of the EGAP course) were taken from each discipline purposively. This purposive sampling is made to avoid extraneous variables that may cause failures of transfer because of the deficiency of the students themselves (a lesson drawn from James, 2010).

It is also important to note that no equal number of students scored >85 in the GEAP course across departments. The variation ranges between 7 (in physics) to 15 (in

political science). To avoid a wider variation, the range of the sample was limited to 7–10 students. Through these steps, 58 (37 male 21 female) students were taken from seven departments. These same sample students were followed up in the content learning classes in Year III content learning classes after two years.

Turning to the selection of EFL writing teachers, the researcher employed comprehensive sampling techniques through which 7 EGAP writing teachers were drawn. Finally, systematic random sampling was also used to select 14 content area professors (2 professors for each discipline) handling the teaching of academic content in classes of Year III target students.

Data Collection Instruments

The exploration of issues surrounding transfer of learning inherently requires generating data from EFL course materials, content area learning materials and instructional processes. To do this, content analysis, corpus count, and in-depth interviews were carried out. Document analysis was made on the teaching materials of the writing course, writing products of students, the writing tasks of content area tasks, and writing outputs of students in these courses. The document analysis made on the EGAP syllabus was mainly meant to assess the language features, skills and strategies contained in it and the proportional coverage given to each of the elements. As a preliminary step into the data generation, the following elements of the GEAP writing course were identified.

Table 1 below shows the language features, writing genres and process of practices covered in the EGAP course. The content of the course and distribution of practice time is universally used across faculties in the study site. These language tools are used as a reference in the assessment on the alignment of tasks and rate of learning transfer. Finally, it is important to note that apart from contents of the course, the writing tasks in the GEAP courses and output of students were comprehensively taken (from sentence level to essay level writing practice) as a way to capture a clear picture of the writing content and nature of practice.

Before the student had taken the GEAP course, a pre-test had been administered on each contents of the course. The results from the pretest were compared with the

Table 1 Language features, Skills and strategies covered in the GEAP Course

GEAP course contents and practices	Distribution of time for practice	
	Practice time in hours	Proportion of time allocated
Basic sentence structures	4	8.3
Sentence types	5	10.4
Coordinating conjunctions	3.5	7.3
Correlatives	3.5	7.3
Conjunctive adverbs	4.5	9.4
Subordinate conjunctions and appositives	7.5	15.6
Genre types and Discourse structures	7	14.6
General vocabulary	5	10.4
Writing Processes and strategies	8	16.7
	48 hours	100

achievement of the students across these contents after they took the GEAP course. This comparison was made to ensure that the knowledge and skills transferred to the content area courses (where they do) come from the delivery of the EGAP course. The statistical output from a Mann–whitney test showed that the students had not had the knowledge of the grammatical tools (Mean difference = 65, p , 0.014), the skills of composing paragraphs (Mean difference = 75; p , 0.0018).

Once this is ensured, an assessment of learning transfer from the GEAP course to content area writing tasks was carried out. For this assessment, the researcher took all types of tasks including examination questions that require writing. Apart from the tasks, proposed answers to the writing tasks were prepared by content area professors with some degree of consultation from the researcher. The answers largely consider the requirements of the standard academic course syllabus. The course syllabi in all forms of writing tasks requires students to demonstrate grammatical accuracy and use of academic vocabulary required by the disciplinary discourse. Further, for home-take assignments and term papers, students are expected to make sufficient exploration of ideas on writing topics. Also, they are expected to critically examine, interpret, paraphrase, synthesize ideas, and present them with clear organizational structure.

The proposed answers, prepared through a consideration of these requirements, were used as a reference to (1) the level of alignment between the contents of the EGAP and the demands of the content area writing tasks, (2) learners' performance in transferring the language features, writing processes, and strategies of composing the writing, and (3) how much the content area writing task demands more than what is practiced in the EGAP course.

To determine the level of alignment between the two writing contexts, two sets of data were produced. First, a count of grammatical functions in the proposed answer and written output of the students was made. The details of counting steps from both documents is described in the next section (methods of data analysis) in combination with the data analysis process.

Secondly, as a way to generate data on the level of alignment between the two writing contexts and rate of transfer on writing processes and strategies, a rating rubric was employed. The rubric particularly targets the strategies and skills of exploring/generating ideas, analyzing, and synthesizing them into a text meeting the requirements of the standard academic course syllabus.

Two EFL educators were involved in the rating of how much the EGAP course contents align with these demands of the course (also considered in the proposed answers). Also, they rated transfer effect on uses of writing genres, writing processes, and strategies. This rating is made in terms of students' performance in directly using or adapting these tools (practiced in the EGAP course) to accomplish the content area writing tasks according to the requirement standard content area course syllabus (outlined above). An inter rater reliability was run on the ratings in both cases (the rate of alignment and transfer). The results were found to be consistent (r , 0.0.8, 0.75).

Finally, in-depth interview was held with students in the middle and at the end of the content area course semester. In the interview, the students were made to freely reflect on the level of alignment between the EGAP writing practices and the demands of the content area writing tasks. Particularly, they were given the chance to freely comment

on (1) the relevance of each of the contents covered in the EGAP course to their content area writing tasks with specific instances showing the relevance or irrelevance, and (2) the effort made by their teachers in ensuring the relevance of the contents of the course. Further, they were made to reflect on (1) the quality of their content area writings, (2) why they wrote their content area assignments the way they did, (3) whether and how their practices in the EGAP course help them to compose their content area assignments.

Methods of data analysis

The study employed non-parametric statistical package and multi-stage qualitative data coding and analysis techniques. The quantitative data mainly came from (1) the contents of the EGAP course, (2) the students' written output in both contexts, and (3) the proposed answers to the writing tasks in the content area learning. This set of data were meant to attain two purposes. First, it is meant to assess the level of alignment between content area writing tasks and the contents and writing practices of EGAP course. Secondly, it serves the purpose of determining the degree of learning transfer learners made from the GEAP course to content writing tasks.

The determination of alignment between the contents of the EGAP course and the demands of the content area writing course is made in two broad areas: (1) alignment in grammatical features and (2) concordance in writing strategies and processes. To determine the level of alignment in grammatical features, the researcher moved through a couple of steps to generate quantitative data from the relevant documents. First, a count of grammatical functions in the proposed answer was made. For example, the number of correlatives (one of the grammatical features used in the proposed answers in which they are required for the communicative purpose) was counted across the tasks. The quantitative count for this grammatical feature is divided by the total number of grammatical functions (e.g. correlative conjunctions, subordinates, coordinate conjunctions etc.) used in the proposed answer and this is multiplied by hundred to determine the percentage of demand for that particular grammatical feature in the content area writing tasks.

It is important to note at this point that while a corpus count can be employed for counting the grammatical features, it is not possible to use it for writing processes and strategies. Thus, a rating rubric was employed (as indicated in the last section) to assess the level of alignment on the writing process and strategies in the two contexts (the EGAP course context and the content area writing tasks). This rating of alignment is summarized into a percentage point which was also verified using chi square goodness-of-fit test.

Turning to the assessment of the transfer effect, a count of specific grammatical feature from the students' written output on content area tasks was made. This quantity is divided by the frequency of this same specific grammatical feature (for example, correlative conjunctions) occurred in the proposed answer. This ratio is multiplied by hundred to work out the rate of transfer for the specific grammatical feature and this rate was further verified through chi square goodness-for-fit test.

The transfer effect on uses of writing genres, writing processes, and strategies was determined based on the rating made by the professional educators on students' performance in terms of directly using or adapting these tools (practiced in the GEAP course)

to accomplish the writing tasks according to the requirement of standard content area course syllabus (outlined in the last section.) The data from the ratings of transfer was analyzed using percentage and chi square goodness-for-fit test.

Finally, the data from the interview was coded and categorized into themes of evidences on (1) level of alignment between the contents of the EGAP course and demands of the content area writing courses, (2) the learning transfer attained, and (3) the variables determining the carryover impact of the EGAP course. Also, the themes from the interview were combined with the data from written outputs of the students. Through this combination, a cross validation of data from the two sources has been made.

Results and discussion

As outlined at different points in this paper, the study moved to answer three interconnected questions. Accordingly, it employed a three-step inquiry framework to answer these questions. Also, the presentation and discussion of data follows these steps as an organizing framework. First, it presents the data on the level of alignment between the contents and practices covered in the EGAP course and the linguistic resources and thinking processes demanded by the content area writing tasks. In the second step, the rate of transfer for those language tools to content writing tasks is determined. Finally, the variables responsible for better transfer and failure of transfer are explained.

Results

The figures presented in Table 2 below reveal mixed picture on the alignment level of language features and practice of EGAP course and Linguistic resources and thinking processes demanded by content area writing tasks. While some of the language features, for example, basic sentence structures ($>78\%$, $P < 0.05$), coordinating conjunctions ($>75\%$, $P < 0.05$) and Subordinate conjunctions ($>80\%$, $P < 0.05$) are widely required as instrumental tools for the desired communicative purposes across disciplines, other language elements (for example, knowledge of sentence types) have little or no space in the accomplishment of the writing tasks ($<15\%$, $\mu < 3.84$; $P > 0.05$).

Also, writing genres and practice processes are the other category of language tools that are significantly demanded, suggesting that knowledge of these elements are relevant to the academic writing tasks. Yet low level of alignment is observed in writing processes and strategies ($<16\%$, $\mu < 3.84$; $P > 0.05$), suggesting a discrepancy between the practice students received in the GEAP course and the tools demanded by the academic content writing tasks. The evidences, consistent with findings of previous studies (Devitt, 2007; Linda & Zepernick, 2007), show that the writing processes and strategies in GEAP writing course mainly involve exploring learners personal experiences while those in the academic content courses require exploring scientific concepts from different sources, analyzing and synthesizing them into writing texts in response to a content area task.

Another important point observed in the figures is the variations on the level of alignment between contents of the EGAP course and the demand of content area writing tasks across disciplines. Looking into the figures in Table 2 above, one can observe that the demands of tasks in the social sciences (political science and geography) align with the grammatical features and writing genres covered in the EGAP course (75–90%)

Table 2 Level of Alignment between Contents of EGAP Course and Demands of Content area Writing Tasks

Language features and processes covered in GEAP courses	Rate of alignment between language features and practice of EGAP course and Linguistic resources and thinking processes demanded by content Area Courses (%)						
	Economics	Bio	physics	Polit. Sc	Geography	Mechanical Engineering	Computer science
Basic sentence structure	78% $\mu = 7.57$, $P = .0145$	83% $\mu = 15.3$ $P = .0115$	71% $\mu = 11.3$ $P = .0115$	87% $\mu = 12.72$, $P = .0111$	90% $\mu = 11.8$ $P = .0013$	69% $\mu = 9.89$, $P = .0245$	72% $\mu = 13.5$ $P = .0186$
Sentence types	13% $\mu = 2.57$, $P = .145$	13% $\mu = 1.89$ $P = .256$	14% $\mu = 1.79$ $P = .278$	14% $\mu = 2.32$ $P = .414$	12% $\mu = 2.57$ $P = .671$	14% $\mu = 2.43$ $P = .387$	12% $\mu = 2.57$ $P = .545$
Coordinating conjunctions	78.5% $\mu = 5.86$, $P = .0113$	78% $\mu = 5.387$, $P = .0298$	77% $\mu = 5.239$, $P = .0289$	81% $\mu = 9.57$, $P = .0145$	80% $\mu = 8.76$ $P = .0211$	68% $\mu = 6.53$, $P = .0175$	72% $\mu = 4.57$, $P = .0265$
Correlatives	53% $\mu = 6.54$ $P = .0345$	52% $\mu = 2.57$, $P = .0382$	54% $\mu = 2.57$, $P = .0382$	61% $\mu = 7.31$ $P = .0283$	62% $\mu = 8.91$ $P = .0195$	48% $\mu = 4.11$ $P = .0488$	51% $\mu = 6.21$ $P = .0367$
Conjunctive adverbs	52% $\mu = 6.54$ $P = .0381$	54% $\mu = 3.97$ $P = .0336$	56% $\mu = 4.59$ $P = .0385$	60% $\mu = 5.31$ $P = .0283$	65% $\mu = 8.51$ $P = .0195$	50% $\mu = 5.88$ $P = .0488$	57% $\mu = 4.21$ $P = .0367$
Subordinate conjunctions and appositives	89% $\mu = 17.87$ $P = .0085$	76% $\mu = 11.3$ $P = .0125$	77% $\mu = 12.1$ $P = .0136$	85% $\mu = 17.72$ $P = .0111$	87% $\mu = 21.18$ $P = .0017$	71% $\mu = 9.89$ $P = .0284$	73% $\mu = 13.5$ $P = .0186$
Genre types and Discourse structures	76.5% $\mu = 5.76$, $P = .0213$	72% $\mu = 5.79$, $P = .0218$	73% $\mu = 5.79$, $P = .0218$	80% $\mu = 8.57$, $P = .0145$	82% $\mu = 10.76$ $P = .0114$	70% $\mu = 7.35$ $P = .0154$	72% $\mu = 4.85$ $P = .0265$
Vocabulary	24% $\mu = 2.37$, $P = .175$	25% $\mu = 2.25$ $P = .356$	23% $\mu = 2.16$ $P = .372$	35% $\mu = 2.11$ $P = .414$	28% $\mu = 2.17$ $P = .371$	19% $\mu = 2.43$ $P = .387$	22% $\mu = 3.77$ $P = .445$
Writing Processes and strategies (skills of exploring ideas, analyzing, organizing and synthesizing)	12% $\mu = 2.11$, $P = .0715$	15% $\mu = 1.57$, $P = .1145$	14% $\mu = 1.7$, $P = .1373$	5% $\mu = 1.21$, $P = .192$	8% $\mu = 2.16$, $P = .414$	9% $\mu = 2.57$, $P = .378$	12% $\mu = 2.25$, $P = .0892$

more than those in the natural sciences (Physics and biology) (72–83%) and engineering courses (50–72%). Yet a consistently low level of alignment is observed in the area of vocabulary practices (21–35%) and skills of exploring, analyzing, organizing and synthesizing ideas across disciplines (5–15%).

Finally, it is important to note that the level of alignment between the EGAP course practices and the demands of the content writing tasks tells us only half of the story on the carryover impact of the EGAP course. Thus, as an extension of this evidence, quantitative and qualitative data has been presented on learning transfer made by the learners.

The figures in Table 3 below demonstrate the rate of learning transfer from the EGAP course to academic content writing tasks. The chi-square test results in the table show

Table 3 Transfer of language features and writing processes across academic writing settings

Language features and writing processes covered in GEAP course	Rate of Transfer to Academic Writing settings					
	Economics	Bio	Polit. Sc	Geography	Mechanical Engineering	Computer science
Use of Basic sentence structure	81% $\mu = 13.67$, $P = .005$	86% $\mu = 21.57$, $P = .003$	83% $(\mu = 13.67$, $P = .017)$	77% $(\mu = 2.55$, $P = .0385)$	82% $(\mu = 3.76$, $P = 0.002)$	93% $(\mu = 2.23$, $P = .002)$
Use of Coordinating conjunctions	68% $(\mu = 6.52$, $P = .026)$	76% $(\mu = 10.72$, $P = .016)$	71% $(\mu = 3.16$, $P = .028)$	72% $(\mu = 2.67$, $P = .0217)$	52% $(\mu = 9.57$, $P = .0385)$	72% $(\mu = 5.67$, $P < .0173)$
Use of Cor-relatives	58% $(\mu = 4.33$, $P = .0311)$	62% $(\mu = 3.42$, $P = .0298)$	69% $(\mu = 3.67$, $P = .0256)$	61% $(\mu = 5.67$, $P = .0301)$	51% $(\mu = 25.87$, $P = .0478)$	52% $(\mu = 4.24$, $P = 0.048)$
Use of Adver-bial conjunc-tions	57% $(\mu = 4.73$, $P = .038)$	65% $(\mu = 4.56$, $P < .031)$	67% $(\mu = 3.89$, $P = .028)$	61% $(\mu = 5.67$, $P = .034)$	51% $(\mu = 25.87$, $P = .047)$	52% $(\mu = 4.24$, $P < 0.048)$
Use of Subordinate conjunctions and apposi-tives	76% $(\mu = 25.17$, $P = .001)$	80% $(\mu = 56.76$, $P = .018)$	78% $(\mu = 31.89$, $P = 0.028)$	82% $(\mu = 2.11$, $P < 0.018)$	76% $(\mu = 7.67$, $P = .021)$	53% $(\mu = 5.27$, $P = .042)$
writing processes and strategies for disciplinary writing	13% $\mu = 1.89$, $P = .81$	14.5% $\mu = 2.11$, $P = .78$	14% $\mu = 2.01$, $P = .81$	12% $\mu = 2.42$, $P = .87$	13.5% $\mu = 2.11$; $P = .78$	11% $\mu = 1.31$; $P = .88$
Discourse types and structures in disciplinary writing	22% $\mu = 2.22$, $P = .64$	24% $\mu = 2.31$, $P = .68$	21% $\mu = 2.21$, $P = .66$	23% $\mu = 2.23$, $P = .68$	19% $\mu = 2.01$, $P = .77$	18% $\mu = 1.96$, $P = .82$
Vocabulary	22% $\mu = 2.22$; $P = .65$	22.5% $\mu = 2.23$, $P = .66$	21% $\mu = 2.01$, $P = .68$	18% $\mu = 1.96$; $P = .74$	16% $\mu = 2.21$; $P = .75$	12% $\mu = 1.87$, $P = .76$

that learners across departments demonstrate higher rate of learning transfer in basic knowledge of sentence structures (> 80%, $P < 0.05$), use of coordinating conjunctions (> 77%, $P < 0.05$) and subordinate conjunctions (> 75%, $P < 0.05$). A reasonably moderate rate of transfer is observed in correlative conjunctions (50–62%, $P < 0.05$) and adverbial conjunctions (50– 58%, $P < 0.05$). Yet low rate of transfer is found out in the use of discourse types and discourse structures (< 25%, $P > 0.05$) and lexical uses (< 23%, $P > 0.05$). Most considerably, the overall carryover effect of the course on writing processes and strategies to disciplinary writing is very low (< 15%, $P > 0.5$).

Discussion

While the statistical figures summarize the larger picture on the rate of transfer, the details behind these evidence are further substantiated through extracts from writing products and the reflections of students. To this end, the written outputs of students demonstrate that there is visible transfer of learning in the use of cohesive tools (coordinating conjunctions, subordinate conjunctions and appositives). For example, the students in their written products dominantly used appositives as meaning making tools to meet the demands of the task in general. Further, students reported that their practices

on appositives in EGAP course helps them to master the use of appositives which they need to communicate their answers to definition questions in their content area tasks.

In one of such tasks in mechanical engineering, the student defined *milling* as “... a machining process **that** rotates a rotary cutter with several teeth.”

In a similar assignment a student in biology wrote:

Active transport is a biological process that involves the movement of particles from low concentration area to high concentration area.

A similar evidence is visible in writing outputs of students from the department of economics who wrote

.... The increase in income growth increase the aggregate savings of people that participate in the labor force....

*...the dependent family members increases the dissavings of people who were saving
....*

Reflecting on the carryover effect of their GEAP course to their academic language use, the students remarked that they could see that the practices on relative pronouns definitely helps them to communicate their meanings properly in their writing tasks.

A student in computer engineering pointed out:

.... Yes ... no doubt ... the notes and exercise on relative pronouns which who that help me how to define this concept ... I remember our instructor (EGAP course teacher) told us this fact. Particularly that the use of which and that are important in defining concepts in science and technology.

Also, other students reported similar testimony with some additional remarks that they had some knowledge of using appositives before they took the GEAP course, yet the practice in the GEAP course consolidated their knowledge of the form and the use of the grammatical structure.

Moving to other sets of cohesive tools such as time adverbials (when, until, while etc.), comparison conjunction, cause-effect conjunctives, and contrast connectives, one could see that these linguistic tools are widely used in the writing tasks evidencing (1) the space of use/demand for the linguistic tools in the content area tasks and (2) the learning transfer attained from the GEAP course to the language use setting. In their interview reports, the students mentioned these facts substantiating the evidences.

One of the participants from biology reported:

...yes our teacher asks us to tell them differences or similarities between concepts ... or how they are related in cause or effect. In this case we have to use conjunctions to express our ideas correctly. For example, in this assignment, the teacher wants us to tell him the difference between diffusion and active transport. As you can see, we try to use conjunction of contrast here.

In the written output, the student wrote :

.... Diffusion is a movement of particles from high concentration area to low concentration, whereas active transport involves movement of particles from low concen-

tration area to high concentration area

Similar sets of evidences were visible in written outputs of students in mechanical engineering. A student from this department, in his home-take assignment on mechanical operation cars and a lifter, wrote:

When we pull the first lever backwards, the fork tilts down, and it stays down until we push the second level. It means it moves up when we push the second lever forward...

Thus, from the overall evidences of the interview and the written texts, one can see that learners made connections between their EGAP practices on grammatical features and those in their content learning. Further, they make what James (2010) and Lui (2018) call *mindful abstraction of their knowledge* of grammatical functions to apply it to desired written communicative purposes in their academic learning. Also, the evidences suggest that the EGAP writing teachers play the role of hugging (raising the meta awareness of learners) on the practical use of such language functions.

Sentence structures in general

Sentence structures were one of the target of practice in the GEAP course. A problem-approach is employed in the practices of these language feature. The package of practice came under the title *fixing faulty sentences*. The practice particularly targets problems such as run-on sentences, misplaced qualifiers, comma splices, dangling modifiers and fragments. In engaging in these practices, the EGAP course teachers tried to draw the attention of learners to such grammatical errors common among EFL learners. Further, they made them aware of the strategies to edit themselves in their writings in the future.

Turning to the transfer of the learning in the academic writing tasks, one can see that the students carry these skills to the writing tasks of their academic subjects. This is largely evident in their writing outputs which are more or less free of run-on sentences, fragments, and misplaced modifications. Except limited errors in tenses and mechanics, the students use correct sentence structures to express their meanings.

Reflecting on the learning practices and their carryover effect to the real life writing practices, the students reported that the specific sections on such common errors raise their awareness of the errors they would commit before. This, in turn, helps them to self-edit their sentence level writing productions.

A participant from the department of economics remarked:

In [our]writing course [GEAP course], the teacher emphasized the major errors committed by most students in Ethiopia and other contexts [foreign language settings]....and he [our teacher] told us to be aware of these common error we commit. I still remember his advice as I write a sentence.

I make sure whether my sentence has all the components of a sentence whether it is free of those errors of fragments, run on sentences and wrong placing of qualifications and I do this when I write my assignment on determinants of saving.

In his assignment, the learner wrote:

...dissaving is high in families with many dependents. Gradually, the dependent

*family members increases the dissavings of people **who** are saving
 the increase in income growth increase the aggregate savings of people **that** participate in the labor force....*

His sentences have clear components of a simple and complex sentence with no significant grammatical errors of fragment or placing of modifiers except minor errors of tense (for example, the use of **are** in the last sentence). The written output of students from other discourses also demonstrate similar evidences of transfer.

Finally, it is important to note one exception to the remarks of the students. The students remarked that the learning of sentence types per se (covered in their GEAP course) is not directly relevant and transferable to their academic writing activities.

One of the respondents remarked :

The learning of simple sentence, compound sentence, complex sentence and compound-complex sentence is not sensible for me. My writing does not require me to identify types of sentences. We spent a lot of time on identification of sentence types in our English course [GEAP course] Also we take quizzes and a final exam with identification of sentence types...but our writing does not require us to identify the types of sentences.

Another participant, while she made a similar remark, also added:

... Instead of spending a lot of time on sentence type identification ... why not practicing on using these sentences to express our ideas and correcting our errors while using the sentences in expressing our ideas...

In sum, while the problem-based approach practices on sentence structures has higher carry over effect, the practices on identifications of types of sentences is reported to be weak. Looking into these evidences through the theoretical lenses of the activity system model (Russell, 1995), one could see that students have carried out their roles of making metacognitive abstractions on the relevance/ irrelevance of the grammatical features from the EGAP writing course. Conversely, the EGAP writing teachers partially failed to target transferable skills in their instruction.

Failure of transfer and underlying variables

It is implied in the presentation of data earlier and in the remarks of students that not all areas of skills or language features are transferred to academic writing settings. To this end, two set of evidences are visible in the data. The first set is related to academic vocabulary. The students felt that their writing course did not contribute to the development of academic vocabulary power. Their academic writing requires the use of common and specialized words that accurately communicate content meaning in their assignments and exams. Yet they complained that they did not have an opportunity to acquire these words in their EGAP writing course.

A student from the department of economics remarked:

... the course did not give me any knowledge of vocabulary useful for my writing [in the content area learning].as you see, for example, this assignment is about saving It needs words that express the concepts that the scholars used to explained the ideas

on the topic the ideas are deep. You need strong words to express these concepts, but we did not have Practice on such words...

Looking into the complaints, one could infer the historical root of the problem connected to the contents and learning practices of the EGAP writing. First, the writing practices (both at the sentence or paragraph level) did not involve or invite the use of academic vocabulary relevant to disciplinary meaning making. This is mainly because the writings were largely on the social or personal experiences of students. In the analysis of the writing, the researcher could observe that the students were not made to write on topics of academic substance. They were made to write on topics such as *my life at the university dormitory life, my secondary school years, difference and similarities between my home town/ village town and my college town ... etc.*

Further, in his assessment of the topics of writing in the EFL writing course, he could not find any topic that invites students to use academic vocabulary in general or the specialized vocabulary of the students' disciplines, nor could he see a separate focus on vocabulary set relevant to content area writing practices. This suggests that the instructional practice on the vocabulary section of this course is not informed by critical pedagogical reflections targeting far learning transfer (Leki, 1995). The teachers, at least, should have taken bridging instructional actions such as including guided or controlled vocabulary practices targeting disciplinary vocabulary in their instructions. Yet no sign of effort was visible throughout their instructional practices observed and learners carried no vocabulary competence significantly relevant to their content area writing practice.

Turning to the other major set of skills, one could still see very little or no transfer occurred in pre-composing strategies, organizing processes, and synthesizing skills to content area writing practice. In their responses to the interview question, the students reported that they did not go through major steps of composing an academic assignment such as planned process of exploring ideas, framing an outline, developing and synthesizing scientific ideas. Further, their writings do not show defined rhetorical structures with clear main idea and relevant details. The students mention their points with no convincing flow of thought. They employed bulleted listing of points instead of connected stretch of thought. Moreover, their writings are mere declaration of facts with no critical examination and synthesis of points from different sources.

Yet it is important to note that students in their EGAP writing course had passed through prewriting stages of brain storming on writing topics, framing main ideas, outlining their writing, drafting, and editing. Also, the students were made to identify the various discourse structures such as argumentation, cause-effect relationships, description, comparison, and explanation. They also practice composing texts in these rhetorical structures at paragraph level. Yet no sign of transfer is visible in the written output of students. The writings of the students have no clear organizational framework (introduction, body of points or sub topics, summary or conclusion). Most of it is bulleted lists, phrasings and direct copy of ideas from sources with no analysis or synthesis of points.

From a combined look into the two sets of evidences and others mention earlier, one can infer varying variables responsible for the failure of transfer for the later set of skills and strategies (planned process of exploring ideas, framing an outline, developing and synthesizing scientific ideas, and using proper discourse genres in composing their

writing). First, the students might fail to transfer these sets of skills because teachers failed to make a bridging instructional actions (Fallon et al., 2009) between the EGAP writing and content writing practices. Even though the students practiced brainstorming as a means of generating ideas, making an outline, drafting and writing a final piece in the EGAP writing, the practice massively draws from learners personal or social experiences, not from the reservoir of their academic reading or thinking.

As it is reported by the learners and observed in their writing, no attempt was made by the writing teachers to make students write in reaction to, at least, a simulated academic writing task which would have given them the chance to go through the steps of writing for this practical purpose. The EFL writing teachers take it for granted that these skill of writing practice on the personal and social experience of students would transfer to the contexts of writing in the disciplines. Yet this did not happen. The written output of the students in the content areas—while it is reasonably free of grammatical errors—is written with no clear organizational framework (introduction, body of points or sub topics, summary or conclusion). Also, most of it is bulleted lists, phrasings and direct copy of ideas from sources with no analysis or synthesis of points. The evidence is also consistent with cautious recommendations put forward by various writers regarding dangers causing such failure of learning transfer. These writers (Barnett & Ceci, 2002; Leki, 1995; Lobato, 2012) particularly emphasize that practice of skills too tightly bound to a single context with no sufficient bridging instructional actions significantly limits its transfer to a different context.

Finally, while the instructional actions of teachers plays a significant role in the success or failure of learning transfer, learners also play their part in determining the quality of the outcome. Particularly, learners are expected to play the role of mindful abstraction and repurposing of skills and strategies to apply to new writing situations (Fallon et al., 2009; Russell, 1995). Yet looking into the evidences in this study, no such significant effort is made by the students to repurpose and vitalize the brainstorming, outlining, drafting and editing skills of the personal writing to academic content writing processes. This may suggest that this ability to make mindful abstractions and repurposing of skills to new situations needs more cognitive maturity and some level of socialization into the academic culture. Emphasizing this point, Smit (2004) argues that students in the first year of higher learning are too immature to make such meta cognitive actions of abstracting and repurposing of skills.

This is clearly inferable from students' reflection on the quality of their content area writing. The students were asked why they did not use the writing processes and organizing strategies of an academic paper in their content areas. Some of them believe that showing that kind of writing organization is required for an EFL writing course, not for an academic writing assignment. Even they believe that these skills of organization are simply meant to meet course requirements in an EFL course and they are limited to this purpose.

Others externalize their failure of transferring these skills to their professors' (content area teachers) failure to guide them compose their assignments. According to the students, the content area professors simply assign the task by saying "write a term paper on topic x". Still other students reported that their content area professors do not attach value for such language use issue so long as they (students) include the required scientific

information in the text. These remarks of the students largely substantiate their inability to work out the skills and repurpose them for academic writing ends. The assumption behind taking an EFL writing course is to make students carry out their academic writing independently. Of course, the content area professors are expected to set standard of expectation for the accomplishment of the task. As part of setting the expected standard, they are expected to (1) tell the students to compose their assignment following the conventions of academic writing and (2) deservedly reward the writing competence demonstrated by students (Ferguson, 1997). Yet students' blaming of content area professors for not guiding them in their writing is a mere externalization of their deficiency to accomplish the task (Lobato, 2012).

Finally, another group of students responded that they did not apply these organizational skills mainly because their assignments are largely calculation-heavy that do not invite for organizing ideas into rhetorical structures of the discourses they practice in the EFL writing course. Similarly, others indicated that their assignments are highly technical operations requiring little writing or sophisticated analysis and lengthy rhetorical structures. Yet as a cross validation of their remarks, the researcher examined the nature and complexity of the tasks assigned to these students. In a close examination of these tasks, it is found out that—though the tasks involve calculations and technical operation—they requires analysis and synthesis of ideas and organizing them using expository rhetorical structures which the students could not do.

In sum, the students' justification for their low quality of discourse level writing competence are mere externalization of their inability to adapt their skills and strategies of writing personal paragraphs to composing academic content writing. This inability of the learners also suggest teachers' failure to employ what Perkins and Salomon (1992) and Russell, (1995) call *hugging* pedagogical actions in which they tell and demonstrate how these novice group of students would adapt the use of these skills and strategies in different contexts.

Conclusion and limitations

The results in this study demonstrate that the magnitude and quality of learning transfer from the EGAP writing course to content area learning settings is insufficient. Academic writing competence is composed of knowledge of language features, skills and thinking strategies. Students are expected to make a comprehensive transfer of this package of competence as a way to be functional in academic writing communication. Yet the evidence show that only surface level knowledge of grammatical features are transferred from this writing course to this target situation. Thinking strategies for exploration of scientific concepts, skills of analyzing and synthesizing ideas, and organizational competence show little or no transfer to the academic writing context across academic discourses.

This, in effect, show that the ultimate goal of the course has not been attained to the level required. Further, the results suggest that the poor transfer from the writing course to the immediate undergraduate academic writing settings would have a damaging repercussion on the writing performance of student at the graduate level learning and in their professional life. Looking into the poor learning transfer from this course to the life

of students, the researcher may also tempt to argue that the investment (time, money, and professional expertise) expended in this course is largely a waste with little return.

Finally, although the findings of the study revealed and to some level suggest these evidences on the subject, it is important to note that the operationalization of the study has been limited by some variables that prevent generation of more illuminative picture of the phenomena. For example, the addition of more EFL educational settings with more sample of students and consideration of more content area courses (more than two courses for each department) may give us a clearer or different picture of the phenomena. Further, the results would be more illuminative if EFL teachers and content area professors had been given more chances (as much as the students did) to voice their view on the issue. Yet transfer of learning is such a complex phenomenon which is difficult to capture from all angles in a single study. Thus, future studies may take these perspectives to further illuminate the phenomena in such educational contexts.

Implications

Even with these limitations, the evidences from this study bear practical implication that would inform administrative decisions and instructional practices for better learning transfer. As such, the evidences suggest the need for meaningful actions from higher educational institutions and authorities. To this end, the authorities and institutions have two options. First, they may abolish the course and reconstitute it into two courses. The first course, which can be offered in the first year, may exclusively target grammatical features. The other course could be offered in the second year or third year of the undergraduate program where students could reach a cognitive readiness to make metacognitive abstractions of adapting and repurposing thinking processes and strategies from an EFL writing course to a target situation. The content would mainly target identification of academic writing genres, practices of academic vocabulary, writing process and strategies. All this should be connected to a content area learning with practical bridging and hugging actions through which students are guided by the EFL writing teacher to compose typical content area writing tasks. This course would also have a room for content area professor to contribute their part in guiding the students to grow up into writers in their disciplines.

The second option is maintaining the present course structure yet with more actions that sets the foundation for transfer of writing skills. As a way to achieve this, the course need to include authentic academic reading texts in which the students will discover the rhetorical, lexical, syntactic, organizational features and major conventions of academic writing. This needs to be accompanied with simulative writing practices in which they will pass through the strategies and process of composing and academic paper (in contrast to writing a paragraph on personal experiences). Further, an assessment practice ensuring the attainment of the transferable skills need to be in place.

Finally, the instructional practice in both situations (option one and option 2) should be accompanied with research actions in which practitioners investigate viable ways of bridging and hugging action to attain transfer of learning in this educational practice.

Abbreviations

EGAP: English for general academic purposes; EFL: English as a foreign language.

Authors' contributions

AYW carried out the study and drafted the manuscript. This same author performed the data collection and analysis. The author read and approved the final manuscript.

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Availability of data and materials

Because some of the data has been generated with a courtesy of anonymity of the subjects, it is impossible to make it available. Yet the data on the teaching material (GEAP course book) can be accessed through the authors.

Declarations**Competing interests**

The author declare that he has no competing interests.

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