LET: Linguistics, Literature and English Teaching Journal
||Volume||11||Issue||2||Pages||24-42||2021||
|P-ISSN: 20869606; E-ISSN: 25492454|
Available online at: http://jurnal.uin-antasari.ac.id/index.php

THE INTEGRATION OF PROBLEM-SOLVING SKILLS IN ENGLISH IN ACADEMIC DISCOURSE SYLLABUS AT ENGLISH LANGUAGE EDUCATION STUDY PROGRAM

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Article History:

Received: 12 October 2021

Accepted: 23 December 2021

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Keywords:

English in Academic discourse; problem-solving skills; syllabus;

Problem-solving skills have become the essential skill needed in the recent years. However, less attention has been paid to the integration of problem-solving skills in the course syllabus. Hence, this study aims to discover the extent to which problem-solving skills are integrated in the syllabus of "English in Academic Discourse" course and which components of the syllabus integrate problem-solving skills. The 21 words/phrases/sentences that indicate problem-solving skills in the syllabus components of English in Academic Discourse course in English Language Education Study Program were analyzed using problem-solving skills frameworks and indicators obtained from PISA (OECD, 2013), Trilling & Fadel (2009), and Partnership for 21st Century Learning Framework (P21, 2019). Qualitative content analysis is used as the methodology of this study and deductive content analysis by Mayring (2014) is used as the data analysis procedure of this study. The findings of this study show that all of the problem-solving skills indicators–exploration, understanding, representation, solution identification, planning, plan's execution, monitoring and reflection–are integrated explicitly and implicitly in the course

syllabus components. However, only five out of eleven syllabus components–basic information of the course, learning outcomes, course objectives, learning method, and course activities–integrate it.

INTRODUCTION

Problem-solving skills is believed to be needed to overcome the challenges in 21st century (Funke et al., 2018). Binkley, M., Erstad, O., Herman, J., Raizen, S., Ripley, M., Miller-Ricci, M., & Rumble, M. (2012) added that critical thinking and problem-solving skills have increased its importance in curriculum in many parts of the world. Moreover, large-scale international assessments such as Programme for International Student Assessment (PISA) and the Adult Literacy and Lifelong Learning Skills (ALL) have adopted problem-solving in various forms. In context of lesson plan in senior high school, Sulistyaningrum & Putri (2021) found that ways of thinking insufficiently incorporated in lesson plan. However, less attention has been paid into the integration of problem-solving skills in the course syllabus of English in Academic Discourse.

P21 (2019) defines 21st century skills the must-mastered skills, knowledge, and expertise in order to achieve success in work and life. The Partnership for 21st Century Skills (P21, 2019) believes that it is a must for students to acquire the important skills like critical thinking, problem-solving, communication and collaboration to be successful in the recent era. This matter gives educators challenges to be able to integrate new essential skills into the lesson to help students acquired the needed skills to compete in 21st century. As the consequence, the 21st century skills integration into syllabuses began to be massively studied.

Trilling & Fadel (2009) argues that critical thinking and problem-solving are considered as the new basic of 21st century learning. Partnership for 21st Century Learning (P21) defines problem-solving skills as the ability to solve various unfamiliar problems both conventionally and innovatively and recognize and raise questions to clarify different statements and direct to a solution. Additionally, Chalkiadaki (2018) discovered that the value of problem-solving is

on the application of the skill in the real world. Problem-solving also requires analytical and evaluation skills application into any type, data, statements, beliefs and other to make students be able to give solutions into the given problems (Abdullah & Hendon, 2016).

Suto & Eccles (2014) classified problem-solving under the category of "ways of thinking" which consists of critical thinking, problem-solving and decision making. In addition, higher-order thinking levels in Anderson and Krathwol's framework (Anderson & Krathwohl, 2001), such as analyze, evaluate, and create, are related to the ATC21S framework's ways of thinking. This category is further elaborated upon by Binkley, M., Erstad, O., Herman, J., Raizen, S., Ripley, M., Miller-Ricci, M., & Rumble (2012) using the KSAVE (Knowledge, Skills, Attitudes, Values, and Ethics) model. It is found that ways of thinking involve six cognitive thinking skills, including interpretation, analysis, evaluation, inference, explanation, and self-regulation. As a set of categories, the ability to solve problems cannot be separated from critical thinking as the initial step to recognizing and observing the problem state, as well as decision making, which is the application of the result of the process of solving problems.

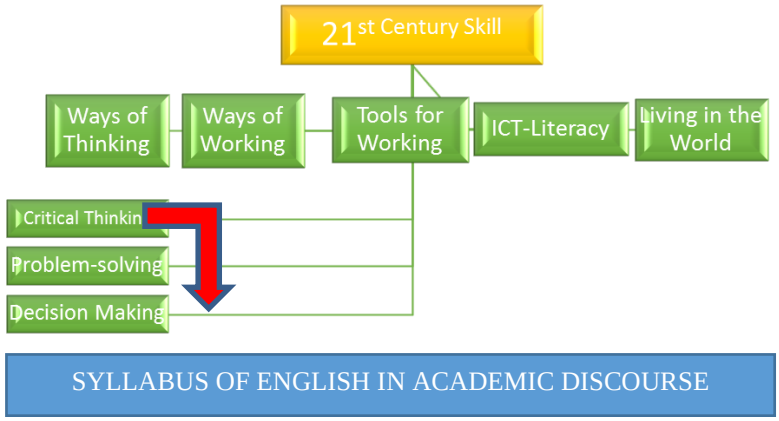

Figure 1. Problem-solving skills based on ATC21s framework.

Figure 1 shows the developing body of research has looked into problem-solving skills. Problem-solving skills are a group of Ways of Thinking Skills in the Assessment and Teaching of 21st-Century Skills (ATC21s) framework (See Figure 1). However, problem-solving skills have developed from the UNESCO ICT Competency Framework for Teachers and Bloom's taxonomy on learning, as

follows: According to Bloom's taxonomy, problem-solving skills are classified as higher-order thinking skills (HOTS). The ATC21S framework's ways of thinking are connected to the HOTS levels of Anderson and Krathwohl's paradigm, such as analyse, evaluate, and create (Sulistyaningrum & Putri, 2021).

The integration of 21st century skills has been widely studied in context of syllabus in higher education. First, a study was conducted by Hamid & Sulistyaningrum (2019) aimed to design ICT competencies – integrated syllabuses of speaking course. The result of the study discovered that the integration of ICT competencies was mostly found in the component of Teaching Method or Classroom Activities and Learning Media in the syllabuses. In short, the integration of ICT competencies in the speaking subject syllabuses have been integrated ICT competencies partly in learning activities and media.

On the other hand, the integration of 21st century skills in context of high school conducted by Radifan & Dewanti (2020) claimed that 4C skills, including problem-solving, are integrated in the lesson plan. It revealed that the integration of the skills is on four main components of the lesson plan: learning steps, assessment, learning methods, and indicators of competence achievement.

In addition, the implication of problem-solving skills in the context of the English curriculum and textbooks revealed by Kanokpermpoon (2019) revealed that problem-solving skills can be integrated into the English curriculum and textbooks. It is exemplified by the requirement for problem-solving by students to become the main topic in many national standards. In the setting of the National Council of Teachers of Mathematics, Karami et al. (2013) highlighted that problem-solving skills should be the key focus in some curriculums. Furthermore, in today's concerns, it has been recommended that incorporating ways of thinking and problem-solving is critical in the teaching and learning process. To summarize, the researchers concentrated merely on integrating problem-solving skills into the English curriculum, textbooks, and less on English in the Academic Discourse subject. As a result, the goal of this study was to close the knowledge gap mentioned before.

Academic discourse in universities encourages individuals to use language for writing, enchasing problems and understanding issues specifically (Hyland, 2009). **"**English in Academic Discourse" at English Language Education Study Program at University A is a compulsory course taken by the students in the fourth semester. The aims of this course are first, to develop students' competence in distinguishing the social function, text structure, and language features of various academic discourses in English including essays, research reports, posters, tables, charts, research articles, and lectures. Secondly, students are able to distinguish some features of various academic discourses, specifically research articles, and lectures. This has led the assumption of the possibility of problem-solving skills integration in the course.

The previous studies, mostly only focus on discussing higher-order thinking skills (HOTS) rather than analyzing the problem-solving skills (Rismi, 2021; Silalahi et al., 2021; Siswadi et al., 2020). Despite the importance of problem-solving skills, few researchers have studied the integration of problem-solving skills in course syllabus. Since there is less information regarding problem-solving skills integration in the syllabus, specifically in higher education context, this research investigates the integration of problem-solving skills in the existing of academic discourse in English Language Education Study Program in one of the universities in Jakarta.

METHOD

This study uses qualitative research, specifically content analysis as the methodology of the research. Mayring (2014) defines qualitative content analysis as a technique to analyze the data with a rule guided the research process. The material to be analyzed in this study is in a form of document, specifically syllabus of "English in Academic Discourse" course.

The data source and data are the syllabus of "English in Academic Discourse" and the 21 words/phrases/sentences that indicate problem-solving skills in the components of the syllabus of "English in Academic Discourse" course. The research instrument used for this study consists of eight indicators of problem-solving skills which are developed based on the combination of PISA

2012 Problem Solving Framework (OECD, 2013), Partnership for 21st Century Learning (P21, 2019) and Trilling & Fadel (2009) framework of problem-solving skills.

The data is collected from syllabus from the authorized lecture of the course in English Language Education Study Program. The statements in the core components of the syllabus such as basic information of the course, learning outcomes, course objectives, course materials, learning method, time allocation, task description, course activities, grading and assessment, course policies and list of references are highlighted. After highlighting the statements, list each sentence into the table of identification which consists of two columns for the name of the components and the statements in each syllabus component. Present each statement that indicates problem-solving skills into the table of analysis of problem-solving skills incorporation according to which indicator they belong to and to which components they belong to.

Deductive content analysis by Mayring (2014) is used as the procedures in this research. The data analysis begins from establishing categories system by defining concepts from theory, other studies or previous research. Next, coding the problem-solving skills indicators obtained from several frameworks and indicators of problem-solving skills. Finally, analyze the data, interpret the findings and conclude the discussion.

FINDINGS AND DISCUSSIONS

After formulating and analysing the data qualitatively, the analysis resulted from the syllabus of "English in Academic Discourse" course.

The Extent to Which Problem-solving Skills are Incorporated in the Syllabus

Based on the analysis of the extent to which problem-solving skills integrated in the syllabus, it was found that the syllabus of "English in Academic Discourse" has integrated problem-solving skills. The code of indicators show in Table 1, the indicators from PISA (2012) Problem Solving Framework, Trilling and Fadel (2009), and Partnership for 21st Century Learning Framework, which

obtained to analyse the existing problem-solving indicators in the components of syllabus in English in Academic Discourse.

Table 1. Indicators of Problem-solving Skills

Indicator Code	Indicators of Problem-solving Skills
PS1	Students explore the problem situation by observing, analyzing and associating with it, looking for information and discovering limitations or detention. (Abdullah & Hendon, 2016; OECD, 2013; Trilling & Fadel, 2009)
PS2	Students understand the given and obtained information and constructing and demonstrating their understanding of the information. (Lismayani et al., 2017; OECD, 2013)
PS3	Students represent problem by composing table, graphic, symbol or verbal representations, and change between representational formats. (OECD, 2013)
PS4	Students explore and identify the appropriate solutions using the synthesized information and arguments related to the problem and their connections. (Lismayani et al., 2017;OECD, 2013; Trilling & Fadel, 2009)
PS5	Students make a plan including setting goal by defining the overall goal and constructing strategies and steps to reach the appropriate solution. (Lismayani et al., 2017; OECD, 2013)
PS6	Students execute the plan; applying the skill in the real situation. (Chalkiadaki, 2018; OECD, 2013)
PS7	Students monitor progress at each stage towards the goal state, detecting incidental case and executing remedial action if necessary. (OECD, 2013; Trilling & Fadel, 2009)
PS8	Students evaluate and reflect on the processes and solutions from various points of view and identifying the urge for additional information or explanation that leads into better solution. (Abdullah & Hendon, 2016; Lismayani et al., 2017; OECD, 2013; Trilling & Fadel, 2009)

The fulfillment of the indicators in the syllabus were briefly presented in Figure 1.

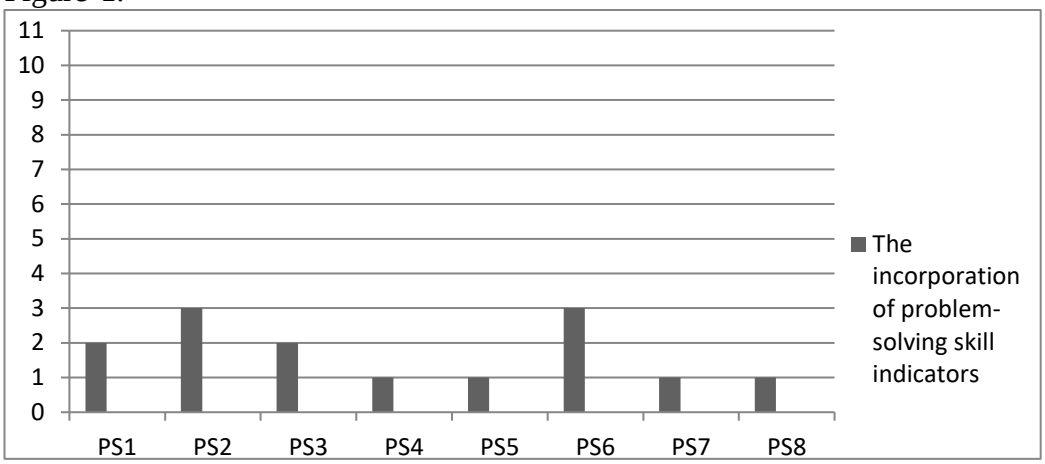

Figure 2. The Incorporation of Problem-solving skills in the Syllabus

PS1-8: Indicators of problem-solving skills

0-11: the amount of syllabus components in which problem-solving skills indicators are integrated

From Figure 1, it shows that all of the indicators are integrated in several syllabus components. However, the integration of each indicator in the syllabus is varied. There are three indicators that are integrated in the components of the syllabus which are the second indicator (PS2) and the sixth indicator (PS6), while the first indicator (PS1) and the third indicator (PS3) are indicated in two components of the syllabus. Moreover, the rest of the indicators, the fourth indicator (PS4), the fifth indicator (PS5), the seventh indicator (PS7), and the eighth indicator (PS8) are integrated in one syllabus component each.

The first indicator "students explore the problem situation by observing, analyzing and associating with it, looking for information and discovering limitations or detention" was explicitly stated in two components of the syllabus which are learning method, specifically in *Langkah-langkah Pembelajaran* part, and course activities (*Rincian Rencana Kegiatan*), which requires students to explore the problem by reading carefully (*membaca dengan cermat*) the materials given to look for and identify (*mengidentifikasi*) the required information such as text structure, social function and language features in the text which are

indicating the first indicator of problem-solving skills. This finding is in line with the study by Kivunja (2014) which stated that problem-solving deals with the attempt to acquire knowledge and information. Similarly, Trinidad et al. (2013) in their study, begins a problem-solving task by giving students authentic set of problems and requires them to explore information from the authentic sources.

***Membaca** dengan cermat isi materi yang dibahas secara analitis*

***Membaca** cermat untuk **mengidentifikasi** bagian dimaksud*

The second indicator "students understand the given and obtained information and constructing and demonstrating their understanding of the information" was stated in three components of the syllabus including the learning outcomes, course description, and learning method, which expect students to understand the given information and the required information gathered from exploration (*membaca*) and then demonstrating their understanding by mentioning (*menyebutkan*) the gathered information (*fungsi sosial, struktur teks,* and *unsur kebahasaan*). In the learning outcomes (*Capaian Pembelajaran Lulusan*) in the syllabus, it is explicitly stated that students are expected to understand (*memahami*) the social function, text structure, and language features of the academic reports contextually.

> *Mampu **memahami** dan menerapkan budaya pengungkapan makna secara kontekstual pada aspek **fungsi sosial, struktur teks, dan unsur kebahasaan, pada laporan ilmiah** hasil pemikiran dalam bentuk kuliah (lecture) di forum ilmiah berreputasi internasional dan dalam bentuk artikel yang terbit di jurnal ilmiah berreputasi internasional.*

In the basic information of the course, particularly in the course description, students are expected to be able distinguish (*membedakan*) the social function, text structure and language features of several academic reports. To be able to do that, students should critically identify and sort which parts of the text that belong to social function, text structure and language features and their differences. As students found out which parts of the text that belong to the

categories and found their differences, students will be able to distinguish the social function, text structure and language features of the academic reports.

> *Mata kuliah ini bertujuan agar mahasiswa* ***mampu membedakan fungsi sosial, struktur teks, dan unsur leksikogramatika*** *beberapa* ***teks laporan ilmiah*** *hasil pemikiran sederhana tentang pendidikan bahasa Inggris bagi penutur bahasa lain (English for speakers of other languages - ESOL).*

The statement in the learning method in *Langkah-langkah pembelajaran* part of the syllabus also explicitly indicates the second indicator of problem-solving skills that students should be able to demonstrate their understanding by mentioning (*menyebutkan*) *bukti-bukti tersurat dan tersirat dari teks* (social function, text structure and language features of the text). By that means, students are demonstrating their understanding by mentioning/articulating the obtained information verbally.

> ***Menyebutkan*** *bukti-bukti tersurat dan tersirat dari teks dan menuliskannya dalam bentuk poster secara bermakna, urutan logis, dengan leksikogramatika, ejaan dan tanda baca yang benar.*

These findings in line with problem-solving skills in level of analysing based on the ATC21S Framework (Suto & Eccles, 2014) and Anderson and Karthwol Framework (Anderson & Krathwohl, 2001).

Explicitly stated, the third indicator "students represent problem by composing table, graphic, symbol or verbal representations, and change between representational formats" was found integrated in two syllabus components which are course activities (*Rincian Rencana Kegiatan*) in the *metode* part and in the learning method in *Langkah-langkah pembelajaran* part. After understanding and mentioning the discovered information (*bukti-bukti tersurat dan tersirat dari teks*), students are asked to represent the information by constructing a written representation (poster). Students should also manage the obtained information which will be presented in the poster by putting them accordingly in the appropriate sequence and also with the correct spelling and punctuation. This finding is aligned with Dixon & Brown (2012) study which stated that problem-

solving involves the representation of the problem based on students' initial knowledge regarding the problem.

Menyalin** setiap kalimat dari bagian dimaksud **ke dalam poster

*Menyebutkan bukti-bukti tersurat dan tersirat dari teks dan **menuliskannya dalam bentuk poster** secara **bermakna, urutan logis, dengan leksikogramatika, ejaan dan tanda baca yang benar.***

The term for the word of "*menuliskan*" in line with OECD 2013, whereas ATC21S Framework (Suto & Eccles, 2014) and Bloom's Taxonomy Revised, that word refers to creation level.

The statements in the course activities (*Rincian Rencana Kegiatan*) in the *metode* part are implicitly indicating the fourth indicator "students explore and identify the appropriate solutions using the synthesized information and arguments related to the problem and their connections" in which students identify the appropriate solution to present the poster properly. Course activities (*Rincian Rencana Kegiatan*) is the only component that integrates the fourth indicator. Using the synthesized information, students are identifying the ways to present the poster appropriately. To be able to present the poster appropriately as expected in the learning outcomes of the course, students are identifying the important part to be presented (verbs and stressed syllables). Students are marking the verbs of the sentences in bold and marking the stressed syllabus with apostrophe according to the way it pronounced. As the continuation of the representation, the syllabus also requires students to identify the appropriate solution which in line with the study by Kivunja (2014) which stated that problem-solving deals with recognition and evaluation of different alternatives.

*Kata kerja **ditebalkan**.*

***Menandai** setiap suku kata yang di-stress dengan appostrophy*

The fifth indicator "students make a plan including setting goal by defining the overall goal and constructing strategies and steps to reach the appropriate solution" was integrated in one syllabus component which is the course activities (*Rincian Rencana Kegiatan*) in the *metode* part. The goal of this

course is that students are able to present the poster verbally. In order to present the poster properly, students are encouraged to build strategies before doing the presentation by rechecking the completeness of the materials to be presented and to practicing before doing the presentation. This finding is relevant with the statement in the study conducted by Chalkiadaki (2018) which argues that the value of problem-solving is on the skill's application in the real situation.

> ***Mencek*** *kelengkapan makna tiap kalimat serta ketepatan ejaan dan tanda baca.*
>
> ***Berlatih*** *mengucapkan setiap kalimat dengan ucapan dan tekanan kata yang tepat*

The statements and instructions that require students to verbally present the poster, which indicate the sixth problem-solving skill indicator "students execute the plan; applying the skill in the real situation", are integrated explicitly in three syllabus components including the course activities (*Rincian Rencana Kegiatan*), learning method in *Langkah-langkah Pembelajaran* part, and course objectives (*CPMK* and *Sub-CPMK*). After constructing plan and strategies, students execute the plan by presenting the poster verbally. As the goal state as well as the overall course objectives, students are required to present the poster which consists of the obtained information (social function, text structure, language features) verbally and meaningfully in the appropriate pronunciation and words stress of the sentences. This finding is verified by Abdullah & Hendon (2016) and ATC21S that problem solving requires evaluation skill application.

> ***Mempresentasikan secara lisan*** *di depan kelas*
>
> ***Mempresentasikan isi poster secara lisan*** *di depan kelas secara bermakna, urutan logis, dengan leksikogramatika, ucapan, tekanan kata dengan benar*
>
> ***Capaian Pembelajaran Mata Kuliah (CPMK)***
>
> *Mampu* ***menyebutkan*** *fungsi sosial dari laporan ilmiah hasil pemikiran dalam bentuk kuliah (lecture)/artikel di forum berreputasi internasional,*

dengan memperhatikan konteks situasinya, secara tertulis dalam bentuk poster dan ***secara lisan dalam presentasi***

Mampu ***menyebutkan*** *struktur teks dari laporan ilmiah hasil pemikiran dalam bentuk kuliah (lecture)/artikel di forum berreputasi internasional, dengan memperhatikan konteks situasinya, secara tertulis dalam bentuk poster dan* ***secara lisan dalam presentasi***

Mampu ***menyebutkan*** *unsur kebahasaan dari laporan ilmiah hasil pemikiran dalam bentuk kuliah (lecture)/artikel di forum berreputasi internasional, dengan memperhatikan konteks situasinya, secara tertulis dalam bentuk poster dan* ***secara lisan dalam presentasi.***

Sub-Capaian Pembelajaran Mata Kuliah (Sub-CPMK)

Tentang beberapa laporan ilmiah hasil pemikiran dalam bentuk kuliah (lecture) di forum ilmiah bereputasi internasional, ***mahasiswa mampu menyebutkan dalam*** *format poster dan* ***presentasi lisan***

Tentang beberapa laporan ilmiah hasil pemikiran dalam bentuk artikel di jurnal ilmiah bereputasi internasional, ***mahasiswa menyebutkan*** *di poster* ***dan presentasi lisan.***

The seventh indicator "students monitor progress at each stage towards the goal state, detecting incidental case and executing remedial action if necessary" was implicitly integrated in one syllabus component which is the course activities (*Rincian Rencana Kegiatan*) which requires students to monitor progress at each stage towards the goal state. In the planning process, students are required to monitor the strategies and anticipating mistakes and incompleteness by rechecking the completion of each statement in the poster, including the spelling and the punctuation. If there are mistakes, the correction needs to be done. The word of "*mencek*" includes to the category of monitoring by (OECD, 2013; Trilling & Fadel, 2009). This finding is also in line with ATC21S (Suto & Eccles, 2014) that refers to evaluation level.

Mencek *kelengkapan makna tiap kalimat serta ketepatan ejaan dan tanda baca*

The last indicator, which is the eighth indicator "students evaluate and reflect on the processes and solutions from various points of view and identifying the urge for additional information or explanation that leads into better solution", was explicitly integrated in one component of the syllabus, the learning outcomes (*Capaian Pembelajaran Lulusan*). The statement encourages students to do a reflection by doing the evaluation towards the learning team, co-working friends and their learning processes.

> *Mampu melakukan proses **evaluasi** diri terhadap kelompok kerja yang berada dibawah tanggung jawabnya, dan mampu mengelola pembelajaran secara mandiri.*

Syllabus Components Which Integrate Problem-solving Skills

Based on the analysis of the syllabus components, it was found that there are five out of eleven components that integrate problem-solving skills. The five components which integrate problem-solving skills were presented briefly in the table below.

Table 2. Table of Syllabus Components Which Integrate Problem-solving Skills

Syllabus Components	Problem-solving skills							
	PS1	PS2	PS3	PS4	PS5	PS6	PS7	PS8
Basic information of the course		√						
Learning outcomes		√						√
Course objectives of each learning steps						√		
Course materials								
Learning method	√	√	√			√		
Time allocation								
Task description								
Course activities	√		√	√	√	√	√	
Grading and assessment								
Course policies								
List of references								

According to Table 2, the five syllabus components that integrate problem-solving skills are: basic information of the course, learning outcomes, course objectives, learning method, and course activities. Three out of five syllabus components are integrated more than one indicator of problem-solving skills, while the other two are integrating at least one indicator.

Basic information of the course integrates one indicator, which is the second indicator of problem-solving skills (PS2). Similar to basic information of the course, course objectives also integrate only one indicator, which is the sixth indicator (PS6). Learning outcomes integrates two indicators, the second (PS2) and the eighth (PS8) indicator. The second most integrated component is learning method with four indicators integrated: the first (PS1), the second (PS2), the third (PS3) and the sixth (PS6) indicator. The most integrated component which integrates six indicators of problem-solving skills is course activities with all of the indicators except the second indicator (PS2) and the eighth indicator (PS8) integrated in the component.

On the other hand, there are six components of the syllabus that are not integrated with problem-solving skills. The first reason is that there is a component that does not present in the course syllabus, such as time allocation. The second reason is that the statements that present in several components cannot be analysed because of the limited description or the statement is very short such as in the materials and task description. The other reason is that there is no detail explanation about the statement such as in the grading and assessment, course policies and references.

Trilling & Fadel (2009) stated that problem-solving skills can be acquired through various inquiry and problem-solving activities. In addition, according to OECD (2013), problem-solving can be developed by individual and group project work. In this study, it was found that the problem-solving skills indicators are mostly indicated in the course activities in the syllabus because the statements in this component of syllabus are dealing with the activities that will be done throughout the course in which students are learning by actively posing and solving problems individually. Additionally, it is in consistent with the study by

Lismayani et al. (2017) that problem-solving skills is supposed to be integrated in the learning process, in which learning processes are described.

On the other hand, the result of this study is contradicting with the study conducted by Sumiati et al. (2020) that 21st century skills are only possible to be integrated in the learning outcomes, the materials, the teaching method, and the assessment and evaluation as this study found that problem-solving skills are possibly integrated in five components of the syllabus including basic information of the course, learning outcomes, course objectives, learning method, and course activities.

Problem-solving skills are integrated implicitly and explicitly in the syllabus components of "English in Academic Discourse". However, not all of the syllabus components integrate problem-solving skills because the statements that must present in the components cannot be analysed since they only consist of very short statements that do not provide further details about it. Thus, only five out of eleven syllabus components integrate problem-solving skills. Nevertheless, the awareness of problem-solving skills and its implementation in learning processes among educators should be risen up to help students become the good problem-solver (Lismayani et al., 2017).

CONCLUSIONS AND SUGGESTIONS

The aims of this study are to discover the extent to which problem-solving skills are integrated in the syllabus of "English in Academic Discourse" course and which components of the syllabus integrate problem-solving skills. Thus, the findings of this study show that problem-solving skills are integrated in the course syllabus components, mostly in course activities, learning methods, and learning outcomes. All of the indicators of problem-solving skills are integrated in the syllabus including students' exploration, understanding, representation, solution identification, planning, plan's execution, monitoring and reflection skills.

However, not all syllabus components integrate problem-solving skills. The statements that should be present in the six components involving course materials, time allocation, task description, grading and assessment, course

policies, and list of references are rather cannot be analyzed because of the limited description nor there is no detail explanation about the statement. Therefore, only five out of eleven syllabus components, which are basic information of the course, learning outcomes, course objectives, learning method, and course activities, integrate it.

The findings of this study cannot be generalized as this study is limited to one syllabus of one course. The main obstacles in conducting this research were the process of gathering the statements in the syllabus that indicate problem-solving skills because the syllabus provides mostly short words/phrases/sentences that cannot be analysed further. Therefore, research on the whole course, including the learning activity, is suggested to see the more detailed integration of problem-solving skills. Furthermore, the research on problem-solving skills integration is possibly conducted in other courses, not only in "English in Academic Discourse" course, so the similar study on another course syllabus is recommended to be conducted.

REFERENCES

Abdullah, S., & Hendon, S. (2016). Transforming Science Teaching Environment for the 21st Century Primary School Pupils. *Malaysian Online Journal of Educational Technology*, *4*(4). https://eric.ed.gov/?id=EJ1116210

Anderson, L. W., & Krathwohl, D. R. (2001). *A taxonomy for learning, teaching, and assessing: A revision of Bloom's taxonomy of educational objectives*. eduq.info. https://eduq.info/xmlui/handle/11515/18345

Binkley, M., Erstad, O., Herman, J., Raizen, S., Ripley, M., Miller-Ricci, M., & Rumble, M. (2012). Defining twenty-first century skills. *In Assessment and Teaching of 21st Century Skills*.

Chalkiadaki, A. (2018). A systematic literature review of 21st century skills and competencies in primary education. *International Journal of Instruction*. https://doi.org/10.12973/iji.2018.1131a

Dixon, R. A., & Brown, R. A. (2012). Transfer of Learning: Connecting Concepts during Problem Solving. *Journal of Technology Education*. https://eric.ed.gov/?id=EJ991236

Funke, J., Fischer, A., & Holt, D. V. (2018). Competencies for complexity: problem solving in the twenty-first century. *Assessment and Teaching of 21st Century Skills*, 41–53. https://doi.org/10.1007/978-3-319-65368-6_3

Hamid, S. F., & Sulistyaningrum, S. D. (2019). DESIGNING ICT COMPETENCES–INTEGRATED SYLLABUSES OF SPEAKING

COURSES (DESIGN AND DEVELOPMENT STUDY OF ENGLISH LANGUAGE EDUCATION PROGRAM SYLLABUSES). *IJLECR-INTERNATIONAL JOURNAL OF LANGUAGE EDUCATION AND CULTURE REVIEW*, *5*(1). https://doi.org/10.21009/IJLECR.051.01

Hyland, K. (2009). *Academic discourse: English in a global context*.

Kanokpermpoon, M. (2019). *Thinking Skills in Practice: A Case Study of an English Curriculum at a Thai University*.

Karami, M., Karami, Z., & Attaran, M. (2013). Integrating problem-based learning with ICT for developing student-teachers' content knowledge and teaching skill. *International Journal of Education*. https://www.learntechlib.org/p/111904/

Kivunja, C. (2014). Innovative Pedagogies in Higher Education to Become Effective Teachers of 21st Century Skills: Unpacking the Learning and Innovations Skills Domain of the New Learning Paradigm. *International Journal of Higher Education*, *3*(4). https://doi.org/10.5430/ijhe.v3n4p37

Lismayani, I., Parno, P., & Mahanal, S. (2017). The correlation of critical thinking skill and science problem-solving ability of junior high school students. *Jurnal Pendidikan Sains*, *5*(3). https://doi.org/10.17977/jps.v5i3.10338

Mayring, P. (2014). *Qualitative content analysis: theoretical foundation, basic procedures and software solution*.

OECD. (2013). PISA 2012 Problem-Solving Framework. In *PISA 2012 Assessment and Analytical Framework*. OECD Publishing Paris. https://www.oecd.org/pisa/pisaproducts/pisa2012draftframeworks-mathematicsproblemsolvingandfinancialliteracy.htm

P21. (2019). P21 framework for 21st century learning definitions. In *Battelle for Kids*. https://www.battelleforkids.org/networks/p21/frameworks-resources

Radifan, M. F., & Dewanti, R. (2020). The Incorporation of 4C Skills in Senior High School English Teachers' Lesson Plans. *Stairs*. http://journal.unj.ac.id/unj/index.php/stairs/article/view/20940

Rismi, O. D. (2021). A Learning Design to Improve Higher Order Thinking Skills (HOTS). *Jurnal Riset Pendidikan Matematika Jakarta*.

Silalahi, L. H., Sitorus, M. M., & ... (2021). The Effect Of Higher-Order Thinking Skill In Reading Comprehension. *IDEAS: Journal on …*.

Siswadi, S., Muawanah, M., Purnama, S., & ... (2020). Development of English Teachers Oriented Higher Order Thinking Skills (Hots) In Elementary School of Madrasah Ibtidaiyah (MI). *Journal of Talent …*.

Sulistyaningrum, S. D., & Putri, R. N. (2021). Fostering ways of thinking in learning activities of English teaching lesson plans at senior high school. *PROCEEDING AISELT (Annual International Seminar on English Language Teaching)*, *6*(1). https://jurnal.untirta.ac.id/index.php/aiselt/article/view/12523

Sumiati, A., Lustyantie, N., & Iskandar, I. (2020). INTEGRATING 21ST

CENTURY SKILLS INTO TRANSLATION CLASSROOM: A BRIEF PERSPECTIVE ON ITS SYLLABUS. *IJLECR-INTERNATIONAL JOURNAL OF LANGUAGE EDUCATION AND CULTURE REVIEW*, *6*(2), 87–96. https://doi.org/10.21009/IJLECR.062.11

Suto, I., & Eccles, H. (2014). The Cambridge approach to 21st Century skills: definitions, development and dilemmas for assessment. In *IAEA Conference. Singapore*. https://www.cambridgeassessment.org.uk/

Trilling, B., & Fadel, C. (2009). *21st Century Skills, Enhanced Edition: Learning for Life in Our Times*.

Trinidad, G., Patel, D., Shear, L., Goh, P., Quek, Y. K., & Tan, C. K. (2013). *Teaching 21st Century Competencies: Lessons from Crescent Girls' School in Singapore*. ERIC. https://eric.ed.gov/?id=ED557191